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Meeting of the MAP Focal Points

Athens, Greece, 10-13 September 2019

Report of the Meeting of the MAP Focal Points

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Report of the 2019 meeting of the Mediterranean Action Plan Focal Points

Introduction

1. In accordance with the programme of work adopted by the Contracting Parties (CPs) to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 20th Meeting, held in Tirana from 17 to 20 December 2017, a meeting of the Mediterranean Action Plan (MAP) Focal Points was held at the Divani Caravel Hotel in Athens from 10 to 13 September 2019.

Attendance

2. The following Contracting Parties to the Barcelona Convention were represented at the meeting: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, European Union, France, Greece, Israel, Italy, Lebanon, Malta, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia and Turkey.

3. The following United Nations bodies, specialized agencies, convention Secretariats and intergovernmental organizations were represented as observers: The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS), the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA); and the Secretariat of Union for the Mediterranean (UfM). The president of the Mediterranean Commission on Sustainable Development was also present during relevant sessions of the meeting.

4. The following non-governmental organizations and other institutions were also represented as observers: the Arava Institute for Environmental Studies; BirdLife Malta; the Center for Energy and Environment Resources (CENER21); the Hellenic Marine Environment Protection Association (HELMEPA); the International Association of Oil & Gas Producers (IOGP); the Mediterranean Association to Save the Sea Turtles (MEDASSET); the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE); the Mediterranean Programme for International Environmental Law and Negotiation, Panteion University of Athens (MEPIELAN Center); Oceana; Water and Environment Support (WES) in the Eni Southern Neighbourhood Region; and the World Wide Fund For Nature WWF Mediterranean Programme .

5. The United Nations Environment Programme (UNEP)/Mediterranean Action Plan (MAP)/Barcelona Convention Secretariat was also represented, along with the Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL) and the following Mediterranean Action Plan Regional Activity Centres (RACs): Plan Bleu Regional Activity Centre (Plan Bleu/RAC); the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC); the Regional Activity Centre for Information and Communication (INFO/RAC); the Regional Activity Centre for Priority Actions Programme (PAP/RAC); the Regional Activity Centre for Specially Protected Areas (SPA/RAC); and the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC).

I. Opening of the Meeting (Agenda Item 1)

6. The meeting was opened at 9.30 a.m. on Tuesday, 10 September 2019, by Ms. Klodiana Marika, President of the Bureau of the Contracting Parties to the Barcelona Convention, and Mr. Gaetano Leone, Coordinator of the Mediterranean Action Plan, who delivered an opening statement. Mr. Konstantinos Aravossis, Secretary General for Natural Environment and Water within the Greek Ministry of Environment and Energy, also delivered an opening statement.

7. Mr. Aravossis, in his statement, said that the Mediterranean Action Plan, which served as a model for other regions of the world, was at an important crossroads, as efforts were made to respond to emerging environmental and ecological challenges. At the same time, it was a crucial period for many Mediterranean countries, which were having to deal with numerous economic and social issues. Greece, as the host country of the Plan's Coordinating Unit, had offered continuous support and was always ready to seek ways of enhancing cooperation. The many achievements of the Plan since its

inception almost 25 years previously included the Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL), the establishment of regional activity centres, the adoption of amendments to the Convention in 1995 and of several Protocols to the Convention, the work of the Mediterranean Commission on Sustainable Development (MCSD) and the implementation of the Mediterranean Strategy for Sustainable Development (MSSD). One of the issues on the busy agenda of the meeting was the phase-out of single-use plastic bags. In Greece, special emphasis was being placed on the fight against marine plastic litter, which should arguably be the subject of a specific treaty. Bearing in mind the ultimate goal of having a clean, healthy and productive Mediterranean, he wished the participants a fruitful meeting.

8. Mr. Leone, in his statement, said that the second biennium of the current six-year medium-term strategy cycle had been a biennium of implementation, and he wished to thank the Contracting Parties and all other stakeholders for their cooperation and support in that regard. Environmental and sustainable development issues continued to take centre stage. Ocean warming and acidification, the decline of nature at an unprecedented rate and the global waste crisis were just some of the challenges that stood in the way of the effective implementation of the Sustainable Development Goals. The Mediterranean region was not spared those challenges. During the previous biennium, the Coordinating Unit and the Mediterranean Action Plan components had strengthened their engagement with one another and with the Contracting Parties to the Barcelona Convention, Action Plan partners and UNEP headquarters. However, conditions in the Mediterranean region continued to deteriorate, and immediate and concerted action was required, particularly with a view to implementing Sustainable Development Goal 14, on “Life below water”. In that connection, key Draft Decisions that would be discussed during the meeting, the proposed programme of work and budget for 2020–2021 and a forward-looking ministerial declaration to be adopted at the 21st Meeting of the Contracting Parties would guide the work of the Mediterranean Action Plan-Barcelona Convention system during the upcoming biennium and beyond. Global milestones that would have a fundamental impact on that work included the 2019 Climate Action Summit, the Santiago Climate Change Conference, the possible adoption of a UNEP marine and coastal strategy for 2020–2030, the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) and the adoption, at the 2020 United Nations Biodiversity Conference, of the Post-2020 Global Biodiversity Framework. The system's mandate had never been more relevant. During the upcoming biennium, a new medium-term strategy would be prepared and existing partnerships would be bolstered, including through the implementation of the Mediterranean Sea Programme (MedProgramme). The Mediterranean region was unique in many ways, and especially in terms of the opportunities that it offered with regard to resources, education, creativity and leadership. All stakeholders had a duty to do the impossible so that current generations would be remembered for having found solutions, and not only for having inflicted what might soon be irreversible damage on the environment. He therefore hoped that the work carried out during the meeting would be guided by a sense of ambition and a spirit of cooperation and innovation.

II. Organizational matters (Agenda Item 2)

A. Rules of procedure

9. The Focal Points were reminded that the rules of procedure for meetings and conferences of the Contracting Parties to the Barcelona Convention (UNEP/IG.43/6, Annex XI), as amended by the Contracting Parties (UNEP(OCA)/MED IG.1/5 and UNEP(OCA)/MED IG.3/5), would apply mutatis mutandis to their deliberations at the meeting.

B. Election of officers

10. In accordance with rule 20 of the rules of procedure, the Focal Points unanimously agreed that the Bureau of the Contracting Parties would also serve as the Bureau for the current meeting:

President:	Ms. Klodiana Marika (Albania)
Vice-Presidents:	Ms. Marina Argyrou (Cyprus)
	Ms. Heba Sharawy (Egypt)

Mr. Oliviero Montanaro (Italy)

Mr. Mohamed Sghaier Ben Jeddou (Tunisia)

Rapporteur: Ms. Ivana Stojanovic (Montenegro)

C. Adoption of the provisional agenda

11. The Focal Points adopted their agenda on the basis of the provisional agenda circulated in document UNEP/MED WG.468/1.

1. Opening of the meeting
2. Organizational matters
   - 2.1 Rules of procedure
   - 2.2 Election of officers
   - 2.3 Adoption of the provisional agenda
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3. Progress report on activities carried out during the 2018–2019 biennium
4. Financial report for 2016–2017 and 2018–2019
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6. Preparation of the 21st Meeting of the Contracting Parties
   - 6.1 Update on preparation and expected outcome
   - 6.2 Provisional agenda
   - 6.3 Ministerial declaration: preparation process and main elements
7. Any other business
8. Adoption of the report
9. Closure of the meeting

D. Organization of work

12. The Focal Points agreed to work in plenary session, in line with the schedule proposed by the Secretariat.

III. Progress report on activities carried out during the 2018–2019 biennium (Agenda Item 3); financial report for 2016–2017 and 2018–2019 (Agenda Item 4)

13. The Focal Points considered item 3 (progress report on activities carried out during the 2018–2019 biennium) and item 4 (financial report for 2016–2017 and 2018–2019) concurrently.

14. The Coordinator gave a presentation based on the progress report on the activities carried out during the 2018–2019 biennium (UNEP/MED WG.468/3) and on supporting information documents. In the presentation, he gave his analysis of the main achievements of the Mediterranean Action Plan system with regard to substantive, political and organizational matters.

15. Concerning financial matters, he summarized the audited financial statements for the 2016–2017 biennium and gave an indicative overview of the situation for the current biennium.

16. Summarizing the challenges faced within the Barcelona Convention system, he said that more needed to be done with regard to the ratification of the Protocols to the Convention and the submission of national implementation reports, and that expertise and capacity in the Secretariat and at regional activity centres needed to be reinforced. Moreover, steps should be taken to enhance the efficiency of the implementation of national activities and the availability and quality of data.

17. All who spoke welcomed the wide range of activities undertaken by the Secretariat. One focal point asked whether there were any activities that it had not yet been possible to implement; if not, why not; and whether they would be implemented during the upcoming biennium. She said that document UNEP/MED WG.468/20 should be expanded to include information from monitoring and assessment exercises in order to give an idea of the impact of the implementation of the Convention on the marine environment. Another focal point thanked Mediterranean Action Plan partners for the support that they had provided in the implementation of national activities and noted that climate change was forcing countries to adapt, a process that could be facilitated through the exchange of experiences and best practices.

18. The focal point for Turkey said that her Government would like to explore ways to be involved in the second phase of the SwitchMed programme (SwitchMed II).

19. A representative of an observer organization/Mediterranean Action Plan partner said that the slow pace of ratification of the Protocols to the Barcelona Convention was alarming, particularly since some of the Protocols had been drafted many years previously and might soon need to be renegotiated. Also alarming was the failure by some Contracting Parties to meet their reporting obligations under the Convention, which hampered effective monitoring. The range of activities undertaken by the Secretariat was impressive, but consideration should be given to whether coherent progress was being made towards the achievement of the goals of the Convention.

20. A representative of another observer organization/Mediterranean Action Plan partner said that a significant challenge had arisen in the form of a weakening of global governance, particularly with regard to environmental issues. It was crucial for children to be made aware of those issues through effective education for sustainable development, and for them to be encouraged to take initiatives to protect the environment.

21. In response to the comments made, the Coordinator said that, although there had been delays in carrying out certain activities, the programme of work had essentially been implemented in full. The level of detail that could be incorporated into document UNEP/MED WG.468/20 had been limited by the fact that some Contracting Parties had failed to submit national implementation reports, while others had submitted incomplete reports. The progress made towards the achievement of the goals set out in the Barcelona Convention was coherent insofar as it resulted from the implementation of a coherent strategy, namely the medium-term strategy. He agreed wholeheartedly on the importance of educating children. In that regard, the Italian Government was organizing consultations with young people in the Mediterranean region in the build-up to the 21st Meeting of the Contracting Parties.

IV. Specific matters for consideration and action by the meeting, including Draft Decisions (Agenda Item 5)

A. Governance

Draft Decision on the Compliance Committee

22. The Coordinator introduced a Draft Decision relating to the Compliance Committee, as set out in document UNEP/MED WG.468/4, highlighting the fact that, as the Committee reported directly to the Meeting of the Contracting Parties, its activity report for the biennium 2018–2019 would be annexed to the Draft Decision when the latter was submitted to the Contracting Parties for consideration at their 21st Meeting.

23. In the ensuing discussion, a number of participants expressed their appreciation for the work of the Committee and made some related proposals. One focal point, speaking on behalf of a group of countries, said that the Committee should be seen as having the dual role of assessing compliance with the basic obligations of the Barcelona Convention and its Protocols, particularly with regard to reporting, and assisting parties in determining where further implementation action was required. She proposed the development of specific legal indicators, both qualitative and quantitative, for effective implementation, and a potential further simplification of the reporting format. She also proposed an additional preambular paragraph highlighting the importance of the report on the overall findings from the reporting exercise and reiterating the request that such document is more elaborated with the information also from the monitoring and assessment exercise.

24. One focal point expressed the importance of capacity building to be provided on the new online reporting system.

25. Another focal point raised questions concerning a number of the recommendations to promote compliance with the Barcelona Convention and its Protocols to improve their implementation that had been made by the Committee and were contained in annex III to the Draft Decision. She highlighted a lack of clarity regarding the scope of the proposals for the role and future activities of the Committee. Her concerns related to capacity-building, a potential role for the Committee in the main governance meetings, and the reporting and other information to be solicited from Parties and Mediterranean Action Plan components. She stressed that the input of the Compliance Committee was only one of several elements to be used by the Contracting Parties in setting their future priorities.

26. Another focal point said that her Government was unable to accept the mention of the transboundary context and transboundary environmental impact assessments in recommendation 6. It was subsequently clarified, however, that, as the Compliance Committee was an independent body that reported to the Contracting Parties, the Focal Points could not amend its recommendations. The Secretariat would, however, convey to the Committee all the comments, concerns and proposals expressed by Focal Points, partners and observers at the current meeting as potential input into their final report to the Contracting Parties at their 21st Meeting.

27. A representative of an observer organization/Mediterranean Action Plan partner expressed concern that the work of the Committee was being hampered by the low level of reporting by Contracting Parties. He proposed that civil society also be able to raise compliance-related issues and provide input to the Committee.

28. A representative of another observer organization/Mediterranean Action Plan partner drew attention to the continuing dire situation of endangered or threatened species of coral as a result of fishing activities, despite the listing of 18 species of corals in annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, the obligations under articles 11 and 12 of the Protocol, the General Assembly resolutions on sustainable fisheries and the work initiated by the General Fisheries Commission for the Mediterranean on vulnerable marine ecosystems and coral protection. So far only a reporting protocol for incidents existed, without any specific fisheries management measures. She called for greater cooperation on the matter between the Barcelona Convention and the General Fisheries Commission in the framework of their existing

memorandum of understanding, the adoption of fisheries management measures by the latter, and stronger cooperation among Contracting Parties with regard to fisheries matters.

29. Following the discussion, the Focal Points endorsed the Draft Decision, as orally amended, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 1 is set out in annex III to the present report.

Draft Decision on governance

30. The Coordinator introduced a Draft Decision on governance, as set out in document UNEP/MEDWG.468/5, noting that it pertained to a number of elements, with related annexes, that would be considered one by one.

UNEP/MAP Operational Communication Strategy for 2020–2021

31. Introducing the sub-item, the Coordinator drew attention to operative paragraphs 1 to 3 of the Draft Decision. The draft strategy was contained in annex I to the Draft Decision.

32. In the ensuing discussion, one focal point, speaking on behalf of a group of countries and welcoming the work on the strategy, acknowledged the long-term need for communication support within the Coordinating Unit and proposed the inclusion of language to that effect in the decision to complement references to staffing or resource implications in the programme of work and budget. He highlighted areas of possible communication-related action, such as the development of guidelines to ensure homogeneity of communication within the Mediterranean Action Plan system and the opening of a Twitter account and the creation of a hashtag, recognizing, however, that the establishment of a social media presence would take time and resources. He also drew attention to potentially misleading phrasing in the document. He made a proposal for standard text to be used in all relevant Draft Decisions to show the integrated nature of the system and to make specific reference to the relevant Component(s) in the preambular paragraph of the Draft Decision.

33. The representative of the Regional Activity Centre for Information and Communication proposed that the Centre prepare proposals for hashtags for the Focal Points to consider during the meeting. He said that the Centre planned to run campaigns tailored to the general public to accompany some of the publications that it was producing.

34. Responding to a question about the Communication Task Force, the Coordinator explained that it had been established a couple of years previously and comprised the information and communication officers of the regional activity centres and the Coordination Unit. They met regularly via teleconference to ensure system-wide coherence in communication and messaging.

35. It was stressed that implementation of the strategy would be the responsibility of the entire Mediterranean Action Plan system, with the Secretariat taking a lead role through the Regional Activity Centre for Information and Communication. The Focal Points finally agreed that reference should indeed be made to the whole Mediterranean Action Plan system, but that the lead component could also be acknowledged in a preambular paragraph.

Main elements and road map for the preparation of a Mediterranean Action Plan data management policy

36. Introducing the sub-item, the Coordinator drew attention to operative paragraph 4 of the Draft Decision. The main elements and road map for the preparation of a Mediterranean Action Plan data management policy were contained in annex II to the Draft Decision.

37. Welcoming the proposed annex, one focal point, speaking on behalf of a group of countries, proposed the addition to the Draft Decision of a preambular paragraph that recalled the adoption of decision IG.21/3 on the ecosystems approach, including adopting definitions of good environmental status and targets. In that decision, the Contracting Parties had adopted the data-sharing principles of the Barcelona Convention/Mediterranean Action Plan, and the Secretariat had been requested to ensure that those principles were implemented through the activities of all Barcelona Convention/Mediterranean Action Plan components.

Mediterranean Action Plan partners

38. Introducing the sub-item, the Coordinator drew attention to operative paragraph 5 of the Draft Decision. The list of new and renewed Mediterranean Action Plan partners, as approved by the Bureau, was contained in annex III to the Draft Decision. Additional background information on the applications was contained in document UNEP/MED WG.468/Inf.24.

39. One focal point, speaking on behalf of a group of countries, welcomed both the list of partners and the plan for its submission to the Contracting Parties at their 21st Meeting.

Medium-Term Strategy

40. Introducing the sub-item, the Coordinator drew attention to operative paragraphs 8 and 9 of the Draft Decision. The road map for the evaluation of the current Medium-Term Strategy and the preparation of the next one was contained in annex V to the Draft Decision.

41. One focal point, speaking on behalf of a group of countries, said that the new strategy should be built on the basis of the structure of the current one and take into account relevant global processes and initiatives such as the 2030 Agenda for Sustainable Development, the Intergovernmental Conference on an international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, the post-2020 Global Biodiversity Framework, the implementation of the Paris Agreement on Climate Change, and relevant resolutions of the United Nations Environment Assembly and implementation of the global Multilateral Environmental Agreements in the Mediterranean region. It should be a strategic document. Participation by all Contracting Parties and other stakeholders was essential for ensuring that they would take ownership of and internalize the Strategy.

42. In response to queries about the process and steps outlined in the annex and the ability of the Contracting Parties to express their views on the process and contribute to it, the Coordinator noted that it was crucial for the Contracting Parties to be involved throughout the process and assured the Focal Points that that would be done. Annex V to the Draft Decision was simply a timeline.

43. The Deputy Coordinator explained that clear instructions on the substantive elements of the strategy were expected to be given through the ministerial declaration expected to be adopted by the Contracting Parties at their 21st Meeting. The Secretariat would undertake the work of drafting the strategy and would need support from external consultants. Alternatively, the Contracting Parties might wish to perform the task themselves, but that would require a strong commitment, numerous meetings and additional resources. Given the weightiness of the task, one focal point extolled the virtues of using external advisers, with their cutting-edge knowledge, despite their cost, and in addition to the expertise the Contracting Parties could themselves provide.

44. Another focal point, speaking on behalf of a group of countries, also proposed that other methods for ensuring the involvement of the Contracting Parties be explored, such as a leader or champion mechanism or a steering committee.

45. The Focal Points requested the Secretariat to produce a revised version of annex V to the Draft Decision, reflecting the comments made during the meeting, for submission to the Contracting Parties at their 21st Meeting, to include more detail about the process as proposed and to include possible options for ensuring that the input of the Contracting Parties was sought and used throughout.

Shift to thematic Focal Points

46. Introducing the sub-item, the Coordinator drew attention to operative paragraph 10 of the Draft Decision. The assessment of the Meeting of Thematic Focal Points of Specially Protected Areas and Biodiversity, conducted on a trial basis in the biennium 2018–2019, was contained in annex VI to the Draft Decision.

47. One focal point, speaking on behalf of a group of countries, referred to decision of COP18 stating “that the current MAP Components Focal Points system will be refocussed into Thematic Focal Points so as to promote coherent approach into the implementation of the Convention, its Protocols and the programme of work..”. She proposed ways of making the process more cost-effective. The

format could be reviewed, and costs trimmed by holding meetings back to back with others to allow more Focal Points to participate, and by making requests for input from Focal Points more targeted with a view to soliciting more useful responses. She invited the Secretariat to develop further the concept and to refine the proposal for presentation at COP 21, together with its budgetary implications.

48. Another focal point, however, noting the concerns reflected in the report and the lack of a clear conclusion regarding the added value of such a shift, including in the reactions of specially protected areas and biological diversity Focal Points, questioned the utility of pursuing the process or at least of widening it further.

49. The Focal Points requested the Secretariat to examine ways of ensuring greater cost-effectiveness and more efficient expert input into thematic meetings, and to make a proposal on the way forward, with budgetary implications, for consideration by the Contracting Parties at their 21st Meeting. The Coordinator requested precise guidance from the Focal Points in that task.

Refined appendix to the Updated Resource Mobilization Strategy

50. Introducing the sub-item, the Coordinator drew attention to operative paragraph 12 of the Draft Decision. The appendix to the Updated Resource Mobilization Strategy, refined pursuant to decision IG.23/5 to account for the resource requirement for each strategic outcome and the relevance of potential donors to each of those outcomes, was contained in annex VIII to the Draft Decision.

51. One focal point, speaking on behalf of a group of countries, said that the development of the appendix had been a useful exercise and should be repeated for the new activities that would be planned following the adoption of the new medium-term strategy.

Areas of cooperation with the UNESCO/Man and the Biosphere Programme

52. Introducing the sub-item, the Coordinator drew attention to operative paragraph 13 of the Draft Decision. Areas of cooperation between the Mediterranean Action Plan and the UNESCO/Man and the Biosphere Programme were outlined in annex IX to the Draft Decision.

53. One focal point, speaking on behalf of a group of countries, welcomed the efforts at closer collaboration with UNESCO/MAB. She proposed widening the scope of that cooperation with UNESCO on the following topics: maritime spatial planning, Integrated Coastal-Zone Management, science-policy interface, taking into account the on-going work of the IPBES and the UN Decade of Ocean Science for Sustainable Development that is to be launched. She proposed these to be included both in the Draft Decision and the in the proposed areas of cooperation with UNESCO.

54. The Coordinator pointed out that such an agreement with UNESCO would require wider and more complex negotiations that could not be undertaken before the 21st Meeting of the Contracting Parties.

55. The Focal Points agreed to mention in the text of the Draft Decision and in annex IX the possible additional areas of cooperation with UNESCO as a potential step towards wider cooperation.

Development of host country agreements for regional activity centres

56. Introducing the sub-item, the Coordinator drew attention to operative paragraph 14 of the decision. The updated version of the minimum common provisions for host country agreements for regional activity centres, showing the input received as tracked changes, was contained in annex X to the Draft Decision. The input received by host Governments of regional activity centres was presented in full in document UNEP/MED WG.468/Inf.23.

57. Two Focal Points, one speaking on behalf of a group of countries, drew attention to the very divergent views expressed by the host countries. The focal point speaking on behalf of a group of countries requested the Secretariat to undertake further work to find common ground and identify possible solutions on the basis of the proposals submitted by host countries. The other focal point, underscoring the specificities of the different centres, which had been created at different times for different purposes, warned that imposing homogeneity could disrupt their work.

58. The Coordinator proposed to hold, in the margins of the current meeting, a meeting of host countries for which the Secretariat would prepare, as requested, a tabular overview of shared and divergent views. The focal point speaking on behalf of a group of countries stressed that, if any matter with an impact on the programme of work or budget was raised at that meeting, the ensuing discussion should be held in the plenary.

59. Reporting on the outcome of that meeting, the representative of the Secretariat said that the discussions had confirmed a divergence of views, owing mainly to differences in national laws, situations and restrictions. The representatives of the host countries had welcomed the document prepared by the Secretariat to aid the deliberations and had wished to receive it electronically for further comment. Upon receipt of their views, the Secretariat would prepare an information document for the 21st Meeting of the Contracting Parities to provide input into discussions on a mandate for further work on the issue during the intersessional period between the 21st and 22nd meetings of the Contracting Parties so that a related proposal could be made for consideration at the latter meeting.

60. It was therefore proposed that operative paragraph 16 in the Draft Decision be replaced with text inviting the Secretariat, in collaboration with Contracting Parties hosting Mediterranean Action Plan regional activity centres, to present minimum common provisions of host country agreements for such centres to the Contracting Parties at their 22nd Meeting, building on the input provided by the Contracting Parties in the aforementioned information document and additional guidance from them.

Composition of the Mediterranean Commission on Sustainable Development

61. Introducing the sub-item, the Coordinator drew attention to operative paragraphs 6 and 7 of the Draft Decision. The proposed composition of the Mediterranean Commission on Sustainable Development for 2020–2021 was contained in Annex IV to the Draft Decision.

62. One focal point, speaking on behalf of a group of countries, welcomed the proposed membership of the Commission and the request, in operative paragraph 7, for the Commission's Steering Committee to identify and implement, with support from the Secretariat, possible ways to keep outgoing members of the Commission involved in its work. The Coordinator confirmed that the Secretariat would make efforts to harness the expertise of former members without financial implications.

Joint Cooperation Strategy

63. Introducing the sub-item, the Coordinator drew attention to the draft joint cooperation strategy on spatial-based protection and management measures for marine biodiversity among the Secretariats of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the General Fisheries Commission for the Mediterranean, IUCN-Med and UNEP/MAP, which was contained in Annex VII to the Draft Decision.

64. One Focal Point, supported by another, recalled that not all the Contracting Parties to the Barcelona Convention were parties to the United Nations Convention on the Law of the Sea and proposed that the fourth preambular paragraph of the text be amended accordingly. Another focal point, speaking on behalf of a group of countries, thanked the Secretariat for its work on the text and highlighted the commitment of the group to the international Ocean Governance. She informed of the group's participation in the consultations on this document. In relation to the fourth preambular paragraph she highlighted the importance of keeping the paragraph, emphasizing the universal character of the Convention, which sets out the legal framework within which all the activities in the oceans and seas must be carried out and is of strategic importance as the basis for national, regional and global action and cooperation in the marine sector, noting that its integrity needs to be maintained, as recognized also by the UN Conference on Environment and Development, in chapter 17 of Agenda 21.

65. The Focal Points agreed that the text should be submitted for consideration at the 21st Meeting of the Contracting Parties. Proposed amendments to the text and elements of it on which there was not yet consensus, such as the fourth preambular paragraph, would be left in square brackets. It was further understood that other partner organizations mentioned in the draft strategy would also need to discuss the matter internally and that that might result in changes to the text that would require further

consultations with the Contracting Parties and make it impossible to finalize the strategy in time for the 21st Meeting of the Contracting Parties.

66. The Focal Points endorsed the Draft Decision and the Annex thereto, with the agreed square brackets, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 2 is set out in Annex III to the present report.

Draft Decision on implementation, monitoring and mid-term evaluation of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean

67. The Coordinator introduced a Draft Decision relating to the implementation, monitoring and mid-term evaluation of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean, as set out in document UNEP/MED WG.468/6. Drawing attention to the updated list of 28 indicators from the Mediterranean Sustainability Dashboard that was contained in Annex I to the Draft Decision, he said that the list was still a living document.

68. A representative of an observer organization/Mediterranean Action Plan partner said that the adoption of the Draft Decision by the Contracting Parties would send a clear message that countries in the Mediterranean region were committed to implementing the Sustainable Development Goals.

69. Ms. Stojanovic, speaking in her capacity as president of the Steering Committee of the Mediterranean Commission on Sustainable Development, said that two of the conclusions reached at the eighteenth meeting of the Commission had been that a cross-cutting approach should be adopted to address in parallel the evaluation of the Mediterranean Action Plan mid-term strategy and the mid-term evaluations of the Mediterranean Strategy for Sustainable Development and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean, and that the Simplified Peer Review Mechanism should be further strengthened through the presentation of voluntary national reviews. She also drew attention to the important work done in the previous two years to update the list of indicators of the Mediterranean Sustainability Dashboard in line with the mandate provided by the Contracting Parties at their twentieth meeting.

70. One focal point, speaking on behalf of a group of countries, said that the group needed more time to consider the Dashboard and proposed that operative paragraphs 1, 2 and 9 be placed in square brackets. Another focal point and a representative of an observer organization/Mediterranean Action Plan partner, however, stressed the tremendous work that had gone into the preparation of the Dashboard, over many years, and advocated its adoption.

71. Regarding the proposed Mediterranean Green Business Award, one focal point said that the effectiveness of such programmes in increasing visibility should be evaluated before any new programme was initiated. In response, the representative of the Regional Activity Centre for Sustainable Consumption and Production explained that the first award would be financed entirely by funding external to the Mediterranean Trust Fund. Furthermore, before the award was designed, a benchmarking exercise would be carried out to ensure that there was no overlap or duplication with other such initiatives. The idea was for the award programme to continue beyond the first edition with the aim of increasing the visibility of and funding for green and circular businesses in the region.

72. The Focal Points endorsed the Draft Decision and the Annex thereto, with the agreed square brackets, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 3 is set out in Annex III to the present report.

Draft Decision on assessment studies

73. The Coordinator introduced the Draft Decision set out in document UNEP/MED WG.468/7 annexed to the decision were the draft key messages of the 2019 *Report on the State of the Environment and Development in the Mediterranean* (Annex I); the draft summary of that report for decision-makers (Annex II); the draft revised road map for the MED 2050 Foresight Study (Annex

III); and the draft road map for the consultation of decision-makers and stakeholders on the first assessment report on the current state and risks of climate and environmental changes in the Mediterranean (Annex IV).

74. One focal point said that she wished to record her Government's reservation with regard to the 2019 *Report on the State of the Environment and Development in the Mediterranean* and was unable to endorse any part of document UNEP/MED WG.468/7. She expressed concern about the mention of specific corridors. Her Government could not accept the information in the report on the number and types of invasive species without conclusive scientific evidence in that respect and detailed checklists. She asked to delete the mention of the Suez Canal in paragraphs 48 from Annex I and 28 from Annex II.

75. The president of the Mediterranean Commission on Sustainable Development and the representative of the Specially Protected Areas Regional Activity Centre both confirmed that the report had been reviewed by those bodies. One focal point quoted the report of the eighteenth meeting of the former body to indicate that the views expressed there had been divergent. In that regard, the Coordinator referred to the conclusion of that meeting, at which it had unanimously been agreed to forward the request to the meeting of the Mediterranean Action Plan Focal Points, reflecting the suggestions made by the Mediterranean Commission for Sustainable Development. The representative of the Blue Plan Regional Activity Centre outlined the stages of the consultation process that had been conducted and welcomed additional comments from Focal Points ahead of the submission of the document to the Contracting Parties at their 21st Meeting, proposing that she consult further with the Focal Points electronically to verify that their comments had been included.

76. Another Focal Point commended the report as a high-quality document with adequate methodology that would be useful for countries. It was a step forward in terms of scientific expertise compared with other recent documents and based on concrete indicators. She proffered that some of the weaknesses might stem from the quality and availability of data. Another focal point stressed the importance of rectifying that issue. She emphasized the importance of taking a broad view when addressing interactions between development and the marine and coastal environment. The representative of the Blue Plan Regional Activity Centre confirmed that the balance of data sources was in accordance with that of other documents produced by international bodies, followed the United Nations guidance thereon and was consistent with recognized practices for international assessment studies.

77. Two Focal Points, including one speaking on behalf of a group of countries, expressed their support for a proposal by the Chair of the EcAp Coordination Group meeting to refer in the Draft Decision to the road map for preparation of the 2023 Mediterranean Quality Status Report, using the outcome of the seventh Ecosystem Approach Coordination Group Meeting on that topic. The proposal was to endorse the road map, annex it to the decision and request the Secretariat and other components to further define in 2020, together with the Contracting Parties and members of the Correspondence Group on Monitoring, concrete requirements and deadlines for output delivery in relation to common indicators for each Contracting Party to ensure effective data collection and to address knowledge gaps.

78. Given the length of the 2019 *Report on the State of the Environment and Development in the Mediterranean*, one focal point, speaking on behalf of a group of countries, said that more time was needed to review the document and that the group was unable to pronounce on the content at the current time. Operative paragraphs 1 to 4 of the Draft Decision were therefore to be placed in square brackets. Similarly, time was required to consider the other annexes and so paragraphs 7, 8 and 9 should also remain in square brackets.

79. The Focal Points endorsed the Draft Decision and the Annex thereto, with the agreed square brackets, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 4 is set out in Annex III to the present report.

80. The Coordinator expressed the appreciation of the entire Secretariat to the main stakeholders who had been contributing on a voluntary basis to the shaping of the *Report*.

Conclusions and recommendations of the seventh meeting of the Ecosystem Approach Coordination Group (Athens, 9 September 2019)

81. At the Coordinator's request, the chair of the Ecosystem Approach Coordination Group presented a report on the seventh session of the group, held on 9 September 2019. The meeting had taken stock of the main achievements in the ecosystem approach roadmap since the publication of the first-ever Mediterranean Quality Status Report, in 2017, and had reviewed documents on key aspects of the implementation of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria. The conclusions and recommendations were presented in document WG.468/Inf.15.

B. Land- and sea-based pollution

Draft Decision on six regional plans to reduce/prevent marine pollution from land-based sources

82. The Coordinator introduced a Draft Decision on the main elements of the six regional plans to reduce/prevent marine pollution from land-based sources and on updating the annexes to the Protocols to the Barcelona Convention on the protection of the Mediterranean Sea against pollution from land-based sources and activities, the prevention of pollution of the Mediterranean Sea by transboundary movements of hazardous wastes and their disposal, and on the prevention of pollution in the Mediterranean Sea by dumping from ships and aircraft, as set out in document UNEP/MED WG.468/13.

83. In the ensuing discussion, two Focal Points, one speaking on behalf of a group of countries, welcomed the proposal and stressed the importance of distinguishing between large and small water treatment plants. The one speaking on behalf of a group of countries also stressed the importance of identifying which measures were legally binding. She wondered whether discussions were under way on specific activities that the Secretariat wished to undertake and suggested there might be a gap between the identification of necessary measures through monitoring and the implementation of those measures. She called for more emphasis on improving overall waste management, including a database, fed by information on the cost and effectiveness of measures, to help decision makers better address marine litter at source. Finally, she said that the group of countries was not yet in a position to accept to undertake the process of updating the annexes to the Protocol on hazardous wastes.

84. The Deputy Coordinator replied that the working groups to be formed for the next biennium for drafting the regional plans would consider the elements elaborated and that a proposal already existed for monitoring all regional plans for the purpose of reporting on implementation. The Secretariat would look at how it could mobilize resources to support countries in implementing measures to deal with wastewater. Supporting measures would be incorporated in the programme of work, but the structure of the regional plan already included supporting measures.

85. One Focal Point said that it was important to ensure that the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea was involved in all activities and negotiations related to the implementation of the Regional Plan on Marine Litter Management in the Mediterranean.

86. The representative of an observer organization/Mediterranean Action Plan partner noted that plastic pollution had become an important issue and that the Mediterranean had a severe problem. His organization believed the action plan on marine litter needed updating to directly address plastic and support by Mediterranean Governments through the phasing out of plastic leakage by 2030.

87. The Focal Points endorsed the Draft Decision and the Annex thereto for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 10 is set out in Annex III to the present report.

Draft Decision on marine litter

88. Introducing the sub-item, the Coordinator drew attention to the four sets of draft guidelines annexed to Draft Decision IG.24/11, which was contained in document UNEP/MED WG.468/14.

89. One Focal Point, speaking on behalf of a group of countries, said that the group welcomed the draft guidelines and believed they would facilitate the transition towards a circular economy. Several participants stressed the importance of combatting marine litter and gave examples of initiatives in that area.

90. The Coordinator announced that, in cooperation with UNEP, the Secretariat had recently launched the first regional node on marine litter. The nodes were tools for the cross-body implementation of regional action plans as part of the Global Partnership on Marine Litter. The Mediterranean node had agreed to be a testing ground. Contracting Parties would be able to submit content to enrich it and enhance knowledge about marine pollution prevention and reduction measures. Another representative of the Secretariat then presented the Mediterranean node on screen in greater detail.

91. The Focal Points endorsed the Draft Decision and the Annex thereto for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 11 is set out in Annex III to the present report.

Draft Decision on updated guidelines regulating the placement of artificial reefs at sea

92. The Coordinator introduced the draft guidelines, as amended at previous meetings and reflected in document UNEP/MED WG.468/15*, and explained that the Secretariat's note on the guidelines contained legal analysis. The Secretariat felt that, in the absence of prohibition of the placement of vessels, the updated guidelines helped Contracting Parties determine whether certain operations constituted placement of matter for a purpose other than the mere disposal thereof, rather than dumping, as referred to in the Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea. Noting that the guidelines should be read in the light of other instruments, including the London Protocol, the Secretariat recommended them in their entirety for approval and submission to the Contracting Parties at their 21st Meeting.

93. In the ensuing discussion, one focal point, speaking on behalf of a group of countries, acknowledged the good work of the Secretariat and the Mediterranean Action Plan system and said it was the mandate of the Regional Activity Centre for Specially Protected Areas to look at the guidelines from a biodiversity perspective. He said that his group stressed the fact that placement activities must not be used as an excuse to legitimize the dumping of material, such as artificial reefs, prohibited under the 1995 Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea, which unfortunately was not yet in force. Although the region already had stricter guidelines than those being discussed, the guidelines were necessary, so the group would compromise and work on the basis of the updated version.

94. He therefore proposed the addition of text to the decision to ensure that the guidelines would be without prejudice to the application of stricter provisions regarding the placement of artificial reefs in the Mediterranean Sea contained in other existing or future national and international instruments or programmes.

95. Another Focal Point said that, while his Government would not object to the majority view, it deeply regretted the endorsement of guidelines on the sinking of vessels, and the resulting deliberate alteration of the marine and coastal environment and habitats, mostly for economic reasons. It was also very concerned about the effective application of those guidelines and the monitoring of that application, and about the risk that they might become a means to justify the uncontrolled placement of objects in the marine environment. It hoped that the amendments to the Protocol would come into force as soon as possible and that, subsequently, the guidelines would be revisited to ensure their strict compliance with the Protocol. Another focal point agreed that situations permitted by the Protocol should be subject to strict guidelines.

96. One Focal Point, speaking on behalf of a group of countries, explained that the guidelines required some technical adjustments and that those would be submitted to the Secretariat as soon as possible after the current meeting for consideration by the Contracting Parties at the 21st Meeting. The group agreed to the removal of the square brackets from part C of the annex prior to that process. The Deputy Coordinator clarified that, if the upcoming deadline for submission of documents for that meeting was not met, the original version of the guidelines would be submitted to the Contracting Parties and the Secretariat would issue a corrigendum upon receipt of the new version if requested to do so.

97. One representative said that the objection to these guidelines is conceptual which puts in question the extra work that was carried out during the last biennium by the Secretariat. She believes that these guidelines will allow Parties who wish to do so to place artificial reefs in an environmentally sound way.

98. One Contracting Party reserved its position with respect to the reference made in the decision to the London Convention to which it is not a Party; the Contracting Party representative noted that this reference should not be interpreted as a change in the legal position of this Contracting Party with regard to the said Convention, nor could this be interpreted as imposing any legally binding obligation on a non-Party.

99. The Focal Points endorsed the Draft Decision and the Annex in square brackets, subject to the proposed revision process, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 12 is set out in Annex III to the present report.

Draft Decision on the Mediterranean Offshore Guidelines and Standards

100. The Coordinator introduced the Draft Decision relating to the Mediterranean Offshore Guidelines and Standards set out in document UNEP/MED WG.468/12/Rev.1.

101. All who spoke acknowledged that the Guidelines and Standards were of the utmost importance. One focal point said that some parts of the Guidelines and Standards would require further work in the future. Another said that the discharge limits for produced water established in the Draft Decision were not based on the best available techniques, and that more ambitious limits should be imposed. A representative of an observer organization/Mediterranean Action Plan partner replied that the oil content average monthly limit was in line with that established in the best available techniques guidance document on upstream hydrocarbon exploration and production published by the European Commission in April 2019, and with guidance produced by the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic. One focal point, speaking on behalf of a group of countries, said that the limits established were appropriate, bearing in mind the guidance produced by the OSPAR. He added, and other Focal Points agreed, that the limits represented minimum requirements, and that the Contracting Parties would be free to impose more stringent limits if they so wished.

102. The representative of another observer organization/Mediterranean Action Plan partner, supported by the representatives of two other such entities, said that no offshore oil or gas activities should be permitted in specially protected areas, and that restrictions should apply to activities that, while undertaken outside those areas, might nevertheless have an impact on them. She noted that geophysical surveys should be the subject of environmental impact assessments and that environmental monitoring in specially protected areas should be mandatory for all operations, and commissioning operations should not be allowed in specially protected areas. She added that if platform structures were installed, they should be removed without exception.

103. The Coordinator proposed that a technical group discussion be held in the margins of the current meeting to facilitate the incorporation of amendments to the Draft Decision with a view to finalizing it and submitting a clean version for consideration at the 21st Meeting of the Contracting Parties.

104. Later in the meeting, the Focal Points considered a revised version of the Draft Decision that took into account their comments and concerns and endorsed it, as orally amended, for consideration

by the Contracting Parties at their 21st Meeting. The Draft Decision 9 is set out in Annex III to the present report.

Draft Decision on the Road Map for the Possible Designation of the Mediterranean Sea Area as an Emission Control Area for Sulphur Oxides pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention

105. The Coordinator introduced a Draft Decision on the Road Map for the Possible Designation of the Mediterranean Sea Area as an Emission Control Area for Sulphur Oxides pursuant to Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL), within the Framework of the Barcelona Convention, set out in document UNEP/MED WG.468/11.

106. In the ensuing discussion, one focal point said that, while her country appreciated the environmental benefits of such a designation, it was not feasible, for some Contracting Parties, to complete knowledge-gathering and the preparation of further studies by the end of the 2020–2021 biennium. The designation would have significant economic, social and administrative ramifications that could not be dealt with – at least not in her country – unless technical and financial support was provided by REMPEC. She asked to include a new operational paragraph requesting support from the Secretariat. Another focal point, noting that not all the Contracting Parties were signatories to MARPOL Annex VI, asked whether it would be possible to conduct an in-depth analysis of those ramifications. A third, speaking on behalf of a group of countries, requested that the title of the Draft Decision, the second operative paragraph, the entire third operative paragraph and the annex to the Draft Decision be put in square brackets, as further technical discussions thereon were needed. Another focal point said that the need for additional socioeconomic impact studies should be stressed in the preambular paragraphs and in operative paragraph 2 (b).

107. One delegate, speaking on behalf of a group of countries, acknowledged the studies on the technical feasibility of a designation of a SOx ECA in the Mediterranean Sea carried out by REMPEC, the EU and France. She also acknowledged that in addition to existing studies, there is a need for further studies of both an economic and technological nature, as detailed in the Roadmap. The group supported the Roadmap, for consideration by the COP, with its goal to reach consensus amongst the Contracting Parties to the Barcelona Convention with a view to formulating a joint and coordinated proposal on the designation of the proposed Med ECA for the Mediterranean, as a whole, to the International Maritime Organization (IMO) to protect the health of the coastal citizens and their environment. She emphasized that there is a need for the joint commitment of all the states that are Contracting State Parties to the Barcelona Convention and invited the other Contracting Parties to share their views as to the dates for the submission to IMO. The group also took note of the existing studies on technical and economic feasibility of designation of the Mediterranean Sea as NOx ECA for consideration of future work. The group noted the links with the IMO preparation work in view of entering into force of the global limit of 0.5% Sulphur content in marine fuels as of 1/1/2020.

108. The Focal Points endorsed the Draft Decision and Annex thereto, with the agreed square brackets, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 8 is set out in Annex III to the present report.

C. Biodiversity and ecosystems

Draft Decision on identification and conservation of sites of particular ecological interest in the Mediterranean, including specially protected areas of Mediterranean importance

109. The Coordinator introduced the Draft Decision set out in document UNEP/MED WG.468/9. The draft updated format for the periodic review of specially protected areas of Mediterranean importance was annexed to the Draft Decision.

110. Two Focal Points, one of them speaking on behalf of a group of countries, shared their experiences of marine-protected areas under their jurisdictions. They both stressed the importance of

adequate resources, governance and management, and of regular reviews for maintaining the protected areas. One of the Focal Points said that his country needed additional support in that respect.

111. One Focal Point speaking on behalf of a group of countries also proposed to use the term "Certificate" instead of "Award". Following consideration of the concept of an award for specially protected areas of Mediterranean importance, it was agreed that the idea should relate more to certification and the awarding of a special status than to competition. It was pointed out that award programmes were time- and resource-consuming and that their effectiveness in increasing visibility should be evaluated before any new programme was initiated.

112. A representative of an observer organization/Mediterranean Action Plan partner proposed the addition to the Draft Decision of a preambular paragraph in order to recall the memorandum of understanding between the Mediterranean Action Plan and the General Fisheries Commission for the Mediterranean and the need to implement management measures to avoid significant adverse impact of fisheries on threatened coral species under annex II of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and comply with articles 11 and 12 of the Protocol. The representative of another such entity expressed the interest of his organization in becoming a member of the ad hoc group of experts for marine protected areas in the Mediterranean and proposed opening up to civil society the process of reviewing specially protected areas of Mediterranean importance.

113. Following the discussion, the Focal Points endorsed the revised Draft Decision, as orally amended, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 6 is set out in Annex III to the present report.

Draft Decision on strategies and action plans under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

114. The Deputy Coordinator introduced the Draft Decision set out in document UNEP/MED WG.468/10. Annexed to the decision were the conclusions and recommendations of the consultation process to evaluate the implementation of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region, as reviewed by the fourteenth meeting of Specially Protected Areas/Biodiversity thematic Focal Points (Annex I); the draft updated regional strategy for the conservation of monk seal in the Mediterranean (Annex II); the draft updated action plan for the conservation of marine turtles in the Mediterranean (Annex III); the draft updated action plan for the conservation of cartilaginous fishes (chondrichthyans) in the Mediterranean Sea (Annex IV); the draft updated action plan for the conservation of marine vegetation in the Mediterranean Sea (Annex V); the draft updated classification of benthic marine habitat types for the Mediterranean region (Annex VI); and the draft updated reference list of marine habitat types for the selection of sites to be included in the national inventories of natural sites of conservation interest in the Mediterranean (Annex VII).

115. One Focal Point, speaking on behalf of a group of countries, expressed support for the documents.

116. A representative of an observer organization/Mediterranean Action Plan partner also welcomed the Draft Decision and annexes, in particular the updating of the reference list of marine habitat types and the classification of benthic marine habitat types, saying that they were essential tools for increasing the reach of marine protected areas in the Mediterranean towards achieving Aichi Target 11.

117. A representative of another observer organization/Mediterranean Action Plan partner, acknowledging the huge amount of work done to implement the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region, said that it was nevertheless difficult to assess progress toward goals. That should be borne in mind when planning the future of the Strategic Action Plan. His other proposals included the establishment of a system of nationally determined contributions for the Plan and better coordination between environmental and fisheries administrations of the Contracting Parties for its implementation. He also considered that, even though

the other action plans were well-developed instruments, their implementation was not progressing quickly enough.

118. Following the discussion, the Focal Points endorsed the Draft Decision for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 7 is set out in Annex III to the present report.

D. Land and sea interaction and processes/integrated coastal zone management

Draft Decision on a common regional framework for integrated coastal zone management

119. The Coordinator introduced the Draft Decision set out in document UNEP/MED WG.468/8, urging all Contracting Parties that had not yet ratified the Protocol on Integrated Coastal Zone Management to do so as soon as possible. The proposed common regional framework for integrated coastal zone management was annexed to the Draft Decision.

120. Welcoming the draft framework and the methodology guidance, including the process of identifying operational recommendations to implement the framework, one focal point, speaking on behalf of a group of countries, stressed that the framework should not go beyond the legal obligations of the Integrated Coastal Zone Management Protocol, as was mentioned in the preamble to the Draft Decision and the framework itself. It was pointed out that the text contained several instances of phrasing that could be misinterpreted, and the Secretariat provided editorial changes.

121. Other Focal Points welcomed elements of the framework such as the coupling of management and monitoring systems, the semi-quantitative assessment of pressures on the marine environment, the employment of more scientifically reliable methods, and the potential for integrated coastal zone management to overcome sectoral approaches.

122. OneFocal Point, speaking on behalf of a group of countries, stressed the need for the Priority Actions Programme Regional Activity Centre to provide institutional legal guidance on specific provisions of the Protocol, especially article 8 on ratification, and said that pilot implementation of the framework would be useful. Another focal point said that risk-based assessment methods were already being piloted in her country though the Priority Actions Programme Regional Activity Centre. She emphasized the importance of implementing the framework at the sub-regional and national levels.

123. One Focal Point said that the common regional framework for integrated coastal zone management was intended only as guidance and did not impose any legally binding obligations on Contracting Parties to the Barcelona Convention.

124. Several Focal Points spoke of activities carried out in their countries with the Priority Actions Programme Regional Activity Centre in terms of their intention to ratify the Protocol or steps already being taken to do so. Another focal point stressed the need for additional building of national capacity in the area of marine spatial planning, suggesting that the Centre could organize additional local or regional workshops.

125. One Focal Point requested more time to consider whether there was need to include in the document text stating that the framework was intended only as guidance and was not legally binding for Contracting Parties; it was possible that existing text in the framework would suffice.

126. It was confirmed that the Secretariat would, as for all the other decisions, harmonize the wording of the decision to portray the Mediterranean Action Plan system as a whole and refer to the mandates of individual components in the preamble.

127. The Focal Points endorsed the Draft Decision and the Annex thereto for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 5 is set out in Annex III to the present report.

E. Sustainable consumption and production

Draft Decision on the development of a set of regional measures to support the development of green and circular businesses and to strengthen the demand for more sustainable products

128. The Deputy Coordinator introduced the Draft Decision set out in document UNEP/MED WG.468/16. Annexed to the Draft Decision was a proposed timeline for the development of a set of regional measures to support the development of green and circular businesses and to strengthen the demand for more sustainable products.

129. Two Focal Points, one of them speaking on behalf of a group of countries, said that much could be learned from the SwitchMed initiative and its green entrepreneurs. They also proposed that efforts be made to ensure that all national experts participated in the development of the measures, and to ensure that Governments needing support and assistance could also benefit from them.

130. In reference to the proposal in the Draft Decision that specific criteria for the definition of green and circular businesses in the Mediterranean be developed, one focal point cautioned against undertaking unnecessary work where appropriate criteria already existed.

131. Following the discussion, the Focal Points endorsed the Draft Decision for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 13 is set out in Annex III to the present report.

F. Programme of work and budget for 2020–2021

132. The Coordinator introduced the Draft Decision set out in document UNEP/MED WG.468/17 and UNEP/MED WG.468/17/Corr.1.

133. The Deputy Coordinator gave a presentation on the main elements of the programme of work, including the deliverables and targets. Analysis through graphs and charts was presented to explain in detail the proposed budget on the basis of the options recommended by the Contracting Parties at their twentieth meeting. She also presented preliminary elements of the process to strengthen the Secretariat to be developed in 2020–2023 to enable effective delivery of the new medium-term strategy for 2022–2027.

134. A number of Focal Points and the representative of an observer organization/Mediterranean Action Plan partner expressed appreciation for the presentation and for the work of the Secretariat.

135. One Focal Point, speaking on behalf of a group of countries, highlighted the importance of understanding the amount of surplus and its composition for the current biennium, in order to be able to discuss the Programme of Work and Budget. The Programme of Work is closely interlinked with the Draft Decisions and their financial implications, which is requirement, set in the Financial Rules of the Convention. In view of the proposal for possible use of a certain amount of the positive balance of the MTF, it is important explore the status of the indicative balance of the MTF of the 2018 – 19 biennium. In order to be able to consider any approach related to the possible use of the positive balance, it is a prerequisite to understand well the amount and composition based on some preliminary figures for 2019. She added that it would be useful if there could be some information on them by November, and that both budget scenarios put forward have implications on activities. In case there are any savings on the activities, as a part of the surplus; the group's preference would be to use these on activities and not on administrative costs. The composition of surplus is also closely related to the proposal of keeping a net cash balance amounting to 6-months of operations of the MAP system and the group would be grateful for more information from the UNEP HQ on whether there is such a practice in the other MEAs. While there was a presentation on how the Updated Scale of Assessed Contributions is to be applied this time, the question is whether the Secretariat considers putting forward a proposal to address this issue on a permanent basis along the option one in the paper. She expressed the group's interest in experiences of the other MEAs with the exchange rates. In relation to the Programme Support Costs (PSC) revenue and the related proposal of posts, she expressed the opinion of the group that the strengthening of the Secretariat, particularly in its work on scientific –

marine environment-related mandate is needed, especially in view of the forthcoming 2023 MED QSR and therefore, the group wanted to explore further if and to what extent these resources could be used for delivering on Ecosystem Approach-related mandates.

136. In her reply, the Deputy Coordinator said that no figures were yet available regarding a possible surplus for 2019, but that it seemed that all but one activity would be fully implemented. The savings existed mainly because there had been a considerable number of vacant posts since 2014, and also because efforts had been made to reduce the cost of activities in response to the previous deficit, and Contracting Parties did not always fully participate in meetings. The Secretariat had received a memo from the UNEP Corporate Services Division confirming the figures on the surplus, savings and a possible net cash balance and on the desirability of establishing that balance. The Secretariat could arrange for a presentation at the 21st Meeting of the Contracting Parties about exchange-rate problems, an issue unavoidably experienced by other multilateral environmental agreements subject to United Nations budgetary requirements, since conversions had to be made at the time funds were received.

137. The Coordinator explained what the Overhead Trust Account was and that it had increased in recent years as the implementation rate had gone up. The Account could not be used to strengthen scientific capacity, but only for administrative costs. The Bureau had once again asked the Secretariat to urge Contracting Parties to respond to nominations for meeting attendance by the specified deadlines.

138. Following up on comments made the previous day, one focal point suggested that some of the sustainable consumption and production resources listed under item 6.1.1 of the budget could be used to support countries developing national action plans, including his own country, which was engaging in a circular economy. The Deputy Coordinator, noting that Lebanon already benefited from the SwitchMed programme, said that the Secretariat would see how the request could be accommodated.

139. One Focal Point referred to the activities under projects under SCP/RAC generally covered by SWITCH MED II project or other funding strategies, noting that Turkey is not covered under SWITCH MED II or those other strategies. She asked the Secretariat to consider Turkey to be allocated support in this field through the MTF.

140. Another Focal Point said that dealing with issues relating to the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and Its Subsoil (Offshore Protocol) required dedicated human resources and asked how much the proposed new posts would cost. The Deputy Coordinator replied that the proposed strengthening of the Secretariat as presented in the draft programme of work would cost around 700,000 euros per biennium.

141. A Bureau member said that the Secretariat had been asked to develop a scenario that would allocate to each Regional Activity Centre an equal core share of financial support from the Mediterranean Trust Fund. He enquired whether that request had been followed up on and, if not, what the situation was. The Coordinator answered that the Secretariat had submitted a document to the Bureau containing a series of specific questions to clarify how the core share would be calculated, and that, in consultation with the Regional Activity Centres, it had conducted and distributed a detailed analysis of operational staff costs to establish a baseline for any future scenario.

142. The Secretariat stressed that those elements would be considered as part of an overall analysis of the structure and needs of the Secretariat and all MAP components that should accompany the development of the new medium-term strategy to ensure its efficient delivery through a possible strengthening of the Secretariat.

143. One focal point, speaking on behalf of a group of countries, requested more information on the new medium-term strategy for consideration at the upcoming meeting of the Contracting Parties, including the proposals for the strengthening of the Secretariat.

144. Responding to the Chair’s invitation to look at the Draft Decision, one Focal Point, speaking on behalf of a group of countries, said that the group was not yet in a position to discuss the Draft Decision on the programme of work and budget. It needed more information on the points raised, and some issues with financial implications had not been resolved. The Coordinator asked for the group of

countries to submit its points in writing so that the Secretariat could respond in consultation with UNEP headquarters.

145. Another Focal Point said that the focus should be on activities aligned with the objectives of the Convention. The 2019 Report on the State of the Environment and Development in the Mediterranean stated that major challenges and critical gaps existed and that concrete action through implementation and enforcement was lagging behind. A few years previously an analysis of allocations to the RACs was carried out and the recommendation was to allocate according to responsibility for Protocols, even thought this was not implemented. She noted that it was not agreed to provide an equal share among all RACs and to do so would require an explicit decision of the Parties. Proportional allocation to Regional Activity Centres had been rejected, and some of the Centres had been set up on the understanding that they would receive less funds, so any allocation based solely an equal core share of the MTF would require a thorough analysis and justification and should be discussed in the medium-term strategy. Contracting Parties should be told the budgetary implications of activities so that they could tailor their programmes to the resources available. Document UNEP/MED WG.468/17 stated that countries had to pay according to the new scale of assessment, but the scale might not be implemented retroactively in 2019. She wondered why table 1 of the document implied that France and Spain paid nothing towards their Regional Activity Centres. As for the additional costs created by late travel requests, those who submitted such requests should not travel if there were cost implications over the years and the need to increase their funding. Since one document talked about a drastic reduction in funding to the Regional Activity Centres, could that be achieved by shifting the balance between those Centres and the Coordinating Unit?

146. In response, the Deputy Coordinator said that the past practice had been for the Secretariat to issue corrective invoices if a Contracting Party had paid too much or too little in comparison with the new scale of assessment. UNEP headquarters had advised that the implementation of the new scale of assessment would not apply retroactively after approval by the 21st Meeting of the Contracting Parties. Rather than requesting a 4 per cent increase in contributions, the Secretariat had proposed using some savings from the positive balance of the Mediterranean Trust Fund. In addition to the 4 per cent, there were additional funds to cover major mandates such as the preparation of the medium-term strategy, expansion of the IMAP information system, implementation of the Prevention and Emergency Protocol, revision of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region and preparation of the pollution regional plans. Another representative of the Secretariat explained that the absence of figures for France and Spain was due to a problem with their accounting systems and that those Contracting Parties would provide the correct figures as soon as possible.

147. One Focal Point stated that because an in-depth discussion on the 2020-2021 PoW was postponed to the request of several parties, the important subject of new recruitments to strengthen the Secretariat was raised but was not concluded. Therefore, the focal point requested the Secretariat to insert to the PoW tables and explanations, the following posts: an Offshore Program Officer (P2/P3), a Marine Scientist officer (upgrade from P3 to P4), a Marine Litter Program Officer (P2/P3), a MED POL assistant (G5), all with a clear explanation of the additional annual costs of each post and possible budget sources, all to be discussed during the COP 21 meeting.

148. The representative of an observer organization/Mediterranean Action Plan partner expressed surprise that, even though there was a workplan for the Offshore Protocol, there was no budget. Eight years on from the enforcement of the Protocol, there were important things that needed to be done. The Regional Marine Pollution Emergency Response Centre for the Mediterranean had shown excellent leadership and could provide technical expertise, but countries needed to take a lead to support the activity. She urged Contracting Parties to take a lead and provide more regular support for implementation.

149. With regard to the Draft Decision, one focal point proposed the addition of text to operative paragraph 16 of the Draft Decision, which related to the request to the Secretariat to submit two options for the budget 2020-2021. She sought to underline the importance of the mandates and operations of the Mediterranean Action Plan components and acknowledge the need for the allocation

of adequate resources from the Mediterranean Trust Fund to enable the components to do their work effectively.

150. The Coordinator, while acknowledging that the choice lay with the Focal Points, said that the process of passing a Draft Decision on to the 21st Meeting of the Contracting Parties without review by the Focal Points was quite unorthodox and would place the preparatory segment of the 21st Meeting of the Contracting Parties under significant time pressure.

151. The Focal Points endorsed the Draft Decision and the Annex thereto, with the agreed square brackets, for consideration by the Contracting Parties at their 21st Meeting. The Draft Decision 14 is set out in Annex III to the present report.

V. Preparation of the 21st Meeting of the Contracting Parties (Agenda Item 6)

A. Update on preparations and expected outcome

152. The Coordinator presented information on arrangements for the 21st Meeting of the Contracting Parties, to be held at Castel dell'Ovo in Naples, Italy, from 2 to 5 December 2019, with a high-level session scheduled for 4 December. Noting that the host country agreement had been signed in August 2019, he drew attention to document UNEP/MED WG.468/19, which set out, inter alia, the priority areas to be addressed at the ministerial session of the meeting. Two important preparatory events would take place in October. The first was a youth event organized by the Italian Government, to be held in Naples on 23 October, for which the Contracting Parties were encouraged to nominate representatives. The second was a regional stakeholders consultation meeting organized by UNEP/MAP with support from Italy, to be held on 24 and 25 October in Athens. Furthermore, the Secretariat had received 26 proposals for side events to be held in the margins of the 21st Meeting of Contracting Parties.

153. The representative of an observer organization/Mediterranean Action Plan partner said that the meeting would take place at a critical juncture. In 2020, high-level decisions would be made that would have an enormous bearing on the implementation of the Barcelona Convention. It was time for all stakeholders to come together for an ambitious "new deal for nature and people" to reverse the catastrophic loss of nature and biodiversity that was threatening the future of humanity.

B. Provisional agenda

154. The Coordinator introduced document UNEP/MED WG.468/18 on elements of the provisional agenda of the 21st Meeting of the Contracting Parties.

155. One focal point, speaking on behalf of a group of countries, said that participants in the Interactive Ministerial Policy Review Session, which was addressed in item 5.3 of the provisional agenda, should be invited to discuss "other relevant global processes" in addition to the topics already listed. One focal point said that it should be specified what those other processes were, in order to give participants the opportunity to prepare, and that reference should be made to other top-level instruments, including the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa 2018–2030 Strategic Framework to Achieve Land Degradation Neutrality.

156. The Focal Points agreed to adopt the provisional agenda for the 21st Meeting of the Contracting Parties, as orally amended, and as set out in Annex IV to the present report.

C. Ministerial declaration: preparation process and main elements

157. The Coordinator introduced document UNEP/MED WG.468/19, which contained information on the preparation of the ministerial declaration to be adopted at the 21st Meeting of the Contracting Parties.

158. The President of the Steering Committee of the Mediterranean Commission on Sustainable Development gave a presentation on the discussion of the 18th Meeting of the Commission, held in Budva, Montenegro, from 11 to 13 June 2019 (UNEP/MED WG.469/11), to the preparation of the

Ministerial Declaration. She highlighted the inputs of the members of the Commission to the Ministerial Declaration of the 21st Meeting of the Contracting Parties provided after the meeting.

VI. Any other business (Agenda Item 7)

159. One Focal Point recalled that the Western Mediterranean Region Marine Oil and HNS Pollution Cooperation Project (West MOPoCo) had been launched in Paris on 13 March 2019. The Project, funded by the European Union, was aimed at strengthening collaboration in combating oil and chemical pollution in the western Mediterranean.

VII. Adoption of the report (Agenda Item 8)

160. The Focal Points adopted the draft meeting report set out in document UNEP/MED WG.468/L.1, as orally amended during the meeting. They entrusted the Rapporteur, working together with the Secretariat, with the task of finalizing the report.

VIII. Closure of the meeting (Agenda Item 9)

161. Following the customary exchange of courtesies, the meeting was declared closed at 8 p.m. on Friday, 13 September 2019.

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TUESDAY 10-13 SEPTEMBER 2019

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Annex II

Agenda

Agenda

1. Opening of the Meeting

2. Organizational Matters

- 2.1 Rules of Procedure
- 2.2 Election of Officers
- 2.3 Adoption of the Provisional Agenda
- 2.4 Organization of Work

3. Progress Report on Activities Carried Out during the 2018-2019 Biennium

4. Financial Report for 2016-2017 and 2018-2019

5. Specific Matters for Consideration and Action by the Meeting, including draft Decisions

- 5.1 Governance

  Including: Compliance Committee; MCSD Composition; Medium-Term Strategy; Information and Communication; Cooperation and Partners; Host Country Agreements for Regional Activity Centres; Thematic Focal Points; MSSD and SCP Action Plan Implementation; Assessment Studies
- 5.2 Land and Sea-based Pollution

  Including: Six Regional Plans to Reduce/Prevent Marine Pollution from Land-Based Sources; Standards and Guidelines under the Offshore, LBS and Dumping Protocols; Marine Litter; Possibility of Designating the Mediterranean as SOx Emission Control Area
- 5.3 Biodiversity and Ecosystems

  Including: Strategies and Action Plans under the SPA/BD Protocol; Marine Protected Areas and SPAMIs
- 5.4 Land and Sea Interaction and Processes / Integrated Coastal Zone Management

  Including: Common Regional Framework for ICZM
- 5.5 Sustainable Consumption and Production

  Including: Regional Measures on Green and Circular Businesses and Sustainable Products
- 5.6 MAP Programme of Work and Budget 2020-2021

6. Preparation of the 21st Meeting of the Contracting Parties (COP 21)

- 6.1 Update on COP 21 Preparation and Expected Outcome
- 6.2 Provisional Agenda of COP 21
- 6.3 Ministerial Declaration: Preparation Process and Main Elements

7. Any Other Business

8. Adoption of the Report

9. Closure of the Meeting

Annex III

Draft Decisions

Draft Decision IG.24/1

Compliance Committee

The Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first Meeting,

Recalling the General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling also the Environment Assembly resolution UNEP/EA.4/Res.20, of 15 March 2019, entitled "Fifth Programme for the Development and Periodic Review of Environmental Law (Montevideo Programme V): delivering for people and the planet",

Having considered Articles 26 and 27 of the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and the relevant provisions of its Protocols,

Recalling Decision IG.17/2 of the 15th Meeting of the Contracting Parties (COP 15) (Almeria, Spain, 15-18 January 2008) on Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, as amended by Decision IG.20/1 of the 17th Meeting of the Contracting Parties (COP 17) (Paris, France, 8-10 February 2012) and Decision IG.21/1 of the 18th Meeting of the Contracting Parties (COP 18) (Istanbul, Turkey, 3-6 December 2013),

Recalling also Decision IG.19/1 of the 16th Meeting of the Contracting Parties (COP 16) (Marrakesh, Morocco, 3-5 November 2009) on the Rules of Procedure of the Compliance Committee, as amended by Decision IG.21/1 of the 18th Meeting of the Contracting Parties (COP 18) (Istanbul, Turkey, 3-6 December 2013),

Recalling Decision IG.23/1 adopted by the Contracting Parties at their 20th Meeting (COP 20) by which the Contracting Parties invited the Secretariat to submit to each meeting of the Contracting Parties, on the basis of an analysis of the information contained in the National Reports, report on general advance made in the region, including at the legal and institutional levels, in implementing the Barcelona Convention and its Protocols along with proposal for further measures, as necessary.

Emphasizing the facilitative nature of the Compliance Committee in promoting compliance with the Barcelona Convention and its Protocols by providing advice and assisting Contracting Parties, as well as the role of the Compliance Committee in considering specific situations of actual or potential non-compliance by individual Contracting Parties and, at the request of the Meeting of the Contracting Parties, general compliance issues and any other issues,

Noting with appreciation the work undertaken by the Compliance Committee during the biennium 2018–2019, in particular ground-breaking work in providing specific and targeted key findings and draft recommendations on the basis of the national implementation reports for the biennium 2014-2015 submitted by the Contracting Parties, with the aim of delivering targeted action to promote compliance with the Barcelona Convention and its Protocols,

Seeking to promote the identification, as early as possible, of implementation challenges encountered by Contracting Parties, and the adoption of and recommendations on the most appropriate and effective measures addressing those challenges,

Stressing that the submission of national implementation reports by Contracting Parties, as per Article 26 of the Barcelona Convention, is instrumental in providing the Compliance Committee with the resources needed to perform its role in considering specific and general compliance issues,

Welcoming the submission of the national implementation reports for the biennium 2016-2017, using the new online Barcelona Convention Reporting System (BCRS), and the progress made by Contracting Parties in implementing the Barcelona Convention and its Protocols,

Recognizing the challenges faced by the Contracting Parties in reporting and implementing, and the need to ensure that legal and technical advice is delivered to facilitate their reporting process and that, as resources allow and in collaboration with other Multilateral Environmental Agreements, capacity building initiatives should be explored to enhance implementation of the Barcelona Convention and its Protocols,

Conscious of the need to continue enhancing the effectiveness of the compliance mechanisms and procedures, thus strengthening the role of the Compliance Committee in facilitating and promoting compliance with the Barcelona Convention and its Protocols,

Having considered the Compliance Committee meeting reports of the biennium 2018–2019,

1. *[Take note* of the Activity Report of the Compliance Committee for the Biennium 2018-2019, set out in Annex I to the present Decision;]

2. *Adopt* the Programme of Work of the Compliance Committee for the Biennium 2020-2021, set out in Annex II to the present Decision;

3. *[Adopt* the Recommendations to Promote Compliance with the Barcelona Convention and its Protocols and Improve their Implementation, set out in Annex III to the present Decision;]

4. *Urge* those Contracting Parties who have not yet submitted their national implementation reports for the biennium 2016-2017 to do so as soon as possible but before December 2019;

5. *Invite* the Contracting Parties to submit their national implementation reports for the biennium 2018-2019 using the new online Barcelona Convention Reporting System by December 2020;

6. *[Elect and/or renew*, in accordance with the Procedures and Mechanisms on Compliance, the membership of the Compliance Committee, set out in Annex IV to the present Decision;]

7. *Request* the Compliance Committee to report to the Contracting Parties at the 22nd Meeting of the Contracting Parties (COP 22) on the work it has carried out to fulfil its functions in accordance with paragraph 31 of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols.

Annex I

Activity Report of the Compliance Committee for the Biennium 2018-2019

(To be added for the 21st Meeting of the Contracting Parties (COP 21) (Naples, Italy, 2-5 December 2019))

Annex II

Programme of Work of the Compliance Committee for the Biennium 2020-2021

Draft Programme of Work of the Compliance Committee for the biennium 2020-2021		
Activity	**Lead/Who**	**Timetable/When**
Specific submissions under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocol		
1. To consider any submissions and/or referrals in accordance with Section V of the Procedures and Mechanisms on Compliance	Compliance Committee	16th and 17th Compliance Committee Meetings
General issues of compliance under the Barcelona Convention and its Protocols		
2. To consider specific situations of actual or potential non-compliance by individual Parties in accordance with Section IV of the Procedures and Mechanisms on Compliance	Compliance Committee	16th and 17th Compliance Committee Meetings
3. At the request of the Meeting of the Contracting Parties, to consider general compliance issues in accordance with Section IV of the Procedures and Mechanisms on Compliance	Compliance Committee	16th and 17th Compliance Committee Meetings
4. To consider any other issues as requested by the Meeting of the Contracting Parties in accordance with Section IV of the Procedures and Mechanisms on Compliance	Compliance Committee	16th and 17th Compliance Committee Meetings
Enhancement activities		
5. To continue work in order to enhance Compliance Mechanisms' and Procedures' effectiveness	Compliance Committee	16th and 17th Compliance Committee Meetings
6. To continue to identify, promote and strengthen synergies, where appropriate, with other Compliance Committee's Multilateral Environmental Agreements (MEAs)	Compliance Committee	16th and 17th Compliance Committee Meetings
Functioning of the Compliance Committee		
7. To review the Rules of Procedure of the Compliance Committee in order to further clarify a number of outstanding issues and make a proposal as appropriate for adjusting accordingly the Procedures and Mechanism on Compliance for consideration by COP 22.	Compliance Committee	16th and 17th Compliance Committee Meetings

Annex III

Recommendations to Promote Compliance with the Barcelona Convention and its Protocols and Improve their Implementation

RECOMMENDATIONS TO PROMOTE COMPLIANCE WITH THE BARCELONA CONVENTION AND ITS PROTOCOLS AND IMPROVE THEIR IMPLEMENTATION

1. In order to implement the Barcelona Convention and its Protocols, Contracting Parties need to put the necessary legislative and policy measures in place, and to establish the corresponding institutional structures to implement them and follow-up and assess the effectiveness of these measures towards a good ecological status of the Mediterranean Sea. Establishing the necessary governance structures and institutions is key for the implementation of the Barcelona Convention and its Protocols. These core institutions have been examined by the Compliance Committee intersessionally, on the basis of the Updated Synthesis Analysis (UNEP/MED CC. 15/Inf.3) and the Updated General Status of Progress (UNEP/MED CC.15/Inf.4) prepared by the Secretariat, as well as on the basis of the national implementation reports for the 2014-2015 biennium, as deemed necessary. As a result, presented hereinafter, are the proposed recommendations to promote compliance with the Barcelona Convention and its Protocols.
2. The proposed recommendations listed below were deemed as high priority issues and therefore the Compliance Committee urges Contracting Parties to direct efforts and take significant action as detailed. They form part of a comprehensive package of key findings and additional recommendations, which is annexed to the Activity Report of the Compliance Committee for the biennium 2018-2019 to COP 21.
3. The proposed recommendations presented below should be understood within the limitations which arise from the fact that not all Contracting Parties have submitted their national implementation reports for the 2014-2015 biennium; the limited number of Contracting Parties to some Protocols, and additionally, the difference in the amount of information submitted by Contracting Parties in their national implementation reports.

Cross-cutting recommendations to promote compliance with the Barcelona Convention and its Protocols

1. To remind the Contracting Parties concerned that the non-submission of national implementation reports under Article 26 of the Barcelona Convention leads the Compliance Committee on a case-by-case basis and within its mandate to trigger the compliance mechanism leading to the consideration of the measures laid down in Section VII of the Procedures and Mechanisms of Compliance;
2. To ask the Secretariat to explore the commitment of adequate resources (both financial and other available) and actions to implement measures of capacity building within the Barcelona Convention framework that would also allow the Compliance Committee to take forward a programme of work for designing and implementing capacity-building measures to improve compliance and especially reporting by the Contracting Parties;
3. In order to increase the submission rate of national implementation reports under Article 26 of the Barcelona Convention and their completeness, to invite the Compliance Committee Chairperson or other appointed representative to participate, having an active role, at the main Governance meetings of the Barcelona Convention;
4. To enhance data collection through the existing INFO/MAP system and its further development, and explore the means and ways to support Contracting Parties in terms of capacity building aiming to ensure coherence at national level and to secure availability and accessibility to necessary infrastructure for providing consistent data management for reporting purposes;
5. To urge the Contracting Parties concerned to report on enforcement measures;

Recommendations to promote compliance with the Barcelona Convention

To urge and recommend the Contracting Parties concerned:

6. To establish and improve Environmental Assessment, in particular Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) in the coastal zone as well as in the transboundary context, and to establish cooperation mechanisms in cases of transboundary EIAs by adopting the required legal framework and setting the corresponding institutional arrangements;
7. To integrate Integrated Coastal Zone Management (ICZM) into the physical planning of their coastal zone; and invite the Priority Actions Programme/Regional Activity Centre (PAP/RAC) to explore how best Contracting Parties could be assisted in this field;
8. To establish the legal framework and institutional structures for monitoring marine pollution, and to consider these as high priority task including the allocation of sufficient resources by those countries to achieve these goals;

Recommendations to promote compliance with the Dumping Protocol

9. The Secretariat is requested to explore in collaboration with other Multilateral Environmental Agreements (MEAs) activities to build up enforcement capacities to ensure the effective implementation of the Dumping Protocol. This could take the form of workshops, seminars or training activities;

Recommendations to promote compliance with the Prevention and Emergency Protocol

10. To ensure that Contracting Parties have an effective system of mechanisms and procedures to manage communication between countries and with REMPEC in case of pollution incidents, action in that regard should be taken within the REMPEC Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021) (COP 19 Decision IG.22/4);

Recommendations to promote compliance with the LBS Protocol

11. To enhance the submission of data and avoid any uncertainty when interpreting data submitted, the Secretariat is requested to continue the work in assisting Contracting Parties to report reliable data on pollutants loads discharged directly and indirectly to the Mediterranean Sea through the existing on-line INFO MAP system (National Baseline Budget -NBB and Pollutant Release and Transfer Register-PRTR) and the work in strengthening the Contracting Parties' capacities for the efficient use of the INFO MAP system;
12. To request the Secretariat to continue to support the conception and follow-up of updated (National Actions Plans) NAPs and to get ownership from other institutions including International Financial Institutions (IFIs) on depollution projects;
13. MED POL should invite Contracting Parties to provide their existing list of depollution investment projects as well as to define their pollution hot spots, in line with the Secretariat terms of reference for (National Action Plans) NAPs. The Secretariat should provide a map for priority projects and pollution hot spots for the Mediterranean region;

Recommendations to promote compliance with the SPA/BD Protocol

To urge and recommend the Contracting Parties concerned:

14. To continue with the identification and establishment of Specially Protected Areas (SPAs) and candidate Specially Protected Areas of Mediterranean Importance (SPAMIs), further embracing open sea areas, including deep seas, which are much underrepresented within the Mediterranean protected areas and SPAMIs, as well as to adopt the necessary measures for the full implementation of article 7.2 of the SPA/BD Protocol;
15. To proceed with the inventory of the components of marine and coastal biodiversity as per article 3.3 of the SPA/BD Protocol;

Recommendations to promote compliance with the Hazardous Wastes Protocol

16. In collaboration with other relevant Multilateral Environmental Agreements (MEAs), with particular focus on the Basel Convention, the Secretariat to explore how to promote coordination and cooperation among Contracting Parties concerning the notification procedure for the transboundary movement of wastes and to strengthen institutional arrangements to ensure transparency, enforcement and public participation;

Recommendations to promote compliance with the Offshore Protocol

17. To give a strong warning to the concerned Contracting Parties with regards to the obligation to provide data on authorizations and permits for offshore activities, the removal of disused installations, inspections and enforcement measures eventually adopted;

Recommendations to promote compliance with the ICZM Protocol

To urge and recommend the Contracting Parties concerned:

18. To integrate ICZM into the physical planning of their coastal zone and to enforce the provision on the setback zones as non-building zones may exceeding the Protocol's 100 metres, in particular as regard as factors such as natural risk and climate change, and the need to protect natural and landscape heritage;
19. To take measures to protect the coastal and marine landscape as well as the characteristics of certain specific coastal ecosystems, in particular to restore and reactivate the positive role in coastal environmental processes of coastal wetlands, estuaries, and islands.
20. To adopt national strategies for ICZM to be implemented at appropriate territorial level through coastal plans and programmes, and to develop indicators for evaluating the effectiveness of these strategies, plans and programmes.

Annex IV

Renewal or Election of the Membership of the Compliance Committee

(To be added for the 21st Meeting of the Contracting Parties (COP 21) (Naples, Italy, 2-5 December 2019))

Draft Decision IG.24/2

Governance

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty first Meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012, in particular the paragraphs relevant to the institutional framework for sustainable development and the engagement of major groups and other stakeholders,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Bearing in mind the international community's commitments expressed in the Ministerial Declaration of the United Nations Environment Assembly at its fourth session,

Recalling Decision IG.17/5 on the governance of the Mediterranean Action Plan Barcelona Convention system, adopted by the Contracting Parties at their 15th Meeting (COP 15) (Almeria, Spain, 15-18 January 2008), and Decision IG.19/6 on the Mediterranean Action Plan Civil Society Cooperation and Partnership, adopted by the Contracting Parties at their 16th Meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009),

Recalling also Decisions IG.20/13 and IG.21/13 on governance, addressing the transition from Mediterranean Action Plan components to thematic focal points, and host country agreements in line with a unified template, adopted by the Contracting Parties at their 17th (COP 17) (Paris, France, 8-10 February 2012) and 18th (COP 18) (Istanbul, Turkey, 3-6 December 2013) Meetings respectively,

Recalling further Decision IG.22/1 on the Mid-Term Strategy for 2016–2021 of the Mediterranean Action Plan, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016),

Recalling Decision IG.22/17 on the Reform of the Mediterranean Commission on Sustainable Development (MCSD) and Updated MCSD Constitutive Documents, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016),
Recalling also Decision IG.22/3 on governance, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017),

Recalling also Decision IG.22/3 on governance, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017),

Recalling the mandate of INFO/RAC and its relevance to the implementation of the Operational Communication Strategy and of the Data Management Policy within the MAP-Barcelona Convention System, and of SPA/RAC in relation to the implementation of the Joint Cooperation Strategy on Spatial based Protection and Management Measures for Marine Biodiversity (Joint Strategy),

Recalling Decision IG.21/3 adopted at COP 18 whereby the data sharing principles of the Barcelona Convention MAP System where adopted and presented in Annex IV and by which the Secretariat was invited to ensure that the data sharing principles of the Barcelona Convention MAP System are implemented through the activities of all Barcelona Convention MAP Components,

Stressing the importance of a strengthened institutional framework in the Mediterranean region which responds coherently and effectively to current and future challenges, by *inter alia* enhancing coherence and coordination, avoiding duplication of efforts and reviewing progress in

implementing the Barcelona Convention and its Protocols and the United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP) Medium-Term Strategy (2016-2021),

Appreciating the guidance and advice provided to the Secretariat by the Bureau of the Contracting Parties to the Barcelona Convention on all policy and administrative matters related to the implementation of the Convention and its Protocols during the 2018–2019 biennium, and having considered the reports of their 85th, 87th and 88th Meetings held in April 2018, November 2018 and May 2019 respectively,

1. *Adopt* the United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP) Operational Communication Strategy 2020-2021 as set out in Annex I to the present Decision;

2. *Request* the MAP-Barcelona Convention system to fully implement the UNEP/MAP Operational Communication Strategy, under the guidance of the Coordinating Unit and in close cooperation with the MAP Communication Task Force;

3. *Acknowledge* the long-term need for support to the communication activities in the Coordination Unit;

4. *Encourage* the Contracting Parties to broaden their efforts to achieve the objectives outlined in the UNEP/MAP Operational Communication Strategy 2020-2021, by enhancing networks and building foundations for partnerships with MAP partners and other relevant stakeholders;

5. *Endorse* the Main Elements and Roadmap for the Preparation of a UNEP/MAP Data Management Policy, as set out in Annex II to the present Decision, and *request* the Secretariat (INFO/RAC) to develop such Policy, in close cooperation with the other MAP components and with the full involvement of the Contracting Parties, and to submit it to the Contracting Parties at their 22nd Meeting (COP 22);

6. *Endorse* the list of new and renewed MAP partners, set out in Annex III to the present Decision and *request* the Secretariat and MAP components to further promote the participation and effective engagement of MAP partners and other relevant stakeholders in the delivery of the MAP-Barcelona Convention system mandate, based on their expertise and relevance to that mandate;

7. *Approve* the membership of the Mediterranean Commission on Sustainable Development (MCSD) for the biennium 2020-2021, as set out in Annex IV to the present Decision;

8. *Call upon* the members of the MCSD, the Secretariat and the MAP Partners to mobilize expressions of interest in membership of the MCSD for the biennium 2022-2023, and *request* the MCSD Steering Committee, with support from the Secretariat, to identify and implement possible ways to keep the outgoing members of the Commission involved in its work;

9. *Approve* the Roadmap for the Evaluation of the 2016-2021 Medium-Term Strategy and the preparation of the 2022-2027 Medium-Term Strategy, as set out in Annex V to the present Decision;

10. *Request* the Secretariat to prepare the UNEP/MAP 2022-2027 Medium-Term Strategy in close cooperation with MAP components and with the full involvement of the Contracting Parties, and to submit it to the Contracting Parties at their 22nd Meeting (COP 22);

11. *Take note* of the results of the assessment of the meeting of the thematic focal points for Specially Protected Areas/Biological Diversity organized on a trial basis in the biennium 2018– 2019 and the relevant analysis as set out in Annex VI to the present Decision, and request the Secretariat to […];

12. *Endorse* the Joint Cooperation Strategy on Spatial-based Protection Management Measures for Marine Biodiversity, as set out in Annex VII to the present Decision and request the

Secretariat to take the necessary action for its finalization and implementation, and with the involvement of the relevant stakeholders;

13. *Take note* of the "Refined Appendix to the Updated Resource Mobilization Strategy", as set out in Annex VIII to the present Decision;

14. *Take note* of the areas of cooperation with the UNESCO/MAB Programme, as set out in Annex IX to the present Decision and *urges the respective* Secretariats to formalize it and ensure the most effective and beneficial partnership in the relevant fields;

15. [*Invite* the Secretariat in collaboration with the Contracting Parties hosting the MAP Regional Activity Centres to present the minimum common provisions to COP 22 for consideration, building on the inputs provided by the Contracting Parties hosting MAP Regional Activity Centres, as contained in document …….. and guidance from Contracting Parties].

Annex I

UNEP/MAP Operational Communication Strategy 2020-2021

Table of Contents

1. Background

The Mediterranean Action Plan (MAP) Coordinating Unit and Components jointly operate on the basis of the Barcelona Convention and its Protocols and on the basis of the Mid-Term Strategy 2016- 2021 (MTS).

This Operational Communication Strategy aims at supporting the implementation of the MTS for the period 2020 – 2021 and contributing, through joint communication and advocacy, to the successful implementation of the Barcelona Convention and its Protocols. It was developed on the basis of MAP Communication Strategy 2018-2023 (Annex I to Decision IG.23/3 – Governance).

The strategy is in line with the UN Environment publishing, media and visual identity guidelines. The strategy is also in line with the UN system-wide efforts to achieve greater coherence in communication activities with a growing emphasis on the Communicating as One approach. Relevant further policies and guidance issued by the organization will also be taken into account in its implementation.

The activities already carried out from the previous biennium will be reinforced in 2020-2021 and the new ones will be planned bearing in mind the need for concrete and measurable deliverables, particularly, in terms of feasibility of planned deliverables, number and size of actions envisaged and the aggregation of actions of similar nature (PoW 2020-21).

The planned deliverables have been proposed considering that delivering activities will extend beyond 2021 also in order to implement flexibility with the incoming preparation of the new MTS.

The Operational Communication Strategy is compliant with the new organization of thematic Focal Points.

2. Gap analysis

The following gap analysis highlights MAP's communication gaps in terms of (1) Identity, (2) Messages and content, (3) Channels and networks. It also presents the strategic opportunities that can be achieved by addressing these gaps through the present Operational Communication Strategy.

MAP Identity	**Gaps**	Brand building: MAP components communicate mainly in silos, implementing their respective visual identities and communicating different messages. As a result, it is challenging for external audiences to perceive MAP as one unified entity. MAP's name: MAP's full name 'UN Environment / Mediterranean Action Plan – Barcelona Convention Secretariat", is complex. This is reinforced further when it is used in combination with MAP components' names, making it challenging to perceive MAP as a single entity.
	Opportunity	**Position MAP as One System, composed of different components, but Communicating as One on regional priority issues; with the goal to unify and strengthen MAP's "Brand identity".**

Messages and Contents	**Gaps**	Choice of topics: The majority of MAP's communication activities are reactive, initiated on the occasion of meetings/events. MAP does not follow a plan and schedule with strategic priority topics to be highlighted within a specific timeframe. Data availability: Raising awareness about the state of the environment in the Mediterranean requires data-driven communication. However, consolidated data/trends on key topics at a regional level is sometimes unavailable. Style: MAP's style is often technical and challenging to understand for non-technical audiences. Language: English and French are more commonly used for communication. Yet, Arabic and Spanish are also MAP official languages, with 7 contracting parties having Arabic as an official language.
	Opportunity	The publication of the QSR and SoED reports: the reports will provide a basis for the articulation of messages on the state of the environment as part of the ongoing MAP narrative-building. This will in turn bolster advocacy efforts undertaken by MAP Leadership. The increasing awareness of the importance of the oceans: whether in the context of the global response to climate change (carbon sinks), or in relation to livelihoods and food security (sea-level rise, acidification, warming, declining fish stocks, pollution/microplastics), oceans (in the broadest sense) are taking centerstage. SDG 14 (Life below Water): as a global goal specifically dedicated to oceans and seas, SDG14 provides an opportunity to link MAP work to the 2030 Agenda for Sustainable Development, which is captivating the attention of policymakers and citizens around the world, including in the Mediterranean region. The recognized status of the MAP-system: the most advanced legal and institutional framework to have been set up on a Regional Sea; The favorable momentum in the Mediterranean region: evidence of such momentum includes but is not limited to the latest ratifications of the ICZM protocol and the Emission Control Arear (ECA) initiative. **Communicate strategically, focusing on clear and concrete objectives, in a language and a style that are tailored to MAP audiences**.

Channels and Networks	**Gaps**	Traditional Media: MAP has a limited presence in traditional media. For example, in 2017, MAP's name was mentioned less than 10 times in main Mediterranean online newspapers. Media coverage of recent important events (new ratification) and main reports (QSR), was limited, in recent years. Social Media: MAP's main counterparts communicate on Twitter (the large majority of Contracting Parties, Contracting Parties' officials, NGOs, International Organizations, etc.), sometimes mentioning MAP. However, MAP does not maintain a corporate account on any social media platform. Four RACs maintain Twitter accounts. Unlike several other MEAs, BC Secretariat does not have an account tweeting on developments under the Convention, including but not limited to amendments of protocols, the designation of new SPAMI, or additions to existing lists of endangered species (inter alia). There is a need for a #Hashtag referring to the MAP mandate and objectives (examples: #HealthyMediterranean; #Action4Med; #MedEnvironment). Network: Currently, MAP rarely communicates in partnership, yet, MAP has a wide and growing network of partners.
	Opportunity	**Develop MAP presence on key channels and promote communication through MAP network of partners to help raise awareness on MAP shared issues and promote understanding of MAP's work.** The vibrant Mediterranean Civil Society: Partnerships with Civil Society offer opportunities for amplifying MAP broadcasting capabilities to reach a wider audience, including at the national level. Mutually beneficial communication partnerships can be sought with Mediterranean Civil Society Organizations (including but not necessarily limited to MAP network members), for instance through the production of downloadable communication toolkits (containing printable posters, flyers, videos, etc.) on key MAP-BC themes that CSOs could use for their outreach and awareness-raising activities. Joint outreach sessions with "grassroot" organizations can also be envisages thus giving MAP access to unchartered territories in terms of public engagement.

3. Objectives

Through the Operational Communication Strategy, MAP aims to implement the three Mid-Term Strategy (MTS) objectives related to communication, as well as a new cross-cutting objective:

1. Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.
2. MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding.
3. Raised awareness and outreach.
4. The MAP brand and messages strengthened by "Communicating as One".

The objectives set in the Communication Strategy 2018-2023 are classified under the 4 main objectives above, as appropriate:

	Objectives of the Communication Strategy 2018-2023
Objective 1	Strengthen MAP's status as an authoritative voice on the environment in the Mediterranean.
	Improve quality and dissemination of information materials.
Objective 2	Secure the commitment of key stakeholders in order to support MAP issues and activities; and act as advocates, directly and indirectly.
	Improve the quality and dissemination of information materials.
	Encourage participation among researchers or partner bodies.
Objective 3	Ensure the visibility of MAP, its role and achievements.
	Raise awareness, among a wide but defined group of audiences certain MAP communication products, such as the MAP newsletter, can nonetheless be aimed at a well-defined audience group while remaining accessible to a larger audience through a "ripple effect". and user groups, about the critical role that the UN Environment/MAP system plays in the protection of the Mediterranean environment and the promotion of sustainable development in the region.
	Highlight the need for good governance and integrated marine and land ecosystem management in the Mediterranean.
	Inform and mobilize the Mediterranean population with our narrative through key information and media channels.
	Increase quality and quantity of media coverage.
Objective 4	Improve internal communication practices within the MAP Coordinating Unit and its components.

4. Communicating as One: A new cross-cutting objective

Communicating as One supports MAP components to enhance understanding and knowledge of MAP, harmonize their messages and magnify their message and impact. Joint communication presents MAP as a coherent entity without replacing the communication efforts of individual components but rather harnessing and amplifying them in a strategic way. The below principles and guidelines are in line with the United Nations 'Communicating as One' guide. The overall coordination of MAP communications is ensured by the CU under the supervision of the MAP Coordinator Office

4.1 Guiding approaches

The Guiding approaches for Communicating as One are:

- **Emphasize the shared values, mandate and key messages of the MAP system**. Joint MAP communication strengthens each component work through underlining the importance of joint efforts towards the implementation of the Barcelona Convention and its Protocols.
- **Adapt the guidance to the component-specific context.** These guidelines are to be interpreted according to the particular context and applied flexibly to meet each component needs and capacities.
- **Component-specific messages must be consistent with agreed common positions** and should complement joint MAP mandated efforts.
- **Consistent and coherent messaging is a shared responsibility among the Coordinating Unit and MAP components.** Communicating as One does not mean that only one entity speaks or acts as the spokesperson for MAP. MAP components can jointly identify a spokesperson on a

particular issue or to lead communication and advocacy initiatives in sectoral/thematic areas according to mandates and technical competence.

- **Coordination and sharing timely information among the Coordinating Unit and MAP components is important,** particularly on component-specific communication activities covering critical or sensitive issues or issues that may have system-wide implications. Coordination on these issues at regional level is important.

4.2 Modes of presentation

There are three presentation modalities for communication activities, depending on the context. These modes apply to all published materials, such as websites, statements, press releases, signage, publications, events, etc. The Information Task Force members (please see section 9 for detailed information on the Task Force) have flexibility in deciding which approach responds most appropriately to a given communication initiative or product.

- **Modality 1: Presenting MAP as one identity:** This method is for jointly produced or supported communication materials, or on communication materials which aim to strategically communicate that MAP is a single entity. This presentation features the identity of MAP, represented by MAP logo and MAP visual identity guidelines (3.4).
- **Modality 2: Presenting MAP components together in partnership:** This coordinated presentation features multiple components identities through the use of MAP and components logos and MAP visual identity guidelines (3.4). It conveys that the components are working together in partnership or are co-authors of the published materials.
- **Modality 3: Presenting a component separately:** For mandate-specific communications, it is recommended to use a separate, singular identity presentation that shows one component logo and its brand, in accordance with component-specific guidance.

4.3 MAP Identity Guidelines

<u>Terminology</u>:

To facilitate the perception of MAP as one single system, MAP is referred to as ‘The Mediterranean Action Plan’ (MAP) in external communication materials.

When appropriate, MAP is explained by mentioning that the Mediterranean Action Plan is a Regional Seas Programme of UN Environment which serves as the Secretariat to the Barcelona Convention and its Protocols.

An elaborate and consistent narrative that explains the MAP mandate and considers the achievements/success stories of components as well as progress under the BC will be crafted with inputs from the MAP Communications Taskforce.

<u>Visual Identity:</u>

When “presenting MAP as one identity – modality 1” or when “presenting MAP components together in partnership – modality 2”, a common join visual identity must be used. The consistent use of a limited color set and font help maintain a coherent and coordinated look across all products. MAP’s visual identity is aligned to the UN Environment visual identity guidelines:

- **Typeface:** The typeface family “Roboto” is UN Environment typeface for English, French and Spanish languages. Noto Kufi is UN Environment typeface for all communication in Arabic. They should be used for all external communication purposes.

- **Color:** The primary color selected is cyan, the color of the UN Environment.

Language and style

To mobilize and inspire action, MAP needs to combine scientific knowledge with accessible language and style. MAP should seek to adapt our voice and tone to meet the needs of each audience and situation.

In line with the UN Environment content strategy, MAP's style and language should:
- **Embrace being:** inspirational, accessible, credible, collaborative, human, action-oriented, simple, respectful, diverse.
- **Avoid being:** staid, ivory tower, sensational, exclusive, cold, idle, complex.

MAP official languages are Arabic, English, French and Spanish, and efforts must be made to ensure the availability of communication materials in all languages as much as possible.

4.4 Representation of UN Environment identity

All logos are an endorsement of the contents of the products on which they appear; the use of logos on published material indicates that it has been cleared by the designated official. The UN Environment logo must be used with caution. In particular:
- Publications featuring UN Environment logo must be approved by UN Environment Publishing Board (UN Environment Publishing Guidelines).
- Media material, such as press releases, featuring UN Environment logo must be approved by UN Environment designated official.

5. Key messages

Key messages empower individuals to speak knowingly and passionately about the organization, its work, and their own role in supporting its mandate. Key messages represent a simplified strategic framework that guides communication and tone. They describe succinctly MAP's vision and mandate. MAP key messages are in line with the UN Environment Narrative Framework.

MAP key messages are:
- **Issue:** We believe that the Mediterranean Sea and coastal area are threatened by our collective and ongoing exploitation of environmental resources.
- **Goal:** Changing our current course of action begins by informing, inspiring, and empowering people and governments to take meaningful and collective action.
- **Call to Action:** As the leading authority on environmental sustainability in the Mediterranean, we strive to set a regional agenda that leads with research, policies, and economic incentives.
- **Solution:** We will have succeeded when the Barcelona Convention and its Protocols are implemented ensuring "a healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse, contributing to sustainable development for the benefit of present and future generations".

During communication campaigns and scheduled events, key messages will also be developed for specific topics.

6. Methodology

The methodology is based on three basic steps which decline messages and adapt the message to the various channels and targets. The three steps should be at the basis of any communication action:

1. Clearly identify the message;
2. Identify the target audience and tailor the message accordingly;
3. Disseminate the message through appropriate channels.

The following elements are to be considered:
-The upgrading, enhancement and strengthening of MAP own broadcasting platforms, including websites and social media platforms;
-Entering into strategic partnerships with media organizations and other multipliers, including Mediterranean CSOs that are known to have substantial reach at the national level;
-Leveraging support from UN Environment and other institutional partners, including UN Information Centres, UN regional commissions, the EU and the Arab Maghreb Union.

Target audiences:

Primary: Decision makers relevant to MAP's mandate, such as Contracting Parties officials, and Focal Points;
Second: Main actors relevant to the MAP mandate at the national, regional and international levels, such as, MAP partners, Multilateral Environment Agreements (MEA), Non-Governmental Organizations (NGOs), Intergovernmental organization (IGOs), MCSD members, donors and business;
Third: Influencers, such as journalists, scientific community, academic community, NGOs.

Priority channels:

	Platforms / **Audiences**	**Meetings**	**Media**	**Social media**	**Website**	**E-Mail**	**Online platforms**
External	**Primary audience**: Decision makers	X		X	X	X	
	Second audience: Main actors	X		X		X	
	Third audience: Influencers	X	X	X	X		
Internal	**Task force members**	X				X	X
	ALL MAP staff	X				X	X

7. Key activities

The activities presented in this strategy aim to complement the activities established under the Programme of Work / Mid-Term Strategy 2016-2021.

The following table presents the activities to be implemented jointly, at the regional level, by the MAP Coordinating Unit and the MAP components. Each component should continue to support local mandate-specific or sub-regional project-specific communication activities, messages and products, applying their respective brand identities, provided that such mandate specific messages are consistent with the agreed common positions within the MAP system and that they complement joint MAP communication efforts.

Overview of the Operational Communication Strategy activities:

OBJECTIVE 1: Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.	
Outcomes	**Activities**
1.1. MAP flagship publications are accessible and tailored to MAP target audiences.	1.1.1 Develop a communication pack for MAP flagship publications.
1.2. MAP is a reference for information on Mediterranean environment, on both general and emerging topics.	1.2.1 Produce communication material to enhance accessibility of key information related to MAP mandate.
	1.2.2 Produce a biennial publication on emerging topics/threats highlighting existing knowledge gaps.

OBJECTIVE 2: MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding.	
Outcomes	**Activities**
2.1. MAP's multiple database and information systems are leveraged to raise awareness and understanding.	2.1.1 Create a single data visualization public interface highlighting key data from MAP multiple databases.

OBJECTIVE 3: Raised awareness and outreach.	
Outcomes	**Activities**
3.1. MAP is reaching its targeted audiences by communicating through key channels.	3.1.1 Develop MAP presence on the Twitter social media platform.
	3.1.2 Increase engagement with the media, both in a proactive and reactive way.
3.2. Knowledge on the state of the environment is enhanced.	3.2.1 Conduct one communication campaign for the “State of the Mediterranean Environment” (SoE). For all the campaigns, ad hoc communication material will be developed for each campaign.
	3.2.2 Conduct one communication campaign on the key topic identified for the biennium.
	3.2.3 Conduct communication campaigns at the occasion of key dates such as UN observances related to the Environment.
3.3 Knowledge on MAP mandate and action is enhanced	3.3.1 Improve accessibility of general information on MAP website, ensuring content is tailored to each targeted audience.
	3.3.2. Produce an annual report highlighting MAP key achievements.
	3.3.3 Conduct a communication campaign for each COP.
	3.3.4 Enhance MAP visibility at high level events.
	3.3.5 Enhance MAP visibility through a periodic publication: MED News
	3.3.6 Enhance MAP visibility through multimedia products: Videos, spots, slide shows, scientific documentaries

OBJECTIVE 4: The MAP brand and messages strengthened by "Communicating as One".	
Outcomes	**Activities**
4.1. MAP "brand" is strengthened and unified.	4.1.1 MAP Coordinating Unit, components and project management units follow the "Communicating as One" guidelines for joint MAP products and communications.
	4.1.2 Create a set of relevant templates to be used by all MAP components and projects.
	4.1.3 Create a set of presentation material (PowerPoint video, factsheet, brochure, map, roll-up and posters).
	4.1.4 Create MAP-branded regional visibility items.
	4.1.5 Corporate graphical layout for MAP publications: series of publication layouts.
4.2 MAP's reach is increased by joint communication.	4.2.1 MAP Coordinating Unit, components and project management units promote the annual communication campaigns.
4.3 Internal communication between Information Task Force members is enhanced.	4.3.1 Conduct regular Information Task Force meetings.
4.4 MAP Staff communication capacity is enhanced	4.4.1 Conduct communication training for MAP staff.
	4.4.2 Internal MAP networking and share of information enhanced: . Directory of all the MAP network maintenance and update (repository of NFPs designations); . On-line Event Calendar of all the MAP network initiatives maintenance and update; . Groupware of all the MAP network available: communication tool for document repository and interest groups management; d. Surveys and questionnaires platform available;

8. Monitoring

To evaluate success, a two-pronged approach to measurement will be applied, combining relevant metrics, strategic interpretation and forward-looking insights, including the following:

1. **Quantitative measures:** quantitative indicators and targets for each activity are defined in Annex 2 - Monitoring plan;

2. **Qualitative measures:** advocacy and reputation are measured by conducting online surveys addressed to each of the target audiences.

Monitoring timeline:

Monitoring exercises and reports presenting their results will be prepared on an annual basis, as follows

- Baseline evaluation to be conducted in January 2020; report to be delivered by March 2020;
- Mid-term evaluation to be conducted in January 2021; report to be delivered by March 2021;

- Final Evaluation to be conducted in January 2022 report to be delivered by March 2022.

Further information about the planned monitoring activities are provided in the Annex 1.

9. Responsibilities

While noting that communication is “everybody’s business”, certain staff have specific responsibilities for implementing the operational communication strategy. The responsibility of the implementation of each activity is specified in Annex 1 - Detailed Activities.

MAP’s main mechanism to coordinate communication activities is the “MAP Communication Task Force”. It provides a platform for information exchange and coordination. In particular, the Information Task Force responsibilities include:

- Support the implementation of the MAP Operational Communication Strategy;
- Enhance inter-component collaboration on communication on a timely basis;
- Promote a coherent image of MAP, and ensure quality and consistency of messaging on critical issues for which MAP needs to communicate with one voice;
- Identify new and innovative ways to demonstrate how MAP is delivering results;
- Capture and share lessons learned from both joint and component-specific communication work to support improved communication.

A focal point from each component is appointed by the component’s representative to participate in the ‘MAP Communication Task Force’. Currently representation is ensured as followed:

- CU Public Information Officer and Information Assistant;
- INFO/RAC EcAp and CE&D Senior officer.
- PAP/RAC Programmme officer;
- Plan Bleu/RAC Project Officer Information-Communication-Web;
- REMPEC Junior Programme Officer;
- SCP/RAC Communication Officer;
- SPA/RAC Communication assistant;

Each member should also act as the focal point for projects implemented under the leadership of its component.

The Communication Task Force is open to network with focal points of all MAP projects.

10. Timeline Schedule

The timeline shows the planned activities for the biennium 2020-21. Some activities will be carried out in continuous, other ones scheduled at the appropriate time and other ones will be preceded by a preparation period. Further information about content and schedule of the planned activities are provided in Annex 2.

2020-2021	I	II	III	IV	I	II	III	IV
1.1.1.			X	X			X	X
1.2.1.	X	X	X	X	X	X	X	X
1.2.2.								X
2.1.1.	X	X	X	X				
3.1.1.	X	X	X	X	X	X	X	X
3.1.2.	X	X	X	X	X	X	X	X
3.2.1.	X	X	X	X				
3.2.2.					X	X	X	X
3.2.3.			X				X	
3.3.1.	X	X	X	X	X	X	X	X
3.3.2.				X				X
3.3.3.								X
3.3.4.		X		X		X		X
3.3.5	X	X	X	X	X	X	X	X
3.3.6			X				X	
4.1.1.				X				
4.1.2.		X						
4.1.3.						X		
4.1.4.	X	X	X	X	X	X	X	X
4.1.5.	X	X	X	X				
4.2.1.	X	X	X	X	X	X	X	X
4.3.1.	X	X	X	X	X	X	X	X
4.4.1.		X		X		X		X
4.4.2.	X	X	X	X	X	X	X	X

UNEP/MAP Operational Communication Strategy – Annex 1: Detailed activities

ACTIVITIES		DELIVERABLES	ACTIVITIES DETAILS	FOCAL POINT	TIMELINE	AUDIENCES	CHANNELS
OBJECTIVE 1: Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making							
1.1. MAP flagship publications are accessible and tailored to MAP target audiences	1.1.1 Develop a communication pack for MAP flagship publications	A communication pack for MAP flagship publications	Produce a set of communication material tailored to MAP audiences to increase the accessibility and the relevance of MAP's flagship publications (such as the State of the Mediterranean Environment). The communication pack can include: an executive summary, data visualization products, an interactive report webpage, factsheets at country level to provide localized content, etc. Dissemination of the communication pack is ensured through activity 3.2.1.	INFO/RAC and CU with MAP COM TF	To be initiated 12 months before the publication date	Primary, second and third	Websites, emails, social media
1.2. MAP is a reference for information on Mediterranean environment, on both general and emerging topics	1.2.1 Produce communication material to enhance accessibility of key information related to MAP mandate	Communication material to enhance accessibility of key information related to MAP mandate	Produce a set of communication material tailored to MAP audiences to increase the accessibility of information on key topics (biodiversity, pollution, etc..). Material can include: factsheets, data visualization products, videos, etc.	INFO/RAC and CU with MAP COM TF	January - December 2020	Primary, second and third	Websites, emails, social media
	1.2.2 Produce a biennial publication on emerging topics/threats highlighting existing knowledge gaps	Biennial publication on emerging topics/threats highlighting existing knowledge gaps	Every biennium an emerging topic/threat with a knowledge gap is identified and a publication is developed to present available knowledge on the topic and relevant MAP activities. Dissemination of the publication is ensured through Activity 3.2.2.	INFO/RAC and CU with MAP COM TF	To be initiated 12 months before the publication date	Primary, second and third	Websites, emails, social media
OBJECTIVE 2: MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding							
2.1. MAP's multiple	2.1.1 Create a single data visualization public interface highlighting key data from MAP multiple databases	Maps and data products	MAP multiple databases (MED POL, BCRS, etc) are leveraged and connected	INFO/RAC			Websites

database and information systems are leveraged to raise awareness and understanding		elaborations using a customized data visualization public interface highlighting key data from MAP multiple databases	through a single platform highlighting a selected set of pertinent data/information. The platform is user friendly and accessible to all MAP audiences. To increase accessibility, data are presented through data visualization tools such as maps or graphics. The data visualization tools are automatically generated from MAP databases. Information presented include data on the state of the environment, MAP actions, Status of ratification of the Barcelona Convention and its Protocols, information on Focal Points. The platform can generate dashboards, ready to be downloaded and used off-line.		January - December 2020	Primary, second and third	
OBJECTIVE 3: Raised awareness and outreach							
3.1. MAP is reaching its targeted audiences by communicating through key channels	3.1.1 Develop MAP presence on the Twitter social media platform	MAP presence on the Twitter social media platform developed	A MAP corporate Twitter account is created and facilitate the dissemination of information on MAP activities and achievements, as well as on the State of the Environment in the Mediterranean.	CU and with the support of MAP COM TF	March 2020	Primary, second and third	Social media
	3.1.2 Increase engagement with the media, both in a proactive and reactive way	Engagement with the media, both in a proactive and reactive way Increased	Engagement with the media is increased both in a proactive and reactive way to ensure MAP is perceived by journalists as a reference on all issues linked to the Mediterranean environment: Proactive: a powerful news is identified and actively pitched to journalists. Type of news should be considered carefully, and MAP needs to engage with the media only when there is something powerful to say. Reactive: MAP is responding to a news story that was generated by an external actor. Reactive media opportunities require minimal effort and can result in significant exposure.	CU and with the support of MAP COM TF	Continuous	Third	Email, social media, and in-person

3.2. Knowledge on the state of the environment is enhanced	3.2.1 Conduct one communication campaign for the 'State of the Mediterranean Environment' (SoE). For all the campaigns, *ad hoc* communication material will be developed for each campaign	A) One communication campaign for each 'State of the Mediterranean Environment' publication	Regional campaigns are conducted in partnership with MAP's components and projects at the occasion of the launch of publication or/and key dates (environment day, Mediterranean Coast Day, etc.) with the goal to improve knowledge on the state of the environment. Each campaign is using multiple channels to reach all MAP targeted audiences, in particular traditional and social media.	INFO/RAC and CU, with MAP COM TF for the dissemination	To be initiated 12 months before the publication date	Primary, second and third	Media, Social media, websites
	3.2.2 Conduct one communication campaign on the key topic identified for the biennium	B) One communication campaign on the key topic identified for the biennium					
	3.2.3 Conduct communication campaigns at the occasion of key dates such as UN observances related to the Environment	C) Communication campaigns at the occasion of key dates such as UN observances related to the Environment					
3.3 Knowledge on MAP mandate and action is enhanced	3.3.1 Improve accessibility of general information on MAP website, ensuring content is tailored to each targeted audience	Accessibility of general information on MAP website improved, ensuring content is tailored to each targeted audience	MAP evergreen webpages are redesigned/rewritten, and data-visualization tools are used in order to facilitate understanding for all MAP targeted audiences.	INFO/RAC and CU, with MAP COM TF	January - December 2020	Third	Websites
	3.3.2. Produce an annual report highlighting MAP key achievements	Annual report highlighting MAP key achievements	An annual concise report is produced to highlight MAP key achievements. The report is not exhaustive but focus on a limited number of selected topics/actions which are all summarized and accessible to targeted audiences.	INFO/RAC and CU, with MAP COM TF	Report to be ready by mid-December every year	Primary	Websites and email
	3.3.3 Conduct a communication campaign for each COP	Communication campaign for COP 22	A communication package is prepared for each COP to increase visibility of the event. Key decisions taken at the COP are shared with relevant audiences. E4	INFO/RAC and CU, with MAP COM TF	COP22	Primary, second and third	Media, Social media, websites

	3.3.4 Increase MAP visibility at high level events	MAP visibility increased at high level events	MAP is communicating about its presence at key meetings and participate in conversation on social media. General MAP presentation materials are available and disseminated during meetings accordingly.	Focal point for each meeting (all RAC)	During the meetings (real time)	Primary, second and third	Social media
	3.3.5 Increase MAP visibility through a periodic publication: MED News	MED NEWS - the MAP Newsletter	Quarterly produced and delivered. Main sections: MAP Progress, Droplets, upcoming Events, Sustainable events. Active participation of INFO/RAC NFPs will be developed and an enlargement of contributors to other regional institutions and NGOs will be strengthened. New reorganization of thematic NFPs will be taken into account.	INFO/RAC and CU with all MAP COMM TF	Quarterly	Primary, second and third	Website
	3.3.6 Increase MAP visibility through multimedia products: Videos, spots, slide shows, scientific documentaries	Videos, spots, slide shows, scientific documentaries	Specific video will be developed in the framework of regional events and campaigns: spots, clips and documentaries according to the target.	INFO/RAC and CU with all MAP COMM TF	Yearly	Primary, second and third	Website, socia media
OBJECTIVE 4: Communicate as one to strengthen MAP's brand and messages							
4.1. MAP 'brand' is strengthened and unified	4.1.1 Each MAP component and project follow the 'Communicating as One' guidelines for joint MAP products and communications	'Communicating as One' guidelines for joint MAP products and communications to be followed by each MAP component and project	Guidelines to 'communicate as one' are created and available for joint MAP products and communications. It includes a set of key common advocacy messages, a common established visual identity, an editorial style guide and a media outreach guide. Joint communication presents MAP as a coherent entity without replacing the communications efforts of individual component rather, it can harness and amplify them in a strategic and streamlined way.	INFO/RAC and CU with MAP COMM TF	January - December 2020	Primary, second and third	All platforms
	4.1.2 Create a set of templates to be used by all MAP components and projects	Set of templates to be used by all MAP components and projects	A set of templates is created and available to all components. It includes templates such as PowerPoint, report, factsheet, roll- up, etc.	INFO/RAC and CU with MAP COMM TF	Second quarter 2020	Primary and second	Meetings, websites

	4.1.3 Create a set of presentation material	Set of presentation material	A set of material presenting MAP is created and available to all components to facilitate a unified MAP presentation to targeted audiences. It includes PowerPoint, video, factsheet, brochure, map, roll-up and posters.	INFO/RAC and CU with MAP COMM TF	Second quarter 2021	Primary and second	Meetings websites
	4.1.4 Create MAP's branded regional visibility items	MAP's branded regional visibility items	A set of visibility items is created and available to distribute during key meetings. In particular, MAP invests in branded USB keys in order to disseminate publications in a paper free manner, in line with its sustainable meeting strategy.	INFO/RAC and CU with MAP COMM TF	January - August 2020	Primary, second and third	Meetings websites
	4.1.5 Corporate graphical layout for MAP publications: series of publication layouts		A different layout studied and developed for each kind of publication of MAP. Printing is duty of MAP CU and other partners.				
4.2 MAP's reach is increased by joint communication	4.2.1 All MAP components participate in annual COM campaigns	All MAP components participation in annual COM campaigns	Regional communication activities are shared and disseminated through all MAP components channels.	All RACs	Continuous	Third	All platforms
4.3 Internal Communication is enhanced	4.3.1 Conduct regular Information Task Force meetings	Conduct regular MAP Communication Task Force meetings	Thematic and periodical meetings between the Information Task Force members are organized. Meetings are held through online platforms and in-person meetings. It includes team building, brainstorming and focus groups, synergy and internal communication.	INFO/RAC and CU with all MAP COMM TF	In person meeting: every 6 months Online meetings: every month	Internal	In-person and by skype
4.4. MAP Staff communication capacity is enhanced	4.4.1 Conduct communication training for MAP staff	Communication trainings for MAP staff	Trainings for non-communication staff are conducted on communication subjects, such as writing for external audiences, using social media, etc.	INFO/RAC	1 webinar every 6 months	Internal	Online platforms

	4.4.2. Internal MAP networking and share of information enhanced with different tools		a. Directory of all the MAP network maintenance and update (repository of NFPs designations); . On-line Event Calendar of all the MAP network initiatives maintenance and update; Groupware of all the MAP network available: communication tool for document repository and interest groups management; . Surveys and questionnaires platform available; Help desk and assistance for all the components of InfoMAP network.	Maintenance and updating of all the tools continuously assured by INFO/RAC.	INFO/RAC	Continuous	Internal	Online platforms

UNEP/MAP Operational Communication Strategy – Annex 2: Monitoring Plan

	Indicators	Target 2020	Target 2021	Total		Baseline	Results 2021	Results 2022	Total 2022
OBJECTIVE 1: Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making									
1.1.1 Develop a communication pack for MAP flagship publications	A communication pack is created for each flagship publication.	1	1	2					
1.2.1 Produce communication material to enhance accessibility of key information related to MAP mandate	Communication material is produced for each MTS thematic (at least two by topics = 14).	14	0	14					
1.2.2 Produce a biennial publication on emerging topics/threats highlighting existing knowledge gaps	A communication pack is created for each flagship publication.	0	1	1					
OBBJECTIVE 2: MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding									
2.1.1 Create map and data products with a single data visualization public interface highlighting key data from MAP multiple databases	A public interface is created to visualize key data from MAP databases	1	0	1					
OBJECTIVE 3: Raised awareness and outreach									
3.1.1 Develop MAP presence on the Twitter social media platform	A Twitter account is open by June 2020 The account is updated on a weekly basis at least Each year the number of followers	1 100% -	0 100% +50%	1 100% +50%					
3.1.2 Increase engagement with the media, both in a proactive and reactive way	Press coverage increased	+10%	+10%	+20%					
3.2.1 Conduct one communication campaign for each 'State of the Mediterranean Environment' publication	A campaign plan is developed and implemented for each State of the Environment	1	0	1					
3.2.2 Conduct one communication campaign on the key topic identified for the biennium	A campaign plan is developed and implemented	0	1	1					

3.2.3 Conduct communication campaigns at the occasion of key dates such as UN observances related to the Environment	A campaign plan is developed and implemented	2	2	4					
3.3.1 Improve accessibility of general information on MAP website, ensuring content is tailored to each targeted audience	Measured by online survey	-	-	-					
3.3.2. Produce an annual report highlighting MAP key achievements	One report is produced every year	1	1	2					
3.3.3 Conduct a communication campaign for each COP	A communication pack is created for the COP COP is covered by major Mediterranean media and on social media	0	1	1					
3.3.4 Increase MAP visibility at high level events	Content is posted on MAP social media at the occasion of high- level events	content posted for 12 events	content posted for 12 events	content posted for 24 events					
3.3.5 Increase MAP visibility through a periodic publication: MED News	Measured by online survey and number of subscriptions	+10%	+10%	+20%					
3.3.6 Increase MAP visibility through multimedia products: Videos, spots, slide shows, scientific documentaries	Measured by online survey and number of web sites visits	+10%	+10%	+20%					
OBJECTIVE 4: Communicate as one to strengthen MAP's brand and messages									
4.1.1 Each MAP component and project follow the 'Communicating as One' guidelines for joint MAP products and communications	Measured by online survey	-	-	-					
4.1.2 Create a set of templates to be used by all MAP components and projects	a set of templates is created (including report, PowerPoint, factsheet, roll-up)	1	0	1					
4.1.3 Create a set of presentation material	a set of press material is created (including report, PowerPoint, factsheet, roll-up)	0	1	1					
4.1.4 Create MAP's branded regional visibility items	Visibility items are created and produced	Visibility items available	Visibility items available	Visibility items available					

4.1.5 Corporate graphical layout for MAP publications: series of publication layouts	Publication layout series available	6	0	6					
4.2.1 All MAP components participate in annual COM campaigns	Number of components participating in annual COM campaigns	7	7	7					
4.3.1 Conduct regular Information Task Force meetings	Two in-person meetings are conducted and monthly network activities	100%	100%	100%					
4.4.1 Conduct communication training for MAP staff	Number of teleconferences conducted	2	3	5					
4.4.2 Internal MAP networking and share of information enhanced: a. Directory of all the MAP network maintenance and update (repository of NFPs designations); b. On-line Event Calendar of all the MAP network initiatives maintenance and update; c. Groupware of all the MAP network available: communication tool for document repository and interest groups management; d. Surveys and questionnaires platform available; e. Help desk and assistance for all the components of InfoMAP network.	Number of accesses to informative tools and registered users' number	+10%	+10%	+20%					

Annex II

Main Elements and Roadmap for the Preparation of a UNEP/MAP Data Management Policy

Index

Scope

The data policy aims to ensure that data are managed transparently, ensuring the certainty that they are properly disseminated and recognized, following similar principles and rules across countries and stakeholders.

As a general assumption data and information should be managed as close as possible to its source, collected once and shared with others for many purposes and readily available to easily fulfil the UNEP/MAP mandates. In a more concrete way data and environmental information should be accessible to enable comparisons of the environment at the appropriate geographic scale, fully available to the general public, to enable citizen participation; supported through common, free and open software standards and proprietary action based on a interoperable Infrastructure for Spatial Information in the Mediterranean area.

The policy will cover environmental data and information collected, acquired, processed and disseminated by MAP/Barcelona Convention system through the INFO/RAC System called InfoMAP.

The data management policy document is a general description framework, to start identifying data policy within the Mediterranean countries in order to support the data flows under MAP/Barcelona Convention system, and is mainly based on two axis: one is the management of the Accountability and security due to the roles in the InfoMAP system, the second is the data's granularity due to the different type of data handled by the System. The final aim will be, based on the structure presented in Annex 2, to define a Data Policy for each data flow collected in the system.

Background

The mission of INFO/RAC is to provide adequate information and communication services and infrastructure technologies to the Contracting Parties to implement the Barcelona Convention's Article 12 on public participation and Article 26 on reporting. In this framework, the Data Policy Management document represents a mandatory reference to ensure data sharing and use.

According to the international Open Data Charter, there are six principles for the release of data:

- Open by Default;
- Timely and Comprehensive;
- Accessible and Useable;
- Comparable and Interoperable;
- For Improved Governance and Citizen Engagement; and
- For Inclusive Development and Innovation.

In a broader international contest, it is also recognised the importance of data sharing in achieving the GEOSS vision and interconnected societal benefits; indeed, the GEOSS Data Sharing Principles and the works of the Group on Earth Observations (GEO) is building block for growing the Global Earth Observation System of Systems (GEOSS).

At MAP/Barcelona Convention level, in line with Article 14 of the Barcelona Convention and several articles addressing access to information by the public in the Protocols of the Barcelona convention and Decisions of the Contracting Parties Meeting, the establishment of InfoMAP represents the policy covering environmental data and information collected, acquired, processed and disseminated by UN Environment Programme/Mediterranean Action Plan and its components through the INFO/RAC System.

At European level, the INSPIRE Directive (INfrastructure for SPatial Information in the European) establishes harmonised conditions of access to spatial data sets and services and facilitates the sharing of spatial data sets and services between public authorities in Member States and between Member

States, the institutions and bodies of the Community.

Following the best practices at regional, global and European levels, and the needs of the MAP Barcelona Convention system, there is a need to define a policy to regulate the data sharing and publication, as well as documented with metadata, the right to access and use these datasets and services.

Sharing environmental information principles

Since 2008 the European Commission has started the Communication on SEIS principles, and many efforts have been made to create a SEIS and implement its pillars. The benefits of a regular SEIS-based reporting process for environmental assessment to improve and optimise existing information systems and processes have been recognised at a global level. The ENI initiative adopted by European Environmental Agency (EEA), which extends the principles of SEIS, also to the neighbouring countries, in order to understand and solve environmental issues that are transboundary for nature and could play global reach.

The SEIS in the European Union represents the natural extension of INSPIRE Directive's regulations about the Spatial Data Infrastructure to share environmental data and information in a common way.

SEIS is also about a shift in approach, from individual countries or regions reporting data to specific international organisations, creating online systems with services that make information available for multiple users — both people and machines. Such a shift happens in a stepwise way, ensuring that SEIS remains a driver for access to environmental information and its integration in the knowledge- based economy.

A key cross-cutting goal of SEIS is to provide access to environmental information, optimising and expanding its use. Applying the SEIS principles makes that easier.

Information is often created with a specific purpose, but there are many potential uses, in which this data can be re-use to have a wider application and understanding of phenomena. For example, information about the landslide, although necessary to mitigate potential land impacts, is also extremely valuable for insurance companies and homebuyers to assess the real estate risks.

The seven SEIS principles are:

1. Managed as close as possible to its source.
2. Collected once and shared with others for many purposes.
3. Readily available to easily fulfil reporting obligations.
4. Easily accessible to all users.
5. Accessible to enable comparisons at the appropriate geographical scale and the participation of citizens.
6. Fully available to the general public and at national level in the relevant national language(s).
7. Supported through common, free, open software standards.

A functional SEIS should be structured around three pillars:

- Content (data);
- Infrastructure (SDI);
- Cooperation (Policy).

After the system has identified the types of content (data) required and their potential sources, as a second step, we need an effective, web-enabled technical infrastructure that takes full advantage of ICTs, including web services. The third step is the cooperation and governance structure to manage human resources, inputs and networking and to ensure data sharing agreement.

Environmental data and product definition

Environmental data are defined as individual items or records (both digital and analogue) usually obtained by measurement, observation or modelling of the natural world and the impact of humans upon it, including all necessary calibration and quality control. This includes data generated through complex systems, such as information retrieval algorithms, data assimilation techniques and the application of numerical models. However, it does not include the models themselves.

Environmental products are created by adding a level of intellectual input that refines or adds value to data through interpretation and/or combination with other data. They result from analysis or repackaging of data in such a way that has provided significant added value (intellectual or commercial).

Data collection

The data flow process must take into consideration the Global framework in which the Barcelona Convention operates, as well as the European Union procedure defined within the EIONET network. All dataset acquired in the Barcelona Convention regional framework and in European union regulation may take into account a part of data collection process.

Data collection is the gathering and measuring information on targeted variables in the InfoMAP system, which allow, therefore, to answer relevant questions and evaluate the outcomes of a Good Environmental Status.

The chapter on data collection describes the capabilities of the InfoMAP system to manage data, associated information and data licenses. The system can be represented according to 3 axes (figure 1) that describe: the formats managed or manageable by the system, the types of licenses that can be associated with the data and the associated meta information that describes the data, its formats and the methods of access and use.

The Data collection action is managed by the reporting system which has different procedures and approaches relating to the two main chains available: BCRS Protocols and IMAP Monitoring actions.

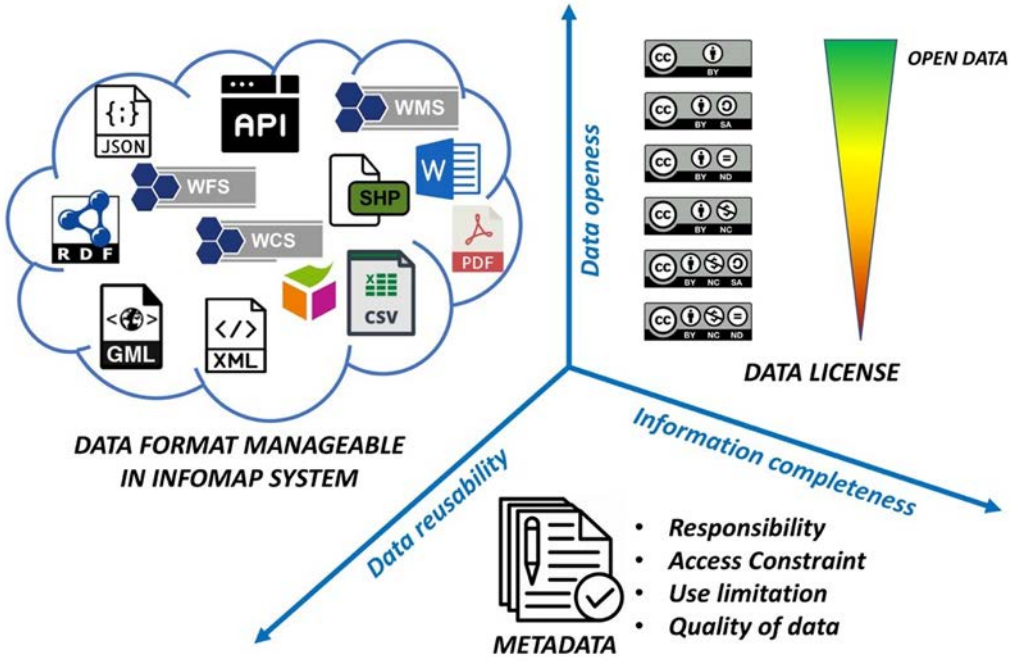


Figure 1 – InfoMAP data capabilities and management.

Type Data flow protocols

Since the Data Centre is set-up to collect the submit report from the Contracting Parties, it was designed to take in consideration not only the data transfer protocol available at the moment as more robust, but also future evolution of these.

At this stage, both reporting system (BCRS and IMAP) are designed to collect data from standard data structures and protocols, based on the procedure for generating or directly fill-in the service on the XML/GML files. At the same time, the Reporter can also upload the spreadsheets prepared by the country.

All data submitted to the InfoMAP system is subjected to validation and quality assessment checks in order to guarantee the quality of data acquired.

Basic geographic data layer could also be collected with specific data call campaign in the InfoMapNode to ensure that the reported data is geographically located.

Data format

There are many standard formats for exchanging and sharing data and information, an example is presented here below, but this itself does not guarantee correct interoperability if we haven't correctly implemented some general assumptions on data harmonisation.

CSV	Values separated by comma	Type of documents in simple open format to represent data in table format, in columns separated by commas (or semicolons, where the comma is the decimal point) and the rows are line breaks. Fields that have a comma, line break, or double quote must be enclosed in double quotes. It does not indicate a specific set of characters, nor how the bytes are located, nor the format for the line break. The extensions that are used are .csv and .txt.
DOC	Microsoft Office Word	Closed format to transfer formatted or unformatted texts. It can contain texts, images, graphics and links. The 2007 version works with a new format, docx, which is more advanced and compresses the document more.
GML-XML	Geography Markup Language	GML is the XML grammar defined by the Open Geospatial Consortium (OGC) to express geographical features. GML serves as a modelling language for geographic systems as well as an open interchange format for geographic transactions on the Internet. Key to GML's utility is its ability to integrate all forms of geographic information, including not only conventional "vector" or discrete objects, but coverages and sensor data.
JSON	Notation of JavaScript Objects	Lightweight data exchange format, easy to understand, and offers simplicity to machines in generation and interpretation. Based on a subset of the JavaScript programming language, suitable for programming by the client.
PDF	Portable Document Format	Universal portable format document that maintains the appearance of the document regardless of the operating system used (multiplatform). It includes any combination of text, multimedia and hypertext and you can also encrypt the content and sign it digitally. It is the ISO standard, from 2008, for electronic document container files for long-term preservation. It is a specification that can be created, visualized or modified with free software tools. This format was originally proprietary (up to 2008).

RDF- XML	Infrastructure for Description of Resources	Model for the representation of web resources in expressions with the form subject-predicate-object. The subject is the resource that is described, the predicate is the property on which the resource is to be established and the object is the value of the property with which the relation is established. The combination of RDF with other tools allows to add meaning to the pages and is one of the essential technologies for the semantic web. To be interpretable, it is represented in XML format.
SHP	ESRI	Shapefile is a proprietary format of spatial data that is the standard for the exchange of geographic information between Geographic Information Systems (GIS). It is a vector format of digital storage where the location of geographic elements and the attributes associated with them are stored, but without the capacity to store topological information. It is generated by several files, minimum 03 and has 03 types of extensions: .shp, .shx and .dbf
SPARQL	Simple Protocol and RDF Query Language	Standardized language for the query of RDF data, normalized by the W3C. It is an official recommendation of the W3C since January of 2008 for the development of the semantic web.
Web services - API	Application programming interface	They are application programming interfaces or web APIs that are accessed through HTTP and run on a remote hosting system for the services requested. Web services are software systems designed to support the interoperable machine-to-machine interaction over a network. It has an interface described in a format processable by a machine and other systems interact with the web service in a manner prescribed by its description using SOAP messages, transmitted through HTTP with an XML serialization in conjunction with other standards related to the web.
WxS OGC services	Open Geospatial Consortium Web Service for share data and information	The OGC (OpenGeospatialConsortium) standards depend on a generalized architecture captured in a set of documents collectively called the Abstract Specification, which describes a basic data model for representing geographic features. is developed to support in-line content as well. The goal is to support use cases such as the distribution of search results, the exchange of a set of resources such as OGC Web Feature Service (WFS), Web Map Service (WMS), Web Map Tile Service (WMTS), Web Coverage Service (WCS) and others in a ‘common operating picture’.
XML	Extensible Labeling Language	It is a simple but strict metalanguage, developed by W3C. It develops a fundamental role in the exchange of a great variety of data. XML is a format that allows the interpretation of data through several applications. It is a simplification and adaptation of the SGML and allows to define the grammar of specific languages. Actually, XML is a way to define languages for different needs.

Data licenses

There are many types of licenses that can be applied to the data flow of the Barcelona Convention, below are the main licenses selected to manage all types of data in the InfoMAP system.

Starting from the concept of open sharing we evaluated the state of the art in licensing trends for public sector information and material, following the EU PSI Directive[1] for European countries or what is used by geospatial communities to ensure use and re-use of data and products.

The licenses, taken into consideration, were those provided by the Creative Commons Licenses (CCL – http://creativecommons.org) which are the most common and used licenses available for digital material. The CC selection is driven by the flexibility offered by a series of 'baseline rights', with attribution (CC- BY) as a core requirement, together with three other 'license elements' that can be mixed and combined to obtain six main customized types licenses (figure 2) through a point – and – click web interface, which passes from more open to restrictive.

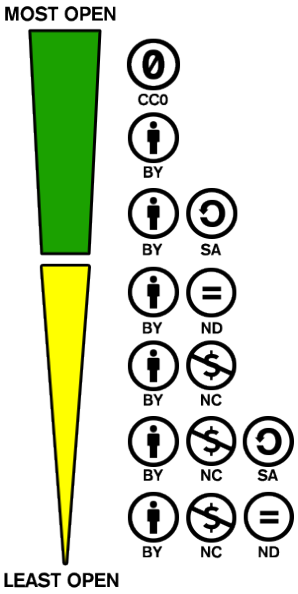


Figure 2 - Common Creative licenses open-restrictive spectrum (image takes from Common Creative web site)

Below are described the six main type of licenses in order to have a complete overview, the criteria adopted for InfoMAP will be defined in article 10 "Data license" of the data policy following the schema proposed in the chapter Data Policy model.

[1] PSI Directive (Directive 2003/98/EC - 31 December 2003) The Directive on the re-use of public sector information provides a common legal framework for a European market for government-held data (public sector information). It is built around two key pillars of the internal market: transparency and fair competition. http://ec.europa.eu/digital-agenda/en/european-legislation-reuse-public-sector-information

Type of license	Name	Main description
	CC BY Attribution International	*This license lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation.* *Recommended for maximum dissemination and use of licensed data and products.*
	CC BY-SA Attribution-ShareAlike International	*This license lets others remix, tweak, and build upon your work even for commercial purposes, as long as they credit you and license their new creations under the identical terms.* *All new works based on yours will carry the same license, so any derivatives will also allow* *commercial use.*
	CC BY-ND Attribution-NoDerivatives International	*This license allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to you.*
	CC BY-NC Attribution-NonCommercial International	*This license lets others remix, tweak, and build upon your work but not for commercial purposes, as long as they credit you for the original creation.*
	CC BY-NC-SA Attribution	*This license lets others remix, tweak, and build upon your work but not for commercial purposes, as long as they credit you and license their new creations under the identical terms.* *All new works based on yours will carry the same license, so any derivatives but not for commercial purpose.*
	CC BY-NC-ND Attribution	*This license allows for redistribution, non-commercial, as long as it is passed along unchanged and in whole, with credit to you.* *It is the maximum restriction for data and products.*

Metadata and data generation

All the data collected, in order to facilitate the search and discovery to manage access to resources, shall have a metadata document to describe in detail the dataset and the service; the metadata is managed and archived directedly or as harvest service in the InfoMAP System metadata catalogue and they are available in the InfoMapNode geoportal.

The basic information available in the metadata is presented as template in this section, in accordance with international standard and to ensure enough interoperability between InfoMAP System and other platforms in the Mediterranean area, but also to store the access constraint and limitation of use.

In the same way, when a new dataset is generated in the InfoMAP system, metadata and network service must be created to share this data and make it available for public use with minimum possible restriction. For each dataset, a Unique Persistent Identifier should be assigned in order to orchestrate data in the best way and easily recognise the source of the dataset.

Metadata Template

1. General requirement
    1.1. File identifier
    1.2. Metadata language
    1.3. Metadata point of contact
    1.4. Metadata date
2. Identification info section
    2.1. Resource title
    2.2. Resource abstract
    2.3. Responsible party
    2.4. Responsible party role
    2.5. Temporal reference
        2.5.1. temporal extent of the described resource
        2.5.2. date of publication, date of last revision or, 2.5.3. date of creation
    2.6. keywords
        2.6.1. Originating controlled vocabulary
    2.7. Limitations on public access
    2.8. Conditions applying to access and use
    2.9. Geographic bounding box
3. Data quality information
4. Metadata for data sets properties
    4.1. Resource type
5. Identification info section

5.1. Unique resource identifier

5.2. Keywords for Spatial Data Theme(s)

5.3. Spatial resolution

5.4. Resource language

5.5. Topic category

6. Distribution info section

6.1. Resource locator

7. Data quality info section

7.1. Scope

7.2. Conformity

7.3. Lineage

Data Embargo periods

Embargoes are enforced at the dataset level. For embargoed datasets, the basic metadata is publicly viewable, but the datasets themselves are not. Basic metadata include geospatial coordinates, site name, dataset type, current end date of embargo, and researchers' names.

Every embargo dataset will have one or more access managers, usually the original data generator or data uploader. Access managers or designated persons can access their embargoed data in infoMAP system, using single-sign-on system and standard tools such as InfoMapNode geoportal, the Data Centre repository, and the APIs. Access will be enabled via a unique persistent identifier (PIDs).

The embargo process is not automatic; embargoes must be requested by the contributor(s) of the relevant data.

Embargoes are temporary and last for a defined period of time. Normally, an embargo lasts two years after a dataset has been uploaded to the system, or until publication is approved, whichever happens first.

- Embargoes will be automatically lifted after two years unless the data generators require a further extension. Up to two-year extensions can be requested.
- InfoMAP data policy, in which data is normally made available to the public at the time of publication.

Authentication, Authorization and Accounting

Authentication, authorization, and accounting (also called AAA) is the architecture behind the InfoMAP System to manage intelligently controlling access to UN Environment Programme/MAP resources, enforcing policies, and providing the information needed to use for services. These three elements are considered important for effective network management and security.

The three pillars to control security and right of actors are:

- The Authentication is the process of ascertaining that somebody really is whom they say they are.
- Authorization refers to rules/permissions that determine who is allowed to do what.
- Accounting is about keeping track of the resources used for financial or auditing purposes.

Authentication system

Authentication is the process of determining who someone is, or who or what they claim to be. Authentication technology provides access control for systems by checking if a user's credentials match the credentials in an authorized user database or in data authentication server.

Users are usually identified with a user ID, and authentication is performed when the user provides a correct credential, such as a password, which matches with the user ID in the database. Most users are most familiar with using a password, which, as a piece of information that should only be known to the user, is called a knowledge authentication factor.

In the InfoMAP System in order to support the user in not having a specific credential in each component, based on the open standard OpenLDAP, a single-sign-on authentication system was integrated. The security offered by this system is described in the security section below.

User profile and role

The user, in general, is any entity (physical person or organization) that interacts with the InfoMAP System. The InfoMAP system is composed of different components for the data flows in order to allow the collection from different data sources and expose data sets, services and maps.

Should the user need to be authenticated in the system, this will be done through a login procedure, using a username and password previously provided. In order to facilitate this procedure, the InfoMAP System has unified the access procedure and a single-sign-on system has been set-up. In the user guide of the System components, there is a section dedicated to explaining how to obtain the right credentials for access. There is a different composition of roles in each data flow procedure in order to guarantee the correct right assigned to all the users involved. Each user, according to its role, has a set of corresponding permissions within the system.

The structure of the profiles and their associated rights in the InfoMAP System are:

- **Contracting Party users**: all the data collection may have a different composition of a national role, in order to guarantee a correct transfer of the environmental information, three different levels have been designed to manage data flows:
    - ***National Focal Point user***
    - ***National Expert user***
    - ***Reporter user***
- **MAP Component users**: Users which are staff of MAP Secretariat and Component; for each of them, there is a different role in the system due to the competence and role of the activities carried out in the different data flow and data assessment. A possible subdivision is the following:
    - ***MAP Secretariat*** is the supervisor of the overall of the InfoMAP System, its members hold all rights to access to all the environmental data and products, and for them, a specific right to manage official dataset shall be defined.
    - ***INFO/RAC*** is the administrator of the overall of the InfoMAP System. INFO/RAC holds all rights in order to protect data and system security, however INFO/RAC will not manage the dataset, unless it is so required by the owner.
    - ***MED POL, REMPEC, PAP/RAC, PB/RAC, SCP/RAC*** and ***SPA/RAC*** are the MAP components involved in the BCRS, IMAP, and NBB and other data collection as well as in data aggregation in order to prepare specific evaluation layer or environmental products and quality assurance. They can view a great part of data but doesn't have the role to manage if it isn’t required.
- **MAP Partners and third-party users**: these are users who have a minimum level of access to supply data or web data services that can be used to support environmental analyzes.
- **Anonymous users:** They represent users who are not authenticated and only have the possibility to search and view metadata and data publicly available. If the data is available for public download, this can be applied.

Each authenticated user can access and manage data domains, based on the user's configured role within the system. Each role has a set of corresponding permissions inside the system, in order to manage, edit and view specific data.

Security procedure

IT security services expertise helps to reduce the risk in operating and managing IT infrastructure network, Data Centre, servers and other IT assets, and the InfoMAP System Manager and Administrator shall guarantee enough rights.

Although a variety of models and techniques are available to manage, access and share geospatial data, we need to pay attention how to address security concerns, such as access control, security and privacy policies, and in particular the development of GIS applications secure and interoperable.

In order to guarantee the correct right to each authenticated user, a formal procedure to receive the credential in the single-sign-on system has been defined in the InfoMAP System; using a central Directory Access Protocol. The security system is mainly organized on a simple "tree" hierarchy composed of the following levels:

- Countries;
- Organizations;
- Organizational units (divisions, departments, and so forth);
- Individuals (includes people, files, and shared resources)

A profile and a role have been assigned to each individual element.

Furthermore, the Security procedure gives the warranty that the data stored in the InfoMAP system will be treated correctly and protected from any case of fraud or data loss, using an adequate daily backup system and multi-level network firewall.

Data granularity

This part of the document describes the type of data managed and collected within the Mediterranean Action Plan in the Barcelona Convention framework. The granularity is represented by the different details of data and by the different source that provides the data itself. For each of them, a license recommendation will be suggested, but it may change case by case with the different data flow collection procedures.

Data Production

The Data production is all the raw data produced and inserted by the Contracting Parties within specific protocols or data flow of Barcelona Convention, as well as all the data produced directly by the MAP Components or with some projects, to support Good Environmental Status (GES) in accordance with Mid-Term Strategy. A particular cluster of production data can be considered that of the data produced by third-parties, such as various UN entities and other Inter-Governmental organizations active in the field of environmental protection in the Mediterranean which are not officially part of Barcelona Convention, but involved as a MAP Partners.

The main and authoritative data to produce all the environmental assessment on the Mediterranean area are those represented by the data officially submitted by the Contracting Parties in the Barcelona Convention Reporting System (BCRS) or in the Integrated Monitoring and Assessment Programme (IMAP) Infosystem. The data are subdivided in two types of data:

- Base layer data
- Environmental data

The data of base layer data represent all the spatial data needed to support the environmental data and assessment, the details of these data depend on the sensibility of the country and some of this information could be for security reason not available for public use. A specific list of reserved data or data subjected to embargo will be edited. All the base layer data available for public use will be made available in the InfoMAP System by the way of network services. The suggested license for this data is CC-BY.

Environmental data are all the environmental parameters, observations and measurements collected within a specific Marine monitoring programme and provided by the Contracting parties through the InfoMAP System data flow on BCRS or IMAP data calls.

The data produced by the MAP components are data collected in their own thematic domain in order to support environmental programmes and protocols, as well as the GES and SoED, reports. This data is property of MAP Barcelona Convention systemand is available for public use and work with a CC-BY license.

The data produced by third part are processed in the InfoMAP system, using the interoperability Network services registered and interlinked on the InfoMapNode SDI or archived as sample dataset in the InfoMAP Infrastructure. These data are available in accordance with the release of the owner's license, normally declared in the metadata associated with the dataset(s) or service(s). These data are not official data to produce report and an assessment but can be used to enrich the environmental analysis.

Data aggregation

The data aggregation represents the minimum common layer of official data production provided by the Contracting Parties and managed at the level of the Thematic Focal Point experts or within the mandate of the relevant MAP Components.

For each thematic domain, the protocols or collection of the data flows can be identified with a different level of aggregation, this common agreement must be defined separately on a case by case basis within the group of thematic expert or National Map Focal Point.

The aggregation layers are produced by the MAP Components and the property right should be of UN Environment Programme/MAP and the MAP Component that produces it. Datasets will be available for any purpose and in the public domain, mainly with CC-BY or CC-BY-SA licenses. In any case, there would be a need to define and sign a specific agreement on this aggregation level.

At this stage it is not possible to produce an exhaustive list of all available data aggregations, but an updated list can be published every semester at the InfoMAP system.

Map and document products

Maps and documents produced within the UN Environment Programme/MAP framework are data and information made for public purposes and should be available to all usersand purposes. These data represent what is developed and produced directly as an environmental evaluation or assessment in the Mediterranean area. These products will be available through the InfoMapNode portal and/or the relevant Regional Activity Centre website as open data, available with CC-BY license.

For all the data provided by the InfoMAP System and the Barcelona Convention, there would be a need to refer to the source of the UN Environment Programme /Mediterranean Action Plan, citing as well as:

"*Data source UN Environment Programme/MAP provided by InfoMAP System, all right reserved @year*".

Data Access and Distribution

All data held by InfoMAP System shall be available at no cost, except where:

- Restrictions arising from binding rules apply, including Contracting Parties' national legislation, including the protection of personal data, statistical confidentiality, protection of

intellectual property rights and protection of national sensible dataset, defence, or public security;

- The data made available by InfoMAP System components are accompanied by a data license. The data originally made available to the UN Environment Programme/MAP by a third-party may have its own data access agreements and license conditions agreed with the UN Environment Programme/MAP, which restricts the way the InfoMAP System can make the data available to others;
- The request for access to data exceeds INFO/RAC handling capacities.

InfoMAP would ensure the availability of all the tools to provide access to the source data that underpins the products and services of MAP Components for: (a) data held by InfoMAP owned by others, (b) data held by InfoMAP that have been adapted, combined or harmonised, (c) data located, managed and accessible to the public in other bodies or distributed, for instance in national administrations according to the INSPIRE and SEIS principles, (d) data in which InfoMAP was requested to arrange access, for instance, to act as a data provider for third parties.

The data will be provided through discovery, view and, as far as possible, through download services which are compliant with standards established by ISO, OGC, INSPIRE and other relevant standardization bodies. INFO/RAC as a system administrator will hold the data, where it sees fit, and INFO/RAC will aim to provide meta-information for all data.

Data policy model

The Data policy model is defined for each collection of data flows, based on two main axes: an axis is composed of the granularity of the data as defined in the previous section and the second axis is the one in which the Authentication profile is presented diversified by user. For each cell of the matrix the right can be defined and from this also which is the applicable main license.

Each Contracting Party can set specific restrictions on environmental data provided.

User profile and data granularity matrix

Below in figure 3 the standard matrix used for survey of each data flows (BCRS, IMAP and Basic layer) is represented, the right to access the data, in order to have a complete picture (country by country) to correctly manage the data collected in the InfoMAP System. An example is presented in Annex 2 on how each country must fill the matrix within the INFO/RAC.

		Data Production				Data Aggregation		Map and document products
		Contracting Parties Data		*MAP Components data*	*Third Party data*	*Minimum Common layer*	*Aggregation layer*	
		Base Layer data	Environmental data					
Contracting Party users	National Focal Point user							
	National Expert user							
	Reporter user							
MAP Component users	CU							
	INFO/RAC							
	MEDPOL							
	REMPEC							
	PB/RAC							
	PAP/RAC							
	SCP/RAC							
	SPA/RAC							
MAP Partners								
Anonymous users								

Figure 3 data management policy matrix template needed to acquire right and rule from the data actors.

The possible data right is presented schematically in the legend below (figure 4)

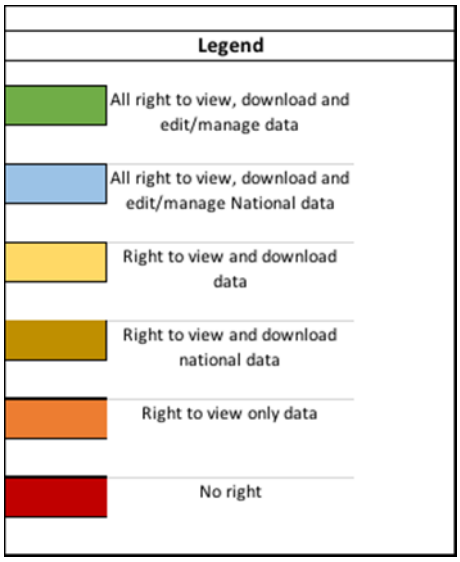


Figure 4 data rights possible combination.

Gaps to fill

At the moment, a clear picture Contracting Party by Contracting Party on what is available for public use or restricted constrains has not been yet defined. There is as a need to compile a list of possible sensitive or restricted data for security reasons.

The document introduces the importance of identifying for each type of data produced, what is the access and use constraint, in order to exploit the potential use in environmental analysis and assessment.

A specific data interview with each country will be set-up to have a list of basic layer data, as well as restricted or public environmental data. For each dataset we need to have metadata available at national level via country or organisational catalogue, or alternatively at the Mediterranean level by directly using the InfoMap Metadata catalogue. The collection of metadata information, using the standard template information provided in the previous section, is needed to evaluate the license associated with a dataset, if this information is not available the metadata document must be updated accordingly.

In parallel, we need to identify which is the common minimum layer to aggregate data information in each data flow, mainly about IMAP and monitoring data.

Contracting Parties role and impact for a data policy

The definition of the data policy is a long process that requires cooperation between the Policy maker, Data manager and Data producer; in this contest the Policy maker is represented by the CU, the Data Manager is INFO/RAC as Administrator of InfoMAP System and the main Data Producer are the Public Authorities involved by the Contracting Parties.
All actors should be aware of the process leading to a common agreement on the data license procedure and data sharing in the InfoMAP System.
Each Contracting Party should identify which dataset is sensitive, restricted or limited in the use and which are the official basic layer data (i.e. Administrative units, Coastline, hydrography, etc.) that are available for all uses and purposes.

Operational roadmap for Data policy

To ensure that the Data Policy is defined for each data treated in the InfoMAP System, it's necessary to bridge the gap or lack of information from the countryside. In the next biennium a preliminary evaluation will be carried out, mainly to enrich two targets:

- Define data limitation and constraint of the basic layer and environmental data in each of the Contracting Parties;
- Define the Minimum Common aggregation layer for each thematic topic.

To guarantee these targets the following operational roadmap has been designed, represented graphically by figure 5:

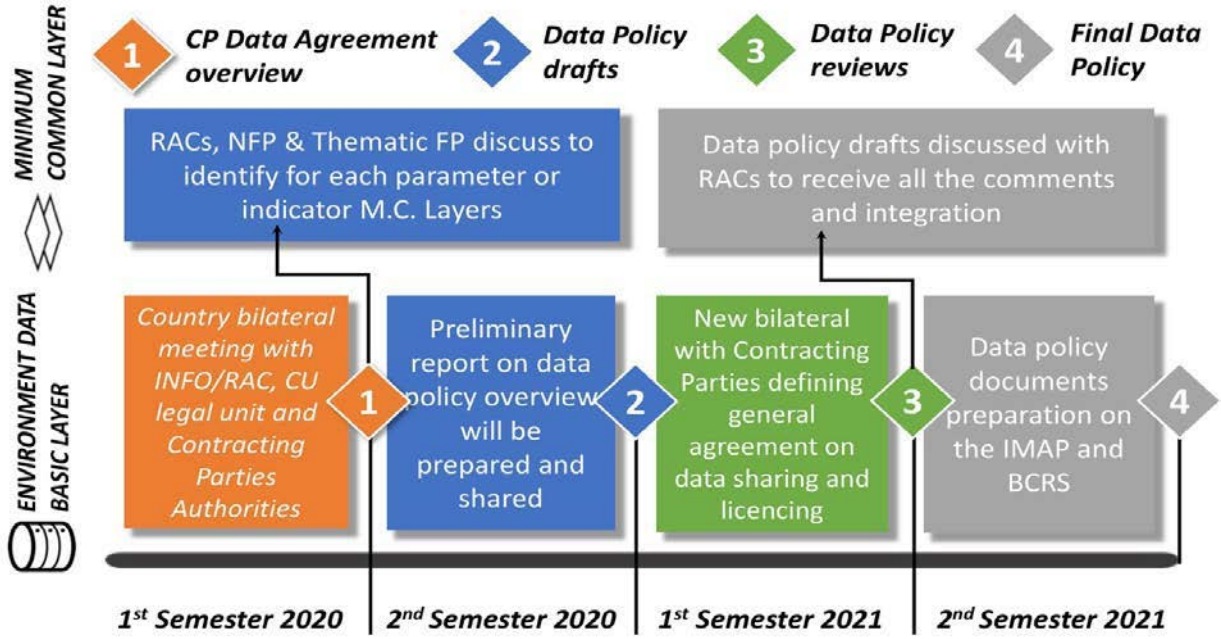


Figure 5 data policies roadmap – through this road map, after the two years of consultation, a common data policy will be defined for each data stream of the Barcelona Convention.

Capacity building to support data policy

The main scope of this technical document, which describes the basic concept of the future MAP Data Management Policy is to prepare three different agreements on Data Policy:

- The IMAP Data policy, which defines the rules for accessing, using and re-using data managed and collected by the InfoMAP IMAP Platform;
- The BCRS Data policy which takes into account the whole data flow involved in the BCRS System; and
- The Data Flow Policy which also will include definition of a specific agreement on all the data produced by UN Environment Programme /MAP as well as the identification of access and use regulation in the MAP Network.

To meet the goals and produce the three documents relating to the Data Policy, the INFO/RAC in collaboration with the Secretariat will provide several supporting tools to Contracting Parties for enhancing the management of data

Such tools will be aimed at supporting capacity building activities in the following areas:

- Coordination: To work with Contracting Parties to improve co-operation with data providers, and coordination with all the data stakeholders, and also to reduce the gap in data sharing, sensitivity and accessibility.
- Data management: To support Contracting Parties, the InfoMAP System platform. should be set-up to ensure a secure interconnection, dataset and layer interoperability. Contracting Parties, from their side, should establish and tune their infrastructure and platform to be aligned with international standards to ensure, as far as possible, interoperability and a correct and dynamic sharing of data and information. Specific guidelines have already developed by INFO/RAC in that regard and could be refined in the next biennium.

- Technical skills: In the training platform developed by INFO / RAC, various training packages will be available, each package with free and open online-modules or courses. These training modules can be exploited at different administrative levels by the countries, moreover, if necessary, MAP components may organize training events if so requested by Contracting Parties.

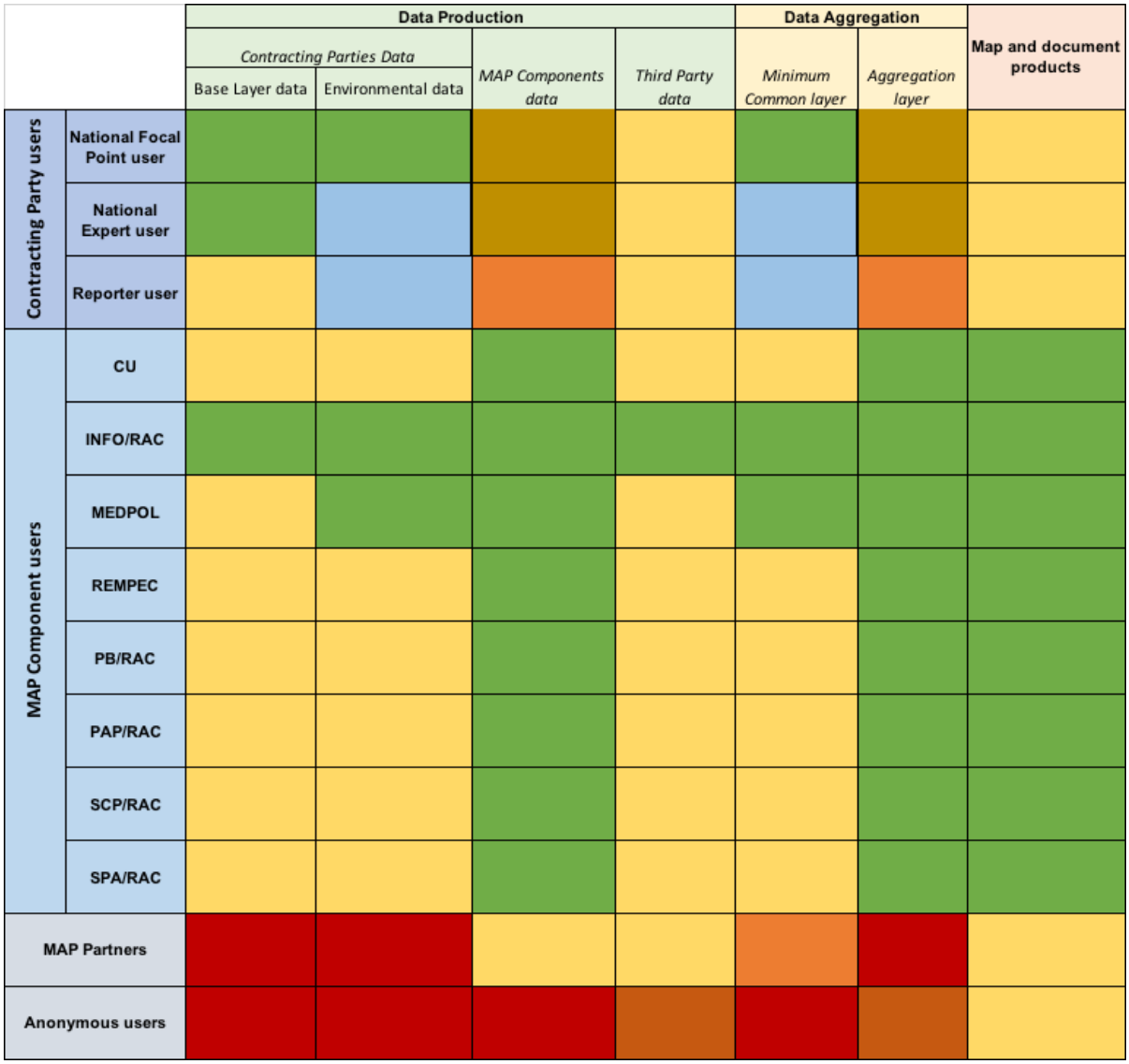
Annex I: data policy Structure examples

In general way, the Data policy document is designed after identifying the different level of knowledge of the data and the possible role that a different user or producer may have in the system. The basic document needs to include the following articles and as attached annex, all the licenses identified as applicable to the Data policy.

The general structure is the following:

Article 1: Subject Matter
It describes what data is the subject of the policy
Article 2: Objectives
It describes the purpose of Data policy.
Article 3: Data Provision
It describes all data included in the policy.
Article 4: Access To and Redistribution
It defines the rules to access, use and re-use the data and how to refer the data source citation.
Article 5: Embargo data case (optional)
It describes the data may be subject to the embargo, the timeframe of embargo rules and the frequency.
Article 6: Recognition of Data Sources
It defines how to cite data sources and where to find references.
Article 7: Warranty
It indicates the warranty on the data source and the right for the third party data.
Article 8: Quality
It indicates the quality of the data and the scale of the correct use of data.
Article 9: Update frequency (optional)
It defines the update rate of document.
Article 10: License applied
It indicated which type data licenses are applied in the data policy framework described in article 1 and 2.

Annex II: Best practices



Annex III

List of New and Renewed MAP Partners

LIST OF RENEWED MAP PARTNERS

The following Institutions accredited at COP 18 as MAP Partners are renewed for another six years:

- EcoPeace Middle East
- Environmental Center for Administration and Technology (ECAT Tirana)
- Fondazione IMC-Centro Marino Internazionale ONLUS
- Global Footprint Network (GFN)
- Greenpeace International
- Hellenic Marine Environment Protection Association (HELMEPA)
- International Association for Mediterranean Forests (AIFM)
- International Centre of Comparative Environmental Law (CIDCE)
- Mediterranean Coastal Foundation (MEDCOAST)
- Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE)
- Mediterranean Programme for International Environmental Law and Negotiation (MEPIELAN)
- Mediterranean Protected Areas Network (MEDPAN)
- Oceana
- Syrian Environment Protection Agency (SEPS)
- The ARAVA Institute for Environmental Studies (AIES)
- Tour du Valat Foundation
- Turkish Marine Research Foundation (TUDAV)
- WWF Mediterranean (WWF Med)

LIST OF NEW MAP PARTNERS

The following institutions are accredited as new MAP Partners:

- Asociación ONDINE
- BirdLife Malta (BLM)
- Center for Energy, Environment and Resources (CENER21)
- Centre of Documentation, Research and Experimentation on accidental water pollution (CEDRE)
- Eco-Union
- Forum of Adriatic and Ionian Cities (FAIC)

- Surfrider España
- French Water Academy
- Human Environmental Association for Development (HEAD)
- The Mediterranean network of cities (Med Cities)
- Secretariat MedWet (MedWet)
- The Agency for Sustainable Mediterranean Cities and Territories (AVITEM)
- Palestine Wildlife Society
- International Association of Geophysical Contractors (IAGC)
- Innovation&DevelopmentAssociation (INNODEV)
- MEDITERRANEAN SOS Network (MedSOS)
- OceanCare
- The International Association of Oil & Gas Producers (IOGP)
- UniVerde Foundation

Annex IV

Composition of the Mediterranean Commission on Sustainable Development for 2020-2021 – Non-Contracting Party Members

Composition of the Mediterranean Commission on Sustainable Development for 2020-2021
Non-Contracting Party Members

Non-Contracting Party membership of the Mediterranean Commission on Sustainable Development, as welcome by the eighteen meeting of the Mediterranean Commission on Sustainable Development (Budva, Montenegro, 11-13 June 2019). New members are indicated in bold:

- The Local Authorities Group: the ***Agence des Villes et Territoires méditerranéens durables* (AVITEM)**, the **Forum of Adriatic and Ionian cities (FAIC)**, and United Cities and Local Governments (UCLG);

- The Socio-economic Stakeholders Group: ANIMA Investment Network, the Economic, the **Association of the Mediterranean Chambers of Commerce and Industry (ASCAME)**, and the **Economic and Social Council of Greece (ESCG)**;

- The Non-Governmental Organizations Group: **ECO UNION**, the **Egyptian Sustainable Development Forum (ESDF)**, and the **Network of Marine Protected Areas managers in the Mediterranean (MedPAN)**;

- The Scientific Community Group: the Forum Euroméditerranéen des Instituts de Sciences Economiques (FEMISE), the Mediterranean Sustainable Development Solutions Network (Med-SDSN), and the Mediterranean Programme for International Environmental Law and Negotiation (MEPIELAN);

- The Intergovernmental Organizations Group: the **Arab Forum for the Environment and Development (AFED)**, the **Global Water Partnership – Mediterranean (GWP-Med)**, and the Union for the Mediterranean Secretariat (UfMS); and,

- Parliamentarians: the Circle of Mediterranean Parliamentarians on Sustainable Development (COMPSUD), the Parliamentary Assembly of the Mediterranean (PAM), and the Parliamentary Assembly of the Union for the Mediterranean (PA-UfM).

Annex V

Roadmap for the Evaluation of the Current Mid-Term Strategy and the Preparation of the Next Mid-Term Strategy

Roadmap for the evaluation of the UNEP/MAP Mid-Term Strategy (MTS) 2016-2021 and the preparation of the next MTS

1. Introduction and principles

This document puts forward a methodology for the evaluation/review of the current UNEP/MAP Medium Term Strategy (MTS) and the preparation of the next MTS. It is based on the following principles and requirements:

- The current MTS was adopted in COP 19 and it covers a period of six years until COP 22 (i.e. 2016-2021); the new MTS needs to be adopted at COP 22 in 2021, taking also into consideration the evaluation of the current MTS;
- The evaluation of the current MTS follows the request of Contracting Parties as in Decision IG.22/1: "*Requests* the Secretariat to launch an independent evaluation of the MTS implementation in 2020 for the consideration of COP 22 in 2021, with special emphasis on the interlinkages with the objectives of the MSSD 2016-2025 and the UNEP/MAP EcAp-based Ecological Objectives.";
- The new MTS needs to be aligned with the global context of the UN 2030 Agenda for Sustainable Development, the CBD post-2020 Biodiversity Framework, the implementation of the Paris Agreement, the relevant UNEA resolutions and the implementation of global Multilateral Environmental Agreements in the Mediterranean region;
- The new MTS will build on the following elements, among others:
    - the uniqueness of the MAP system's mandate in the region;
    - the comparative advantages that the MAP-Barcelona Convention system has in its three dimensions (institutional, regulatory, implementation);
    - the experience, achievements, major processes and lessons learned of the past four decades and in particular of the most recent biennia;
    - the needs, policies and commitments of the Contracting Parties, at national, sub-regional and regional level;
    - the vision, key considerations, evaluation of the current MTS as well as lessons learned from its implementation;
    - the increasingly more accurate assessment work being undertaken on the Mediterranean;
    - the analysis of significant environmental challenges that the Mediterranean region will face in the coming years;
    - the analysis of emerging issues that are of particular relevance to the region;
    - the new paradigm required to achieve Agenda 2030, in which work on environment and sustainable development issues is not conducted in silos, but is intrinsically linked;
    - the implementation and enforcement of the comprehensive body of instruments of the MAP-Barcelona Convention system;
    - the increasing interest demonstrated by actors in the Mediterranean and beyond in partnering with the MAP-Barcelona Convention system;
    - the opportunities presented in the region in terms of access to financial resources, to knowledge, and to stakeholders' involvement; and
    - the advantages provided by being part of a global inter-governmental mechanism such as UNEP and the UN.

- Focus, integration and diversification of responses and approaches will drive the development of the MTS in order to reflect the diversity of the region (possibly by integrating the DPSIR approach in the development of the new MTS);
- The evaluation of the current MTS and the preparation of the next MTS need to take into account the relevant evaluation and assessment processes within the MAP-Barcelona Convention system (including the MSSD 2016-2025 mid-term evaluation, the SCP Action Plan mid-term evaluation, the 2017 MED QSR, the 2019 SoED and the MED 2050 foresight study preparation);
- The process needs to be conducted under the leadership of the Bureau; preparation of the new MTS needs to be Contracting Party-driven, to involve the Executive Coordination Panel (ECP), and to ensure stakeholder participation to the widest extent possible.

2. Methodology and roadmap

A. Evaluation of MTS 2016-2021

The evaluation of the current MTS should be conducted during the first year of the 2020-2021 biennium. It should be based on the performance indicators and respective targets, which were set within each biennial Programme of Work and Budget, to enable MAP to measure progress against these expected accomplishments. As noted in the text of the MTS, central to the performance framework are the strategic outcomes and outputs to be achieved. Therefore, it is proposed that performance is reported on outcome and output level. To this end, the steps to be followed are:

- Elaboration of baseline values
- Complete population of indicators (based on each biennial PoW)
- Assessment of the extent of achievement of targets (at the level of strategic output)
- Assessment of the financial implementation of the MTS

Following the request of Decision IG. 22/1, the evaluation process should also provide special emphasis on the interlinkages with the objectives of the MSSD 2016-2025 and the UNEP/MAP EcAp-based Ecological Objectives.

The assessment of the extent of achievement of targets and of the financial implementation will be complete/final for the first two biennia and anticipated for the third one, since this exercise will take place at the first year of the third biennium of the implementation of the current MTS.

The assessment will also include a comparison between adopted and achieved deliverables, and will examine whether the structure and outputs of the MTS are still adequate, taking also into account the ongoing processes at the global level.

The financial implementation of the MTS will examine both MTF and external funds which supported each strategic outcome and will be linked to the implementation of the Resource Mobilization Strategy.

A call for consultants could be launched in the beginning of 2020 for the independent evaluation. The strategic part of the assessment is proposed to be conducted by a pool of experts with different skills and expertise, due to the complexity of the process and the multi-dimensional nature of the MTS.

The main steps of the process can be set as follows:

- January/February 2020: launch of the MTS evaluation process and finalization of consultant ToRs
- March 2020: Hiring of consultant
- March/April 2020: Elaboration of baseline values
- April/June 2020: Population of indicators

- June/July 2020: Assessment of target achievement, including through consultations with individual Contracting Parties and stakeholders;
- August/September 2020: Assessment of financial implementation
- October 2020: First draft of evaluation report prepared
- October/November 2020: Consultation with Bureau (and Contracting Parties/MAP Focal Points)
- December 2020: Finalization of evaluation report

B. Preparation of MTS 2022-2027

Following the principles and requirements referred to in the introductory part of this concept note, the preparation of the new MTS should be based on a number of key documents and processes. The main ones are listed below:

- Evaluation of MTS 2016-2021;
- MSSD 2016-2025 mid-term evaluation (performed in parallel, during the 2020-2021 biennium)
- Results of the main MAP assessment studies: 2017 MED QSR (which will also provide interlinkages with UNEP/MAP EcAp-based Ecological Objectives) and 2019 SoED; as well as results of global assessment studies, such as the Global Environment Outlook (GEO-6) and the Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC) of IPCC;
- Global processes or relevance, such as the UN 2030 Agenda for Sustainable Development, the CBD post-2020 Biodiversity Framework, the implementation of the Paris Agreement including the outcome of the 2019 UNFCCC COP25 “The Blue COP”, the relevant UNEA resolutions, and the global Multilateral Environmental Agreements;
- Other relevant evaluation and assessment processes performed during the 2020-2021 biennium, such as the SCP Action Plan mid-term evaluation and the preparation of the MED 2050 foresight study.

It is proposed that the new MTS follows the same timeline with the current MTS, covering the period of three biennial PoWs.

The preparation of the new MTS should start during the process of the evaluation of the current MTS, to benefit from it but also to allow a timely development of the first draft of the new MTS.

The process will be transparent, participatory and Contracting Party driven, and will be conducted under the guidance of the Bureau. It will include early involvement of all the MAP Components, through the Executive Coordination Panel, both at the phase of evaluation of the current situation/state of play, and at the phase of the preparation of the themes and strategic outcomes/key outputs. Furthermore, it will involve consultations with stakeholders, including non-governmental organizations/MAP Partners, youth and gender related organizations, private sector organizations and possible donors, as well as intergovernmental organizations, other UN bodies and MEAs. Consultations with the civil society will take place through electronic means (for example through an online consultation of 2-3 weeks) while a physical open-ended meeting could be arranged, depending on the availability of resources.

The main steps of the process can be set as follows:

- March/April 2020: Finalization of ToRs
- May/June 2020: Launch of the new MTS preparation process, following the 89th Bureau meeting
- June/August 2020: Evaluation of the current situation/state of play (global and regional processes)

- September/October 2020: First input from current MTS evaluation process
- November/December 2020: Elaboration of main directions of new MTS
- January/February 2021: First draft text of new MTS (main directions and strategic outcomes) finalized
- April/May 2021: Dedicated MAP Focal Points meeting to discuss and endorse main directions and strategic outcomes of new MTS, and consultations with stakeholders
- May/June/July 2021: Preparation of draft MTS for submission to MAP Focal Points
- September 2021: Examination of draft MTS at the MAP Focal Points meeting
- December 2021: Endorsement of new MTS by COP 22

This process will require adequate financial resources under the MTF, which are reflected in the proposed Programme of Work and Budget for the 2020-2021 biennium, under Key Output 1.1.2.

Annex VI

Assessment of the Meeting of Thematic Focal Points for Specially Protected Areas/Biological Diversity conducted on a Trial Basis in the Biennium 2018–2019

Assessment of the Meeting of Thematic Focal Points for Specially Protected Areas and Biological Diversity conducted on a Trial Basis in the Biennium 2018–2019

Introduction and background

The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean adopted in 1995 by the Contracting Parties to the Barcelona Convention, stipulates in its Article 24 that "*Each Party shall designate a National Focal Point to serve as liaison with the Centre on the technical and scientific aspects of the implementation of this Protocol*". It stipulates also that the National Focal Points shall meet periodically to carry out the functions deriving from the Protocol.

The ordinary meetings of the SPA/BD Focal Points are convened on biennial basis by SPA/RAC to examine the progress made in the implementation of the SPA/BD Protocol with special focus on the activities carried out in accordance with the programme of work adopted for the biennium by the Contracting Parties. During their meetings, the focal points also (i) evaluate, in accordance with Article 14 of the Protocol, the proposal submitted by Parties for the amendments of the Annexes to the Protocol and, (ii) examine, for each area proposed for inscription on the SPAMI List, its conformity with the common guidelines and criteria adopted (Article 9 of the Protocol).

In addition to the SPA/BD Focal Points, partner organisations as well as Secretariats of relevant Agreements are invited to designate representatives to attend the meetings of the SPA/BD Focal Points as observers. The MAP Coordinating Unit and the other MAP components are usually informed of the dates, agenda and venue of the SPA/BD Focal Point meetings.

Before 2019, 13 ordinary and one extraordinary meeting of the SPA/BD Focal Points were organised. Their recommendations were forwarded, through the Coordinating Unit for consideration by the Contracting Parties.

Within the framework of the implementation of the UNEP/MAP Mid-Term Strategy 2016-2021 (MTS) and the efforts of Contracting Parties to strengthen inter-linkages between its Core and Cross-cutting themes as well as facilitating coordination at national level across the relevant sectors, the Contracting Parties envisaged to examine the impacts of a transition to Thematic Focal Points within UNEP/MAP system. To this end, they requested SPA/RAC "*to prepare on a trial basis, a meeting of the thematic focal points for Specially Protected Areas and Biological Diversity for the biennium 2018-2019, under the guidance of the Coordinating Unit, to achieve the greatest possible integration with the other themes of the Mid-Term Strategy*" (Decision IG.23/3). They also requested the Coordinating Unit to present the results of the assessment of that trial, together with any other relevant analysis, to the Contracting Parties prior to their 21st Meeting.

In this context, SPA/RAC convened the Fourteenth Meeting of SPA/BD Thematic Focal Points. It took place in Portorož (Slovenia) from 18 to 21 June 2019. The present note was prepared by the Secretariat to report to the Contracting Parties on this trial exercise.

Participation

SPA/RAC invited all MAP Focal Points and all SPA/BD Focal Points to attend the meeting or to designate their representative. The invitation was also extended to partner organizations. The meeting was attended by:

Representatives of Parties:

- The MAP Focal Points of Albania, Algeria, Cyprus, European Union, France and Slovenia
- The SPA/BD Focal Points of Albania, Algeria, Bosnia & Herzegovina, Croatia, Cyprus, Egypt, European Union, France, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Turkey Tunisia, Slovenia and Spain

Representatives of Partner organisations:

The following organizations were represented at the meeting: Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Accord RAMOGE, the International Association of Oil and Gas Producers, the Centre of Mediterranean Cooperation of the International Union for Conservation of Nature (IUCN- Med), the Mediterranean Association to Save the Sea Turtles (MEDASSET), the Environmental Fund for Mediterranean Marine Protected Areas (The MedFund), the Network of Marine Protected Areas Managers in the Mediterranean (MedPAN), Shark Advocates International the Shark Trust and the Mediterranean Programme Office of the World Wide Fund for Nature (WWF).

Representatives of MAP Components

In addition to the MAP Coordinator and the staff of SPA/RAC, the following other MAP Components were represented at the meeting: PAP/RAC, INFO/RAC and REMPEC.

In comparison with previous meetings of SPA/BD Focal Points, the noticeable change in the attendance relates to the participation of some MAP Focal Points or their representatives and the participation of representatives from MAP components. As for the participation of representatives from partner organisations, most of the represented organisations have long-standing collaboration with SPA/RAC and they are therefore used to attend the SPA/BD Focal Points meetings, with the exception of the International Association of Oil and Gas Producers. The participation of this organisation is mainly in relation to the Agenda Items 5.4 (Mediterranean Offshore Guidelines and Standards: Draft Guidelines for the Conduct of Environmental Impact Assessment) and 6.5 (Mediterranean Offshore Guidelines and Standards: Draft Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPAs) within the framework of the Mediterranean Offshore Action Plan. Both Agenda Items were included in the meeting agenda following a proposal by REMPEC.

Topics covered by the Agenda Items of the meeting

The topics addressed by the Agenda Items were in line with those relating to biodiversity in the MTS. Most of them were similar to items included in the agendas of previous meetings of the SPA/BD Focal Points. There were however new topics whose inclusion in the agenda of the SPA/BD Thematic Focal Points meeting was proposed by other MAP components that provided the relevant working documents and introduced them during the meeting, as follows:

- Topics proposed and introduced during the meeting by the representative of REMPEC:

  5.4. Mediterranean Offshore Guidelines and Standards: Draft Guidelines for the Conduct of Environmental Impact Assessment

  6.5. Mediterranean Offshore Guidelines and Standards: Draft Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPAs) within the framework of the Mediterranean Offshore Action Plan

- Topics proposed by MEDPOL and introduced during the meeting by SPA/RAC:

  5.5. Updated Guidelines for Regulating the Placement of Artificial Reefs at Sea

- Topics proposed and introduced during the meeting by the representatives of PAP/RAC:

  7.3. Methodological Guidance of the Common Regional Framework for ICZM in the Mediterranean

  8.2. Analysis of coherence between regional documents adopted under the SPA/BD Protocol and the ICZM policy framework

- Topics proposed and introduced during the meeting by the representatives of INFO/RAC:

7.2. IMAP information system platform related to biodiversity and non-indigenous species cluster

Financial aspects

The option of organising the SPA/BD Thematic Focal Points meeting instead of an ordinary SPA/BD Focal Points meeting involved additional expenses relating mainly to the increase in the number of participants due to this new option. In total, SPA/RAC covered the travel and accommodation costs for 28 Party representatives; nine of them would not have participated if the meeting was a SPA/BD Focal Point meeting and not a SPA/BD Thematic Focal Points meeting.

Costs of the Fourteenth Meeting of SPA/BD Thematic Focal Points covered by SPA/RAC:

	Expenses related to the SPA/BD Focal Point Meeting	Additional cost*	Total cost of the Meeting
Travel and Terminal expenses	18 846 €	2 316 €	21 162 €
Accommodation	16 761 €	2 159 €	18 920 €
Per diem	10 300 €	1 766 €	12 066 €
Lunches	4 500 €	375 €	4 875 €
Coffee-breaks	3 570 €	298 €	3 868 €
Meeting room	7 750 €	500 €	8 250 €
Interpretation equipment	5 983 €	544 €	6 527 €
Total	**67 710 €**	**7 958 €**	**75 668** €

*Additional cost linked to the option of the SPA/BD Thematic Focal Points meeting with the participation of the MAP Focal Points of six Parties

In addition to the meeting expenses covered by SPA/RAC, the SPA/BD Thematic Focal Points meeting option resulted to expenses covered by the other MAP components in relation to the participation of their representatives to the meeting.

Views and opinions of the participants

The Secretariat contacted all the delegations during the meeting to collect the views and opinions of the participants regarding the added value they see in the option of organising SPA/BD Thematic Focal Points meetings instead of SPA/BD Focal Points meetings. In this context, a questionnaire was elaborated and made available to participants (Annex 1 to this note).

A summary of the replies to the questionnaire (19 replies received) appears in Annex 2 to this note. It shows that the opinion of the Contracting Party representatives regarding the added value of the option of organising for SPA/BD Thematic Focal Points meetings is mixed: 64% of them indicated that they see an evident added value, while 36% indicated that they see no evident added value. It should be noted that those who indicated they see no evident added value are only SPA/BD Focal Points or representatives of SPA/BD Focal Points.

The analysis of the replies to the questionnaires showed also that, before coming to the meeting, most of the SPA/BD Focal Points did not consult with other Focal Points of their countries about the issues addressed in the meeting agenda.

The replies to the questionnaire received from representatives of partner organisations (four replies received) indicated that they see an evident added value.

Conclusions and recommendations

Conclusions and recommendations
It is obvious that the meetings of thematic focal points held for Core and Cross-cutting themes of the MTS are likely to promote the integration of efforts to implement the Barcelona Convention and its Protocols. The Fourteenth Meeting of SPA/BD Thematic Focal Points, held on trial basis, has shown that such meetings can promote exchanges between Focal Points of the MAP components, which would be beneficial for the functioning of the MAP system and its structures. However, the exchange was relatively limited during this meeting since a low number of MAP Focal Points attended the meeting or sent their representatives. Furthermore, many delegates indicated that before coming to the meeting, they did not consult with other MAP component Focal Points of their countries about the issues addressed in the meeting agenda.

The views of the meeting participants on the usefulness of this approach are rather mixed. This is apparent from the discussions made with the participants at the meeting and from the analysis of the replies to the questionnaires which was distributed for this purpose. An important remark is that only SPA/BD Focal points or their representatives indicated they see no evident added value of the approach.

The analysis of the additional costs showed that compared to a “classical” Meeting of SPA/BD Focal points, the organisation of the Fourteenth SPA/BD Thematic Focal Points Meeting involved an increase of 11,75% in the expenditures needed to cover the travel and accommodation fees of the Contracting Party delegations and the other expenditures required for logistics. The increase was due to the participation of six MAP Focal Points or their representatives. The Meeting also involved additional costs related to the participation of the representatives of MAP components.

At this stage, definitive conclusions cannot be drawn as for the actual relevance, usefulness and cost- effectiveness of the approach tested with the organization, on trial basis, of the Fourteenth Meeting of SPA/BD Thematic Focal Points. It appears from this trial that the preparation of such a meeting should start from the elaboration of the programme of work for the biennium in order to orient the activities of the concerned MAP components towards more integration, collaboration and joint actions.
Furthermore, effort needs to be made at Contracting Party level so that there is more exchange between the focal points of the different MAP components of the same Contracting Party as well as with the MAP Focal Point. To promote integration and ensure more positive impact to thematic focal points meetings, it is proposed that Contracting Party delegations have preparatory meetings in their countries involving the Focal Points of all MAP components and MAP Focal Points. During these preparatory meetings, they should jointly review the working and information documents of the meeting of thematic focal points documents they will attend.
The organisation during the next biennium of another Meeting of Thematic Focal Points addressing one of the cross-cutting themes of the MTS would provide more elements as for the possibilities and limits of the transition to Thematic Focal Points within UNEP/MAP-Barcelona Convention system.

Annex 1: Questionnaire for the evaluation of the Thematic Focal Points meeting option within the framework of the Barcelona Convention

Background

Decision IG.23/3 of the Contracting Parties "requested SPA/RAC to prepare on a trial basis, a meeting of the thematic focal points for Specially Protected Areas/Biological Diversity for the biennium 2018- 2019, under the guidance of the Coordinating Unit, to achieve the greatest possible integration with the other themes of the Mid-Term Strategy".

It also requested the Coordinating Unit to assess the trial and present the results of the assessment to the Contracting Parties prior to their twenty-first meeting.

This questionnaire aims at collecting views and opinions of the representatives of the Contracting Parties and of partner organisations attending the Thematic Focal Points meeting, held from 18 to 21 June 2019, in Portoroz (Slovenia).

1. **Are you:**

☐ The SPA/RAC Focal Point
☐ A Representative of the SPA/RAC Focal Point
☐ The MAP Focal Point
☐ A Representative of the MAP Focal Point
☐ Representative of a partner organisation
☐ Other (Please specify)

2. **Did you know before the meeting that this is a SPA/BD thematic focal points meeting?**

Yes ☐ No ☐

3. **If yes, how you were informed?**

☐ From the MAP Focal Point of your country (if applicable)

☐ From the meeting invitation and documents

Other (please specify)

4. **Did you have preparatory meeting(s)/consultation at national level with your MAP Focal Point and the Focal points of the other MAP Components?**

Yes ☐ No ☐ Only with some of them (partially) ☐

5. **How do you assess the usefulness of organizing a Thematic Focal Points meeting instead of the RAC's Focal points meetings, with regards to increased integration at the national level and within the MAP system?**

☐ Useful with evident added value

☐ No evident added value

Added value could be obtained through the following improvements: (please specify)

6. **Please indicate here any further remarks or suggestions**

Annex 2: Compilation of the answers received from participants in response to the questionnaire

Type of Participant	How you were informed that it was a Thematic Focal point Meeting[1]	Preparatory meeting with Focal points at national level[2]	Usefulness of Thematic Focal Points meeting[3]	Added value could be obtained through the following improvements[3]	Further remarks/suggestions[4]
1-MAP FOCAL POINT	From the meeting invitation and documents	YES	Useful with evident added value	Strengthen national coordination with the relevant RAC's Focal Points in order to have an integrated and holistic approach on the themes concerned. Substantially contributing to EcAp achievement, since its implementation requires an integration approach in interconnected fields.	I found the thematic focal points meeting for Specially Protected Areas/Biological Diversity extremely useful, since it gave the opportunity to have an integrated view on interconnected fields from different activities/ developments going on through the different RACs components. Marine biodiversity and MPAs cannot be protected if the other components are not taken into account. In this respect, the development of the different guidelines and relevant documents for the various components i.e. Offshore activities, artificial reefs, ICZM etc should be in coherence with the marine biodiversity conservation.
1-MAP FOCAL POINT	From the meeting invitation and documents	YES	No evident added value		Dans mon pays, nous parvenons à nous organiser en interne entre les points focaux du PAM et les points focaux des CAR afin d'obtenir une vision transversale et intégrée des sujets traités au sein du PAM. Le fait que le point focal du PAM soit également point focal de deux CAR facilite cette intégration. Cette organisation pourrait être recommandée aux Parties considérant que le système doit évoluer. - Bien que cette réunion ait été fort intéressante, l'absence de la grande majorité des points focaux du PAM illustre que ceux-ci ont jugé que leur présence n'était pas indispensable.

[1] Questions 2 and 3 of the questionnaire

[2] Question 4 of the questionnaire

[3] Question 5 of the questionnaire

[4] Question 6 of the questionnaire

Type of Participant	How you were informed that it was a Thematic Focal point Meeting[1]	Preparatory meeting with Focal points at national level[2]	Usefulness of Thematic Focal Points meeting[3]	Added value could be obtained through the following improvements[3]	Further remarks/suggestions[4]
2-REPRESENTATIVE OF MAP FOCAL POINT	From the meeting invitation and documents	PARTIALLY (ONLY WITH SOME NATIONAL FOCAL POINTS)	Useful with evident added value		Even some representative countries did not draft or implement an action plan regarding species, they took some initiatives in the frame of different agreements with other foundations ore donors (such case M2PA), that helped on improvement of situation regarding these species' conservation. I think this kind of contributions should be mentioned also in future meetings (just like in this one by Side events), as an added value for successful implementation of regional action plan and strategies.
2-REPRESENTATIVE OF MAP FOCAL POINT	From the meeting invitation and documents	YES	Useful with evident added value	Réunion thématique très intéressante et fructueuse de bonnes présentations beaucoup d'information ont été données Qualité et niveau de participation élevés Présentation des opportunités nouvelles Très convivial, bons échanges ; différents partenaires s'informent mutuellement sur leurs activités	On souhaiterait dans l'avenir de nous faire parvenir les documents de travail dans les deux versions pour être plus efficient Poursuite de l'appui du CAR/ASP Le développement des capacités financières, techniques et institutionnelles est très important pour la mise en œuvre de toutes les activités. La coordination intersectorielle doit parvenir au point focal du PAM
3-SPA FOCAL POINT	From the meeting invitation and documents	YES	Useful with evident added value	We welcome this integrated approach as biodiversity is horizontal theme and should be harmonized and coordinated with other RACs programme of work within the MAP system.	
3-SPA FOCAL POINT	From the meeting invitation and documents	PARTIALLY (ONLY WITH SOME NATIONAL FOCAL POINTS)	Useful with evident added value		
3-SPA FOCAL POINT	From the meeting invitation and documents	PARTIALLY (ONLY WITH SOME NATIONAL	No evident added value		I don't see purpose of this approach. It was like regular Meeting of National Focal points.

Type of Participant	How you were informed that it was a Thematic Focal point Meeting[1]	Preparatory meeting with Focal points at national level[2]	Usefulness of Thematic Focal Points meeting[3]	Added value could be obtained through the following improvements[3]	Further remarks/suggestions[4]
		FOCAL POINTS)			
3-SPA FOCAL POINT	From the meeting invitation and documents + SPA/RAC	NO	No evident added value	Regular coordination at national level addressing the issues that are dealt with within the other protocols and/or MAP components; possibility to influence the activities/decisions/actions of other RACs;	
3-SPA FOCAL POINT	From the meeting invitation and documents	YES	No evident added value	In small countries, the same people who represent the Thematic and the regular meeting.	
3-SPA FOCAL POINT	From the meeting invitation and documents	PARTIALLY (ONLY WITH SOME NATIONAL FOCAL POINTS)	Useful with evident added value		
3-SPA FOCAL POINT	MAP FOCAL POINT	PARTIALLY (ONLY WITH SOME NATIONAL FOCAL POINTS)	Useful with evident added value		

Type of Participant	How you were informed that it was a Thematic Focal point Meeting[1]	Preparatory meeting with Focal points at national level[2]	Usefulness of Thematic Focal Points meeting[3]	Added value could be obtained through the following improvements[3]	Further remarks/suggestions[4]
4-REPRESENTATIVE OF SPA FOCAL POINT	From the meeting invitation and documents	YES	Useful with evident added value	Added value could be obtained through the following improvements: (please specify) Although the meeting included several components beyond the SPA/BD Focal Point Meeting, those components are interlinked with marine biodiversity and it was extremely useful to get involved with such documents and actions (i.e. offshore protocol, eia, artificial reefs etc).	
4-REPRESENTATIVE OF SPA FOCAL POINT	From the meeting invitation and documents	PARTIALLY (ONLY WITH SOME NATIONAL FOCAL POINTS)	No evident added value		
4-REPRESENTATIVE OF SPA FOCAL POINT	From the meeting invitation and documents+ National network system	PARTIALLY (ONLY WITH SOME NATIONAL FOCAL POINTS)	No evident added value		I am of the opinion that the MAP Secretariat should emphasise that coordination and communication between FPs of the RACs and MAP should primarily happen nationally, as a matter of fact that is one of their primary roles, thus ensuring coordinated implementation of the Convention and requirements of the RACs. If there is the need to have a meeting to discuss matters, ad-hoc, which are cross-sectoral and over-arching, this could be seen as an opportunity to hold such a thematic meeting, where added value would surely be an output. However, I fail to see the added value of a thematic meeting like the one held in Slovenia, whilst noting that the organization and logistics were impeccable as always.

Type of Participant	How you were informed that it was a Thematic Focal point Meeting[1]	Preparatory meeting with Focal points at national level[2]	Usefulness of Thematic Focal Points meeting[3]	Added value could be obtained through the following improvements[3]	Further remarks/suggestions[4]
5-REPRESENTATIVE OF PARTNER ORGANISATION	From the meeting invitation and documents	NO	Useful with evident added value		
5-REPRESENTATIVE OF PARTNER ORGANISATION	From the meeting invitation and documents	NO	Useful with evident added value		
5-REPRESENTATIVE OF PARTNER ORGANISATION	From the meeting invitation and documents	NO	Useful with evident added value	To link may be with other RAC focal points depending on the main subjects discussed (for example PAP/RAC focal points if discussion is about ICZM/biodiversity)	Maybe it would be useful to plan short power-point presentations to introduce subjects and present the main elements of the documents; so that Parties that may not have fully prepared all documents of the meeting can also bring some direct contribution, based on main elements of the documents presented through presentation.
5-REPRESENTATIVE OF PARTNER ORGANISATION	From the meeting invitation and documents	NO		As it was our first participation in a SPA RAC meeting, we cannot comment on the interest of having Thematic Focal Points Meetings.	We would like to thank the SPA/RAC Secretariat for the invitation. We very much appreciated the opportunity to participate in the meeting. We hope that we can be a valuable partner and we are looking forward to working together.
6- OTHER (Consultant) SPA/RAC)	From the meeting invitation and documents	NO	Useful with evident added value		

Annex VII

Joint Cooperation Strategy on Spatial-based Protection and Management Measures for Marine Biodiversity Among the Secretariats of ACCOBAMS, GFCM, IUCN-Med and UNEP/MAP

Joint Cooperation Strategy
on
Spatial-based Protection and Management Measures for Marine Biodiversity Among the Secretariats of ACCOBAMS, GFCM, IUCN-Med and UNEP/MAP (the draft Joint Strategy)

Considering the need of facilitating effective conservation and sustainable use of the Mediterranean marine biodiversity, as required by their respective mandates and with special emphasis on areas beyond national jurisdiction;

Recognising that the challenges facing marine ecosystems in the Mediterranean including its areas beyond national jurisdiction, require effective monitoring and development of spatial-based protection and management measures;

Recalling the common vision, the Mediterranean Ecological Objectives and the Good Environmental Status descriptions and targets, as defined in the Decisions of the Contracting Parties to the Barcelona Convention on the Ecosystems Approach (Decisions IG.17/6, IG.20/4, IG.21/3 and IG. 22/7);

Reaffirming that the [general principles of the Law of the Sea and the] UNCLOS [where applicable[1]] set[~~s~~] out the legal framework within which all activities in the oceans and seas must be carried out;

Considering the on-going negotiations in the Intergovernmental Conference on an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, following United Nations General Assembly resolution 72/249;

Considering the importance of the post-2020 global biodiversity framework, which is being prepared pursuant to CBD Decision CBD/COP/DEC/14/34, and its subsequent implementation;

Building on, where available, the bilateral Memoranda of Understanding signed by the Partners, and in particular their topics addressing spatial-based management and conservation measures;[2]

The Secretariats of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS), the General Fisheries Commission for the Mediterranean (GFCM), the International Union for Conservation of Nature Centre for Mediterranean Cooperation (IUCN-Med), and the United Nations Environment Programme Mediterranean Action Plan (UNEP/MAP), herein after referred to as “the Partners”, agree on the following Joint Cooperation Strategy:

1. Objectives

The overall aim of the Joint Cooperation Strategy is to contribute to the achievement in the Mediterranean of SDG 14, in particular Targets 14.2, 14.5, 14.7 and the CBD Aichi Target 11; and that the application of the precautionary principle and of the Ecosystem Approach is strengthened in a coordinated manner and a coordinated application of spatial-based protection.

In particular, the objectives of the Joint Cooperation Strategy are that:

[1] ~~Pending further consultations by Contracting Parties which are Member States of the European Union.~~

[2] [List of MoUs to be added]

the conservation and the sustainable use of the marine biodiversity in the Mediterranean including its areas beyond national jurisdiction are ensured through the application of the Ecosystem Approach, the use of the best available knowledge and technologies and the application of the precautionary principle;

(1) the activities undertaken by the concerned Partners, following the respective mandates by their Parties, in relation to the spatial-based management and conservation in the Mediterranean, including its areas beyond national jurisdiction, are harmonised and complement each other, while respecting the role and jurisdiction of [relevant coastal States] and allowing for consultation of other States concerned in line with UNCLOS.

(2) The activities undertaken by the concerned Partners, following the respective mandates by their Parties, in relation to the spatial-based management and conservation in the Mediterranean, including its areas beyond national jurisdiction, are harmonised and complement each other, while respecting the role and jurisdiction of [relevant coastal States] and allowing for consultation of other States concerned in line with UNCLOS.

2. Areas of Cooperation

The Partners, in line with the individual mandates, strategies and Programmes of Work of their respective Organizations will cooperate to:

(1) Collect and exchange information and identify and fulfil existing gaps in information, to identify potential priority areas that could be protected or managed, in close collaboration with the [relevant coastal States];

(2) Initiate the process of consultation of the [relevant coastal States] on the identified potential priority areas;

(3) Assist interested countries in a coordinated manner in declaring intent/interest of protecting a specific area and on the process to do so, in consultation with relevant coastal States;

(4) Assist interested countries, to:

(i) elaborate the designation files;

(ii) undertake national consultation processes in case need be;

(iii) finalize the designation files including the agreed area-based conservation and management measures;

(iv) undertake the official designation of SPAMI and/or FRA or other area-based conservation and/or management measures;

(5) Address follow up actions, in consultation with [relevant coastal States], in a coordinated manner.

3. Modalities of Cooperation

Regular meetings will be convened for the implementation of this Joint Cooperation Strategy, with the cost shared between all Partners, and with the participation of a representative of each Partner, and observers from the [interested coastal States]. These meetings will:

(i) Steer the process and identify options for the Areas of Cooperation, as

described in point 2 above;

(ii) Propose to the Contracting Parties of the relevant Conventions a roadmap for implementing actions described under point 2 above, and propose role-sharing among the Partners, in line with their mandates and comparative advantages;

(iii) Foster and promote coordinated outreach, public awareness and scientific research and observation, and liaise with other appropriate organisations (such as IMO);

(iv) Facilitate the information among Partners on new areas registered, as well as on any change regarding the [limits ~~border~~] or status of an area previously registered;

(v) Advise the established regular evaluation processes of the status of the areas;

(vi) Undertake, upon consultation with Contracting Parties, other tasks as may be deemed appropriate in line with the individual mandates, strategies and Programmes of Work of their respective Organizations;

(vii) Publish the outcomes of the meetings and the information on the activities in the respective web sites of the Partners.

4. Implementation Aspects

The practical arrangements for the implementation of this Cooperation Strategy and the related activities, including defining financing of the modalities of the cooperation and the Areas of Cooperation will be identified and discussed in the first meeting, in line with the Partners' mandates and financial rules and Programmes of Work. If necessary, upon the request of the respective governing bodies of the respective organizations, joint efforts will be undertaken to mobilize resources for activities foreseen under point 2 in a transparent manner, without additional financial burden to the respective Organizations of the Partners, nor to the Contracting Parties.

5. Reporting

Each Partner will inform its respective governing body on the implementation of this Joint Cooperation Strategy.

6. Participation

This Joint Cooperation Strategy is open for the participation of any other relevant and interested International or Regional Organization, provided its participation is approved by all the Partners and their Contracting Parties, in line with the rules of their respective governing bodies.

Annex VIII

Refined Appendix to the Updated Resource Mobilization Strategy

(Refined Appendix of the Updated Resource Mobilization Strategy, in accordance to Decision IG. 23/5, to take account of the resources requirement for each strategic outcome and the relevance of potential donors to each of these outcomes)

TABLE 1. Strategic Outcomes and Indicative Key Outputs for Governance

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
1.1 Contracting Parties supported in the implementation of the Barcelona Convention, its Protocols, Regional Strategies and Action Plans.	1.1.1 Ratification of the Barcelona Convention and its Protocols by all Contracting Parties supported.	Bilateral donors[1]		French Development Agency (AFD – Political and Civic Transition; Territorial and Ecological Transition) Spanish Agency for International Development Cooperation (AECID) (Environment and climate change) World Bank (Regional Integration; Environmental policies and institutions) GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action". Swedish International Development Cooperation Agency (SIDA): Environment and Climate
	1.1.2 Effective legal, policy, and logistic support provided to MAP decision-making process including advisory bodies meetings.	Bilateral donors, EU		
	1.1.3 Strengthen interlinkages between Core and Cross-cutting themes and facilitate Coordination at national level across the relevant sectors. In this context, examine the impacts of a transition to Thematic Focal Points within UNEP/MAP system for consideration at the COP 20.	Bilateral donors and national governments and regional development institutions	18.000	
	1.1.4 Funding opportunities for regional and national priorities identified, donors/partners informed and engaged, through the implementation of the updated Resource Mobilization Strategy and Contracting Parties assisted in mobilizing resources.	EU, GEF and national governments.		

[1] Bilateral donors also include ad hoc voluntary contributions from Contracting Parties

1.2 Contracting Parties supported in compliance with the Barcelona Convention, its Protocols, Regional Strategies and Action Plans.	1.2.1 Compliance mechanisms effectively functioning and technical and legal advice provided to Contracting Parties, including technical assistance to enhance implementation of the Convention and its Protocols including reporting.	International Development Law Organization (IDLO) could be a potential partner for technical/legal assistance to countries. Global Foundations could be funders		French Development Agency (AFD – Political and Civic Transition; Territorial and Ecological Transition) Spanish Agency for International Development Cooperation (AECID) (Environment and climate change) World Bank (Regional Integration; Environmental policies and institutions)
1.3 Strengthened participation, engagement, synergies and complementarities among global and regional institutions.	1.3.1 Regional cooperation activities promoting dialogue and active engagement of global and regional organizations and partners, including on SAP BIO, Marine Litter, SCP, ICZM, Related entities could support funding for regional co-operation MSP and Climate Change (e.g. regional conference, donor meetings).	Bilateral Donors, EU, Regional Development Banks, UNDP, UNFCCC, IGOs, and GEF	50.000	Italian Ministry of Environment, Land and Sea (IMELS) French Development Agency (AFD – Political and Civic Transition; Territorial and Ecological Transition) World Bank (Regional Integration; Environmental policies and institutions) GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs UfM: “Sustainable Development” Theme – “Water Environment and Blue Economy” and “Energy and Climate Action”.
	1.3.2 Participation in relevant existing or new international initiatives and dialogue (e.g. ABNJ, MPAs, Offshore, Sustainable Development) to highlight the Mediterranean regional specificities and increase synergies.	Bilateral, IGOs, private sector/foundations	30.000	
	1.3.3 MSSD implementation set in motion through actions on visibility, capacity building and the preparation of guidelines to assist countries adapt the Strategy to their national contexts.	UN Sustainable Development Fund, Adaptation Fund, other similar funds	75.000	

1.4 Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.	1.4.1 Periodic assessments based on DPSIR approach and published addressing inter alia status quality of marine and coastal environment, interaction between environment and development as well as scenarios and prospective development analysis in the long run. These assessments include climate change related vulnerabilities and risks on the marine &coastal zone in their analysis, as well as knowledge gaps on marine pollution, ecosystem services, coastal degradation, cumulative impacts and impacts of consumption and production.	Bilateral donors, Private sector entities and Foundations, European Investment Bank, European Bank for Reconstruction, and Development, EU	280.000	Italian Ministry of Environment, Land and Sea (IMELS) European Neighbourhood Instrument (ENI) EU Global Public Goods and Challenges' (GPGC) SIDA: Regional Development Cooperation MAVA Foundation (Mediterranean, Sustainable economy, Global projects) Prince Albert II of Monaco Foundation (e.g. Blue initiative) (e.g. Blue initiative) Environment and Energy Management Agency (ADEME), France (European Energy Network) Rhône Méditerranée Corse Water Agency, France GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. UfM: “Sustainable Development” Theme – “Water Environment and Blue Economy” and “Energy and Climate Action”. Global Partnership for Education (GPE)
	1.4.2 MSSD implementation monitored, as appropriate and evaluated, as appropriate on periodic basis through the agreed set of indicators in line with SDG and the sustainability dashboard.	GEF, EU, Private sector Foundations, IGOs	115.000	
	1.4.3 Implementation of IMAP (the EcAp-based integrated monitoring and assessment programme) coordinated, including GES common indicators fact sheets, and supported by a data information centre to be integrated into Info/MAP platform.	EU (relevant EU Directorates), GEF	400.000	
	1.4.4 Interface between science and policy-making strengthened through enhanced cooperation with global and regional scientific institutions, knowledge sharing platforms, dialogues, exchange of good practices and publications.	EU, Foundations, Bilateral donors, Scientific institutions	120000	
	1.4.5 Educational programmes, including e-learning platforms and college level degrees, on governance and thematic topics of MAP relevance organized in cooperation with competent institutions.	Foundations, Universities and Educational institutions	30.000	

				The World Bank (IBRD IDA): Education for All
1.5 MAP knowledge and MAP information system enhanced and accessible for policy- making, increased awareness and understanding.	1.5.1 Info/MAP platform and platform for the implementation of IMAP fully operative and further developed, connected to MAP components' information systems and other relevant regional knowledge platforms, to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public.	EU, Bilateral Donors, Private sector entities engaged in Informatics, IT companies (potentially)	490.000	Italian Ministry of Environment, Land and Sea (IMELS)
	1.5.2 Barcelona Convention online Reporting System (BCRS) updated and operational, improved and maintained, and complemented and streamlined with other reporting requirements.	Bilateral donors, EU		
1.6 Raised awareness and outreach.	1.6.1 The UNEP/MAP communication strategy updated and implemented.	Foundations, Communication and public relation networks (pro-bono services)	680.000	Italian Ministry of Environment, Land and Sea (IMELS) European Neighbourhood Instrument (ENI) EU Global Public Goods and Challenges' (GPGC) MAVA Foundation (Mediterranean, Sustainable economy, Global projects) Prince Albert II of Monaco Foundation (e.g. Blue initiative) Ellen Macarthur Foundation (Systemic Initiatives, Europe)

TABLE 2. Strategic Outcomes and Indicative Key Outputs for *Land and Sea-Based Pollution*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
2.1 Strengthening regional implementation of the obligations under the Barcelona Convention and 4 pollution-related Protocols, and of programmes of measures in existing relevant Regional Strategies and Action Plans.	2.1.1 Targeted measures of the regional plans/strategies facilitated and implemented.	Bilateral donors, EU, IGOs, Regional organizations, GEF	140.000	Italian Ministry of Environment, Land and Sea (IMELS) EU Global Public Goods and Challenges' (GPGC) Ellen Macarthur Foundation (Systemic Initiatives, Europe) MAVA Foundation (Mediterranean, Sustainable economy, Global projects) GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and Minamata Conventions. UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action".
2.2 Development or update of	2.2.1 Guidelines, decision-support tools, common standards and criteria provided for	Private sector Foundations,	140.000	Italian Ministry of Environment, Land and Sea (IMELS)

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
new/existing action plans, programmes and measures, common standards and criteria, guidelines.	in the Protocols and the Regional Plans, developed and/or updated for key priority substances or sectors.	Regional organizations, GEF		Ellen Macarthur Foundation (Systemic Initiatives, Europe) European Structural and Investment Funds, e.g., EMFF, ERDF GEF 7 Strategy: International Waters Focal Area. Objective i: strengthening Blue Economy Opportunities GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and Minamata Conventions. UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action".
	2.2.2 Regional programmes of measures identified and negotiated for pollutants/ categories (sectors) showing increasing trends, including the revision of existing regional plans and areas of consumption and production.	Green Climate Fund, GEF, EU, Regional Organizations, Bilateral donors, Private sector partners	100.000	
2.3 Strengthening and implementation of marine pollution prevention and control legislation	2.3.1 Adopted NAPs (Art. 15, LBS Protocol) implemented and targeted outputs timely delivered	National entities, Bilateral donors, EU, European Investment Bank, European Bank for Reconstruction, and Development,	180.000	EU (e.g. Switch Med) Horizon 2020 Initiative SwitchMed Programme

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
and policies at national level, including through enforcement and integration into sectorial processes.		World Bank, IFA, GEF		Ellen Macarthur Foundation (Systemic Initiatives, Europe) MAVA Foundation (Mediterranean, Sustainable economy, Global projects) GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and Minamata Conventions. UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action". SIDA: Environment and Climate
	2.3.2 NAPs developed to implement the Regional Strategy for Prevention and Response to Marine Pollution from Ships.	National Entities, IGOs, EU, IMO		
	2.3.3 SCP Regional Action Plan (pollution-related activities) mainstreamed into and implemented through NAPs and national processes, such as SCP National Action Plans and NSSDs.	Private sector, Foundations, Bilateral Donors, IGOs, EU, GEF		
2.4 Marine Pollution Monitoring and assessment.	2.4.1 National pollution and litter monitoring programs updated to include the relevant pollution and litter Imap indicators, implemented and supported by data quality assurance and control.	Bilateral Donors, EU, GPA	500.000	UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action".
	2.4.2 Inventories of pollutant loads (NBB, PRTR from land-based sources, and from	EU, European Investment Bank,		

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
	offshore and shipping) regularly updated, reported and assessed.	European Bank for Reconstruction, and Development, Technical cooperation with Shipping Companies, GPA		
	2.4.3 Marine pollution assessment tools (in depth thematic assessment, maps and indicator factsheets) developed and updated for key pollutants and sectors within EcAp.	Bilateral donors, EU, GEF		
2.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.	2.5.1 Training programmes and workshops in areas such as pollution monitoring, pollutant inventories, policy implementation, common technical guidelines, authorization and inspections bodies, compliance with national legislation.	National Entities, EU, relevant IGOs	350.000	Italian Ministry of Environment, Land and Sea (IMELS) European Structural and Investment Funds, e.g., EMFF, ERDF Horizon 2020 Initiative Ellen Macarthur Foundation (Systemic Initiatives, Europe) MAVA Foundation (Mediterranean, Sustainable economy, Global projects) GEF 7 Strategy: Chemicals and Waste Focal Area Objective:
	2.5.2 Pilot projects implemented on marine litter, POPs, mercury, and illicit discharges reduced, including through SCP solutions for alternatives to POPs and toxic chemicals and the reduction of upstream sources of marine litter for businesses, entrepreneurs, financial institutions and civil society.	WB, UNDP, GEF, EU, Private sector entities	2.600.000	

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
				eliminating chemicals covered by the Stockholm and Minamata Conventions. UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action". SIDA: Environment and Climate GEF 7 Strategy: International Waters Focal Area. Objective i: strengthening Blue Economy Opportunities Objective iii: Enhance Water Security in Freshwater Ecosystems
	2.5.3 Marine pollution prevention and control measures and assessments integrated in ICZM Protocol implementation projects, CAMPs and related Strategic Environment Impact Assessments.	Bilateral Donors, GEF		
2.6 Enhanced cooperation at regional, sub-regional and national levels to prevent and control marine pollution.	2.6.1 Agreements, synergies and exchange of best practices with key relevant global and regional partners and stakeholders with a particular focus on marine litter.	Regional Organizations, UfM, International Environmental Organizations, EU		EU Global Public Goods and Challenges' (GPGC) Ellen Macarthur Foundation (Systemic Initiatives, Europe) MAVA Foundation (Mediterranean, Sustainable economy, Global projects)
	2.6.2 Networks and initiatives of businesses, entrepreneurs and civil society	EU,	30.000	

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
	providing SCP solutions contributing to alternatives to POPs and toxic chemicals and to reduce upstream sources of marine litter supported and coordinated.	Environmental Organizations, GEF, Private sector partners		GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and Minamata Conventions. UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action".
2.7 Identifying and tackling new and emerging issues, as appropriate.	2.7.1 Reviews/policy briefs developed and submitted to Contracting Parties on emerging pollutants, ocean acidification, climate change and linkages with relevant global processes.	Foundations, UNFCCC, UN/DESA, EU, Bilateral donors	210.000	UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" EU ESF (European Science Foundation)

TABLE 3. Strategic Outcomes and Indicative Key Outputs for *Biodiversity and Ecosystems*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
3.1 Strengthening regional implementation of the obligations under the Barcelona Convention, and its relevant Protocols and other instruments.	3.1.1 A comprehensive coherent network of well managed MPAs, including SPAMIs, to achieve Aichi Target 11 in the Mediterranean set up and implemented.	Bilateral Donors, EU, GEF, FAO	560.000	Italian Ministry of Environment, Land and Sea (IMELS) Leonardo DiCaprio Foundation EU INTEREG MED GEF 7 Biodiversity Focal Area: Objective iii: Strengthen Biodiversity Policy and Institutional Frameworks. GEF 7 Strategy: International Waters Focal Area. Objective ii: Improving Governance in Areas Beyond National Jurisdiction (ABNJ) UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs"
	3.1.2 Most relevant area-based management measures are identified and implemented in cooperation with relevant global and regional organizations, through global and regional tools (SPAMIs, FRAs, PSSAs, etc.), including for the conservation of ABNJ, taking into consideration the information on Mediterranean EBSAs.	WB, GEF, UNDP, other relevant IGOs		
3.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines for the conservation	3.2.1 Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats, on species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management are updated to achieve GES.	CBD, FAO, CMS, CITES	520.000	Italian Ministry of Environment, Land and Sea (IMELS) French Facility for Global Environment (FFEM) GEF 7 Biodiversity Focal Area:

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
of Coastal and Marine biodiversity and ecosystems.	3.2.2 Guidelines and other tools for the conservation of endangered and threatened Mediterranean coastal and marine species, key habitats, for non-indigenous species control and prevention as well as the management of marine and coastal protected areas developed/updated and disseminated.	GFCM, EU, GEF	25.000	Objectives i: Mainstream Biodiversity Across sectors as well as within Production Landscapes and Seascapes Objective ii: Reduce Direct Drivers of Biodiversity Loss Objective iii: Strengthen Biodiversity Policy and Institutional Frameworks. UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action". SIDA: Environment and Climate, and Sustainable Societal Development
	3.2.3 Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM) applied in selected areas at a pilot level linking coastal and open sea areas subject to major pressures. To this end the information on EBSA areas could be used.	EBRD, WB, GEF, EU, Bilateral donors		
3.3 Strengthening national implementation of biodiversity conservation policies, strategies and legislation measures.	3.3.1 NAPs for the conservation of Mediterranean endangered and threatened species and key habitats and on species introductions and invasive species developed/updated.	IPBES, TEEB, Foundations, IGOs, CBD, GEF	59,500	French Facility for Global Environment (FFEM) Leonardo DiCaprio Foundation Prince Albert II of Monaco Foundation (e.g. Blue initiative)
	3.3.2 National measures developed and implemented to strengthen the protection and the management of relevant marine and coastal sites, especially those containing threatened habitats and species (including deep-sea habitats).	EU, National Entities, UNESCO, GFCM	500,000	

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
	3.3.3 Biodiversity and ecosystem protection actions integrated in CAMPs, other ICZM Protocol implementation projects and Strategic Environment Impact Assessments.	Partnering with Environmental Organizations/NGOs, IUCN, WWF	15,000	
3.4 Monitoring, inventory and assessment of biodiversity with focus on endangered and threatened species, non-indigenous species and key habitats.	3.4.1 Monitoring programmes for key species and habitats as well as invasive species, as provided for in the IMAP are developed and implemented, including on the effectiveness of marine and coastal protected areas, and on climate change impacts.	EU, GEF, Foundations, Research institutes	621,000	French Facility for Global Environment (FFEM) EU Global Public Goods and Challenges' (GPGC) Horizon 2020 Initiative Leonardo DiCaprio Foundation Prince Albert II of Monaco Foundation (e.g. Blue initiative) GEF 7 Biodiversity Focal Area: Objectives i: Mainstream Biodiversity Across sectors as Well as Within Production Landscapes and Seascapes Objective ii: Reduce Direct Drivers of Biodiversity Loss Objective iii: Strengthen Biodiversity Policy and Institutional Frameworks. GEF 7 Strategy: International Waters Focal Area.
	3.4.2 Biodiversity conservation assessment tools (in-depth thematic assessment, maps and indicator fact sheets) developed and updated to show trends at national, sub-regional and regional levels, and measure the effectiveness of the SAP BIO NAPs and Regional Action Plans implementation.	CBD, GEF, UNDP, EU, National Entities		
	3.4.3 EcAp common indicators on biodiversity and non-indigenous species monitored through IMAP in MPAs and SPAMIs, and relevant data sets established.	CBD, EU, Foundations	35,000	
	3.4.4 Inventory of vulnerable and fragile coastal and marine ecosystems and assessment of sensitivity and adaptive capacities of coastal and marine ecosystems to changes in sea conditions as well as of the role of services they provide developed.	IMO, UNESCO, EU	100,000	

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
				Objective i: strengthening Blue Economy Opportunities Objective iii: Enhance Water Security in Freshwater Ecosystems
3.5 Technical assistance and capacity building at regional, sub-regional and national levels to strengthen policy implementation and compliance with biodiversity -related national legislation.	3.5.1 Capacity-building programmes related to the development and management of marine and coastal protected areas, to the conservation and monitoring of endangered and threatened coastal and marine species and key habitats, and to monitoring issues dealing with climate change and biodiversity developed and implemented, including pilots to support efforts aimed at MPA/SPAMI establishment and implementation.	Foundations, Private sector, EU, Bilateral donors	660.000	French Facility for Global Environment (FFEM) French Development Agency (AFD – Territorial and Ecological Transition) Leonardo DiCaprio Foundation Prince Albert II of Monaco Foundation (e.g. Blue initiative) UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action".
	3.5.2 Training and awareness-raising programmes on SCP solutions contributing to the conservation of the ecosystems and biodiversity delivered to businesses, entrepreneurs, financial institutions and civil society.	ACCOBAMS, Private Foundations, Businesses, Private sector Foundations, EU	200.000	
3.6 Enhanced cooperation at regional, sub-regional and national levels to protect and conserve biodiversity and ecosystems.	3.6.1 Joint strategies and programmes on biodiversity and ecosystem conservation developed, by considering NAPs in cooperation with relevant partner organizations at global and regional levels.	Bilateral donors, GEF, EU		EU (Switch Med) Ellen Macarthur Foundation (Systemic Initiatives, Europe) GEF 7 Biodiversity Focal Area: Objective ii: Reduce Direct Drivers of Biodiversity Loss
	3.6.2 Businesses, entrepreneurs and civil society encouraged to use networks to disseminate SCP solutions contributing to biodiversity and ecosystems	Private-public partnerships and Foundations, World Business Development Council		

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual
	conservation coordinated through adequate mechanisms.			
3.7 Identifying and tackling with new and emerging issues, as appropriate.	3.7.1. Coordination with the ongoing process towards the adoption of an Implementing Agreement on BBNJ (namely concerning marine genetic resources, marine protected areas BBNJ, and SIA).	EU, Bilateral donors, GEF		

TABLE 4. Strategic Outcomes and Indicative Key Outputs for *Land and Sea Interaction and Processes*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
4.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.	4.1.1 Contracting Parties assisted in identifying, implementing and evaluating specific measures and tools to reduce pressures on coastal and marine areas (e.g. coastal setback, land policy measures, zoning).	Bilateral donors, EU, GEF, UNESCO		GEF 7 Strategy: International Waters Focal Area.
4.2 Development of new action plans, programmes of measures, common standards and criteria, guidelines.	4.2.1 Tools and guidelines for environmental assessments developed and applied (e.g. EIA, cumulative assessments, SEA).	Bilateral donors, IUCN, UNEP/GEF, EBRD		Italian Ministry of Environment, Land and S (IMELS) French Development Agency (AFD – Territorial and Ecological Transition) GEF 7 Strategy: International Waters Focal Area.
	4.2.2Marine Spatial Planning defined in the context of the Barcelona Convention and applied, as appropriate.	National Authorities and Institutions, GEF EU	200.000	

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
4.3 Strengthening national implementation.	4.3.1 New generation of CAMPs prepared to promote land-sea interactions, also addressing trans-boundary aspects, as appropriate.	National institutions, EU, EBRD	600.000	Italian Ministry of Environment, Land and S (IMELS) French Development Agency (AFD – Territorial and Ecological Transition) Conservatoire du Littoral, France (Délégation Europe et International), France (Délégation Europe et International) Rhône Méditerranée Corse Water Agency, France
4.4 Monitoring and assessment.	4.4.1 Mapping of interaction mechanisms on coastal and marine environment at regional and local levels developed, including assessment of the risks of sea level rise and coastal erosion, and their impacts on coastal environment and communities.	UNFCCC, FAO, UNESCO, UNEP/GEF	200.000	Italian Ministry of Environment, Land and S (IMELS) French Development Agency (AFD – Territorial and Ecological Transition) Conservatoire du Littoral, France (Délégation Europe et International), France Rhône Méditerranée Corse Water Agency, France GEF 7 Strategy: International Waters Focal Area.
	4.4.2 National coast and hydrography monitoring programme developed and updated to include the relevant IMAP common indicators, interactions and processes.	National Entities, EU, GEF	200.000	
4.5 Enhanced capacity at regional, sub-regional and national levels including	4.5.1 Capacity building for the application of tools for assessi interactions and integrating them in planning/management of coastal and marine environment implemented.	FAO, UNESCO, EBRD, AfDB	100.000	

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
technical assistance and capacity building.				
4.6 Enhanced cooperation at regional, sub-regional and national levels.	4.6.1 Networks of CAMPs and other ICZM Protocol implementation activities established, and cooperation undertaken with other partners to promote the exchange of data, experience and good practices established.	Bilateral donors	50.000	Italian Ministry of Environment, Land and S (IMELS) Conservatoire du Littoral, France (Délégation Europe et International), France
4.7 Identifying and tackling with new and emerging issues, as appropriate.	4.7.1 Additional stresses relevant to the Convention on water resources due to climate change assessed in cooperation with other regional interested stakeholders	UNFCCC, World Water Counci UNESCO, FAO, EBRD , UNDP	200.000	Méditerranée Corse Water Agency, France
	4.7.2 Reviews/policy briefs developed and submitted to Contracting Parties, inter alia impacts from possible tsunami cases explored.			

TABLE 5. Strategic Outcomes and Indicative Key Outputs for *Integrated Coastal Zone Management*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
5.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.	5.1.1 The Mediterranean regional framework for Integrated Coastal Zone Management is defined and put in effect.	Bilateral donors	200.000	Italian Ministry of Environment, Land and Sea (IMELS) Conservatoire du Littoral, France (Délégat Europe et International), France Rhône Méditerranée Corse Water Agency, France UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action". SIDA: Environment and Climate, and Sustainable Societal Development
	5.1.2 SAP BIO, SAP MED, Offshore Action Plan and Strategy to combat pollution from ships implemented in an integrated manner, including through the Mediterranean regional framework, as set out in ICZM Protocol to enhance the sustainable use of marine and coastal resources.	Innovative Financing Mechanism, Private sector partners, EU		
	5.1.3 Action Plan for the implementation of the ICZM Protocol further implemented; Status of Implementation reported.	Private sector partners, National Authorities		
5.2 Development of new action plans, programmes of measures, common standards and criteria, guidelines.	5.2.1 Action Plan for the implementation of the ICZM Protocol updated.	National Authorities		Conservatoire du Littoral, France (Délégat Europe et International), France Rhône Méditerranée Corse Water Agency, France
	5.2.2 Methodological framework for land and sea interactions, considering in particular MSP and ICZM, developed and applied.	National Entities, EU, Bilateral donors		

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
5.3 Strengthening national implementation.	5.3.1 National ICZM Strategies including streamlining pollution, biodiversity, adaptation to climate change and SCP, land and sea interaction as well as sustainable cities prepared and applied.	EBRD, UNFCCC, CBD, UNDP	350.000	Conservatoire du Littoral, France (Délégation Europe et International), France Rhône Méditerranée Corse Water Agency, France
	5.3.2 Countries assisted in carrying out gap analysis on national legal and institutional frameworks for ICZM in order to streamline as need be the ICZM Protocol provisions into national legislations.	National Authorities, EU		
	5.3.3 SCP Regional Action Plan activities and climate change adaptation issues mainstreamed into and implemented through ICZM national strategies, as well as CAMPs and other ICZM Protocol implementation projects.	EU, UNFCCC, Bilateral donors		
5.4 Monitoring and assessment.	5.4.1 Fact sheets for ICZM indicators developed to evaluate the effectiveness of coastal and marine resources management measures.	Bilateral donors, IUCN		Conservatoire du Littoral, France (Délégation Europe et International), France Rhône Méditerranée Corse Water Agency, France
5.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.	5.5.1 MedOpen Training Programme on ICZM regularly updated and implemented, in coordination with the relevant NFPs.	EU, EBRD, UNESCO, UNDP	70.000	Conservatoire du Littoral, France (Délégation Europe et International), France Rhône Méditerranée Corse Water Agency, France

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
5.6 Enhanced cooperation at regional, sub-regional and national levels.	5.6.1 ICZM coordination enhanced through: (i) Mediterranean ICZM Platform; (ii) National ICZM coordination bodies.	National Institutions, Regional Entities, EU, Bilateral donors	80.000	Conservatoire du Littoral, France (Délégation Europe et International), France Rhône Méditerranée Corse Water Agency, France

TABLE 6. Strategic Outcomes and Indicative Key Outputs for *Sustainable Consumption and Production*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
6.1 Development of new action plans, programmes of measures, common standards and criteria, guidelines and implementation of current ones.	6.1.1 Selected actions of the SCP Action Plan directly contributing to prevent, reduce and eliminate marine pollution and protect/enhance biodiversity and ecosystems as well as address climate change in the marine and coastal areas of the Mediterranean identified and implemented.	EU, Private sector partners, CBD, UNFCCC, Foundations, Innovative Financing Mechanisms	800.000	EU (Switch Med)
	6.1.2 Methodological tools for SCP mainstreaming in CC adaptation and mitigation regional strategies and frameworks developed.	EU, Bilateral donors, UNFCCC, Green Climate Fund	500.000	
	6.1.3 Methodological tools for SCP mainstreaming in the priority areas of consumption and production of the Regional Action Plan on SCP - tourism, food, housing and goods manufacturing implemented and new ones developed for other sectors.	EU, National Entities, Private sector partners, Academia, Business, Schools	800.000	
6.2 Monitoring and assessment.	6.2.1 SCP Action Plan indicators aligned with MSSD relevant work, identified, selected and factsheets developed.	Bilateral donors, EU		EU (Switch Med)
6.3 Enhanced capacity at regional, sub-regional and national levels including	6.3.1 Training and support programme for green entrepreneurs and civil society as SCP drivers.	Private sector partner, Innovative Financing Mechanisms	500.000	EU (Switch Med)

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
technical assistance and capacity building.				
6.4 Enhanced cooperation at regional, sub-regional and national levels to prevent and control marine pollution	6.4.1 Establishment of networks and initiatives of businesses, entrepreneurs, civil society, providing SCP solutions promoted.	EU, Private sector partners, Foundations	400.000	EU (Switch Med) GEF 7 Chemicals and Waste Focal Area. Objective: eliminating chemicals covered by the Stockholm Convention and Minamata Conventions that are used in or emitted from industrial and agricultural sectors.
	6.4.2 A Mediterranean SCP Hub for knowledge exchange and networking fully operative and performing as connector and lever for new partnerships and initiatives providing SCP solutions.	EU, UNESCO, UNEP, GEF	500.000	

TABLE 7. Strategic Outcomes and Indicative Key Outputs for *Climate Change Adaptation*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
7.1. Strengthening the regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.	7.1.1 Climate Change Adaptation main activities identified and mainstreamed into the implementation of existing regional strategies, regional action plans and measures.	EU, Bilateral donors, UNFCCC, Green Climate Fund, SCCF		
	7.1.2 Selected actions of the SCP Regional Action Plan directly contributing to address climate change in the marine and coastal areas of the Mediterranean implemented.	Business Council On Climate Change, EU, National Entities		
7.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.	7.2.1 Climate Change Adaptation, including related vulnerabilities and risks, key activities mainstreamed into the development of new updated regional strategies, regional action plans and measures addressing biodiversity, pollution and land and sea interaction.	Adaptation Fund, CBD, UNFCCC, EU, SCCF	150.000	GEF Programming Strategy on Adaptation to Climate Change for the LDCF and the SCCF and Operational Improvements GEF 7 Climate Change Focal Area. Objective i: Promote Innovation and Technology Transfer for Sustainable Energy Breakthroughs Objective ii: Demonstrate Mitigation Options with Systemic Impacts Objective iii: Foster Enabling Conditions for Mainstreaming Mitigation Concerns into Sustainable Development Strategies.
	7.2.2 Climate Change-related vulnerabilities and risks considered in the development and implementation of biodiversity, pollution and land and sea interaction related regional strategies, action plans and measures through the EcAp.	CBD, UNFCCC, EU, UNEP/ GEF		
	7.2.3 Promote integration of ecosystem-based responses in National Climate Change	EU, UNFCCC, Adaptation		

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners	Resources required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
	Adaptation Strategies.	Fund		
7.3 Strengthening national implementation.	7.3.1 Climate change adaptation priority fields identified and mainstreamed into the relevant MAP policies, as appropriate.	National Entities, EU, UNFCCC, SCCF	150.000	
7.4 Monitoring and assessment.	7.4.1 Climate Change vulnerability issues considered in existing monitoring programmes.	UNFCCC, Adaptation Fund, Green Climate Fund, SCCF		GEF Programming Strategy on Adaptation to Climate Change for the LDCF and the SCCF and Operational Improvements GEF 7 Climate Change Focal Area. Objective i: Promote Innovation and Technology Transfer for Sustainable Energy Breakthroughs Objective ii: Demonstrate Mitigation Options with Systemic Impacts Objective iii: Foster Enabling Conditions for Mainstreaming Mitigation Concerns into Sustainable Development Strategies.

Annex IX

Areas of cooperation between UNEP/MAP and UNESCO/MAB

Areas of cooperation between UNEP/MAP and UNESCO/MAB

a. Promotion of the conservation and sustainable use of biological diversity, thus contributing to the achievement of the 2011-2020 Strategic Plan for Biological Diversity and its Aichi Biodiversity Targets. Cooperative and coordinated efforts in this common area of interest should include but not limited *to*:

   (i) identify synergies between Specially Protected Areas of Mediterranean Importance (SPAMIs) and biosphere reserves as models for sustainable development and advancing in the implementation of the relevant Sustainable Development Goals (SDGs) and related targets;

   (ii) identification and designation of biosphere reserves in the Mediterranean for inclusion in the World Network of Biosphere Reserves (WNBR), to achieve both the objectives of the Man and Biosphere Programme (MAB) and the objectives of the Barcelona Convention and its Protocols, in particular the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD) and Integrated Coastal Zone Management (ICZM) Protocol;

   (iii) identify best practices in governance and management structures in SPAMIs and biosphere reserves of the Mediterranean to ensure the continued delivery of ecosystem services in the Mediterranean region and the involvement of local communities.

b. Engagement in capacity building activities and training programmes under the MAB programme and the Barcelona Convention and its Protocols. Collaboration in this common area of interest should include but not limited to:

   (i) exchange of best practices on *inter alia* the interlinked issues of conservation and sustainable used of biodiversity, with specific emphasis on the use of both biosphere reserves and SPAMIs as tools for Integrated Costal Zones Management (ICMZ), marine spatial planning, sustainable tourism, non-indigenous invasive species management, marine litter, sustainable fisheries and mitigation and adaptation to climate change;

   (ii) the promotion of a common network of scientists and relevant NGOs working in SPAMIs and the Biosphere Reserves in the Mediterranean to build and share expertise;

   (iii) development of a common programme for communication and promotion of traditional local fishing practices, and

   (iv) increasing public awareness of the values and benefits of both biosphere reserves and SPAMIs, and integrating sustainability practices into Education for Sustainable Development (ESD) and training environments, from schools to universities to research institutes and the wide public by promoting/applying *inter alia* the Mediterranean Strategy on Education for Sustainable Development (MSESD), where both UNESCO and UNEP/MAP participate in its governing body, the Mediterranean Committee on ESD.

c. Support mitigation and adaptation to climate change by *inter alia* promoting the Biosphere Reserves in the Mediterranean and SPAMIs as priority sites in developing and implementing strategies on climate change mitigation and adaptation.

Draft Decision IG.24/3

Implementation, Monitoring and Mid-Term Evaluation of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, in particular article 4 thereof on general obligations,

Recalling Decisions IG.22/2, IG.22/5, and IG.22/17, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the Mediterranean Strategy for Sustainable Development 2016–2025, the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean, and the Reform of the Mediterranean Commission on Sustainable Development respectively,

Recalling also decision IG.23/4, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017) on the Implementation and Monitoring of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean,

Emphasizing the instrumental nature of the Mediterranean Strategy for Sustainable Development 2016–2025, as a strategic guiding document for all stakeholders and partners to effectively translate the 2030 Agenda for Sustainable Development into concrete actions at the national, sub-regional and regional levels, and the leading role of the United Nations Environment Programme/Mediterranean Action Plan – Barcelona Convention in facilitating the coordinated and coherent implementation of the 2030 Agenda for Sustainable Development and Sustainable Development Goals and in ensuring the transition towards a green and blue economy in the Mediterranean region,

Having considered the conclusions of the 18th Meeting of the Mediterranean Commission on Sustainable Development, held in Budva, Montenegro, on 11-13 June 2019, following the outcome of the 12th Meeting of the Sustainable Consumption and Production Regional Activity Centre National Focal Points, held in Barcelona, Spain, on 14-15 May 2019, and of the Meeting of the Plan Bleu Regional Activity Centre National Focal Points held in Marseille, France, on 28-29 May 2019,

1. *[Endorse* the updated List of Indicators of the Mediterranean Sustainability Dashboard for monitoring the implementation of the Mediterranean Strategy for Sustainable Development 2016–2025, set out in Annex I to the present Decision;]

2. *[Recognize* the living nature of the List of Indicators of the Mediterranean Sustainability Dashboard and the need to keep it under review under the guidance of the Mediterranean Commission on Sustainable Development Steering Committee, and with the technical support of the Plan Bleu Regional Activity Centre, as international work on Sustainable Development Goals indicators progresses;]

3. *Request* the Secretariat, through the Sustainable Consumption and Production Regional Activity Centre and Plan Bleu Regional Activity Centre, to integrate the List of Sustainable Consumption and Production Indicators, welcomed and taken note of by the Contracting Parties

through their Decision IG.23/4 adopted at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017), in the Mediterranean Sustainability Dashboard;

4. *Approve* the "Roadmap of the Mediterranean Strategy for Sustainable Development 2016-2025 Mid-Term Evaluation (2020-2021)" and the "Roadmap of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean Mid-Term Evaluation (2020-2021)", as set out in Annexes II and III to the present Decision;

5. *Request* the Secretariat, with the technical support of Plan Bleu Regional Activity Centre to undertake the mid-term evaluation of the Mediterranean Strategy for Sustainable Development 2016–2025;

6. *Also request* the Secretariat, through the Sustainable Consumption and Production Regional Activity Centre, to undertake the mid-term evaluation of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean;

7. *Urge* Contracting Parties to support both mid-term evaluation processes by providing data and access to information for the effective and accurate monitoring of the implementation of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean;

8. *Encourage* the Contracting Parties, in particular those which are Members of the Mediterranean Commission on Sustainable Development Steering Committee and those that have gone through the Voluntary National Review Process at the United Nations High-level Political Forum, to participate in the third edition of Simplified Peer Review Mechanism (SIMPEER);

9. *[Urge* the Contracting Parties and all stakeholders and partners to intensify their efforts towards the full implementation of the Mediterranean Strategy for Sustainable Development 2016–2025 and its flagship initiatives;]

10. *Request* the Secretariat through Sustainable Consumption and Production Regional Activity Centre, to launch the first edition of the Mediterranean Green Business Award, as a flagship initiative of the Mediterranean Strategy for Sustainable Development 2016–2025, in line with the concept note set out in Annex IV to the present Decision.

Annex I:

**Mediterranean Sustainability Dashboard – Updated List of Indicators,
as agreed by the 18th Meeting of the Mediterranean Commission on Sustainable Development
(Budva, Montenegro, 11-13 June 2019)**

Annex I: Mediterranean Sustainability Dashboard – Updated List of Indicators, as agreed by the 18th Meeting of the Mediterranean Commission on Sustainable Development (Budva, Montenegro, 11-13 June 2019)

No.	MSSD Objective	Indicator
1	Global	Ecological footprint (*)
2	Global	Human Development Index
3	Global	Annual growth rate of real GDP per capita (*) (SDG Indicator 8.1.1), Gross Domestic Product (*), Gross Domestic Product per capita (*)
4	Global	Youth literacy rate (*)
5	Global	Girl/Boy primary, secondary and tertiary school registration ratio (*)
6	1	Number of ratifications and level of compliance as reported by the Contracting Parties of the Barcelona Convention
7	1	Coverage of protected areas in relation to marine territorial waters (*)
8	1	Proportion of fish stocks within biologically sustainable levels (*) (SDG Indicator 14.4.1)
9	2	Number of protected areas participating in the Green List initiative (*)
10	2	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems (*) (SDG Indicator 15.a.1)
11	2	Global Food Security Index
12	2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (*) (SDG Indicator 6.4.2)
13	2	Water demand, total and by sector, compared to GDP (*)
14	2	Proportion of population using safely managed drinking water service (*) (SDG Indicator 6.1.1) (**)
15	2	Share of population with access to an improved sanitation system (total, urban, rural) (*) (**)
16	2	Proportion of agriculture quality products (*) and/or Share of the agricultural land area used by organic farming (*)
17	2	Red List Index (IUCN) (*) (SDG Indicator 15.5.1)
18	3	Proportion of urban population living in slums, informal settlements, or inadequate housing (*) (SDG Indicator 11.1.1)
19	3	Status of UNESCO world heritage sites (*)
20	3	Waste generated and treated by type of waste and treatment type (*) (**)
21	4	Green House Gas emissions (related to GDP)
22	4	Energy intensity measured in terms of primary energy and GDP (*) (SDG Indicator 7.3.1) and/or Renewable energy share in the total final energy consumption (*) (SDG Indicator 7.2.1)
23	5	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP (*) (SDG Indicator 12.2.2)
24	6	Number of National Strategies for Sustainable Development adopted or updated [and number of updates since first edition] (*)
25	6	Proportion of bank credit allocated to the private sector – Existence of alternative financing systems using bank credit
26	6	Research and development expenditure as a proportion of GDP (*) (SDG Indicator 9.5.1)
27	6	Number of countries that have clear mechanisms in place for ensuring public participation and guarantying public access to environmental information (*)
28	6	Number of countries that have National Strategies/Action Plans on Education for Sustainable Development in place

(*) Corresponding/linked to SDG Indicators, (**) linked to SEIS II / Horizon 2020 Indicators

Annex II

Roadmap of the Mediterranean Strategy for Sustainable Development 2016-2025
Mid-Term Evaluation (2020-2021)

Annex II: Roadmap of the Mediterranean Strategy for Sustainable Development 2016-2025 Mid-Term Evaluation (2020-2021)

I. Background and Context

1. MSSD Regional Action 7.2.4 recommends to "*Undertake a participatory mid-term evaluation of the Mediterranean Strategy for Sustainable Development 2016-2025 based on the first 5 years of data regarding its implementation, using indicators associated with the actions, as well as the proposed dashboard of Sustainability Indicators*". Results of the MSSD mid-term evaluation will be submitted to COP 22 in 2021, providing an opportunity to make the MSSD implementation, at its second phase, more efficient and focusing on gaps, shortcomings and opportunities.

2. As per Decision IG.22/5 "*Regional Action Plan on Sustainable Consumption and Production in the Mediterranean*" (SCP AP), the indicator-based mid-term evaluation of the SCP AP is also expected to be undertaken in 2020-2021. Since SCP is one of the three cross-cutting themes of the MAP Medium Term Strategy (MTS) 2016-2021, the indicator-based mid-term evaluation of the SCP AP should feed the preparation of the MTS 2022-2027. This evaluation will highlight the main developments related to SCP in the four key economic sectors covered by the action plan: Food, Fisheries and Agriculture; Tourism; Goods Manufacturing; Housing and Building.

3. The timing of the MSSD and SCP AP mid-term evaluations is in-line with the cycle of the MTS 2016-2021. These processes shall mutually inform each other, as indicated in Table 1 below; preparation of the MTS 2022-2027 should benefit from the MSSD and SCP AP mid-term evaluations. MTS, MSSD and SCP AP processes shall go in parallel following a transversal approach. The use of common methods/tools should be encouraged as much as possible to support this transversal approach.

Table 1: Indicative timeline of MTS, MSSD and SCP AP processes

COP	MTS process	MSSD process	SCP AP process
COP 21 (end of biennium 2018-2019)	To launch the MTS 2016-2021 Evaluation and Review	To launch the MSSD mid-term evaluation (5 years of data - period 2016-2020)	To launch the indicator-based mid-term evaluation
COP 22 (end of biennium 2020-2021)	To adopt MTS 2022-2027	To approve the MSSD mid-term evaluation	To approve the indicator-based mid-term evaluation

4. At its 85th Meeting (Athens, Greece, 18-19 April 2018), the Bureau of the Contracting Parties requested "*the Secretariat to prepare, in due time, a draft thematic decision, including a dedicated roadmap, related to the processes of the MSSD mid-term evaluation and the indicator-based mid-term evaluation of the SCP Regional Action Plan, and to submit it to the next meeting of the MAP Focal Points for consideration and further submission to COP 21*".

5. The Secretariat will ensure consistency between the respective roadmaps of the MSSD and SCP AP mid-term evaluations that shall be undertaken by Plan Bleu/RAC and SCP/RAC, in close cooperation with the MCSD and the Focal Points of these two Regional Activity Centres. The MCSD, through its Steering Committee, is expected to have a leading role for the MSSD participatory mid-term evaluation, while the SCP AP mid-term evaluation, as an indicators-based exercise, should be a straighter forward endeavor steered by the Secretariat (SCP/RAC).

6. At its 20th Meeting (Athens, Greece, 23-24 January 2019), the MCSD Steering Committee recommended that the MSSD mid-term evaluation informs on the progress and gaps regarding the

strategy's implementation and the state of the sustainability in the Mediterranean. The effectiveness of the MSSD should be assessed at a later stage during the MSSD Review Process in 2024-2025.

7. The MSSD mid-term evaluation should be an open, participatory process and the result of collective efforts, combining both internal and external expertise, including both desktop analysis and stakeholder consultations. At its 20th Meeting, the MCSD Steering Committee recommended to use existing/well-known methodologies for this kind of assessments and to base the "self-assessment" component of the MSSD mid-term evaluation on MAP bodies' and partners' consultations, through interviews and workshops, and to use relevant communication channels within the MAP system.

8. The Members of the MCSD Steering Committee agreed that the MSSD mid-term evaluation should be also based on quantitative and qualitative criteria, taking advantage *inter alia* of the Mediterranean Sustainability Dashboard and Assessment Studies (SoED 2019, MED 2050), capitalizing on the implementation of MSSD Flagship Initiatives, and collecting inputs from MCSD Members, MAP Partners, MAP Components, and other relevant stakeholders.

9. Finally, the MCSD Steering Committee recommended to the Contracting Parties, MAP Focal Points and the Secretariat to allocate the necessary resources for the evaluation of MAP Regional Strategies in the UNEP/MAP Programme of Work and Budget for 2020-2021.

II. Elements of Terms of Reference and Draft Roadmap

10. The MSSD mid-term evaluation will be based on the following principles and requirements:

- The mid-term evaluation is an opportunity to make the MSSD implementation, at its second phase, more efficient and focusing on gaps, shortcomings and opportunities.
- The MSSD and SCP AP mid-term evaluations will inform the preparation of the MTS 2022-2027, the three processes being expected to go in parallel following a transversal approach based on common methods/tools.
- The MCSD, through its Steering Committee, will have a leading role for the MSSD participatory mid-term evaluation.
- The MSSD mid-term evaluation should be an open, participatory process and the result of collective efforts, combining both internal and external expertise, including both desktop analysis and stakeholder consultations.
- The "self-assessment" component of the MSSD mid-term evaluation will be based on MAP bodies' and partners' consultations.
- The MSSD mid-term evaluation will be based on quantitative and qualitative criteria, taking advantage *inter alia* of the Mediterranean Sustainability Dashboard and Assessment Studies, capitalizing on the implementation of MSSD Flagship Initiatives, and collecting inputs from MCSD Members, MAP Partners, MAP Components, and other relevant stakeholders.
- The results of the MSSD mid-term evaluation will be submitted to COP 22 in 2021.

11. The draft Roadmap of the MSSD mid-term evaluation includes the following phases:

- ***Phase 1 (Q1 – Q3 2020): Prepare and launch the process***
    a. Define the organizational structure for the management of the evaluation;
    b. Collect internal knowledge, raw materials, and evidence on the MSSD implementation within the MAP – Barcelona Convention system, including best available practices and experiences, as well as obstacles encountered;
    c. Mobilize independent experts for carrying out the external evaluation;

d. Set-up an online platform to support consultations of MAP bodies and partners;

e. Draft a consultation document based on a desktop analysis identifying successes, good practices and challenges, as well as on the results of the external evaluation.

- ***Phase 2 (Q4 2020 – Q1 2021): Conduct the participatory MSSD mid-term evaluation***

a. Define consultative expert groups and draft their terms of reference, considering the six MSSD Objectives and the two levels of implementation, i.e. regional and national;

b. Identify chairs/leaders of the expert groups;

c. Mobilizing participants in the expert groups, in particular from relevant MAP bodies;

d. Launch the stakeholder consultation, online (teleconferences, questionnaires) and face-to-face (workshops), based on the consultation document;

e. Consolidate the results of the consultations and draft the final report.

12. ***Phase 3 (Q2 – Q4 2021): Finalization and submission for approval***

a. Consultation of the MCSD and its Steering Committee on the draft final report of the MSSD participatory mid-term evaluation;

b. Launch an internal review within the MCSD Steering Committee and the Secretariat, involving all MAP Components;

c. Submission for various stages of approval: MAP Focal Points and MCSD Meetings, COP 22.

Annex III

Roadmap of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean Mid-Term Evaluation (2020-2021)

Annex III: Roadmap of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean Mid-Term Evaluation (2020-2021)

- The mid-term evaluation of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean (SCP Regional Action Plan), together with the mid-term evaluation of the Mediterranean Strategy for Sustainable development (MSSD) will inform the preparation of the UNEP/MAP Medium Term Strategy (MTS) 2022-2027, the three processes being expected to go in parallel following a transversal approach based on common methods and tools.

- The mid-term evaluation of the SCP Regional Action Plan is an opportunity to evaluate the implementation of SCP in the region and identify current challenges, needs and opportunities, and set up priority for actions during its second phase of implementation.

- The evaluation will include both desktop analysis and stakeholder consultations and will be supported by external experts to be selected through an open selection process.

- The Focal Points of the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) will be consulted during the preparation process of the mid-term evaluation.

- Reporting provided by the countries on the implementation of the SCP Regional Action Plan (under LBS protocol) will be considered.

- The mid-term evaluation of the SCP Regional Action Plan will be based on quantitative and qualitative criteria and will consider information available in the updated database of SCP indicators.

- The results of the mid-term evaluation of the SCP Regional Action Plan will be submitted to COP 22 in 2021.

- The Roadmap of the mid-term evaluation of the SCP Regional Action Plan includes the following steps:

When (period)	What (task, step)
1st semester 2020	• Preparation of a detailed concept note for the evaluation • Preparation of terms of reference for external experts and selection process • Launch of the consultation with the Contracting Parties • Identification of key stakeholders to be consulted
2nd semester 2020	• Preparation of the evaluation with the selected experts, interviews with Contracting Parties and stakeholders • First draft of the mid-term evaluation shared with SCP/RAC Focal Points
1st semester 2021	• Consolidated draft of the mid-term evaluation prepared for the Meeting of the SCP/RAC Focal Points
2nd semester 2021	• Submission of the final draft to the MAP Focal Points • Presentation of the evaluation at COP 22

Annex IV

Concept Note on the Mediterranean Green Business Award
Flagship Initiative of the Mediterranean Strategy for Sustainable Development 2016-2025

Annex IV: Concept Note on the Mediterranean Green Business Award – Flagship Initiative of the Mediterranean Strategy for Sustainable Development 2016-2025

At their 17th Meeting (Athens, Greece, 5-7 July 2017), the MCSD Members expressed their support to the activities to foster green entrepreneurship ecosystems in the region and to the continuation of those activities. Likewise, in relation to the MSSD Flagship Initiative on a Mediterranean business award for environmental innovation, the MCSD welcomed the experience of the Catalan Waste Agency (ARC), SCP/RAC hosting agency, in the organization of an Award for Sustainable Businesses, which could provide a strong basis for that MSSD Flagship Initiative.

The ARC's Award for Sustainable Businesses was created in 2001 with the goal of encouraging the incorporation of eco-design in the production process, to foster a cross-cutting approach and knowledge transfer, and to boost the consumption and production of sustainable products and services. The award recognizes innovative products and services that promote eco-design and circular economy solutions. In 2015, a pilot edition of the Award was opened to entrepreneurs and businesses from all Mediterranean countries and received 45 applications from 11 countries. The award ceremony was held in Barcelona bringing +150 representatives from Mediterranean countries. This successful pilot edition has not been reproduced so far.

The present concept note proposes to create a proper Mediterranean Green Business Award, based on the solid experience of the Catalan Waste Agency and on the lessons learned from the creation of the afore mentioned pilot edition. This award will be operationally linked to the implementation of the relevant MSSD Flagship Initiative.

The MAP – Barcelona Convention system has the institutional mandate, via this MSSD Flagship Initiative, to create and promote a Mediterranean Green Business Award. SCP/RAC has organized the first pilot initiative of a Mediterranean award and owns the necessary skills and experience to support the technical process of that initiative. External resources will be available to fund the organization of a first edition of the Mediterranean Green Business Award and the preparation of a long-term strategy for its replication over the years. It is expected that the first edition will target southern Mediterranean countries, including Jordan and Palestine, as eligible countries of the SwitchMed programme. It will be possible to develop several categories of the Mediterranean Green Business Award.

Objectives of the Mediterranean Green Business Award

The Mediterranean Green Business Award will be inspired by the proceedings of the first pilot developed by SCP/RAC in 2015 with the support of the Catalan Waste Agency. This award will aim to recognize, reward, and encourage the efforts of entrepreneurs to incorporate environmental innovation and eco-design in the production process, to foster knowledge transfer and a cross-cutting approach between the three pillars of sustainable development, and to boost circular economy solutions and the consumption of sustainable products and services in the Mediterranean.

The objectives of such an award will be to:

- Recognize and reward the efforts of entrepreneurs to incorporate environmental innovation and eco-design in their production process;
- Encourage entrepreneurs to move towards more environment friendly patterns of production, boost circular economy solutions and their practical application, as well as the consumption of sustainable products and services;
- Enable entrepreneurs to act as a role model to inspire other entrepreneurs, to foster knowledge transfer between green entrepreneurs, and to further promote corporate social and environmental responsibility;
- Raise the awareness of the general public regarding environmental-friendly business innovations;
- Provide a practical response to the implementation of Sustainable Development Goals (SDGs), in particular SDG 12, in the Mediterranean region.

Mediterranean green entrepreneurs and circular businesses will be invited to submit an application, following an open call. The possible categories could include products already available in the market, products under development or product promotion strategies that are developed in Mediterranean countries and that take into account environmental considerations with the goal of reducing the environmental impact of the product over the course of its life cycle.

For the first edition, applications should be submitted by entrepreneurs and circular businesses from Southern Mediterranean countries, including Jordan and Palestine. Any person or corporate entity domiciled or with corporate headquarters in those countries, who designs or manufactures a product or service, promotes or designs a product or service under development, or promotes any eco-innovation strategy, should be invited to submit an application.

In the further elaboration of the objectives and criteria of the award, the recently launched "European Sustainability Award" by the European Commission with the support of the EU Multi-stakeholder Platform on SDGs aiming to recognize the initiatives (by the private sector, large companies and SMEs, public agencies, civil society and youth) working towards turning the SDGs into concrete solutions and opportunities, could be used as a possible source of inspiration and information.

Application, Evaluation and Nomination Process

An application form should be developed in two main parts: 1. open questions to introduce the entrepreneur/business and its products/services/strategies; 2. specific questions based on criteria enumerated above.

After a first screening to check eligibility of applicants, the accepted applications should be evaluated by a team of independent experts selected by the Secretariat (UNEP/MAP Coordinating Unit and SCP/RAC), taking into account their different backgrounds and experiences in relation to the scope of the award and the evaluation criteria.

The composition of the Jury will be decided at a later stage and should include the President of the MCSD.

Questions from possible applicants should be allowed before submission. To this end a helpdesk should be established when the call of submissions is launched, so possible applicants are able to further inquire about the award through the helpdesk.

The selection will probably be carried out via the following three main steps:

- First Step – Initial Screening: With the end of the submission deadline, an initial screening will be conducted by the SCP/RAC to ensure that the applicants fulfill the eligibility criteria and that the submission forms are correctly filled.

- Second Step – Short-Listing: SCP/RAC supported by independent experts will select the appropriated number of applicants for the award. An evaluation report will be sent electronically to the Jury for approval. A letter will be sent to the short-listed entrepreneurs regarding their nomination.

- Third Step – Selection: The Jury will select the winning entrepreneur(s)/business(es) through electronic means. Every effort should be made to take a decision by consensus. In the case of more than one winner, geographical balance should be ensured.

Award Giving and Ceremony

The award should consist of at least an honorary board (commemorative object) and the permission to use the logo of the award by the winning entrepreneur(s)/business(es). Access to finance to the awardees will be also considered for the ones that will have an eco-designed product at the ideation stage or early stage of development. This will be done as part of the Switchers Fund currently being developed by SCP/RAC, as established in Activity 6.4.1.1 of UNEP/MAP Programme of Work and Budget for 2020-2021.

Media coverage and visibility will also bring added value. The award should be conferred on a biannual basis during the Ordinary Meeting of the Contracting Parties to the Barcelona Convention, or other relevant events (like SwitchMed Connect).

General Timeline:

When (period)	**What (task, step)**
1st semester 2020	• Benchmarking of other relevant awards • Definition of the concept note, categories and criteria for the Award • Definition of the visual identity, including logo
2nd semester 2020	• Development of a database of contacts for the dissemination of the Award • Preparation of a Communication Strategy • Definition/mobilization of the Jury
1st semester 2021	• Launch of the Award • Extensive communication campaign • Evaluation of the candidates
2nd semester 2021	• Selection and nomination of the candidates • Celebration of the Award • Design of the strategy for the replication of the Award to be considered at COP 22 (for instance in the context of the implementation of the MAP Resource Mobilization Strategy)

Draft Decision IG.24/4

Assessment Studies

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, and its Protocols, at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling further the Environment Assembly resolution of 15 March 2019, UNEP/EA.4/Res.23 entitled "Keeping the world environment under review: enhancing the United Nations Environment Programme science-policy interface and endorsement of the Global Environment Outlook",

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, and in particular Article 4 thereof on general obligations,

Recalling decision IG.23/4 on the "Implementation and Monitoring of the Mediterranean Strategy for Sustainable Development 2016-2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean", requesting the Secretariat to present progress of MED 2050 Phase I at the 21st Meeting of the Contracting Parties (COP 21),

Deeply concerned with the increasing pressures on the Mediterranean marine and coastal environment, as highlighted in the 2012 State of the Mediterranean Marine and Coastal Environment and the 2017 Mediterranean Quality Status Report, and with the continuing unsustainable consumption and production patterns in the region,

Recognizing that there are gaps in the knowledge of the state of the environment and that there is an urgent need to continue to strengthen efforts to bridge those gaps through building and reinforcing existing mechanisms,

Expressing appreciation for the work undertaken by the Contracting Parties, members of the Mediterranean Commission on Sustainable Development, the Mediterranean Action Plan (MAP) Partners, members of the Steering Committee and of the Scientific Board, the Secretariat and the MAP components for the preparation of the 2019 Report on the State of the Environment and Development in the Mediterranean,

Appreciating also the progress being made by the network of Mediterranean experts on climate and environmental change (MedECC) on the first assessment report on the current state and risks of climate and environmental changes in the Mediterranean (MAR 1),

Having considered the conclusions of the meeting of the Plan Bleu Regional Activity Centre National Focal Points held in Marseille, France, on 28-29 May 2019, and the 18th meeting of the Mediterranean Commission on Sustainable Development held in Budva, Montenegro, on 11-13 June 2019,

[

1. *Endorse* the key messages of the 2019 Report on the State of the Environment and Development in the Mediterranean, as set out in annex I to the present Decision, as well as the Summary for Decision-Makers set out in annex II to the present Decision;

2. *Urge* the Contracting Parties and the Secretariat to take the necessary measures to implement the recommendations of relevance to the mandate of the MAP-Barcelona Convention system, included in annexes I and II to the present Decision;

3. *Recognize* the importance of considering the findings of the 2019 Report on the State of the Environment and Development in the Mediterranean as a crucial input for the definition of the 2022-2027 United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP) Medium Term Strategy and other relevant policy and strategy developments of the MAP-Barcelona Convention system [including preparation of the 2023 Mediterranean Quality Status Report];

4.

5. *[Endorse* the QSR roadmap and needs assessment as contained in Annex V of this decision and request the Secretariat and MAP components to further define in 2020, together with the Contracting Parties and CORMONs concrete requirements and deadlines of output delivery at the level of common indicators per each Contracting Party in order to ensure effective data collection and to address knowledge gaps to enable the entire MAP system to successfully deliver the 2023 MED QSR;]*Request* the Contracting Parties and the Secretariat to make all possible efforts to overcome the knowledge gaps that are identified in the 2019 Report on the State of the Environment and Development in the Mediterranean;]

6. *Endorse* the proposed revised roadmap for the MED 2050 foresight study, as contained in Annex III of the present decision, and *request* the Secretariat, through Plan Bleu Regional Activity Centre to implement the proposed roadmap in cooperation with the other components of the Mediterranean Action Plan;

7. *Encourage* the Contracting Parties to participate in the phase II of MED 2050 foresight study, organise on a voluntary basis national or sub-regional workshops, and nominate relevant experts or interested national stakeholders including youth representatives to contribute to the study;

8. *[Request* the Secretariat to organise a broad consultation on the draft summary for policy-makers of the first assessment report on the current state and risks of climate and environmental changes in the Mediterranean (MAR 1) by MedECC, in line with the elements of a roadmap as set out in annex IV of the present decision, involving the Mediterranean Action Plan Focal Points, the Mediterranean Action Plan Components' Focal Points, and the Mediterranean Commission on Sustainable Development;

9. *Encourage* the Contracting Parties and partners to support the streamlining of the report findings and recommendations at all levels of policy- and decision-making;

10. *Also request* the Secretariat (Plan Bleu Regional Activity Centre, with support of the Information and Communication Regional Activity Centre), to undertake an extensive dissemination and communication campaign for the three assessment reports referred to in this Decision, with the involvement of Contracting Parties.]

Annex I

2019 Report on the State of the Environment and Development in the Mediterranean (SoED 2019)
Draft Key Messages

Table of Contents

Annex I: 2019 Report on the State of the Environment and Development in the Mediterranean (SoED 2019). Draft Key Messages

I. Introduction: Linking 2017 MED QSR, SoED 2019 and MED 2050

1. Since the late 1970s, Mediterranean countries have agreed to cooperate to put "*at the disposal of political leaders and decision-makers all information that will enable them to develop plans likely to ensure sustained optimal socio-economic development without degrading the environment*"[1]. To continue fulfilling this objective, Mediterranean countries have asked the Secretariat of the Barcelona Convention to produce three major assessments from 2016 to 2021.

2. Published in 2018, the *Mediterranean 2017 Quality Status Report* (QSR 2017) was the first assessment based on the Mediterranean Action Plan Ecological Objectives and Integrated Monitoring and Assessment Programme (IMAP) indicators adopted in 2016 by all Mediterranean riparian countries, parties to the Barcelona Convention. Despite the limited availability of data and the fact that IMAP implementation was still in an early phase, the 2017 MED QSR provided relevant details on the status of the marine and coastal Mediterranean ecosystems and the achievement of Good Environmental Status (GES), using available data to document IMAP Common Indicators[2].

3. The Mediterranean State of the Environment and Development Report 2019 (SoED 2019) has a wider and more systemic scope. The SoED 2019 considers a range of sustainability issues related to the environment and development in the Mediterranean region and outlines their interactions. On marine ecosystems, for example, the SoED 2019 contributes to assess SDG 14: "Conserve and sustainably use the oceans, seas and marine resources for sustainable development". SoED 2019 thus puts IMAP indicators, among others, in the context of a network of causal links and interactions.

4. A regional foresight at horizon 2050, MED 2050, to be developed by 2021, will use both the 2017 MED QSR and SoED 2019 as baselines to explore scenarios and transition pathways towards a sustainable and inclusive future in the Mediterranean.

5. All three assessments will inform Mediterranean decision-makers in their identification of key areas requiring further joint or coordinated action, drawing elements for the future Mediterranean Action Plan (MAP) Medium Term Strategy 2022-2027.

II. Major drivers and pressures, and associated trends

6. **Despite their differences, Mediterranean countries remain strongly connected**. Countries along the Mediterranean Sea share a common heritage, analogies in lifestyle and values, exposure to climate and environmental risks and impacts; however, contrasts are also important, with different demographic dynamics, access to natural resources, income, investment in environmental protection, decentralisation policies, etc. These differences lead to large gaps in countries capacities to prevent and adapt to potential crises. At the same time, the region is connected through intense flows of people (migration and tourism), goods and energy products (especially via maritime transport), financial resources (foreign investment and cooperation), information and social interactions, as well as via environmental flows (riverine flows and marine currents), and policy fora. The Mediterranean Region remains thus an extremely relevant level to assess environment and development interactions, but that requires considering sub-regional heterogeneities as well as connections beyond regional boundaries with Africa, Far East, and Northern Europe.

II.1. Demographic trends: Population in the Mediterranean region continues to grow, being increasingly meridional and urban, with a younger population in SEMCs

7. **The population of the Mediterranean riparian countries**[3] **amounts to approximately 510 million people in 2017**[4]**, representing 6.8% of the world population. While population has been stabilizing in the North since 1980, population in the South and East of the basin has more than doubled** (from 152 million in 1980 to 311 million in 2017) **and is expected to increase by an additional 130 million people by 2050**. In 2017, 39% of the Mediterranean countries' population live on the northern shore and 61% on the southern and eastern shores. In decreasing order, population growth rate in the past decades is highest in Palestine, Lebanon, Israel, Egypt, Algeria and Syria. The most populated country is Egypt with 98 million people in 2017, followed by Turkey (70 millions) and France (67 million). 2017 population density is highest in Monaco, Malta and Palestine, and lowest in Libya (ranging from 4 to almost 20,000 people per km^2)[5].

8. **Demographic transition has been completed in two thirds of Mediterranean countries and is underway in the remaining ones**. The demographic convergence with northern Mediterranean countries (NMC) is striking in Lebanon, Tunisia and Turkey. In Morocco and Libya, where fertility continues to decline, this convergence is only a few years away. This trend is coherent with an increasing urbanization, as in demographic transition fertility rates generally decline fastest in urban areas and remain highest in the most remotely settled and rural zones. Contrary to earlier projections, the demographic transition seems to have come to either a halt or a new increase in Algeria and Egypt. All south-eastern Mediterranean countries (SEMCs) show a fertility rate at or above the replacement rate of 2.1, leading to population growth, except Lebanon (1.7). In Egypt, Israel and Palestine, fertility rates exceed the symbolic threshold of three children per woman. Fertility is below replacement rate in all NMCs, leading to population decrease and aging. Migration does however impact these dynamics.

9. **Population in SEMCs is 14 years younger than in the north**. While the average median age in SEMCs ranges from 20 to 31, in NMCs the average median age is between 34 to 45.

10. **Around 70% of Mediterranean population lives in urban areas**. Urban population has continued to increase throughout the region in the last decade with more than half of the population being urban in 2017 in all countries except for Egypt (57% rural population) and Bosnia Herzegovina (52%). A new phenomenon is the decline in absolute numbers of the rural population in Albania (- 2,4%), Croatia (-1%), Montenegro (-1%), Algeria (- 0,4%), Slovenia (- 0,5%), and Turkey (-0,5%), while Egypt still registers an annual growth of 2% of its rural population. The continuing urbanisation comes with an increase in the number of inhabitants in Mediterranean metropoles, which challenges urban planning, including transport and environmental infrastructure.

11. In Mediterranean **countries, one out of three persons lives in a Mediterranean coastal region**[6]. The share of the coastal population ranges from 5% in Slovenia to 100% in island countries (Cyprus, Malta) and Monaco. Coastal urbanization is partly driven by tourism, with Mediterranean countries hosting more than 337 million international tourist arrivals (ITAs) per year, about 27% of world tourism in 2016[7], largely concentrated in coastal zones and summer months.

II.2. Human development: While education and health have considerably progressed in the south and east of the basin, large north-east/south divides remain driven by persistent GDP gaps and are aggravated by conflicts

12. **The economies of Mediterranean countries have undergone important variations between 2007 and 2017, struck by the global financial crisis in 2008 and the European debt crisis starting late 2009**. All European Mediterranean countries witnessed a downturn of their GDP per capita between 2008 and 2009. Ten years later, Cyprus and Greece, particularly struck by the

European debt crisis, have not recovered their pre-crisis GDP per capita. South Mediterranean countries have shown a surprising resilience to the 2008 crisis, but the added political instability and conflicts since the Arab Springs has left the region with relatively low growth rates.

13. **Throughout the last decade, Mediterranean geopolitics have been shaken by tensions and instabilities**. The EU also faces difficulty to find a satisfactory common response to the ongoing refugee crisis. The rise of populist claims has turned the threat of fragmentation of the European Union into a plausible future scenario (among others). To the south, a number of countries witnessed disruptive social and political transformations, with both the rise of democratic aspirations of large parts of the population and the upsurge of extremism, leading to a series of turmoil and upheavals, with severe consequences and uncertainties for the region's economies and societies. Tensions exacerbated in several areas of the region, such as in Libya and Syria, where civil uprisings unfolded into ongoing international armed conflicts[8]. Although a direct causality is controversial, climate change is likely to have played a role in triggering the Syrian crisis as the country was struck by the longest and most intense drought in the last 900 years when the crisis began[9].

14. **In spite of demographic growth and geopolitical difficulties, human development,** as measured through the Human Development Index (HDI), **has experienced an upward trend throughout the last decade, significantly increasing in almost all countries. Major gaps between the northern and southern/eastern shores of the Mediterranean persist but have reduced**[10]. In 2015, HDI was highest in Israel (world rank 19) and lowest in Syria (world rank 149). The largest progress has been experienced in Albania, Algeria, Bosnia Herzegovina and Turkey, with major increases in life expectancy in Algeria and Turkey, and high increases of gross national income in Albania, Bosnia Herzegovina and Turkey. In Libya, HDI went down as a result of the breakdown of the economy, while HDI in Syrian Arab Republic collapsed due to severe degradation of all three components of HDI: life expectancy, duration of schooling and per capita national income.

15. **Basic education has considerably improved throughout the last decade, especially in SEMCs** with literacy rates showing drastic increases, notably in Morocco, Tunisia and Turkey. Very significant progress in primary education has been observed between 2000 and 2016 in SEMCs. However, access to tertiary education remains unequal.

16. **Girls' education has improved but the share of women in the active population is still low**. The gender parity index of the enrolment rate in primary and secondary schools increased in most Mediterranean countries. Nevertheless, the share of woman in the active population is reported at only 30% in countries of the Middle East and North Africa.

17. **The Mediterranean region is a global hotspot for migrations. This issue is linked to environmental pressures and needs, and significantly impacts human development**. Turkey hosts the highest number of refugees worldwide, estimated at 3.54 million people, and counts more than 300 thousand asylum seekers. Lebanon has the highest proportion of refugees in the world (16.4% of total population)[11]. This proportion is 4.3% in Turkey, followed by Malta (1.7%). Meeting basic human needs of incoming migrants necessitates a flexible and effective response in host countries. Access to water, food and sanitary services, as well as waste management, are of specific concern in refugee camp operationalisation. Syria is the country from which the highest number of refugees originates in the world, with an estimated 34.5% of its population having left the country. An unprecedented peak in the number of refugees and migrants entered Europe via Western (Spain), Central (Italy) and Eastern (Greece) Mediterranean routes in 2015; with more than 1 million arrivals that year[12]. Major countries of origin include Syria, Palestine, Maghreb countries, as well as sub-Saharan African countries. In European

Mediterranean countries, immigration flows range from 8,400 new international migrants per year in Malta to 332,600 in France[13]. This inflow of migrants has led to dialogue between countries and institutional capacity challenges[14]. Among others, environmental and climatic changes are important drivers of migration, especially for water-scarce countries, in vulnerable areas e.g. rainfed farmland, water-contaminated sites, and urban slums.

II.3. Macroeconomic situation: Mediterranean countries are increasingly vulnerable to external conditions and shocks, including environmental shocks

18. **Mediterranean countries are vulnerable to external conditions and shocks.** Especially in SEMCs, non-diversified economic structures, coupled with a general trade deficit (external balance) and budget deficit, reflect and reinforce the difficulty of national economies to develop more competitive products that could enhance economic resilience[15].

19. **Cooperation frameworks and integration schemes in Euro-Mediterranean relations have not achieved shared prosperity**. Political integration in the Mediterranean region has been limited throughout the last decade and mainly focused on thematic ministerial conferences and parliamentary meetings under the Union for the Mediterranean and the Parliamentary Assembly of the Mediterranean, as well as some cooperation on security-related matters. Economic integration has been less timid with tariff dismantling under free trade agreements already in force and the signature of a number of additional trade agreements, mainly between the EU and accession candidates, remaining however relatively limited in comparison to other regions in the world. Little progress has been achieved in the dismantling of non-tariff barriers to trade, in particular subsidies which are still common across the region, including subsidies considered environmentally damaging[16]. Trade among EU and Mediterranean countries did not increase much faster than trade of EU countries with the rest of the world, with the share of intra-Mediterranean imports remaining stable and exports from EU to other Mediterranean countries slightly increasing between 2005 and 2015, meaning that trade regionalization remained low in the Mediterranean region[17].

20. **Youth unemployment is a critical issue in most of the basin**. Total unemployment rates differ broadly from 4% of total labour force (Israel and Malta) to 21% (Bosnia Herzegovina)[18]. Youth (age 15-24) unemployment shows rates of up to three times the national unemployment level[19], with especially high proportions of youth not in education, employment or training in Albania, Algeria, Bosnia Herzegovina, Egypt, Lebanon, Palestine, Tunisia and Turkey (> 20%)[20]. The creation of new jobs, especially for young people, is becoming a cross-cutting priority concern for Mediterranean policy makers. The emergence of innovative sectors within the green, blue and circular economy could contribute to the creation of these needed jobs[21], and proposal for an environmental transition in economic or housing sectors is examined in light of employment concerns.

21. **Throughout the last twenty years, agriculture and industry have lost ground while services developed**[22]. In Mediterranean countries, services generally account for close to or above half of national GDP with Albania (47%) and Algeria (46%) having the lowest service share and Malta (75%), Cyprus (74%) and Lebanon (74%) the highest. In only three Mediterranean countries, industry represents around or more than 30% of national value added: Algeria (with an economy highly dependent on oil and gas), Egypt (the only Mediterranean country having recently experienced a significant increase in the contribution of industry to GDP) and Turkey. Israel (19%) and Lebanon (12%) have the lowest contribution of industry to their national economies. The share of agriculture in national GDP is generally below 10%, except for five countries: Albania (19%), Algeria (12%), Morocco (12%), Egypt (11%), and Tunisia (10%). Algeria is the

only Mediterranean country in which the share of the agricultural sector is increasing (from 8% in 1990 to 12% in 2017).

22. **Mediterranean economies increasingly rely on debt**. Over the last decade, government debt, as a percentage of national GDP has increased in most Mediterranean countries, except for Israel, Lebanon, Malta, and Turkey. The government debt over GDP ratio is close to or above 60% in all Mediterranean countries except for Algeria, Bosnia Herzegovina and Turkey, and is close to or above 100% in Cyprus, Egypt, France, Greece, Italy, Lebanon and Spain, with Greece reaching more than 180%[23]. High and increasing debt ratios can be a risk for the financial sustainability of Mediterranean governments and hinder public investments in the environment sector.

23. **The Mediterranean basin is unable to produce enough agricultural and food products for its own consumption and is therefore highly dependent on international trade and imports of agricultural products, and sensitive to the volatility of international prices**. The agricultural production deficit is due, on the one hand, to agroclimatic conditions, and on the other hand to the scarcity of arable land and water resources. Faced with a growing demand for food products, especially cereals, food security is increasingly threatened in countries where population growth and demand are sustained. Mediterranean countries account for one-third of world imports of cereals, especially wheat, for only 7% of the world population. Egypt and Algeria are among the largest cereal importers in the world, and the import dependency ratio for cereals (import / consumption ratio) is very high in the Mediterranean (42% in Egypt, 60% in Tunisia, 72% in Algeria, 86% in Lebanon). The only countries whose agricultural balance is in surplus are France and Spain. The contribution of small-scale family farming to food security should not be underestimated. Small scale crop and livestock production in family farms significantly contribute to the food consumption of farmers and their families, and to the provision of food adapted to local tastes, including for urban dwellers.

II.4. Dependence on environmental health: Mediterranean economies are dependent on environmental health, in particular in coastal areas

24. **Mediterranean countries, communities and economies are dependent on natural coastal and maritime resources to create wealth, provide jobs, and continue to develop locally**. It is therefore essential to recognize the importance of environmental sustainability to address key socio-economic challenges in Mediterranean countries.

25. **Mediterranean countries remain the world's leading tourism destination** with nearly 30% of international tourist arrivals, and absolute numbers having doubled in 20 years. Recently, this growth has been concentrated in northern countries, with international arrivals diminishing since 2011 in SEMCs. **The coastal and maritime tourism sector is extensively developed in NMCs and had witnessed a significant growth in SEMCs, before the 2011 slow-down turn.** International tourist arrivals in the Mediterranean region grew from 58 million in 1970 to more than 337 million in 2016 and are projected to reach 500 million by 2030[24]. Tourism provides around 11% of total Mediterranean countries employment and 11% of their GDP[25], directly and indirectly.

26. **The Mediterranean also stands as the second biggest cruising region in the world** (16.7% of global cruise fleet deployment in 2018), after the Caribbean). In 2018, the Mediterranean noted more than 28 million cruise passenger movements, compared to just over 8.5 million in 2000.

27. **Mediterranean fisheries and aquaculture play a strong role in the economy**[26]. Fishing generates 250,000 jobs and a direct and indirect economic impact of approximately 13 billion € annually. Aquaculture accounts for more than 50% of total fish production and plays an important

role in coastal communities, contributing to socio-economic development and employment (more than 120,000 direct jobs and 750,000 indirect jobs).

28. **Mediterranean agriculture's role in national wealth creation and employment varies across countries**. Agriculture provides between 1.5% (France) and 19% (Albania) of national GDP in Mediterranean countries and between 1% (Israel) and 40% (Albania) of national employment, with a general decreasing trend in the share of GDP and employment (except for Greece, Libya and Syria where agricultural employment has increased relatively in recent years).

29. **Marine biotechnologies and bioprospecting with applications in medicine, food, materials, energy and cosmetics are a young and growing sector in the Mediterranean region**. The high rate of endemism and quantity of species with high potential for application (e.g. sponges and extreme microorganisms) make the Mediterranean a promising region for these activities, with a significant potential for the generation of revenue and (highly qualified) jobs.

II.5. Environmental pressures from economic sectors: Despite the emergence of low impact solutions, economic sectors exert increasing pressures on the environment, driven by a rapid growth in polluting sectors and a diversification of economic activities in marine areas

30. **The Mediterranean region has one of the world's highest ecological deficits**. The Mediterranean Ecological Footprint[27] per capita (3.2 gha[28]/cap) is higher than global average (2.8 gha/cap), while the biocapacity per capita to support this footprint is lower than global average in most Mediterranean countries (except for France, Croatia, Montenegro and Slovenia). The ecological footprint exceeds biocapacity in all Mediterranean countries, leading to an ecological deficit. From 2010 to 2014, the Ecological Footprint per capita decreased in most Mediterranean countries[29]. This is mostly due to the effects of the economic crisis, which slowed down resource consumption, a reduction of CO_2 emissions in NMCs and population growth in SEMCs spreading the total footprint over a larger population. Variations in the ecological footprint continue to be coupled to variations in GDP, noting, however, a slower growth rate of ecological footprint compared to GDP.

31. **While being economically profitable in the short term, coastal mass tourism generates considerable environmental damage** (habitat loss, increase of water consumption and waste production, disturbance of protected and endangered species mainly due to underwater noise, water pollution, introduction of invasive species, etc.). In addition, profits are not necessarily invested in local development. Tourism in Mediterranean countries faces three complementary challenges: to sustain and expand the development of an alternative offer to mass tourism, less seasonal, more environmentally sustainable and socially beneficial, based on rural and cultural assets (including ecotourism); to concomitantly reduce the footprint of mass tourism, its pressure on scarce natural resources, fragile ecosystems and costly environmental infrastructure; and finally to strengthen tourism linkages with other sectors in the local economy generating indirect benefits on local employment while potentially driving demand for sustainable products.

32. **Transport is the highest energy consuming sector** (with 31% of total energy consumption in NMCs and 38% in SEMCs) **and, with a very strong dependence on fossil fuels, among the largest contributors to GHG emissions in the Mediterranean region**. GHG emissions in the region are mainly caused by terrestrial traffic, and in a smaller proportion maritime and air traffic. Road transport accounts for 70% of transport energy use in the Mediterranean basin, mainly stemming from private vehicles. Transport also leads to significant air pollution, particularly in cities, and represents a major challenge for human health.

33. **The Mediterranean Sea is host to the world's busiest shipping lanes**, accommodating large parts of the world fleet which pass through the Suez Canal, the Bosporus and Dardanelles and the

Gibraltar straits, connecting Asia with Western Europe ports and serving the growing ports in the Mediterranean and Black Sea regions. The Suez Canal/SUMED Pipeline and the Turkish Straits accounted for over 13% of the world's seaborne oil trade in 2015 and the Mediterranean coastal States' fleet accounts for more than 17% of the world's oil tanker capacity in 2017. Pressures from maritime transport essentially include potential accidental (with a clear downward trend) and illicit discharges of oil and hazardous and noxious substances (remaining issue); marine litter; water discharge and hull fouling (shipping being the primary source of the over 1000 established non-indigenous species in the Mediterranean); air emissions from ships (gases and particulates like sulphur oxides (SOx) and nitrogen oxides (NOx) which are toxic for humans, and GHG); underwater noise; collisions with marine mammals; land take through port infrastructure; and anchoring (destructive for sea floor ecosystems).

34. **The Mediterranean continues to rely on energy imports and fossil fuels, despite improvements in renewable energy production**. Mediterranean countries account for 7% of the world primary energy demand in 2015 (equivalent to its global population share), representing more than 955 million tons of oil equivalent (Mtoe). Primary energy demand has increased by 38% between 1990 and 2015, despite a relative stagnation between 2008 and 2015. NMCs account for nearly two thirds of total Mediterranean energy demand, while the southern and eastern Mediterranean countries consume about 19% and 18% respectively. In 2040, energy demand of SEMCs are projected to exceed that of the NMCs. Total energy production has been increasing since 1990, reaching 549 Mtoe in 2015, well below the region's energy demand. Electricity demand almost doubled between 1990 and 2015. Renewable non-hydro electricity production has increased from 1% of total production in 1990 to 11% in 2015. The 2015 electricity generation mix also includes: 29% gas, 25% nuclear (of which 87% in France), 16% coal, 13% hydro, and 7% oil[30]. There is an enormous but untapped potential for further increase of renewable energy sources (wind and solar), especially in Southern Mediterranean countries, which can contribute to ensure a cleaner energy sector and reduce energy dependence (the region is currently importing around 58% of its fossil fuel demand with 90% in NMCs and 20% in SEMCs). There is also a high potential for further energy savings and energy efficiency.

35. **More than two hundred offshore oil and gas platforms are active in the Mediterranean**. With new discoveries of large fossil fuel reserves and explorations in the region, this figure is set to increase. Ongoing offshore exploration in the Levantine Basin, in Lebanon and Syrian Arab Republic, as well as in the Nile Delta Basin and Aegean Basin could contain significant reserves of oil and gas and could transform the eastern Mediterranean ecosystems and economies.

36. **Quantities of fertilizers and pesticides used for agriculture in Mediterranean countries are above global average**. The average per hectare fertilizer consumption is of 176 kg in NMCs, and of 185 kg in SEMCs, compared to the global average of 138 kg[31] in 2015. The average consumption of pesticides in the Mediterranean basin in 2015 was 6.7 kg per hectare, compared to the world average of 2.12 kg. France, Italy, Spain and Turkey are the Mediterranean countries using or selling the highest amount of pesticides for the agricultural sector in 2016[32].

37. **Large water footprints per capita are found throughout the Mediterranean exceeding the global average**[33], with especially high volumes of water contained in imported goods and services. SEMCs are more dependent on these virtual water imports (e.g. Egypt, Israel, Syrian Arab Republic). The use of water within the national consumption and production systems of Mediterranean countries shows a water deficit (higher abstracted quantities of water than available renewable water resources) in all SEMCs. Desalination develops in a context of water scarcity, and despite technological improvement, desalination plant rejections remain an environmental concern for coastal ecosystems.

III. State and impact

III.1. Land-cover and land-use change: Ambitious objectives and disparate policy measures have not been sufficient to preserve natural land cover and agricultural land use, in particular in coastal areas

38. **Land cover and land use in the Mediterranean region continue to change as a result of human activities, with urban sprawl** (residential, touristic, commercial and industrial area expansion) **and infrastructures diffusing throughout the region. Landscapes are typically fragmented due to a multitude of human land uses**, and ecological continuity is a constraint for many biodiversity components.

39. **Soil is one of the main contributors to agroecosystem function and food security. In Mediterranean countries, around 8.3 million hectares of arable land have been lost since 1960**[34] and the area of arable land decreased by an average of 13% over the period 1995-2015, ranging from a loss of 42% of arable land in the State of Palestine to an increase of 21% in Bosnia Herzegovina. The area of arable land per capita fell by an average of 41% over the same period, more than double than average in middle-income countries globally. The Mediterranean countries most affected by the decline in ha per capita are the State of Palestine (-68%) and Lebanon (-62%). Soil degradation is mainly caused by agricultural and non-agricultural land use intensification, resulting from the expansion of intensive cultivation techniques, industrial and urban areas and leading mainly to water and wind erosion, salinization, sealing and compaction, loss of organic matter and permanent loss of vegetation cover, impacting biodiversity and ecosystem services.

40. **Within the limit of the Mediterranean biome, the extent of forests has remained stable, with contrasts between northern and southern shores**. In NMCs, land abandonment in rural areas, associated to depopulation, has led to natural recovery and forest expansion. In SEMCs, pressures on agricultural and forest ecosystems remain significant due to strong demographic pressures on land and water resources, urban sprawl, forest overexploitation, and overgrazing.[35] Although the forest area of Mediterranean countries at national scale has increased from 68 million ha in 1990 to 82 million ha in 2015[36], forests in the Mediterranean biome cover 18% of total area and remain stable. Mediterranean forests are subject to fragmentation due to land cover change including urban sprawl and infrastructure expansion. The area of other wooded lands (small trees, shrubs and bushes) has decreased from 36 million ha in 1990 to 32 million ha in 2015. The coverage of trees outside forests (found in agroforestry systems, urban forests and as elements of the landscape) has increased between 2000 and 2010[37]. Climate change-induced longer droughts and heat waves, combined with uncontrolled biomass accumulation due to land abandonment in northern countries, are leading to an increased risk of wild fires.

41. **Areas of coastal wetlands continue decreasing**. The Mediterranean basin hosts 19-26 million hectares of wetlands[38], and according to a broad sample of 400 Mediterranean wetland sites, about 48% of natural wetland habitats have been lost between 1970 and 2013. The surface area of natural coastal wetlands such as wet meadows and marshes has decreased by more than 10% over the past decades, whereas artificial wetlands like pools, reservoirs and storage ponds have increased by more than 50%[39], the latter being designed mainly for agricultural and aquaculture purposes.

42. **In the coastal belt, the built-up area has increased substantially in the last decades, leaving less space for natural coastal ecosystems and increasing risks for people living in the coastal zone**. Between 1975 and 2015, three out of four Mediterranean countries doubled or more than doubled the built-up area in the belt situated within 1 km from the coastline. Urban expansion and industrialization around coastal cities are driven by waterfront development for economic

activities, such as tourism and real estate, marinas, fishing and trading ports, industrial plants that need the proximity of seawater for cooling or for production export (energy, mineral), desalination, etc., with diverse environmental and social impacts. The ICZM Protocol, in its article 8, provides that Contracting Parties shall establish in coastal zones, a zone of at least 100 m in width where construction is not allowed. However, the built-up area within the first 150 m wide belt along the coastline is above 20% in almost half of Mediterranean countries in 2015[40]. The past and ongoing development of harbors, dikes and others coastal structures is further declining the extent of rocky shores and cliffs, which have decreased by approximatively 20% over the last 50 years in EU countries. Land-use change and subsequent fragmentation represent a major driver of the loss of biodiversity and ecosystem services in the Mediterranean Basin to date[41].

III.2. Natural resources, biodiversity and ecosystem services: Multiple human induced pressures combine to threaten critical resources, biodiversity components and ecosystem services

43. **Mediterranean coastal terrestrial ecosystems offer important services to the inhabitants of the basin; but their functioning is threatened by past and current land-use management**. Ecosystem services offered by wetland and coastal aquifers include water purification, flood and drought mitigation, and water provision, among others. Services offered by these ecosystems are much more significant than their relative land surface. However, loss of natural wetlands habitats and excessive abstraction of groundwater limits the capacity of these ecosystems to provide services. Soft and rocky shores (e.g. beaches, cliffs), representing the majority of the Mediterranean coastline[42], offer services like natural sea defence, nutrient cycling and erosion control and provide opportunities for tourism. Coastal infrastructure development, water and sediment flow alteration at the watershed scale, and pollution, alter the functioning of these ecosystems and their services. Agroecosystems, forests and shrublands, as well as their ecosystem services (e.g. food, fuel and fibre production), are mainly impacted by landscape fragmentation.

44. **The region is a hotspot for marine biodiversity and endemism, which are fragile and threatened by species extinctions and habitat losses**. Although the Mediterranean Sea is a low primary productivity ecosystem due to limited nutrient inputs from fluvial and Atlantic origins, and despite only covering 0.82% of the world's ocean surface, it hosts more than 17,000 marine species and contributes to an estimated 4-18% of the world´s known marine species. The Mediterranean Sea represents the highest proportion of threatened marine habitats in Europe (32%) with 21% being listed as vulnerable and 11% as endangered, with seagrass ecosystems experiencing the most rapid recession. Marine ecosystems support fish stocks restauration, resilience to climate change, sailing, diving and wildlife-watching activities, for example. Fishing and harvesting aquatic resources, considering overfishing, bycatch and the damaging impacts on marine habitats, is the main driver of increasing fish species extinction risk in the Mediterranean region[43]. Over the 1950 to 2011 time-period, the abundance of top predators including a number of marine mammals has diminished by 41% and fish species have reduced by 34%, including commercial and non-commercial species, while an increase of about 23% of the organisms at the bottom of the food web has been observed[44].

45. **Seagrass meadows occurring in the Mediterranean, including the endemic species *Posidonia oceanica*, play an important role in terms of habitat for biodiversity, water quality regulation, coastal protection and carbon fixation and storage.** Localized regressions have been recorded in the region, in relation to natural and anthropic pressures such as mooring, seabed disturbing fishing, and excessive sand and organic matter discharge.

46. **Coralligenous assemblages contribute to carbon sequestration and storage, and generate a remarkable natural productivity** which contributes to the maintenance and development of

fisheries resources. Numerous species (above 1,700 species, i.e. 15 to 20% of Mediterranean species) use coralligenous environments as feeding, breeding or nursery grounds, including species of commercial interest for fisheries and endangered or threatened species. Furthermore, being attractive for scuba diving, coralligenous support important recreational economic activities whose existence depends on the presence and the state of conservation of these assemblages.

47. **78% of Mediterranean and Black Sea fish stocks are fished at biologically unsustainable levels**[45]. Fish landings in the Mediterranean have been declining irregularly since 1994 with subsequent decline in economic value, and represented 850 000 tonnes in 2016. The number of overexploited or collapsed fish stocks in the Mediterranean Sea has increased between 1970 and 2010[46]. The pattern of exploitation and the state of different fish stocks is especially critical in the eastern Mediterranean. Fishery overexploitation is the main driver of marine populations and has led to the bad state of most highly commercial stocks and the low abundance of top predators.

48. **The Mediterranean Sea and particularly the Levantine basin is a hotspot for alien species introductions some of which causing a decrease or collapse in native species populations**. More than 1,000 non-indigenous marine species have been recorded in the Mediterranean, of which 618 are established[47]. The main vectors for species introduction are maritime transport (through ballast water and hull fouling) and corridors (in particular the Suez Canal). Aquaculture and aquarium trade provide additional ways of introduction. Mediterranean Sea warming leads to spreading of some “warm-water” invaders and reduction of some indigenous species. There is evidence that some invaders have already had a strong ecological impact on marine ecosystems, communities and activities, while others are becoming commercially exploited fishing resources.

49. **Water scarcity is considered one of the main factors challenging sustainable development, especially in SEMCs and island states**. Total renewable water resources are unevenly distributed across the basin, with 67% in the northern sub-region, 23% in the eastern sub-region and 10% in southern countries[48]. Around 30% of the Mediterranean population live in water scarce countries[49], and an additional 13% in countries facing absolute water scarcity[50]. With less than 500 m^3 total renewable water resources per capita per year, Algeria, Israel, Libya, Malta, the State of Palestine and Tunisia face important water-related challenges. On the contrary, northern countries are in a situation of relative water security (> 1,700 m^3 per inhabitant per year). However, national averages hide significant local and seasonal disparities, and natural water scarcity in the Mediterranean region is getting aggravated, even in the North, by population growth, urbanization, growing food and energy demands, pollution and climate change.

50. **Significant differences in the proportion of water demands exist between Mediterranean catchments and season. By 2050, under a business-as-usual water-use scenario, water withdrawals are projected to double or even triple in catchments of the southern and eastern rims due to population growth, expansion of irrigated areas and increasing crop water needs resulting from warmer and drier conditions**[51]. Water demand for irrigation purposes represents more than half of the total water demand over all Mediterranean catchments (for the production of cereals, vegetables and citrus), except in France and Italy where water demands for energy and industrial purposes prevail, and in Slovenia and Croatia where domestic water demands prevail[52]. Water demands vary throughout the year, mainly according to tourism. Under a business-as-usual scenario, trends in irrigated land expansion should lead to a 150% increase in agricultural water withdrawals in Algeria, Israel, Lebanon and Libya by 2050, an 80% increase on average in the Maghreb and Turkey and a 20 to 25% increase in other southeastern catchments[53]. Environmental requirements (environmental flows) which are necessary for sustaining ecological continuity, riparian productivity and many other services provided by fluvial systems, are often underestimated, neglected and strongly impacted by over-abstraction.

51. **Greenhouse gas emission reduction objectives are still far from being met**. While the CO_2 emissions of most NMCs have been decreasing since 2005, those of most SEMCs increased, in particular due to demographic growth. Total CO_2 emissions from Mediterranean countries account for 5% of world emissions estimates. Greenhouse gas emissions in Mediterranean countries have increased by 6.6% from 2002 to 2012[54]. NMCs and SEMCs now both emit about 1 Giga ton of CO_2 per year[55]. Emissions per inhabitant stand around 4 tonnes per capita on average, remaining highly differentiated among countries (ranging from 0.5 to 10 tonnes per capita). Mediterranean countries with highest total CO_2 emissions (higher than 100 kt in 2014) include Turkey, Italy, France, Spain, Greece and Algeria (in decreasing order). Total CO_2 emissions have decreased between 2000 and 2014 in Croatia, Cyprus, Greece, France, Italy, Slovenia, and Spain (Northern countries) and Syrian Arab Republic, and have increased in Israel, Lebanon, Turkey (East), Algeria, Egypt, Libya, Morocco, Tunisia (South), and Bosnia Herzegovina (North).

52. **Nutrients, heavy metals, persistent organic pollutants (POPs), pesticides, hydrocarbons, and marine litter are the main pollutants of the Mediterranean Sea and efforts have so far not succeeded in achieving GES of the waters in many places**. Levels of major pollutants show a decreasing trend, even though important issues remain, especially for heavy metals in coastal sediments, as well as in known hotspots associated with urban and industrial coastal areas. A decreasing trend has been observed for aqueous effluents from specific industrial sectors, such as the food and beverages, metals production and processing, and paper and wood production, while increasing trends have been observed for waste and wastewater management and the energy and chemical sectors[56]. Emerging contaminants, such as plastic additives, cosmetics, plasticizers, nanoparticles, and pharmaceuticals, represent an under-investigated threat to ecosystem and human health which deserves attention, especially because, to date, municipal treatment plants are unable to remove them. Underwater noise is also an issue of raising concern for its major impacts on cetaceans, especially in relation to identified hotspots overlapping important habitats of cetaceans such as the Pelagos Sanctuary and the Strait of Sicily. At the European level, considering the 16 River Basin Districts monitored in terms of surface water pollution and habitat degradation along the Mediterranean coastline, 49% of water bodies on average are failing to achieve the Good Ecological status, the highest percentage being found in Sicily, Italy, and lowest in Corsica, France[57]. Eutrophication represents a major issue in coastal areas influenced by natural and anthropogenic inputs of nutrients, such as the Gulfs of Lion and Gabès, the Adriatic Sea, northern Aegean, and Nile-Levantine.

53. **Waste generation and management practices vary widely throughout the Mediterranean**. The total amount of generated municipal solid waste is slightly greater than 183 million of tons per year, i.e. an average of 370 kg per capita per year (about 1 kg per capita per day). In NMCs, values range from 1.1 to 1.7 kg per capita per day with a maximum of more than 3 kg in Monaco. In SEMCs, values range from 0.5 kg per capita per day in Morocco to 1.1 in Algeria (value for Israel is similar to EU countries). In NMCs and Israel, the percentage of food and organic waste is between 30% and 52% while this rate in the SEMCs is still higher (from 52% in Lebanon to 70% in Libya). Recycling rates also vary broadly. In the northern countries, the recycling rate is above 13% and reaches 46% in Slovenia (except in Bosnia Herzegovina with almost no recycling). In SEMCs, Egypt has the highest recycling rate (12.5%) and the rate is especially low in Palestine, Syria and Turkey. A relatively high share of waste is discharged on open dumpsites or unaccounted for, representing potential leakage into the environment and eventually ending up as marine litter.

54. **The Mediterranean is one of the world areas most highly affected by marine litter due to an increase in plastic use, the lack of recycling, unsustainable consumption patterns, inadequate and ineffective waste management, high pressures from tourism and shipping,**

coupled with significant riverine inputs. Plastics account for up to 95 to 100% of total floating marine litter and more than 50% of seabed marine litter[58]. The Mediterranean is especially affected by microplastics, with concentrations at the sea surface largely above 100,000 items per km^2 [59] and maxima above 64 million floating particles per km^2 [60]. These concentrations are projected to further increase in years to come. Marine Litter impacts marine organisms mainly through entanglement and ingestion, but also through colonization and rafting. It also creates an economic burden through clean-up costs, and potential loss of income and jobs from tourism, residential property values, recreational activities and fisheries. The effects of micro- and nano-plastics and associated Persistent Organic Pollutants (POPs) and Endocrine Disrupting Chemicals (EDCs) in the marine environment represent an additional risk to human health and marine organisms.

55. **Although land-based sources are dominant in generating marine litter, sea-based sources actively contribute to the problem with an estimated EU average of 32% and values up to 50% for some sea basins**. It is estimated that the fishing and recreational sectors are relatively large sea-based sources contributors, with shares of 30% and 19% respectively (the balance provided by merchant shipping). If an average treatment of 25% is assumed, the gross waste generation would be an approximate 1.2 million tons per year for all shipping sectors in the EU. Fishing and recreational vessels together account for about half of the total MARPOL Annex V waste generation.

III.3. Health and environment: while health has globally improved in the region, pollutants, climate change, new lifestyles and consumption patterns raise increasing health concerns

56. **In the Mediterranean, 15%**[61] **of deaths are attributed to modifiable environmental factors[62], compared to 23% worldwide**[63]. Among Mediterranean countries, the number of deaths attributed to modifiable environmental factors ranges between 8% and 27% in 2012[64]. WHO estimated that, in Mediterranean countries, more than 228,000 persons died prematurely in 2016 because of exposure to ambient air pollution, making it the main responsible for the environmental burden of disease in the region.

57. **Air pollution is critical, its negative impact on various health components being increasingly well documented**. Levels of urban ambient air pollution is best documented for particulate matter (PM2,5) and in Mediterranean countries are highest in Egypt (100.6 $\mu g/m^3$), far above world and European averages (39.6 $\mu g/m^3$ and 14.2 $\mu g/m^3$, respectively). Other Mediterranean countries with levels >40 $\mu g/m^3$ include Bosnia Herzegovina and Libya[65]. In 2016, almost two thirds of Mediterranean countries exceeded the WHO threshold of 25 $\mu g/m^3$ of particulate matter (PM2,5).

58. **Contaminated drinking water affects human health**. In some areas, water is still contaminated by untreated sewage that leads to increased nitrite and bacteriological count. Drinking water sources are [in many areas] also affected by leakage of nitrates from extensive fertilizers use in agricultural activities leading to an increase in nitrates level beyond 50 mg per l (WHO limit for drinking water quality)[66].

59. **Under 5-year old deaths attributed to environmental causes have been reduced in SMECs**. However, progress remains possible. In 2016, the burden of disease related to diarrhoeal diseases from water, hygiene and sanitation was above 30 000 disease adjusted life years (DALYs) in children under 5 years in Algeria, Egypt, Morocco and Syrian Arab Republic.

60. **Climate change increases risks for human health**. Increased and longer heat waves are a health risk factor especially for the elderly. Transmission of vector-, food- and water-borne diseases is facilitated by higher temperatures. The risk of personal injury increases with a higher frequency and intensity of extreme weather events. Modifications in pollen patterns favour asthma and

allergies. Finally, drinking water sources are at risk of loss, decreasing quality and salination through intrusion of saltwater, potentially causing a significant rise in cardiovascular diseases.

61. **Man-made and natural disasters and emergencies are a reality in the Mediterranean region and have the potential to temporarily or permanently alter the inhabitants' access to safe environmental infrastructure and services**. The Mediterranean is an area of relatively high seismic and volcanic activity with a series of destructive earthquakes, volcanic eruptions and tsunamis on record, having displaced and killed thousands of Mediterranean inhabitants. Man-made emergencies linked to political turbulence and war force large numbers of people to flee and find new, often improvised, housing and means of living. In such emergencies, providing healthy environments for people is a particular challenge. Forced displacement can also cause environmental degradation, not only in the (destroyed) areas left behind, but also in the areas that receive massive population flows. Emergency and preparedness plans, integrating health and environment considerations are key to disaster management to protect the health and ecosystems.

62. **In many Mediterranean countries, a triple nutritional burden can be observed, adding undernutrition, overfeeding (obesity and noncommunicable diseases) and nutritional deficiencies**. A worrying increase in overweight and obesity is to be noted between 2012 and 2016 in all Mediterranean countries[67]. The adult obesity rate exceeds 30% in 2016 in Egypt, Lebanon, Libya, Malta and Turkey. It is lower in the Balkans but is everywhere above 20% (except in Bosnia and Herzegovina), leading to increased risks to public health (cardiovascular diseases, type 2 diabetes, metabolic syndrome).

63. **Degradation of coastal and marine ecosystems limit their benefits for humans**. Coastal and marine ecosystems provide a number of health benefits ranging from food provision, including the particularly healthy fatty acids contained in fish, to the provision of bioactive metabolites used in drugs, and the provision of leisure activities contributing to physical and mental health. The degradation of coastal and marine ecosystems negatively impacts their capacity to provide the mentioned ecosystem services and thus reduces human health benefits.

64. **Whereas environmental factors influence human health, the health sector itself influences the state of the environment**, producing a magnitude of different kinds of waste, including untreated pharmaceutical residues in wastewater that travel down water basins and end up in the marine environment, [and potentially in the food chain]. Liquid waste from healthcare facilities is often discharged directly in municipal wastewater networks. This contains radioactive elements, heavy metals and hazardous substances from laboratories, bacteria and pathogens, blood, etc. leading to environmental contamination[68].

III.4. Climate change is already affecting the Mediterranean, exacerbating preexisting challenges

65. **The Mediterranean basin is affected by climate change at a pace well above global average, in particular by more rapid warming of ambient air and sea surface in all seasons**. While global mean air temperature is now about 1.1 °C above pre-industrial values, the Mediterranean region approaches a warming of 1.6 °C. It is expected to have warmed by 2.2 °C between 2030 and 2052 when the global mean is expected to reach the 1.5 °C threshold highlighted in the Paris Agreement. Without additional mitigation, in some regions of the Mediterranean the temperature increase is expected to exceed 3.8 °C by 2100. In parallel, the sea surface temperature in the Mediterranean has already warmed by around 0.4 °C per decade during the period between 1985 and 2006 and is expected to reach between + 1.8 °C and + 3.5 °C by 2100 compared to the period between 1961 and 1990. Heat waves are becoming stronger and more frequent, and are especially accentuated in urban centers due to the heat island effect. Summer precipitation is expected to decrease by 10 to 30% at the global atmospheric increase of 2 °C, and heavy rainfall events are

likely to intensify and become more erratic. The sea is absorbing CO_2, which causes ocean acidification at an unprecedented rate of - 0.018 to - 0.028 pH units per decade, with significant expected consequences on calcifying organisms, impacting marine biodiversity and aquaculture. Wild fire risks are growing with climate change-induced longer fire seasons and increasing heat waves in combination with drought.

66. **Climate change already exacerbates regional challenges, inducing an increase in risks of droughts, floods, erosion, and fires. In the upcoming decades, climate change is expected to further threaten food and water security, as well as human livelihoods and health**. Tourism, fisheries, aquaculture and agriculture have already started to be adversely affected by both changes in general climatic patterns and extreme events. Freshwater resources quality and quantity decrease while warming and decreased precipitation locally lead to the reduction of yields (especially for winter and spring crops in the South) and increased irrigation requirements. Combined with potentially increasing pests, dependence on international food imports will become stronger in SEMCs. Fish stock composition and distribution will likely change, with more warm-water species and a decrease in fish size. Unfavourable changes are likely to predominate in Mediterranean aquaculture, adversely affecting investment and growth in a sector projected to be the backbone of increasing sea food supply to meet the growing demands.

67. **Due to a limited tidal range, Mediterranean coastal infrastructures and settlements are often closer to mean sea level, than in most regions of the world[69], which makes them highly vulnerable to sea-level rise, storm-surges, flooding, erosion and local land subsidence**. The sea is rising at an accelerating rate of 2.6 to 2.9 mm per year, implying an increase currently estimated at 52 to 190 cm by 2100[70]. Considering the high concentration of human population and activities in the Mediterranean coastal zone, exposure is high. Sea-level rise also causes salinization of coastal wetlands and aquifers and, combined with a disturbed sediment balance on Mediterranean shores, leads to erosion. Projections of sea-level may be significantly revised in upcoming years, especially due to unprecedented rapid melting of the ice caps.

68. **Climate change, together with a lack of regulatory and control mechanisms, has accelerated the spread of non-indigenous species leading to a shift in species composition and functioning of ecosystems**. Mediterranean species are partly responding to climatic changes by changing their geographical distribution. However, the expected migration of species to cooler areas as the ocean warms up is limited in enclosed seas like the Mediterranean Sea. Increasing water temperature will lead to more frequent mass mortality events, especially in coralligenous but also in sponges or mollusks, including in aquaculture sectors. Calcifying organisms are especially vulnerable to acidification. Global warming in combination with direct anthropogenic impacts such as water extraction and pollution, largely affect water budgets in Mediterranean wetlands (salinity, continuity, depth, inundation), and thereby the structure of the communities, which inhabit them, e.g. birds[71].

69. **Considering the particular intensity of climate forcing (increased temperature, precipitation decrease, acidification, extreme events increase), non-climate forcing (population growth, including tourist arrivals), vulnerability and exposure of major stakes (land cover, population density, economic activities, heritage sites), the Mediterranean Basin is considered a climate change hotspot**. A multi-scale risk assessment shows that areas in three out of four Mediterranean countries are at “extremely high risk”, with a predominance in SEMCs and Italy[72].

IV. Responses – Major progress in addressing regional issues

70. Previous reports on the state and outlook of environment and development interactions in the Mediterranean published by Plan Bleu in 1989 and 2005 had identified three main policy challenges: (i) strengthening regional cooperation; (ii) integrating environment into sectoral policies, and (iii) promoting sustainable local and territory-specific development.

- Over the last decade, **regional cooperation in the Mediterranean has experienced major difficulties due to geopolitical circumstances, but cooperation on environmental matters has remained active.** Countries have adopted common objectives, commitments and monitoring frameworks. Stakeholder networks have also expended and diversified. With the multiplication of relevant information sources and pilot experiences, cooperation will remain a key condition of environment and development progress in the upcoming decades, with permanent cooperation frameworks across different institutions and types of stakeholders a key priority.

- **On integrating environment into sectoral policies, progress has been achieved through the Barcelona Convention and the establishment of integrated tools, including the ICZM Protocol, the Ecosystem Approach and the Sustainable Consumption and Production (SCP) Action Plan.** However much remains to be done, as ambitious regional and international environmental agreements are rarely fully implemented on the ground, and important gaps persist in enforcing them. Ministries in charge of environment remain under-considered and underfunded. With the rapid development of sectors impacting the environment, ensuring a transition towards more environmentally sustainable and socially inclusive sectors remains a critical target, as demonstrated by the mobilization on blue, green and circular economy. Depending on policy areas, regulation, funding, urban planning, or reforming the incentive structure are priority instruments. More complex or diffuse issues require the implementation of a set of instruments through a coherent policy mix.

- **Territorial approaches have been successfully strengthened with decentralization moving forward in some countries, and advocacy for local decision-making progressing through various fora.** Local authorities play for example a crucial role in planning and implementing concrete climate change mitigation and adaptation measures. However much remains to be done in empowering local governments, as applicable.

71. In conclusion, **while progress is notable on some common pollution issues, other environmental areas are of remaining concern, including urban sprawl and ecosystem fragmentation, air pollution, waste management, marine litter, etc.**, with significant impacts on human health and wellbeing, as well as on economic sectors critical for the region. Climate change already aggravates existing vulnerabilities with limited integration to date in relevant policies instruments. The three above mentioned policy challenges remain insufficiently addressed. Regulations and enforcement implementation, and upscaling pilot initiatives to foster efficient transitions are, in particular, critical bottlenecks.

IV.1. Over the last ten years, Mediterranean countries have adopted common objectives and cooperation frameworks, setting a shared path towards sustainable development

72. **Environment and sustainable development remain major areas of regional cooperation**:

- **Over more than 40 years, the Barcelona Convention has led to the adoption of 7 legally binding protocols and numerous strategies and action plans**, including in recent years the ICZM Protocol (2008), the 2016 Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas, the 2016 Regional Action Plan on Sustainable Consumption and Production, as well as the Mediterranean Strategy for Sustainable

Development 2016-2025 (MSSD)[73]. The adoption of the 2018 Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea under the auspices of the General Fisheries Commission for the Mediterranean (GFCM) also testifies of this appetite for cooperation on sustainability challenges in the Mediterranean region.

- **Mediterranean countries have enhanced their legal and institutional capacity to protect the coastal zones**. The ICZM Protocol encourages the development of national coastal regulation, legislation and the creation of coastal agencies. Half of the Contracting Parties have ratified the ICZM Protocol and another six have signed it. For the period 2014-2015, twelve countries submitted their national implementation reports of the ICZM Protocol[74]. Seven countries have a legal framework in place for the protection of the coast[75], and seven others have launched its preparation. Seven countries have a national ICZM strategy[76], and five others are preparing one. Coastal protection agencies or local bodies to protect the coast have been established in six countries[77]. In four additional one, dedicated funds, land acquisition mechanisms or development plans for coastal zone management are in place. A "Common Regional Framework" on ICZM is in development in 2019, with the main objective to introduce maritime spatial planning as an important tool/process for the implementation of ICZM in the marine part of the coastal zone. This framework should help countries plan and manage human activities according to an ecosystem-based approach.
- **Addressing marine litter is a recognized priority policy area of common concern and action**. Acknowledging the importance of prevention and the application of sustainable circular economy principles, the Regional Plan on Marine Litter Management in the Mediterranean (2013) provides for a set of policy, legal, institutional, regulatory, economic, and technical measures, addressing different aspects of marine litter prevention and management from land- and sea-based sources. At national level, important prevention measures have been adopted in the majority of Mediterranean countries. National legislation and policies are in place for recycling (8 countries) and for reducing the use of single-use plastic bags (17 countries) tackling the major marine litter items found in the Mediterranean. A Regional Cooperation Platform on Marine Litter established in 2016 helps exchange good practices, share information and seek solutions together.

73. **Mediterranean Countries also broadly subscribe to global environmental and sustainable development agreements**:

- **Ratification of international conventions is usually high**. The Convention on the protection of World Cultural and Natural Heritage, Basel Convention, Convention on Biological Diversity, Framework Convention on Climate Change (UNFCCC) and Convention to Combat Desertification (UNCCD) have been ratified by all 21 Mediterranean riparian countries and the European Union. Other conventions and agreements on biodiversity conservation and pollution reduction are strongly supported in the region, such as CITES (on international trade of protected species), CMS (migratory species), AEWA (African-Eurasian Migratory Waterbird), ACCOBAMS (Cetaceans) and Stockholm Convention (persistent organic pollutants). However, the Nagoya Protocol[78], Minamata Convention[79], Aarhus Convention[80] and Espoo Convention[81] have been ratified by less than 50% of the Mediterranean countries.
- **Since their adoption in 2015, 2030 Agenda and Sustainable Development Goals (SDGs) have become a major common reference framework for policy design and evaluation**. Numerous Mediterranean countries have revised or are revising their National Strategy on Sustainable Development to transpose the 2030 Agenda and SDGs at the national level. The MSSD, its monitoring dashboard and the Simplified Peer Review Mechanism SIMPEER have

contributed to the regional and national implementation of the 2030 Agenda, while taking into account local and regional specificities.

- **Most Mediterranean countries are committed to the Paris Agreement on Climate Change**. 85% of Mediterranean riparian countries have ratified the Paris agreement and 80% have submitted their first Nationally Determined Contributions (NDC). Some Mediterranean countries have demonstrated an important mobilisation on the international scene, welcoming international or regional climate change events (e.g. Morocco, France). In addition, a 15% increase in renewable energy consumption (2005-2015) regionally[82] indicates an effort to shift from carbon-intensive energy sources to alternatives. However, some renewable energy developments raise debates on potential environmental trade-offs associated with impacts on biodiversity, resource consumption, recycling, etc. that deserve further assessment.

IV.2. Integration and system-based approaches are increasingly recognized as the most efficient way to address systemic factors, and combined pressures and impacts

74. **Integrated ecosystem-based approaches replace and complement sectoral approaches**. In 2000, Parties to the Convention on Biological Diversity adopted globally the Ecosystem based Approach (EcAp), defined as "*a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment*." EcAp "*recognizes that humans, with their cultural diversity, are an integral component of ecosystems*"[83]. Since 2008, the Contracting Parties to the Barcelona Convention agreed to progressively apply the Ecosystem Approach to manage human activities in the Mediterranean, with the ultimate objective to achieve Good Environmental Status (GES)[84].

75. **Hydrologic basins** (watersheds draining into the Mediterranean Sea) **are recognized as a coherent scale for the management of anthropogenic activities and natural resources**. Water runoff throughout the Mediterranean basin to the sea (with specific flow quantity, quality, timing and duration) supports nutriment, sediment and carbon flows which are essential for the functioning of coastal and marine ecosystems. The increase in the number and capacity of dams in Mediterranean countries[85], as well as changing land cover, water abstraction and pollution caused by direct and diffuse sources, have notable impacts on downstream (coastal and marine) ecosystems and the services they provide, thus calling for an management at the level of the hydrologic basin, as highlighted in the Land-based sources (LBS) Protocol, and taking in due considerations trends and potential policy measures in sustainable land management including agriculture, forestry, soils...

76. **The emergence, consolidation and implementation of systemic approaches remain key to addressing dysfunctions and bottlenecks** within the Mediterranean socio-ecological/economic system, accounting for multiple drivers, pressures, actions and actors and their interactions, rather than specific and isolated factors. In SEMCs in particular, increasingly scarce water resources impose an integrated water management and considering the **water, food and energy nexus** when developing a sectoral policy. Systemic approaches also facilitate the reconciliation of conflicting time scales between policies and ecosystem dynamics, giving due consideration to the long term.

IV.3. Pollution sources: Investments and collaborations have addressed some major pollution sources and health hazards

77. **Most Mediterranean people use safely managed drinking water services[86] in 2015, demonstrating continued progress in access to water despite population growth. However,**

more than 26 million are still to be served[87]. 6 out of 22 Mediterranean countries (Algeria, Egypt, Libya, State of Palestine, Syrian Arab Republic and Turkey) do not yet have monitoring data on the use of safely managed drinking water services[88], indicating a difficulty in monitoring the achievement of SDG Target 6.1. Nevertheless, available data show a significant progress between 2005 and 2015 (increase from 83% to 90% of the population using safely managed drinking water services in monitored countries [89]). However, in Albania, Lebanon and Morocco, more than 30% of the population still do not use safely managed drinking water services.

78. **The proportion of the Mediterranean population using safely managed sanitation services has increased in most countries, but objectives are still far from being reached**. In the past decade, access to adequate and equitable sanitation and hygiene has increased from 58% (2005) to 65% (2015) of the population using safely managed sanitation services[90]. Progress has been recorded particularly in Albania, Egypt, Israel, Lebanon, Morocco, Tunisia and Turkey and the gap between NMCs and SEMCs decreased. Yet, more than 160 million people do not use safely managed sanitation services. Access to adequate and equitable sanitation and hygiene still represents a tremendous challenge in particular in Egypt, Morocco and Turkey (with over 100 million people lacking safely managed sanitation services in these three countries combined).

79. **Considerable improvement in the treatment of wastewater has led to a significant improvement in bathing water quality; but localized problems subsist** and [may] even be wide spread when strong rainfall events occur due to stormwater overflow. In 2017, most NMCs report over 75% of excellent bathing water quality and over 90% of good or excellent bathing water quality, with exception of Albania with about 12% of poor basin water quality sampled[91]. In part of the Mediterranean, bathing water quality remains a permanent or occasional barrier to tourism and a sanitary risk, in particular due to the difficulty to manage heavy rainfall events, and seasonal activities (tourism) putting limited infrastructure under stress.

80. **Despite a steady increase in oil and other cargo volumes moved by ship, accidental spillages of oil and other harmful substances from ships into the Mediterranean have decreased.** Between 1994 and 2013, approximately 32,000 tons of oil have been released into the Mediterranean Sea as a result of incidents. The proportion of incidents involving oil spills dropped from 56% for the period 1977 - 1993, to 40% for the period 1994 – 2013. 61% of these incidents resulted in a spillage of less than 1 tonne[92]. In the Mediterranean, the quantities of harmful or noxious substances (HNS) accidentally spilled have considerably decreased during the period 1994 - 2013 and have become insignificant since 2003[93]. The impact of the international regulatory framework adopted through the IMO as well as technical cooperation at regional level have contributed to this favourable outcome, especially in the prevention of accidental pollution. The support REMPEC provide to Mediterranean coastal States since 1976 contributes to this positive trend. However, risks associated with the transport by ships of oil and HNS with possible harmful consequences on biota and ecosystems cannot be completely eliminated, especially in vulnerable areas such as the Mediterranean Sea.

V. Responses: Persisting and emerging challenges

81. **Despite notable progress, Mediterranean countries are not on track to achieve agreed goals**. The majority of observed trends show developments that are either progressing towards set targets but at an insufficient rate or unequally across countries, or moving away from the target. **Major changes in production and consumption patterns are urgently needed to progress decisively towards inclusive sustainable development, with focus on climate change concerns, biodiversity protection, circular economy, and transition towards blue/green economy.** This is consistent with the UN 2030 development agenda and its SDGs, as well as the MSSD.

V.1. Enforcing common agreed objectives and commitments

82. **While Mediterranean countries have adopted ambitious objectives and sometimes legally binding agreements** (including Protocols under the Barcelona Convention), **critical gaps remain in implementing and enforcing them**:

83. **The Barcelona Convention provides a twofold mechanism to ensure enforcement of its provisions, yet to be fully enacted**: (i) the compliance committee and (ii) reports by Contracting Parties on measures implemented and their effectiveness (Article 26) reviewed by the COP to recommend potential corrective measures (Article 27). The Compliance Committee of the Barcelona Convention and its Protocols was created in 2008 to help identify implementation and compliance difficulties as early as possible. The Compliance Committee can be triggered by Contracting Parties, the Secretariat and the Committee itself; however, it has not been triggered to date. National reporting of measures taken and evaluation of their effectiveness is insufficient, with a significant number of non-submitted or incomplete reports. The Barcelona Convention does not provide for a sanctioning mechanism in case of non-compliance. Strengthening the fulfillment of Articles 26 and 27 presents an opportunity to close the adaptive policy cycle from planning, to implementation, enforcement, monitoring and evaluation, based on commonly agreed measures.

84. **Enforcement also remains limited at national level**. Human resources, training and budgets in this area are often insufficient to provide effective solutions, and sanctioning mechanisms are often inexistent or ineffective. The systematic inclusion of operational implementation and enforcement instruments into environmental policies remains a key gap and calls for increased efforts and capacity building.

85. **Critical areas for increased enforcement include: illegal waste disposal and trafficking** (including criminal activities), **illegal mining** (including illegal sand extraction and smuggling[94]), **illegal fishing** (including in Marine Protected Areas, with enforcement needed along the value chain), **illegal construction in coastal zones and protected coastal areas**, etc. Recent enforcement measures (e.g. on air pollution by ships) and sub-regional collaborations (e.g. on illegal discharge at sea) can serve as examples for upscaling surveillance and legal action on environmental regulations.

86. Leads for strengthening enforcement include:

- **developing and testing of a set of criteria and associated indicators to assess compliance** (including with the Barcelona Convention and its Protocols);
- **adopting necessary provisions in national legislation to allow for legal action**; including notions of **precautionary principle**, **environmental prejudice**, **non-regression** on environmental regulations, environmental **prevention**…; and adopting effective legal and administrative mechanisms to implement these principles;
- **strengthening cooperation between judiciary and administrative bodies**;
- **building capacities of judiciary and administrative resources along the enforcement chain**, on environmental legal frameworks, jurisprudence, environmental and economic stakes; with both a general awareness programme and specialized trainings;
- **developing cooperation and synergies with other MEAs Compliance Committees** in areas of common concern including joint activities to promote and facilitate compliance; and
- **developing judicial cooperation at Mediterranean level**. **In the framework of the Barcelona Convention, promising leads for judicial cooperation have developed with regard to**

detecting and sanctioning intentional pollution from maritime transport. The Mediterranean Network of Law Enforcement Officials (MENELAS) relating to the International Convention for the Prevention of Pollution from Ships (MARPOL) explores the possible development of regional jurisdictional and judicial cooperation in the Mediterranean, along with a common report that would enable the courts of the Contracting Parties to the Barcelona Convention to prosecute all individuals, irrespective of the place of pollution. MENELAS is also considering the possibility of accompanying this judicial cooperation with the creation of a regional "Blue Fund", to which a part of the pecuniary sanctions would be transferred. Stakeholders mention aligning the level of sanctions or nature of acceptable proofs as potential areas for future progress. Judicial cooperation could be further extended to other policy areas of common interest.

87. **Several cases of judicial litigation have been recorded in European Mediterranean countries**, 40 of which at the European Court of Justice, 13 in Spain and 4 in France[95]. One of the trends in climate change litigation is related to **holding governments to their legislative and policy commitment, thereby enforcing climate engagements via legal action**. The most famous of such cases took place in the Netherlands[96]. The court in the Hague agreed with the plaintiffs and ordered a limitation of GHG emission to 25% below 1990 levels by 2020 finding the set of 17% to be insufficient with regard to the Paris Agreement. A similar case filed in France is expecting judgment.

V.2. Raising the profile of environmental institutions and stakes

88. **Policy-making continues to encounter barriers hindering long term considerations** in decisions, whereas ecosystems adaptation and restoration generally require time scales exceeding the duration of a human life. Raising the profile of environmental institutions and stakes requires more decisive actions on areas generally well-known, but addressed at a pace inconsistent with the magnitude of current challenges, such areas include:

- **Expending stakeholders' awareness and involvement**

89. **Improving public access to information and participation, as well as education for sustainable development are key for inclusive engagement in transitions and raising the political profile of environmental issues**.

90. **Effective policy making for a sustainability transition requires an inclusive approach that guides behavioral changes at all levels**, and actively involves not only policy-makers, but also dialogues with civil society and the private sector at all stages of the policy-cycle. Inclusive development must pay attention to inequalities and involve civil society in decision and action. In particular women who can play a major role: (i) in promoting sustainable household consumption and investment (e.g. in food/agriculture, in energy), and (ii) in entrepreneurship and economic development. Mediterranean policies increasingly integrate participatory and multi-stakeholder tools[97]. The young generations and their demands and potential for action are central to short term and longer-term progress, including in countries with strong demographic trends today and tomorrow.

91. **Since the 2000s, the strong increase of mobile phone subscriptions and people using the Internet has opened new opportunities for access to information and public participation in the environmental debate, including through social media**. However, only 12 of the 22 Contracting Parties to the Barcelona Convention are already Parties to the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, which links environmental protection and human rights. Generalizing the

accession to the Convention and the fulfilling of its commitments are key levers for inclusive transitions.

92. **Environmental impact assessments are a key source of stakeholder information.** All Mediterranean countries have adopted frameworks for *ex-ante* environmental impact assessment (EIA), in line with Article 4.3c and 4.3d of the Barcelona Convention (in 100% of Mediterranean countries, EIA is a legal requirement, whereas 72% have enacted a legal framework for SEA). **However, their further extension to Strategic Environmental Assessment and to including social assessment, as well as their rigorous application and enforcement, require further efforts**.

- **Understanding and addressing non-environmental stakes associated with environmental decisions**

93. Food security, youth employment, access to water in required quality and quantity, health (in particular in urban and peri-urban areas), are critical policy issues of widespread concern in Mediterranean countries. Assessing and sharing expected co-benefits and trade-offs of environmental decisions on those policy priorities, and discussing them with stakeholders concerned is critical to further integrate environmental objective in development policies.

94. In this regard, strategic stakeholder information includes assessments that demonstrate **economic and social (including health) co-benefits of environmental action**, including cost of inaction. **Natural capital, ecosystem and ecosystem services accounting** could be further developed as a component of national accounts. **Nutritional information and labelling** appear equally critical in particular in the eastern part of the Basin.

- **Raising the profile of administrations in charge**

95. Administrations in charge of the environment often lack institutional strength to enforce environmental policy integration. Legal and institutional mechanisms to ensure policy integration, including explicit deadlines and reporting mechanism (e.g. through coordination mechanisms at the highest level of government, and reports to Parliament) need to be implemented more widely.

- **Removing harmful incentives**

96. Mainstreaming environment into sectoral policies also requires phasing-out of unsustainable practices and removing barriers to change, including environmentally harmful subsidies. Priorities include **continuing to remove subsidies on non-renewable energies** (showing an upward trend at global level after a period of significant decrease), **and groundwater extraction**. **Adequately targeting direct consumption supports to poorest and most vulnerable groups** would help improve the efficiency of environmental measures, in particular in the water and energy sectors of critical importance in the Mediterranean.

- **Upgrading the ambition of specific regulations**

97. **Strengthening adoption**. While six out of seven Protocols of the Barcelona Convention are in force in 2019, three of them are only ratified by half or less than half of the Contracting Parties and still require particular attention to ensure full regional coverage. Those include the Integrated Coastal Zone Management Protocol (11 ratifications), Offshore Protocol (8 ratifications) and Hazardous Waste Protocol (7 ratifications).

98. **Preparing the designation of the Mediterranean Sea as an emission control area (ECA)**. Recent feasibility studies (2019)[98] examining the possibility of designating the Mediterranean Sea, or parts thereof, as sulphur oxides (SOx) emission control areas (ECAs) under MARPOL Annex VI, indicate that a Mediterranean ECA would result in significant health and

environmental benefits, fewer cases of respiratory and cardiovascular diseases and premature deaths avoided annually with health benefits much larger than expected costs. One of the studies also highlights the benefit of the reduction of NOx emission through a NOx ECA.

99. **Regulating emerging activities at sea and emerging contaminants**. Current practices in the use of substances of emerging concern, for which environmental and human health impact studies have not been sufficiently carried out, are not in phase with the precautionary principle and require further regulation. The study of the multitude of emerging contaminants, their interactions with the environment and human health and their treatment is extremely complex and costly. It has not been sufficiently carried out for a number of substances and does not currently keep the pace at which new substances are being created, researched and enter the market. To date, the European Chemicals Agency has registered more than 22,000 substances[99] under the REACH regulation, whereas, worldwide, more than 142 million exist[100]. Accordingly regulation has difficulty keeping pace with the emergence of new activities at sea, including in areas out of national jurisdictions.

100. **Integrating the mitigation hierarchy in regulations and program design**. Environmentally or socially harmful activities can be regulated in a way to respect the mitigation hierarchy, based on the three steps of avoidance, minimization and then offsets/compensation of impacts, thus leading to more positive environmental and/or social outcomes. While applying the mitigation hierarchy in marine environment is particularly challenging, recent research and pilots across the world provide encouraging results and ground for sharing good practices and strengthening regulations.

V.3. Translating national and international engagements into local action, adapted to the territorial context

101. **The gap between the ambition of international agreements and their implementation at the local level needs to be closed while taking into account local specificities**. Many sustainable development strategies and commitments are designed and adopted at the national or international level, but it is at the local scale that concrete action for conservation and management of natural resources for human wellbeing can be taken. This is particularly true for adaptation to environmental and climate change. Clear mechanisms to mainstream international commitments into local planning often lack effective tools that need to be catered to the differing stages of decentralization in Mediterranean countries. Coordination between local administrations and central and decentralized sectoral technical services, as appropriate, requires further capacity building and implementation support to become more fluid and effective.

102. **Managing local risks and sometimes scarce resources will be a particular challenge for local communities or governments**, as appropriate, in a context of climate change. The resilience and adaptive capacity of local communities vary largely around the Mediterranean basin. Local planning approaches can reflect these specificities by integrating locally held knowledge about specific local contexts.

103. **Territory-specific actions include the preservation or restauration of ecosystems providing key services, expected to become increasingly critical in a changing climate, such as wetlands, peri-urban forests and forested ecosystems, healthy agricultural soils, shallow sea shore habitats including meadows, and corraligenous**. Reducing fragmentation through corridors is another important territorial priority in both land use planning and investment in restoration. In addition, fire prevention and fighting, flood prevention, heat island effect prevention and management… are expected to be critical in a number of location, with local responsibilities.

104. **Mediterranean islands**. While the issues of sustainable management of resources, limitation of destruction of natural habitats, control of invasive alien species and mitigation and adaptation to climate change are not specific to islands, they are particularly exacerbated in these isolated territories where resources are scarce, space limited and technologies restricted. Nevertheless, islands should not be reduced to vulnerable territories, as they represent resilience laboratories for innovation for biodiversity conservation, sustainable development and transition objectives. The networking among these territories needs to be encouraged in the Mediterranean and beyond, and policies recognizing the singularity and value of these territories should continue to be implemented (in line with the efforts made under the Rio+20 declaration, the Aichi targets and working group on insular biodiversity, the resolution XII.14 of the Ramsar Convention and the ICZM Protocol).

105. **Promote innovative local-level systems and governance models, around emerging (or re-emerging) value chains**. **Collective organization and citizen-led innovations in sustainable agriculture, aquaculture, fisheries and eco-tourism sectors, creating jobs and diversifying the economy, should be further strengthened and supported**. The value chain approach promotes the participation of local producers which individually are "vulnerable", to group and act collectively to overcome market barriers and increase revenue. The value chain approach can also help identify opportunities towards a more circular economy. The attractiveness and preservation of rural territories is compromised by the urban migration of young professionals who lack skills, capital, access to credits and land to develop sustainable businesses in the agriculture, aquaculture, fisheries and eco-tourism sectors. Mechanisms to value local products, i.e. labelling, should be further implemented to value sustainable practices and protect consumer health. In regions where traditional rural activities – including pastoralism and other activities using forests or forested areas - still hold important economic contributions (in particular in SEMCs), sustainably managing them is critical.

V.4. Upgrading and diversifying the policy-mix

106. **Efficient environmental policies require adjusted policy mixes, as systemic issues can rarely be solved by regulatory measures alone**. Environmental challenges associated with multiple pressures and activities, including strong economic interests, can be tackled only by a conjunction of coordinated instruments through policy mixes, associating regulatory measures with: (i) Economic instruments, fiscal measures, extended producer responsibility in application of the polluter-pays principle, diverse funding mechanisms and partnerships; (ii) Awareness raising, education, labelling and voluntary agreements; and (iii) Instruments supporting environmentally friendly land tenure, land use and land use planning in areas under significant pressures.

107. Other than at the national and local level, policy mixes can be strengthened at the regional level, for example through the implementation of the seventh step of the EcAp roadmap that aims at developing action plans and programmes of measures for achieving GES in the Mediterranean.

- **Completing regulations and plans with appropriate funding mechanisms**

108. Many regional strategies, programs and plans for sustainability are conceived without adequate funding plans and mechanisms. Investments in infrastructure development, including water drinking water supply, sanitation, wastewater treatment, waste management, and more recently renewable energy have been key to progress on sustainability indicators, in particular in SEMCs. Continuous need for investments are expected in these areas as population continues to grow in SEMCs. However emerging challenges are also expected to require considerable public and private investment, with early action a condition to prevent major later costs. On other

environmental policies, including biodiversity conservation, while investment costs may be limited, regularly funding recurring costs is a condition of effectiveness.

109. **Climate change adaptation in agricultural, urban and coastal areas is expected to require major investment**. Anticipating adaptation, choosing no-regret solutions including nature-based solutions, and effectively involving the private sector (including banks and insurance) can minimize funding needs.

110. **Water demand management, improvements in water efficiency and non-conventional resources mobilization, including reuse, will require investments and pricing**. Losses and leakages in water supply systems, efficiency defects and waste in irrigation and domestic use are estimated at about 100 billion m^3 in the whole Mediterranean region, equivalent to approximately 45% of the total water demand for both sectors, a significant part of which being avoidable. Positive experiences in the region show that wastewater can be safely recycled for irrigation or aquifer recharge. Israel is a leader in SEMCs, with a reuse rate of over 85% on all wastewater collected. In Europe, Cyprus and Malta are the most advanced countries, with 90% and 60% of their treated wastewater being reused respectively, far exceeding European average (2.4%)[101]. To sustain necessary investments and foster demand prioritization, a pricing policy becomes increasingly relevant, in particular in agriculture.

111. **Marine Protected Areas critically lack permanent funding for operating costs**. The marine area covered by conservation measures (Marine Protected Areas and Other Effective Conservation Measures) reached 226,665 km^2 in January 2019, representing just over 9% of the Mediterranean Sea surface, close to the 2020 Aichi target of 10%. However, it is estimated that only about 10% of the sites declared have a proper implementation of their management plans, which is a major determinant for the effectiveness of protected areas. The setting up and implementation of such management plans requires adequate permanent financial and human capacity, which are generally lacking in the Mediterranean. For the management of protected coastal and marine areas in the Mediterranean, a private-public donor trust fund - the MedFund - has been created in 2019, as a sustainable financing mechanism. The MedFund has raised around one fourth of its 3-year financial endowment for supporting the management of 20 Mediterranean MPAs. The fund needs to be further endowed to cover its objectives and expand to additional MPAs in the Mediterranean. The development of innovative funding mechanisms, including public private partnerships is also key to sustained funding.

- **Transitioning towards a green, blue and circular economy**

112. Over the last decades, the Mediterranean has seen the emergence of an encouraging number of promising innovations either restoring the environment or offering alternatives to environmentally damaging solutions (e.g. through EU innovation funding programmes such as BlueMed and InterregMED). Innovative sectors include: sustainable and eco-tourism, waste reuse in a circular economy, toxic substance substitution, agroforestry, agroecology, sustainable fisheries, sustainable aquaculture and local agri-food systems, non-fossil sources of energy/renewables (including energy recovery from waste), etc. Efforts to scale-up these innovations remain critical for a significant impact on environmental quality and job creation. To move decisively towards a blue, green and circular economy, governments and enterprises in the Mediterranean region should build on: (i) on a **mix of regulatory and economic instruments**, with attention to proper prices, taxes and subsidies; (ii) **technological and social innovations development** and dissemination / scaling-up through capitalization and mainstreaming; (iii) **multiple financing sources** (in line with the 2015 Addis Abeba agreement): national and international, public and private, conventional and non-conventional, micro-credit…; (iv) **information, awareness raising**

and training programs including specialized university modules, and (v) **monitoring** factual progress with indicators and data.

113. Efficiently addressing the transition also requires a precise understanding of non-environmental issues and stakes, including economic and employment benefits and impacts, as well as operational, social, cultural and behavioral aspects, associated with sectors or issues addressed. This most likely requires working with the private sector and local communities representative of targeted sub-regions, and may require further developing **sectoral and behavioral knowledge** including in the MAP – Barcelona Convention system.

- **Protecting the coastal zone from urban sprawl and economic pressures**

114. As highlighted in the Draft Common Regional Framework for ICZM to be submitted at Barcelona Convention COP 21 in December 2019, protecting the coastal zone from cumulated pressures in both land and marine sides of the land-sea interface requires an integrated set of complementary and coordinated policy instruments. Besides a legal framework, critical instruments include monitoring and assessment, coordinated planning processes and governance mechanisms, dedicated funding mechanisms (e.g. economic or fiscal instruments), land policy instruments (e.g. land acquisition, concession, separation between ownership and right of use, land stewardship, etc.), training, communication and information, and efficient enforcement systems.

V.5. Developing permanent collaboration frameworks, bridging current divides

115. **Developing long-term interlinkages bridging stakeholder networks and governance fora.** Since Rio 1992 and 2015 Paris Agreement, stakeholder mobilization on sustainable development goals has bloomed, with the emergence of numerous stakeholder networks and governance fora. In the Mediterranean, networks often gather stakeholders of similar profile, and governance fora often focus on a specialized theme. Interrelations between different types of stakeholders and across governance fora are generally limited in time and dependent on externally funded projects. Few exceptions include the Egyptian Sustainable Development Forum at national level, *Parlement de la Mer* in the French Region of Occitanie at the local level, and - at the regional level - the Mediterranean Commission for Sustainable Development, which has recommended to create a Mediterranean Forum on Sustainable Development. Efforts are required to develop long-term or permanent interlinkages.

116. **Investing in policy platforms** can help understand and share experience on suitable combinations of policy instruments. Policy platforms can also provide a context in which synergies and trade-offs between measures can be best dealt with and improve policy learning between countries. On issues specifically associated with economic sectors, countries should build **active alliances of governments, enterprises and opinion leaders** to implement international agreements and related commitments at global level (e.g. Climate Convention, Biodiversity Convention, Law of the Sea), Mediterranean level (e.g. Barcelona Convention, MSSD) and among neighbouring countries.

117. The sustainability of the cooperation mechanism should be a key concern from the design stage. As most cooperation mechanisms are currently dependant on project funding, innovation may be required to conceive **light, agile and mutually beneficial institutional set ups**. This would in particular apply to necessary long-term science policy interfaces.

V.6. Anticipating the transformation of coastal and marine areas, activities and landscapes

118. **Clean-up and curative measures will not be sufficient**. Measures that prevent degradation from happening are generally less costly and lead to better environmental and social outcomes.

Preventive action to counter environmental degradation can only be sufficiently achieved through transformative change in resource use patterns.

119. **With an expected increase in sea level rise, coastal erosion and coastal extreme events**, **adaptive strategies will be required** for organising where needed strategic retreat, and ensure when appropriate a sustainable transition in economic activities and human settlements. These transformations are projected to become game-changers and need to be mainstreamed into new and existing policies.

120. **The "maritimization" of human activities is an emerging trend adding on to the impact on a continued "littoralization". This phenomenon requires extending the approach and practices of integrated coastal zone management towards more offshore waters through maritime spatial planning**. Human activities are increasingly moving towards the sea, with both a continued growth of existing maritime activities and the emergence of new activities rendered possible by technological development at sea. The coastal zone, already subject to a continued pressure from land-based activities and urban development, and saturated by build-up areas in some parts, is an unavoidable base for these new maritime activities, expected to generate additional pressures on fragile ecosystems, in particular in shallow coastal areas. Avoiding, reducing or compensating these impacts is expected to be a major challenge for the upcoming decades.

121. **Monitoring and regulating marine bio-technology industries and underwater extraction of minerals**. Marine bio-technology industries and underwater extraction of minerals including in the deep-sea are still very little developed in Mediterranean countries. However due to the uncertainty of their impacts on ecosystems and the potential environmental damages, these activities need to be further studied and their expansion will require adjustment and expansion of current monitoring systems and regulations.

VI. Knowledge for action

122. **The capacity to generate knowledge has tremendously increased and new cost-effective sources of information have emerged**. Big and open data, widespread use of remote sensing and GIS, aerial and underwater drones, etc. have considerably increased the capacity to generate and process new data. Internet access and open-source software have allowed citizen science projects to emerge as a virtual and physical place where citizens, researchers and decision makers can cooperate to monitor the state of the environment in the Mediterranean, especially in relation to conservation biology or ecology (e.g. COMBER[102], CIGESMED[103]). The information thereby collected can provide a strong basis for short- and long-term planning and decision-making in the region, while educating the public and enhancing public participation.

123. **Concomitantly, Mediterranean countries have adopted common monitoring and assessment frameworks to improve information-based decision-making**:

- **An Integrated Monitoring and Assessment Programme (IMAP)** is being developed with support from the MAP system, to assess progress towards the Good Ecological Status. IMAP is based on eleven Ecological Objectives (EO), corresponding twenty-eight operational objectives and their related 27 agreed common indicators covering three clusters (i) pollution and marine litter, (ii) biodiversity and non-indigenous species and (iii) coast and hydrography. The initial implementation phase of the IMAP (2016-2019) resulted in the development of the first 2017 Mediterranean Quality Status Report.

- **A shared environmental information system with EU countries**. Mediterranean countries collaborate to improve data availability and access to environmental information. The EU-

supported Shared Environmental Information System (SEIS) for the reduction of marine pollution fosters the regular production and sharing of quality assessed environmental data, indicators and information in Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, and Tunisia. This complements information available in EU countries.

- **Sustainable development indicators**. Under the 2030 Agenda, countries have committed to a global indicator framework[104] with 232 indicators to monitor 17 SDGs and 169 targets. At the Mediterranean level, support is provided by the MAP through the MSSD sustainability dashboard, largely based on SDGs. SDGs have renewed attention on interactions (synergies and trade-offs) among components of sustainable development. In particular, **awareness and reporting on the link between environmental conditions and human health has improved**. Since 2012, the World Health Organisation reports on the "environmental burden of disease" globally and at national level.

124. However, given the diffuse nature of information sources and data collection processes, the two promising trends above described risk remaining largely disjoint, significantly reducing their relevance for policy making. Decisive action is required to ensure that the new capacity to generate knowledge directly benefits common agreed monitoring frameworks at regional and/or national levels (including through their expansion to new indicators), and sustainable observation processes and institutions. Such principles could be stated as conditions in programs funding data collection or processing (with evident exceptions for fundamental/theoretical research).

VI.1. Putting existing knowledge to use

125. Critical knowledge is generated in knowledge hubs, universities, local assessments or research programs, or is held by local communities and practitioners, but insufficiently or ineffectively transmitted to public and private decision makers. Despite the development of various instruments for scientific cooperation (in research and innovation), with a strong support from the European Union, significant disparities remain in the level of monitoring and innovation support between NMCs and SEMCs. When science-policy-practice collaboration and information sharing exist, they are often project dependant and thus short-lived with important entry costs and limited capitalisation across time. Recent initiatives such as the MedECC scientific network on climate change pave the way towards further consolidated and "user-ready" knowledge resources. Efforts could also be further streamlined through efficient data and output sharing platforms.

VI.2. Implementing, sustaining and expanding common monitoring frameworks

126. **Building on existing common frameworks is a condition to efficiently follow-up on recent efforts**. In the context of the Barcelona Convention priorities include:

- **Implementing national monitoring programmes in alignment with IMAP, to fill priority knowledge gaps identified in the 2017 MED QSR**. 2017 MED QSR identified a vast array of knowledge gaps to implement IMAP and develop 2023 MED QSR. On coastal and marine biodiversity, for example, data on marine habitats are still scare, fragmented and discounted in time and would gain from a complete mapping of the most significant marine habitats.
- **Establishing data exchange protocols,**
- **Covering issues of emerging concern**. Mineral extraction and other emerging activities at sea, as well as the proliferation of pollutants of emerging concern are currently not adequately monitored;
- **Expanding monitoring to also cover drivers, pressures, impacts and responses**, to provide integrated information for the effective design of measures to achieve the GES.

VI.3. Documenting and communicating the stakes of environmental degradation and inequalities

127. As previously underlined further integrating sustainable development in public, private and citizen decisions requires documenting and communicating the stakes associated with degradations or increasing inequalities on environmental, social and economic components, in particular **stakes associated with other SDGs including health, food security and poverty reduction through employment**. On environmental aspects in particular, this would involve evaluating key ecosystem services and socio-economic impacts in relation to (i) potential threats like sea level rise, coastal erosion and extreme events and (ii) environmental targets such as ecosystem preservation, restauration or creation at regional level.

VI.4. Learning from experience, for more effective policies

128. Multiple technical, social and governance innovations have been developed in the last decade and many more are on-going, with a multitude of actors involved, and often short-lived funding widows. **Well-structured capitalization efforts are required to ensure that future policy development and private action benefit from lessons learned and tools piloted**. Rather than an after-thought, capitalization should be built in project and programme processes. Practionners and experts should be involved in identifying key conditions and instruments needed for replicating and scaling-up promising innovations as a condition for funding.

129. **Closing the policy cycle by conducting *ex-post* evaluation is key for coherent, transparent and effective policies**. Evidence from *ex-post* appraisal informed via mutualized evaluation processes, can largely contribute to better informed and more effective policies, more interdisciplinary approach and accountability, and potentially reduce the regulatory burden. Rather than general processes and statistics alone, ex-post evaluation should consider some practical applications on the ground, and discuss with practitioners to identify lessons learned, adaptations implemented during the project life-time, and recurrent bottlenecks including behavioral aspects.

130. **The Barcelona Convention provides for a comprehensive policy evaluation mechanism for measures taken by Contracting Parties in application of the Convention; but it is only partially implemented and does not currently allow to draw conclusions on the effectiveness of the Contracting Parties' actions**. By virtue of Article 26 of the Barcelona Convention, Contracting Parties commit to report *ex-post* on the measures taken for the implementation of the Convention, its Protocols and of the recommendations from the Conference of Parties as well as on the effectiveness of these measures. Article 27 further stipulates that, on the basis of these elements, the Conference of Parties shall evaluate compliance with the Barcelona Convention and its Protocols and recommend potential corrective measures. This policy evaluation mechanism is crucial for the effective implementation of the Convention and its tools and requires further support for Contracting Parties for full application of the provisions of the Convention.

131. **Data gaps are likely to remain a reality in the future and should not prevent decision-makers from taking action**. In application of the precautionary principle stipulated in the Barcelona Convention, stakeholders are invited to take evidence-based action embracing the different available data sources, without delaying the implementation of critical measures when data is incomplete.

Conclusion

132. The sections above have shown that the overarching objective of the Barcelona Convention, "the preservation and sustainable development of a common heritage, in the interest of present and future generations" cannot be reached by pursuing current trajectories and requires

transformative change. A systemic modification of behavior calls for an inclusive approach with the active participation of all stakeholders in the different steps of the policy cycle. Urgent action is needed to integrate the environmental, economic and social spheres on realistic yet desirable transition pathways.

Annex II

2019 Report on the State of the Environment and Development in the Mediterranean (SoED 2019)

Draft Summary for Decision Makers

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Annex II: 2019 Report on the State of the Environment and Development in the Mediterranean (SoED 2019). Draft Summary for Decision Makers

Introduction

1. Driven by population growth, unsustainable production and consumption patterns and associated technological development, as well as a persisting coupling of economic growth with resource consumption and carbon emissions, the Mediterranean region is subject to increasing human-induced pressures that have led to a degradation of the environment throughout the last decades. Further land and sea-use change, exploitation of resources and organisms, pollution and climate change are projected to exacerbate already existing systemic and combined fragilities in the Mediterranean, leading to "multiple stresses and systemic failures" (IPCC, 2014), putting health and livelihood at risk.

2. Progress in policy responses and actions to manage the Mediterranean more sustainably has been achieved, leading to positive results compared to scenarios of no intervention. These results have however not been sufficient to reduce the most significant pressures on the environment and to allow for safeguarding the Mediterranean for present and future generations while answering human development needs. Current trends do not allow for achieving Good Environmental Status (GES) of the Mediterranean Sea by 2020. In line with worldwide trends, "global goals for 2030 and beyond may only be achieved through transformative changes across economic, social, political and technological factors" (IPBES, 2019).

3. The Mediterranean environment can be safeguarded while simultaneously fostering human development, taking into account differences between Mediterranean countries, through urgent and collective efforts for transformative change. A fundamental reorganization of economic and social systems, including changes in paradigms and values, is required to follow the engagement of countries to achieve GES of the Mediterranean Sea and coast and more largely to achieve SDGs under the 2030 Agenda in the region.

I. Socio-economic, political and institutional drivers and trends

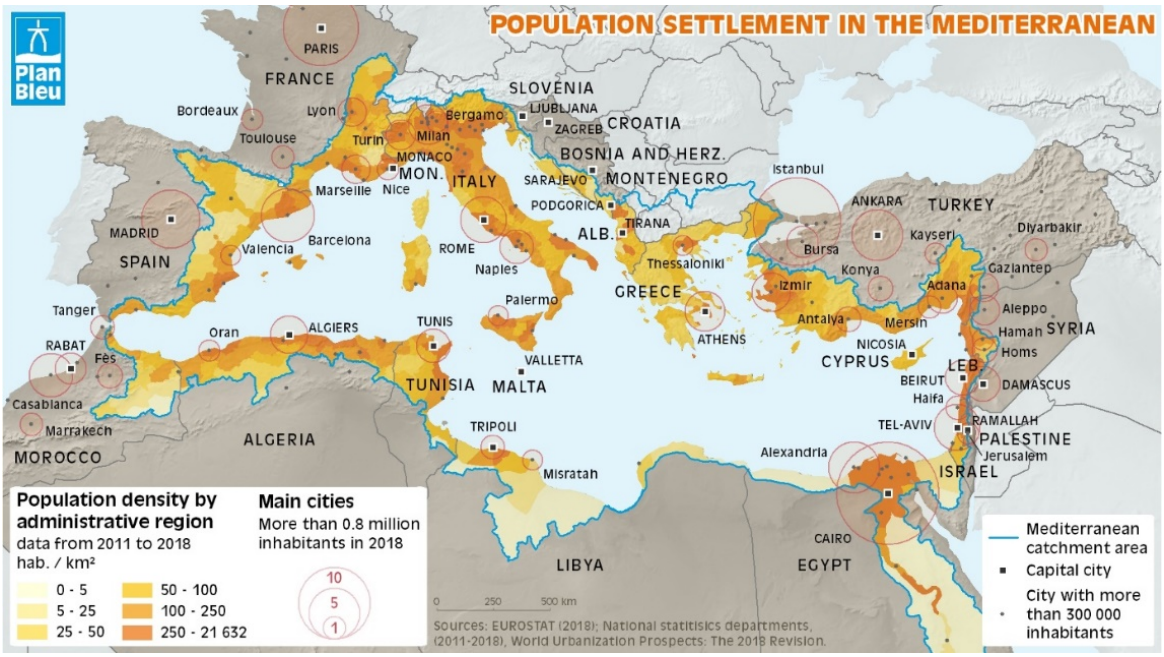


Figure 1: Population density by administrative region and main cities in the Mediterranean catchment area (Source: EUROSTAT, 2018; National statistics departments, 2011-2018, World Urbanization Prospects: The 2018 Revision)

4. Despite their differences, Mediterranean countries remain strongly connected. Countries along the Mediterranean Sea share a common heritage, analogies in lifestyle and values, exposure to climate and environmental risks and impacts; however, contrasts are also important. Throughout the last decade, the gap between Northern Mediterranean countries (NMCs) and Southern and Eastern Mediterranean countries (SEMCs) in human development, demographic dynamics, access to natural resources and environmental protection has persisted. These differences lead to large inequalities in resilience and adaptive capacity to deal with current and projected environmental and climate changes. While facing contrasted situations, countries in the region remain connected through intense flows of people (migration and tourism), goods and energy products (especially via maritime transport), financial resources (foreign investment), information and social interaction (increase in mobile phone subscriptions and number of people using the Internet and social media), as well as via environmental flows (riverine flows and marine currents).

5. The population of the Mediterranean countries is driving environmental change. Its total number increased from approximately 475 million inhabitants in 2010 to 510 million inhabitants in 2017, representing 6.8% of the world population. Almost one third of the Mediterranean population lives in the coastal area and more than 70% in cities. Migration from rural to urban areas continues. The regional demographic context is very diverse in the northern and southern shores. NMCs are characterized by a low fertility rate, an ageing population, and a relatively low share of active population. SEMCs are in a phase of demographic transition, with a relatively higher population growth, an overall younger population, and subsequently, a higher share of active population.

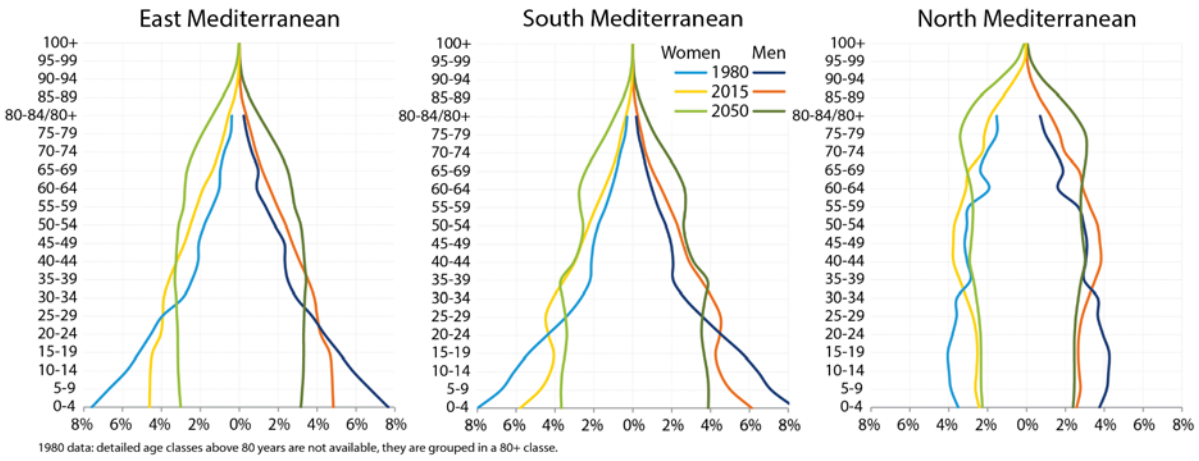


Figure 2: Age distribution of population in the East Mediterranean, South Mediterranean and North Mediterranean, 1980, 2015 and projection of 2050 (Source: World Population Prospects, 2017)

6. The region has always been a crossroads for migration of people and communities. Migration only within non-EU Mediterranean countries involved about 7.5 million people, while migration from non-EU to EU Mediterranean countries involved about 5.7 million people. The number of refugees originating from Mediterranean countries is particularly high, coming mainly from the State of Palestine and Syrian Arab Republic. The number of refugees hosted in Mediterranean countries is also high, both in terms of absolute number and proportion of refugees to the host country population, in particular in Lebanon, Malta and Turkey. Among the most significant root causes for migration figure war, lack of economic prospects, and climate and environmental changes.

7. In the last decade, geopolitics in the Mediterranean region have been shaken by tension and instabilities. Political stability and well-established democratic systems generally characterize NMCs, although the recent financial and economic recession, started in 2008, led to public discontent and the raise of populist claims has turned the threat of a fragmented EU into a plausible future scenario. Several countries among SEMCs witnessed social and political transformations, with both the rise of democratic aspirations of large parts of the population and the upsurge of extremism, leading to a series of turmoil and upheavals. In Libya and Syrian Arab Republic, civil uprisings unfolded into ongoing international armed conflicts.

8. In spite of these demographic and geopolitical difficulties, human development has experienced a general upward trend throughout the last decade. Gaps between the northern and the southern and eastern shores have reduced but persist. Basic education in SEMCs in particular has considerably improved throughout the last decade. Girls' education has reached levels equivalent to boys in primary and secondary education, although the share of women in the active population is still low for most of the region. Youth unemployment is also a major issue in most parts of the basin, with rates of up to three times the national unemployment level.

9. GDP growth rates in SEMCs are slightly higher than those of the EU Mediterranean countries, but do not currently allow for a rapid catch-up. In the last twenty years, the share of agricultural and industrial value added in national GDP has decreased in the majority of Mediterranean countries to the benefit of services, which generally account for close to or above half of national GDP. Mediterranean economies continue to rely on unsustainable material consumption and carbon emissions to produce value-added, even if improvements have been achieved in many Mediterranean countries.

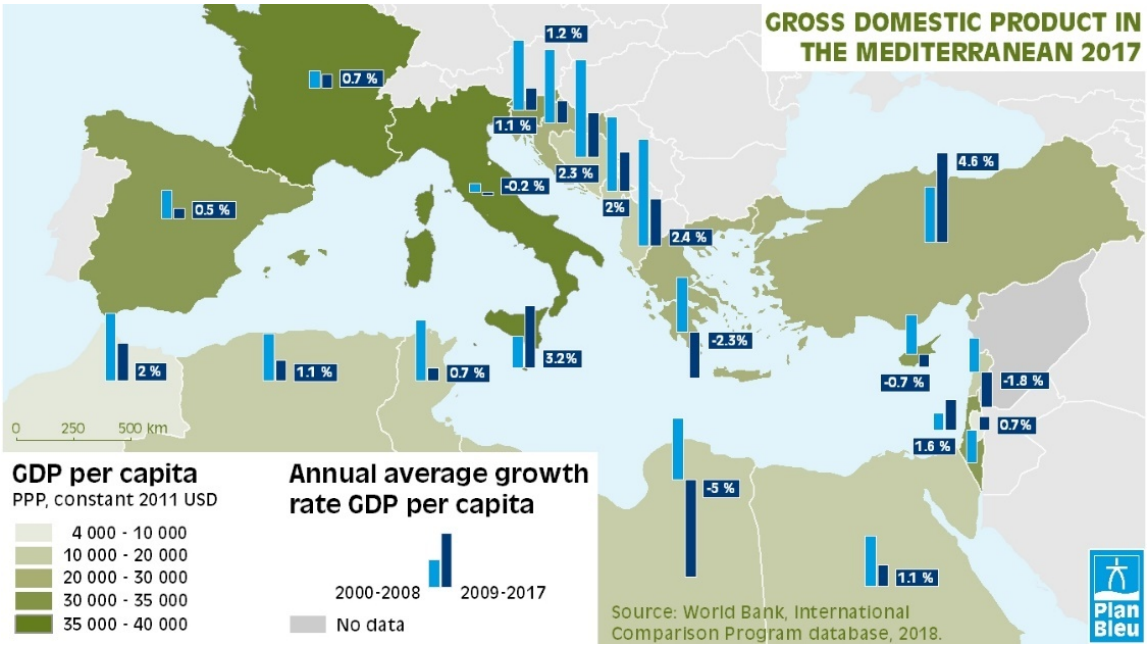


Figure 3: Gross Domestic Product in Mediterranean countries, 2017 (Source: World Bank, International Comparison Program database, 2018)

10. The regional economic context is generally characterized by a high economic dependence on imports, particularly of fossil fuels and cereals. In SEMCs in particular, the general trade deficit, coupled with non-diversified economic structures and a budget deficit, reflect and reinforce the difficulty of national economies to enhance their resilience to internal and external conditions and

shocks. In parallel, over the last decade, government debt, as a percentage of national GDP, has increased in most countries and reaches close to or above 100% of national GDP in one third of Mediterranean countries. High and increasing debt ratios can be a risk for the financial sustainability and may hinder required public investments in the environment sector.

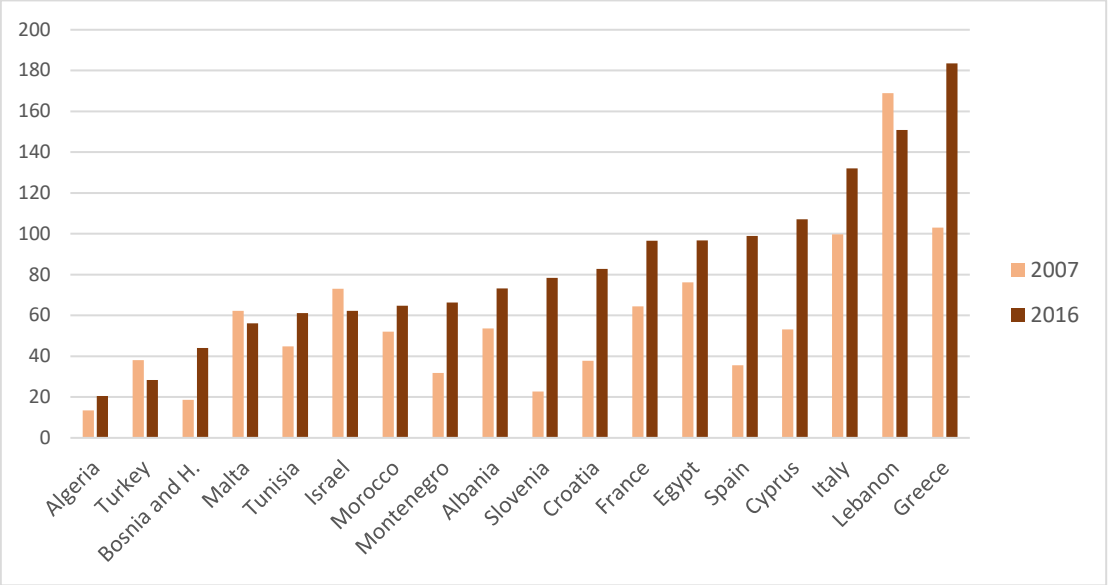


Figure 4: General Government Gross Debt, % of GDP, 2007 and 2016 (Source: IMF World Economic Outlook)

11. Throughout the last decade, cooperation frameworks and integration schemes in Euro-Mediterranean relations have not achieved shared prosperity. Political integration relied on thematic ministerial conferences and parliamentary meetings, and cooperation on security issues. Economic integration progressed with tariff dismantling under free trade agreements, in particular between the EU and accession candidates. However, economic trade within the region is limited.

II. Climate change

12. The Mediterranean basin is already experiencing climate change, at rates that exceed global averages. The IPCC AR5 considers the Mediterranean Region is “highly vulnerable to climate change” due to the influence of multiple stressors and projected associated “systemic failures” through the exacerbation of already existing fragilities, including a high coastal urbanization and a limited adaptive capacity of coastal countries, especially in SEMCs.

13. The air temperature in the Mediterranean basin has already warmed by + 1.6 °C above pre-industrial values, well above global average, and future projections indicate a warming of around + 2.2 °C when the global average will pass the + 1.5 °C threshold. Warming will be more evident during summer months, and heat waves are expected to occur more frequently than in the past, especially in the East, with further amplification in cities due to the “urban heat island” effect. The frequency and intensity of both droughts and heavy precipitation events has already increased since 1950 and is expected to continue to grow. A 2 °C global warming will likely be accompanied by a reduction in summer precipitation of about 10 to 15% in some areas, while an increase of 2 to 4 °C would imply a reduction of precipitations of up to 30% in southern Europe, especially in spring and summer. Heavy rainfall events are likely to intensify by 10 to 20% in all seasons except summer. The Mediterranean water temperature is also expected to rise between + 1.8 °C and + 3.5 °C by 2100, with

hot spots expected in the east of Spain and in the eastern Mediterranean Sea. In addition, sea level is expected to rise at about 3 cm per decade, a sharp increase compared to the period 1945 to 2000 (0.7 mm per year) and similar to global sea level increase. Finally, the Mediterranean Sea is subject to ocean acidification[105] at rates in line with global averages.

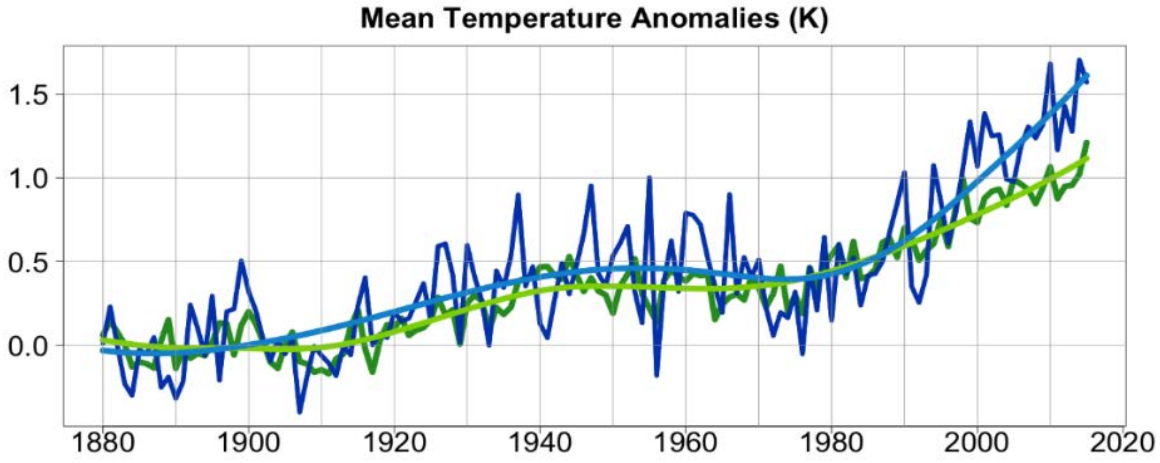


Figure 5: Historic warming of the atmosphere, globally and in the Mediterranean Basin. Annual mean air temperature anomalies are shown with respect to the period 1880-1899, with the Mediterranean Basin (blue) and the globe (green) presented with and without smoothing. Data from Berkeley Earth available at http://berkeleyearth.org/ (Source: Cramer et al, 2018).

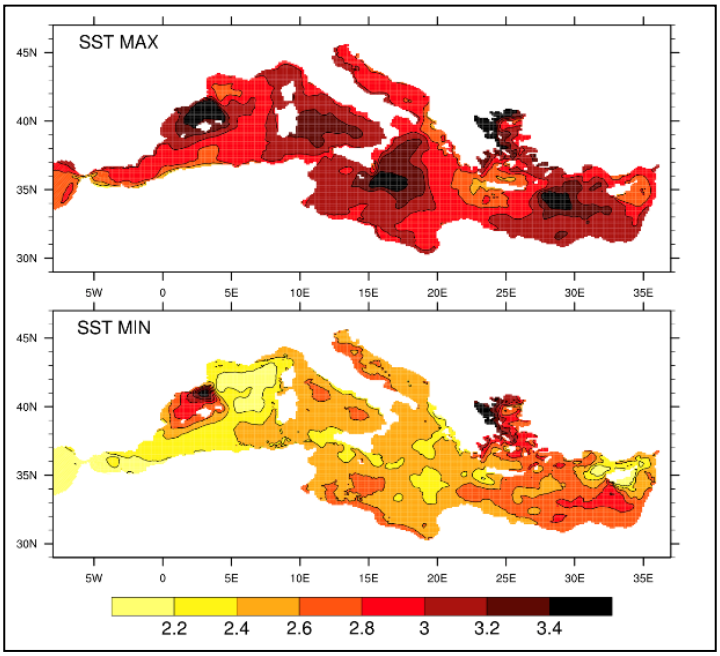


Figure 6: Sea surface temperature anomalies maxima (top) and minima (bottom) for the 2070–2099 period (vs. 1961–1990), in °C (Source: Adloff et al. 2015).

14. Climate change is expected to have significant impacts on the terrestrial, coastal and marine environment of the Mediterranean region. These include an expected increase in aridity, due to reduced precipitation and warming; an increased risk of more frequent and severe fires with projected increases of burnt area between 40% and 100%; and, negative impacts on the wildlife of inland

wetlands and freshwater ecosystems by falling water levels and reduced water quality. The expected decrease in ecosystem integrity, biodiversity, and carbon storage capacity will lead to soil erosion, soil fertility loss, and desertification. Overall crop productivity is expected to fall by over 20% in 2080 in Mediterranean countries, with peaks of an almost 40% decrease in Algeria and Morocco, threatening the already challenging food security of a population that is expected to grow.

15. The particularly high density of coastal population and infrastructure on the shoreline, linked to a limited tidal range, make the Mediterranean coast particularly vulnerable to changes in climate and sea level. Extreme rainfall and droughts, combined with sea-level rise, will contribute to higher risks of coastal flooding and erosion, with increasing damage to key infrastructure and highly populated and growing cities, which are primarily located in the coastal area. In particular, the effects of sea level rise are expected to be high for most low-lying coasts of the Mediterranean basin. These risks may be even higher along the southern and eastern shores, where monitoring systems are limited and the adaptive capacity is generally lower than in the north. Coastal erosion and flooding will generate loss of coastal land where important cultural heritage sites are located with 85% of the 49 low-lying World Cultural Heritage sites being at risk of flooding and 75% at risk of coastal erosion, already today.

16. Sea warming and ocean acidification are expected to have negative impacts on marine biodiversity and dependent human activities, while wave and storm surge activity will likely decrease in a warmer future. Increased water temperatures will: lead to a rise in mass mortality events of sensitive species (especially coralligenous, sponges, and mollusks), favor warm-water affinity species including non-indigenous at the expense of cold-water affinity ones, and cause increased hypoxia or anoxia in large coastal areas. Ocean acidification will impact organisms producing carbonate shells and skeletons, such as calcifying plankton organisms, and other pelagic and benthic organisms with calcareous body parts, such as corals, mussels, and sponges, affecting tourism and aquaculture.

17. Mediterranean countries are designing national frameworks to mitigate and adapt to climate change. These efforts need to be urgently implemented, effectively enforced and their ambition strengthened in a multi-stakeholder context.

III. Biodiversity and ecosystem services

18. The Mediterranean is a semi-enclosed sea with multiple types of coastline including deltas, coastal plains, high cliffs, and mountainous areas, providing various natural and anthropogenic landscapes, and multiple types of sea-bottoms hosting diverse ecosystems and habitats. It counts more than 17,000 marine species (4 to 18% of the world’s known marine species), while only representing around 1% of global ocean volume. The Mediterranean also holds the highest rate of endemism at global level (20 to 30% of species are endemic). It is considered as a biodiversity hotspot.

19. Mediterranean coastal ecosystems include wetlands, coastal aquifers, forests, agricultural land and soft and rocky shores. Mediterranean wetlands are characterized by a rich endemism, and host tens of millions of migratory, wintering, and breeding water birds. Wetlands provide several ecosystem services, including the capacity to mitigate impacts of floods, freshwater provision, carbon capture and recreational services. However, wetlands experience habitat loss (- 48% since 1970), due to pressures such as conversion of wetlands to agricultural and urban areas, water pollution, alteration of the hydrological functioning, overfishing, coastline retreat, and sea level rise. A total of 397 Mediterranean Wetlands of National Importance has been designated (of which 113 sites are mainly coastal and marine), in the framework of the Ramsar Convention, 44% of which have developed a management plan.

20. Coastal aquifers are an essential source of water supply in the Mediterranean catchment but are limited and unevenly distributed. They support many ecosystems, and provide essential ecosystem services, including water purification and storage, biodegradation of contaminants, nutrient recycling, and mitigation of floods and droughts. Current pressures on water resources are derived from increasing water demand linked to population dynamics, economic and social development, technological trends, and the increment of climate change. These pressures often lead to groundwater pollution, level depletion and seawater intrusion, which causes the salinization of soil and underground resources. It is therefore essential to manage groundwater using the Integrated Water Resources Management (IWRM) approach, in combination with Integrated Coastal Zone Management (ICZM).

21. Forests are steadily increasing in Mediterranean countries, from 68 million ha in 1990 to 82 million ha in 2015. They are particularly important because they represent both a regional identity, a source of economic wealth, and a key element to sustainably manage watersheds in a region prone to erosion issues. They provide important goods and services, such as timber and non-timber products, primary production, nutrients recycling, air quality, climate and hydrology regulation, soil protection from erosion, and cultural and recreational services. These ecosystem services are particularly important in proximity of urban areas, which is also where they experience the highest pressures. In NMCs, forest fires are larger today than half a century ago due to increased fire risk from biomass accumulation linked to land abandonment; while, in SEMCs considerable degradation exists due to intensive fuelwood extraction and grazing. Climate change and linked increased and prolonged drought and fire risk are further challenging forest dynamics. Recognizing the importance to protect forests, eight Mediterranean countries (Algeria, France, Israel, Lebanon, Morocco, Spain, Tunisia, and Turkey), in addition to Iran and Portugal, endorsed the Agadir Commitment that compel them to restore at least eight million hectares of degraded forest ecosystems by 2030.

22. Major Mediterranean agroecosystems are based on irrigated crop farming (large-scale and small-scale, traditional and commercial), pastoral/livestock and rainfed agricultural exploitations. They occur in two distinguished zones, namely fertile areas with large scale irrigated and rainfed systems and marginal zones in mountainous areas or semi-arid non-irrigated fields where agriculture interferes with pastoralism. Supporting dry and hot summer months, typical crops include: olive trees, grapes, citrus, nuts, fresh vegetables, leguminous and wheat. Traditional systems associate the culture of cereals or legumes with trees (olive/almond trees, etc.) and are thought to provide productivity, resource efficiency and resilience. However, their role in agricultural production and other ecosystem services, such as carbon sequestration, biodiversity and soil conservation, water regulation, pollination and cultural services is challenged by modernization and intensification. Small-scale family farming systems contribute significantly to ensuring food supply to rural households, providing products which are adapted to local needs and purchasing powers, thereby supporting food security in the Mediterranean region.

23. Mediterranean coastal environments (soft sediment coasts, muddy environments, rocky and soft shores and cliffs) provide important ecosystem services, such as shoreline stabilization and buffering, coastal defense, groundwater storage, and water purification. They suffer from accelerated erosion rates and substratum loss of rocky shores due to urbanization and coastal infrastructure expansion, sea level rise, and reduced river sediment inputs. About 1,238 coastal terrestrial species are identified by IUCN as threatened with extinction. Major drivers of species extinction include tourism and recreational activities, urbanization, agriculture, livestock, and invasive species.

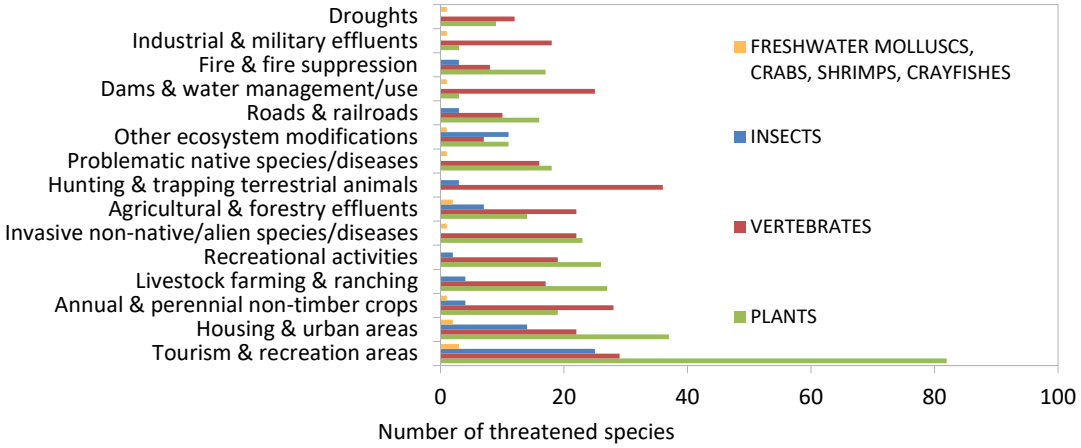


Figure 7: Main threats affecting coastal species in risk of extinction (IUCN Red List Categories CR, EN and VU) in the Mediterranean region (Source: IUCN)

24. Seagrass meadows, coralligenous and dark ecosystems are the most representative marine ecosystems particular to the Mediterranean Sea. Seagrass meadows, especially the endemic species *Posidonia oceanica*, show signs of regression due to both natural and anthropogenic pressures. Coralligenous ecosystems cover about 2,760 km^2; they contribute to carbon sequestration and storage, and generate a remarkable natural productivity that contributes to the maintenance and development of fisheries resources, while being also attractive for tourists and scuba divers. Destructive fishing gears, boat anchoring, invasive species, pollution, and climate change are the main threats to coralligenous habitats and the species they host, with reported cases of mass mortality events and slower growing rates. Dark habitats, in which aphotic ecosystems rely, are among the most fragile and unknown components of the Mediterranean marine biodiversity. They support commercial fishing resources and have an important role in biogeochemical cycles sustaining the balance of the marine trophic chain. They are threatened by land-based nutrients, waste discharge (including litter) and oil and gas activities. There is a growing awareness of the need to preserve dark habitats; in 2005, the FAO-General Fisheries Commission for the Mediterranean (GFCM) adopted a ban on the use of towed fishing gears in depths beyond 1,000 m. Current knowledge on these particular ecosystems still needs to be improved, promoting capacity building for habitat mapping and information sharing among coastal countries. At least 78 marine species assessed by IUCN are threatened with extinction, especially cartilaginous fish, marine mammals, reptiles and corals, due to interaction with fisheries, overfishing and other anthropogenic pressures. From 1950-2011, the Mediterranean has lost 41% of top predators including marine mammals. Projections show that more than 30 endemic species would become extinct by the end of the century.

25. Finally, non-indigenous and invasive species are increasingly present in the Mediterranean region. By 2017, more than 1,000 non-indigenous marine species have been recorded in the Mediterranean Sea, with 618 species considered established. The main vectors for introductions are corridors (in particular the Suez Canal) and maritime transport (through ballast water and hull fouling). Non-indigenous and invasive species may have negative impacts on marine ecosystems and dependent economies and societies.

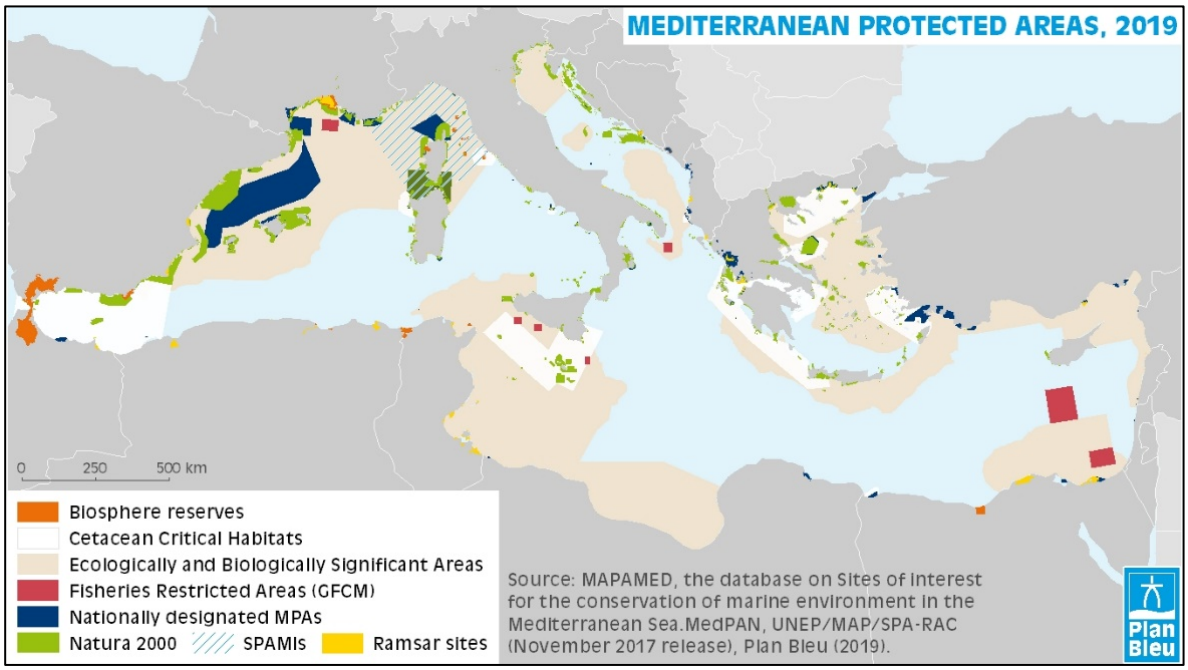


Figure 8: Mediterranean protected areas, 2017 (Source: MAPAMED, 2017, Plan Bleu 2019)

26. The building of a coherent, representative, and well managed network of Marine Protected Areas (MPAs) is a priority in the Mediterranean region. To date, about 1,200 MPAs and other effective area-based conservation measures cover over 8.9% of the Mediterranean Sea, close to the global Aichi 11 and SDG 14 Target of 10% coverage. However, only about 10% of these sites properly implement management plans, due to the lack of financial resources and skilled staff, as well as legal and policy gaps.

IV. Economic activities and their pressures

27. Production and consumption patterns in the Mediterranean region have been undergoing profound changes throughout the last decades, which have led, in combination with demographic growth, urbanization, and a raise of living standard, to increasing resource consumption and environmental degradation. The increase in the demand of processed, refined food, manufactured goods and in coastal tourism couple with food loss and waste packaging overuse and the associated losses of scarce resources such as water, land and energy. This adds to inefficient industrial processes and unsustainable waste management, putting further pressure on natural resources on which Mediterranean economies depend.

28. Agriculture always played an important role in the socio-economic development and is anchored in the Mediterranean identity. However, its importance has been gradually declining in the last decades, both in terms of its share in GDP generated, as well as in the number of farms and employed people. In the northern shore, this is mainly due to agricultural modernization and the consequent raise in labor productivity. Agricultural modernization and massive rural exodus released land and surplus labor; this structural transition has not yet fully taken place in the southern countries. Quantities of fertilizers and pesticides used for agriculture in Mediterranean countries are above the global average, with on average 6.7 kg of pesticides per hectare against a global average of 2.1 kg; and 176 kg (NMCs) and 185 kg (SEMCs) of fertilizers per hectare compared to a global average of

138 kg in 2015. The main environmental impacts of the agricultural sector include the run-off of nutrients and agrochemicals to the sea, which leads to algal and phytoplankton blooms, eutrophication, and bioaccumulation of chemical pollutants, as well as high resource consumption (water, soil, energy).

29. Fisheries play an important socio-economic role across the Mediterranean region, in terms of food production (landings representing 850,000 tons in 2016), revenue (approx. 2.44 billion USD annually[106]) and employment (>227,000 direct jobs onboard fishing vessels, plus indirect job opportunities for fish processing). Turkey and Italy have the highest fishing capacity and production levels across the region. Capture fisheries are dominated by small pelagic fishes (mainly sardine and European anchovy). Polyvalent vessels represent 77.8% of the Mediterranean fishing fleet, indicating a predominance of small-scale, diversified fishing, providing significant employment. Trawlers are also common (8.6% of fleet), especially in the western basin and Adriatic, and represent the highest revenue. However, fisheries are highly threatened by overfishing, pollution, habitat degradation, invasive species and climate change. 78% of Mediterranean and Black Sea stocks (for which validated assessments are available) are fished at biological unsustainable levels, based on Ecological Objective indicators related to biomass, fishing mortality and total landings. The overexploitation index of most species identified as “priority species” have been decreasing since 2012 (except for sardine and European anchovy), nevertheless considering current mortality regimes, regional fisheries tend toward collapsing, leaving no fish for future generations. Discards represent a window for improvement in the fishing sector as 18% of total catches are currently discarded. Aquaculture creates additional pressures on fish stocks due to the use of wild fish for feed and the transfer of non-indigenous species.

30. The Mediterranean holds 4.6% of global natural gas reserves and 4.2% of global oil reserves; they are located almost entirely off the coast of Algeria, Libya, and Egypt. However, there are other production areas off the coast of Italy, Greece and Turkey and recent discoveries of major gas reserves in the Levantine basin and many areas holding hydrocarbon potential have not yet been explored. The main pressures posed by offshore exploration and drilling are resource depletion, underwater noise, and accidental discharges of oil and other substances. Underwater noise induces physical damage and behavioral changes in marine mammals. At the same time, oil spills lead to the reduction of plankton, and the physical damage and population decline of fish stocks, marine mammals, and birds. Finally, the spillage of other chemical substances exacerbates the impacts of pollution, such as bioaccumulation and biomagnification of marine organisms.

31. Thanks to its unique combination of mild climate, rich history and cultural heritage, exceptional natural resources and proximity to major source markets, the Mediterranean region is the world’s leading tourism destination, receiving about one third of the world’s international tourists. The Mediterranean basin is also the world’s second largest destination for cruise ships. Tourism contributes directly to about 11% of the total economic wealth and jobs in the region. It is extensively developed in NMCs and has witnessed a significant growth in SEMCs over the last twenty years, despite a slowdown of international arrivals in the South from 2011 onwards, showing the sector’s volatility and poor resilience to shocks. In parallel, there has been a significant and rapid increase in cruise ship movements over the last decade; the number of single cruise passengers in 2017 (24 million) was more than double compared to 2006. The economic growth of tourism activities has often been to the detriment of environmental integrity and social equity. Mass tourism with a high seasonality is a major consumer of natural resources, especially water, food and energy, and pollutes marine and freshwater environments. Tourism-related coastal man-made infrastructures may alter and damage landscapes.

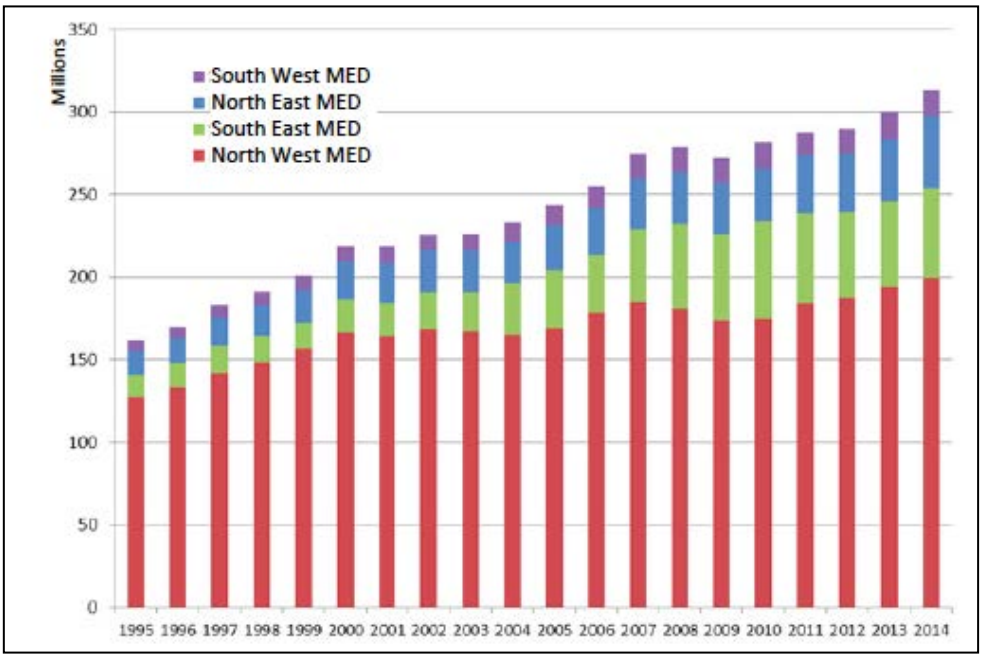


Figure 9: Mediterranean International Tourist Arrivals 1995-2014 (Source: Plan Bleu 2016, based on UNWTO Data 2016) (updated figure pending)

32. Transport is the highest energy-consuming sector in the Mediterranean. Public transportation and train systems are developed in the northern shore, while they need further development on the southern and eastern shores. Road transport generates ambient air pollution, exposing people to hazardous emissions of air pollution, noise, and anthropogenic heat, with an associated high cost in terms of welfare loss. Investments in public transport and electrification, as well as urban planning measures are needed to reduce these impacts. In parallel, commercial aviation continues growing in the Mediterranean region, above 300 million passengers annually. Aviation is responsible for an estimated 4.9% of global anthropogenic greenhouse gas emissions and existing technological solutions to decarbonize aviation are not mature at this stage.

33. The Mediterranean Sea is the crossroads of major global maritime passages, namely the Suez Canal, the Strait of Gibraltar, and the Bosporus and Dardanelles Straits. Intra-Mediterranean traffic accounts for 58% of total traffic, with a steady increase over the last decade. Europe is the main shipping connection, receiving about 40 to 50% of total extra-Mediterranean traffic. Oil transport and cruise ship tourism are the two most important activities. The Mediterranean Sea hosts major oil transportation lanes; in total, the Suez Canal and the Turkish Straits accounted for about 13% of the world's seaborne oil trade in 2015. Major impacts of maritime transport include operational, accidental or intentional pollution from the release of oil, litter, and hazardous and noxious substances, including toxic gases and particulates such as sulphur oxides (SOx) and nitrogen oxides (NOx), as well as greenhouse gas emissions; introduction of non-indigenous species through ballast waters; and underwater noise.

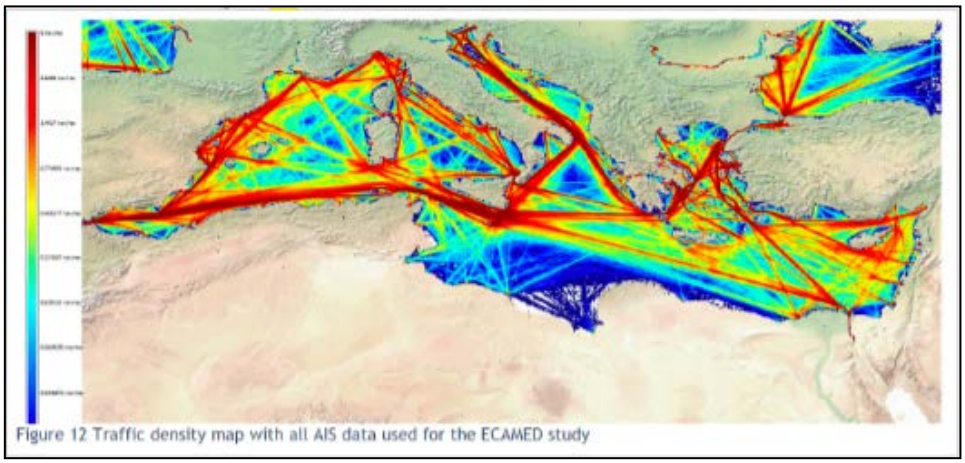


Figure 10: Traffic density in the Mediterranean Sea Area (Source: INERIS, 2019)

34. Emerging sectors with potential development include the marine biotechnology sector, i.e. the search for genes, molecules, and organisms with features that may be of benefit for society and have value for commercial development, and marine and seabed mining, i.e. the production, extraction and processing of non-living resources in seabed or seawater. Currently, there are no deep-sea mining activities in the Mediterranean Sea, mainly because of the low resource potential of the region, as well as low technological development, and regulation of these activities is currently lacking. Deep-sea mining activities may adversely affect deep-sea ecosystems through physical alterations, stirring-up of potentially toxic sediment plumes, noise, vibration and light induced, or through inappropriate waste management.

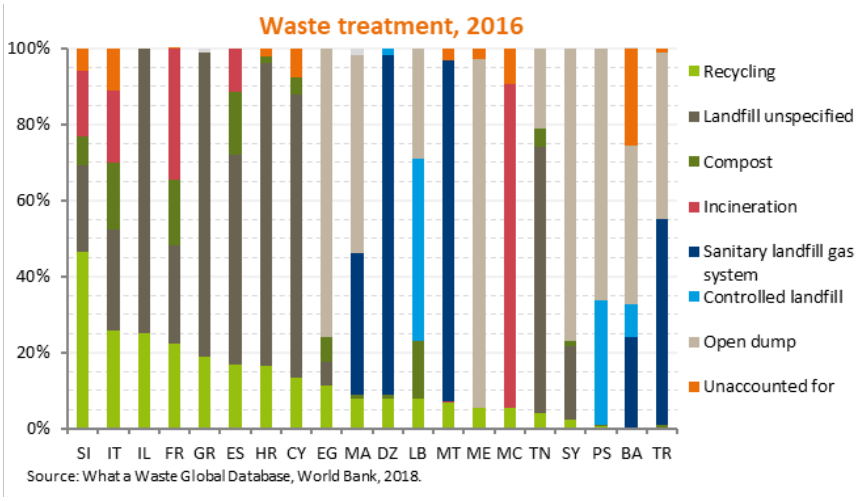


Figure 11: Waste treatment in Mediterranean countries, 2016 (Source: What a Waste Global Database, World Bank, 2018)

35. Nutrients, heavy metals, persistent organic pollutants (POPs), pesticides, hydrocarbons, and marine litter are the main pollutants of the Mediterranean Sea. Eutrophication represents a major issue in coastal areas that are known to be influenced by natural and anthropogenic inputs of nutrients, such as the Gulfs of Lion and Gabès, the Adriatic Sea, northern Aegean, and Nile-Levantine. Levels of major pollutants show a decreasing trend, even though important issues remain, especially for heavy metals in coastal sediments, as well as for known hotspots associated with urban and industrial coastal areas. A decreasing trend has been observed for aqueous effluents from specific industrial sectors, such as the food and beverages, metals production and processing, and paper and wood production, while increasing trends have been observed for waste and wastewater management and the energy and

chemical sectors. Emerging contaminants, such as plastic additives, cosmetics, plasticizers, nanoparticles, and pharmaceuticals, represent an under-investigated threat to ecosystem and human health which deserves attention, especially because, to date, municipal treatment plants are unable to remove them. Underwater noise is also an issue of raising concern for its major impacts on cetaceans, especially in relation to identified hotspots overlapping important habitats of cetaceans such as the Pelagos Sanctuary and the Strait of Sicily.

36. The Mediterranean Sea is one of the most marine-litter affected areas in the world. More than 200 tons of plastic enter the Mediterranean Sea every day, and plastics account for up to 95 to 100% of total floating marine litter, and more than 50% of seabed litter. Single-use plastics represent more than 60% of the total recorded marine litter in Mediterranean beaches, which is typically generated from beach recreational activities. Major causes of plastic pollution include the increase of plastic use, unsustainable consumption patterns, and ineffective and inefficient waste management practices. Less than one third of the plastic produced each year in Mediterranean countries is recycled. Wastewater is also an important pathway through which marine litter enters the sea. To date, less than 8% of wastewater undergoes tertiary treatment. Other important sources of marine litter are fisheries, tourism, and shipping. Marine litter impacts marine organisms mainly through entanglement and ingestion, but also through colonization and rafting. It also has economic and social impacts through clean-up costs, as well as potential loss of income and jobs from tourism, residential property values, recreational activities, and fisheries.

37. In 2016, the Contracting Parties to the Barcelona Convention adopted the Regional Action Plan on Sustainable Consumption and Production (SCP) in the Mediterranean. The Action Plan recognizes that patterns of consumption and production need to be changed to decouple human development from degradation of the marine and coastal environment and gives guidelines for a shift towards sustainable consumption and production patterns, long-term sustainability, circular economy and new paradigms in the use of resources, while taking into account climate change and contributing the 2030 Agenda. The SCP Action Plan is supplemented by a roadmap, and further efforts are required for its effective implementation.

V. Marine and coastal zone management

38. For Mediterranean economies and societies, the coastline has long been an area of concentration with an increasingly high population density and related infrastructure as well as touristic, commercial and industrial stakes, many of these situated close to mean sea level. This intensification of coastal uses is at the origin of many impacts that alter the invaluable capital that is the Mediterranean, leading to increased fragmentation of landscapes and disrupting ecological continuity. It also makes coastal zones highly vulnerable to sea-level rise, storm-surges, flooding and erosion.

39. The built-up area in the Mediterranean coastal belt has continued to increase in all Mediterranean countries throughout the last decade; and between 1965 and 2015, three out of four Mediterranean countries doubled or more than doubled the built-up area in the coastal belt of 1 km from the coastline. This leaves less space for natural coastal ecosystems, diminishing the services they provide, and increases coastal risks for the people living in the coastal zone. The Integrated Coastal Zone Management (ICZM) Protocol of the Barcelona Convention, in its article 8, provides that Contracting Parties shall establish in coastal zones, a zone of at least 100 m in width where construction is prohibited. However, the built-up area within the first 150 m[9] wide belt along the coastline is above 20% in almost half of Mediterranean countries (in 2015).

[9] Data for the 100 m belt not available.

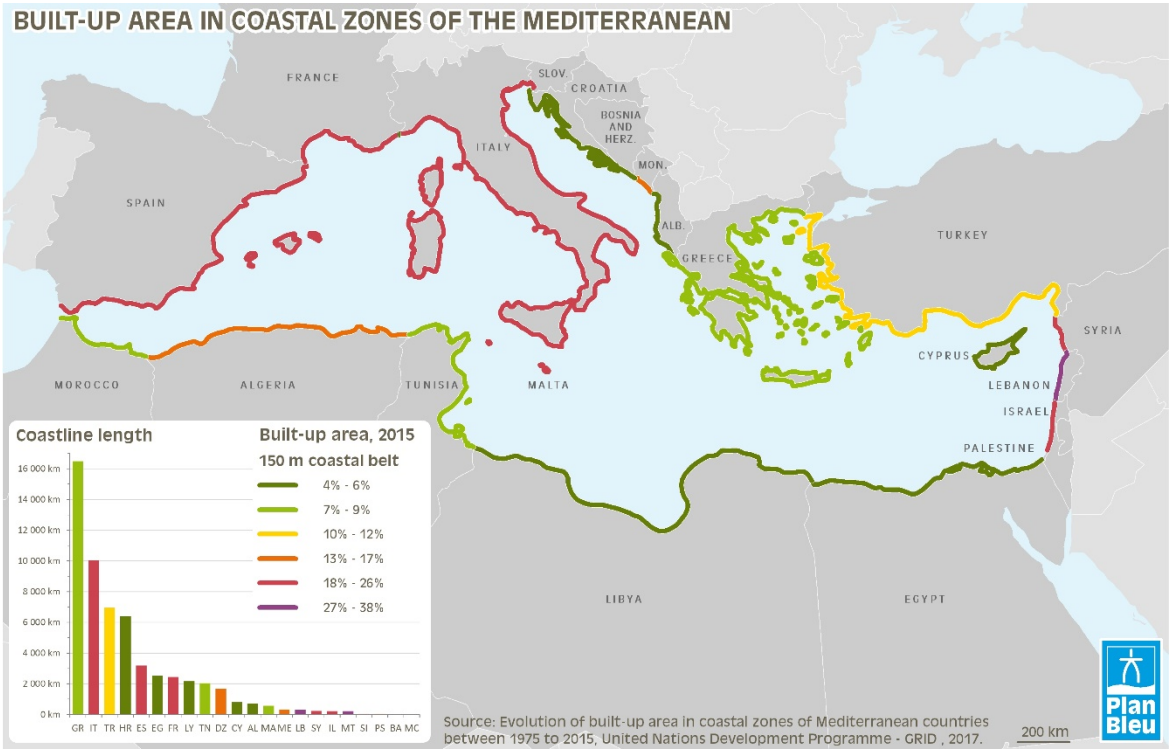


Figure 12: Built-up area in coastal zones of the Mediterranean countries (% within 150 m coastal belt)

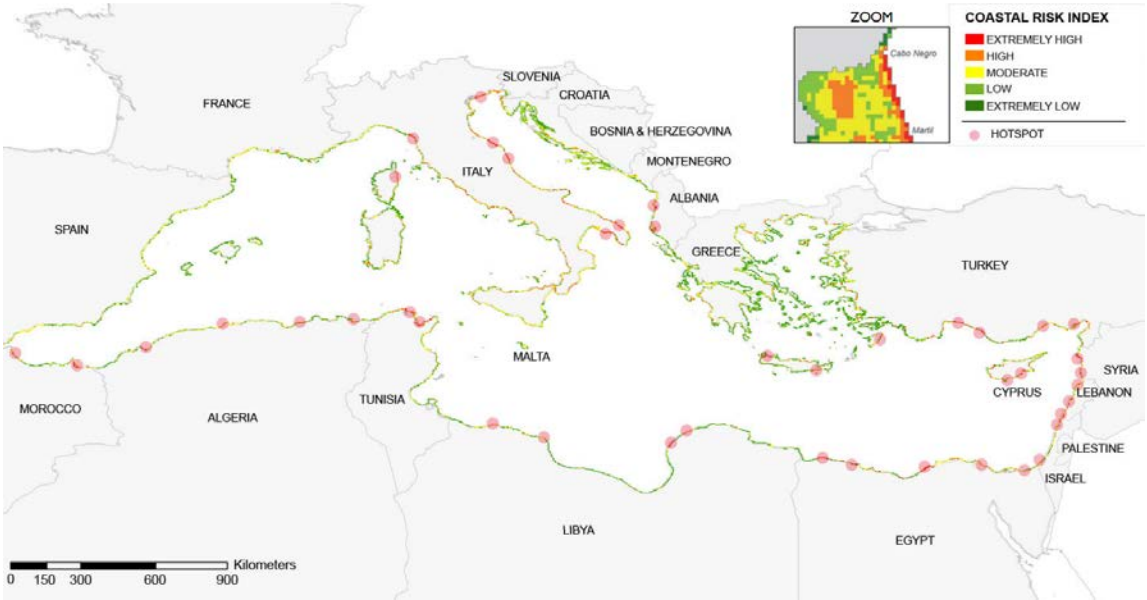


Figure 13: Regional risk assessment map for the Mediterranean based on the CRI-Med method (Source: Satta et al., 2016)

40. The increasing attractiveness of coastal regions and cities comes with a decline in rural economic and population dynamics. Whereas in NMCs, rural exodus is a long-standing reality, it is much more recent in SEMCs, inversing population distribution to less than 50% of national populations living in rural areas in all but two Mediterranean countries today. Socio-economic disparities between the rural and urban areas continue to persist with generally poorer rural areas and more challenging access to basic services and infrastructure in rural areas.

41. Recently, new activities such as renewable marine energies or the extraction of marine minerals and organisms emerge and co-exist with other maritime activities such as offshore oil and gas, maritime transport and with Marine Protected Areas. This multiplication and intensification of maritime uses represents new challenges for achieving or maintaining Good Environmental Status of the Mediterranean.

42. Integrated Coastal Zone Management (ICZM) and Marine Spatial Planning (MSP) offer coherent responses to current challenges that face Mediterranean coasts. The ICZM Protocol to the Barcelona Convention has been supplemented in 2017 by a “Common Regional Framework” to introduce MSP into the delivery of the ICZM Protocol. Both ICZM and MSP deal with land-sea interactions and address conflicts between human uses and coastal and marine ecosystems and advocate for coherent policy mixes. Avoiding further degradation of Mediterranean coastal zones and where possible restoration of ecosystems require urgent implementation, enforcement and follow-up of these tools.

VI. Food and water security

43. Renewable water resources in the Mediterranean basin are concentrated mainly in northern countries (67%). In 2015, nearly 220 million people were in water scarcity or stress situations in the Mediterranean countries, mainly in SEMCs. Water scarcity has led to unsustainable consumption and over-abstraction of surface and groundwater resources, which contributed to further water shortages. Aquifers are being over-exploited, leading to groundwater pollution and seawater intrusion in coastal areas. Irrigated agriculture is the most water-demanding sector (55% of the total), followed by the energy and domestic sector, urban and rural drinking water supply, and touristic activities. Water demand varies significantly throughout the year and locally, and peaks in summer especially for irrigation and tourism. Total water consumption lays well below the total available resources in the NMCs, while in the SEMCs it exceeds available water resources. By 2050, water demands are projected to double or even triple, driven by population and economic growth, expansion of irrigated areas, and increasing crop water needs resulting from warmer and drier conditions. Water use efficiency is particularly low in agriculture, due to water losses that call for the modernization of irrigation systems. About 10 million people, corresponding to 2% of total Mediterranean population, do not have access to safe drinking water or sanitation, mostly in the south-east areas, although significant improvements have been made.

44. Food security is granted when people constantly have physical and economic access to enough food, which is healthy and nutritious and allows them to satisfy their energy needs and their food preferences, while leading a healthy and active life. Food production in the Mediterranean countries exceeds consumption in fruits and vegetables, wine, and olive oil, while being chronically deficient in cereals. This deficit is essentially due to agroclimatic conditions and to the generally low availability of both water and arable land. The intrinsic limitation of natural resources and current rates of population growth, especially in the south and east, lead to an increase in the dependence on food imports. Projections indicate that this situation will worsen in the coming decades, mainly under the pressure of climate change and population growth. Current statistics show that access to food is generally lower in rural areas, due to physical (e.g. absence of infrastructures and markets) or economic (e.g. low purchase power, rising prices) reasons, making the rural population particularly vulnerable. Food habits are gradually changing in the last decades, with the abandonment of the traditional Mediterranean diet, towards a “western” nutrition style rich in proteins, fats, and refined cereals. Food security has been improved in the Mediterranean countries, often at the expenses of nutritional quality, of locally-produced, seasonal and diverse food, and of traditional conservation know-how. These changes have growing environmental, economic, and human health impacts,

including biodiversity loss and food waste, an even higher dependence on cereal imports, a higher vulnerability to the volatility of international prices, as well as phenomena of both under- (e.g. anaemia) and over-nourishment. In the period 2012 to 2016, obesity shows a rising trend, with an obesity rate above 20% in almost all Mediterranean countries and peaks of more than 30% in Egypt, Lebanon, Libya, Malta and Turkey in 2016.

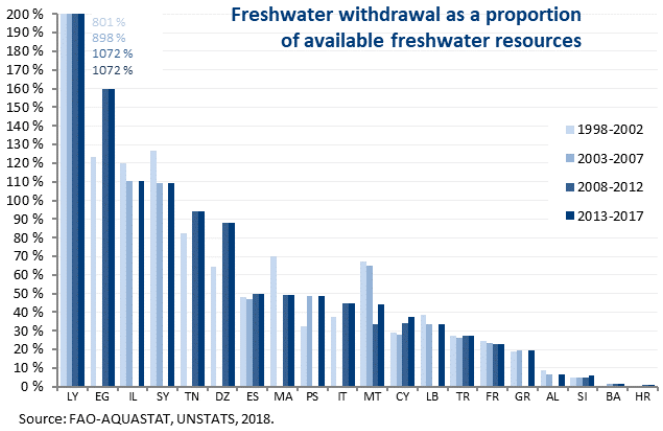


Figure 14: Freshwater withdrawal as a proportion of available freshwater resources, 1998-2017 (Source: FAO-AQUASTAT, UNSTATS, 2018)

45. Overexploitation of resources (water, soil) put increasing pressures on food and water availability. Land use changes and intensification of the agriculture in response to population growth (particularly in the south) or access to subsidies (EU countries) increase soil erosion, which affects agricultural productivity and increases pollution and eutrophication, with higher risks of flash floods, and reservoirs siltation. Soil pollution is mainly linked to the use of fertilizers and pesticides, used increasingly in the Mediterranean region, posing at the same time threats to human and environmental health through diffuse water pollution, animal death, and soil contamination. Climate change will amplify most of these pressures and impacts on the availability, quality, stability of and access to water and food, thus further threatening water and food security. Ensuring water and food security for Mediterranean populations is key for their sustainable development and requires an integrated approach that considers the interdependencies between the uses of resources.

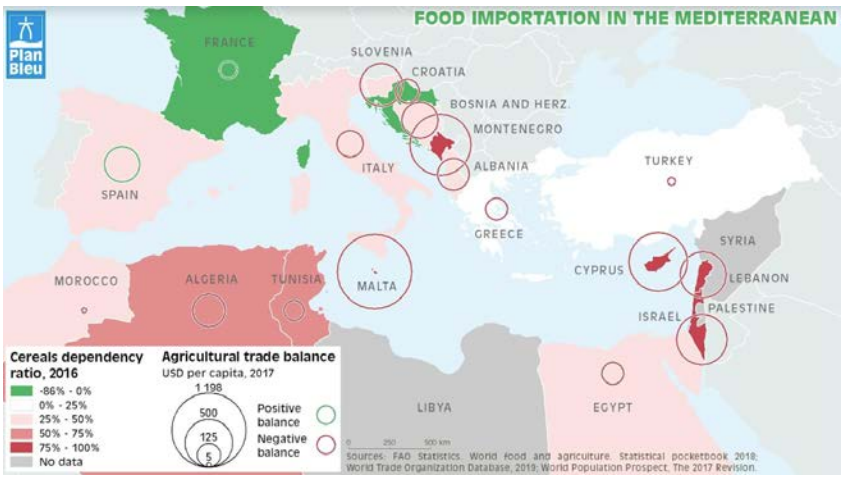


Figure 15: Cereals dependency ratio, 2018 and Agricultural trade balance in USD per capita, 2017 (Source: FAO 2018)

VII. Environment and health

46. The deep and complex relation between environmental conditions and human health is recognized by the international community as a pressing issue of emerging concern. In Mediterranean countries, 15% of deaths are attributed to modifiable environmental factors, compared to 23% worldwide, and ranging between 8% and 27% across countries in 2012. Major risks to human health derive from ambient air pollution and some remaining inadequate drinking water quality and sanitation services. Climate change is expected to exacerbate risks for human health: the expected increase of air temperatures, including a raise in the frequency and intensity of heat waves, can seriously affect the health of the most vulnerable population groups, including the elderly in an aging population. There is high certainty that the recent observed climatic trends will contribute to the future transmission of vector-, food-, and water-borne diseases. Areas with elevated probability for West Nile infections, linked to climate change, will likely expand and eventually include most of the Mediterranean countries. Extreme events, like floods, may lead to the spread of water-borne and vector-borne (e.g. mosquitoes) infectious diseases. Floods also cause personal injuries, enteric infections, increase mental health problems, and lead to potential contamination by toxic chemicals. An increase of allergies is also expected, due to the modifications in the geographic distribution range of some plant species, the extension of the pollen season, and an increased production of pollen. The intrusion of saltwater into groundwater, caused by sea level rise, may deprive parts of the population of drinking water and increase the saline content of drinking water sources, which in turn may have serious health consequences.

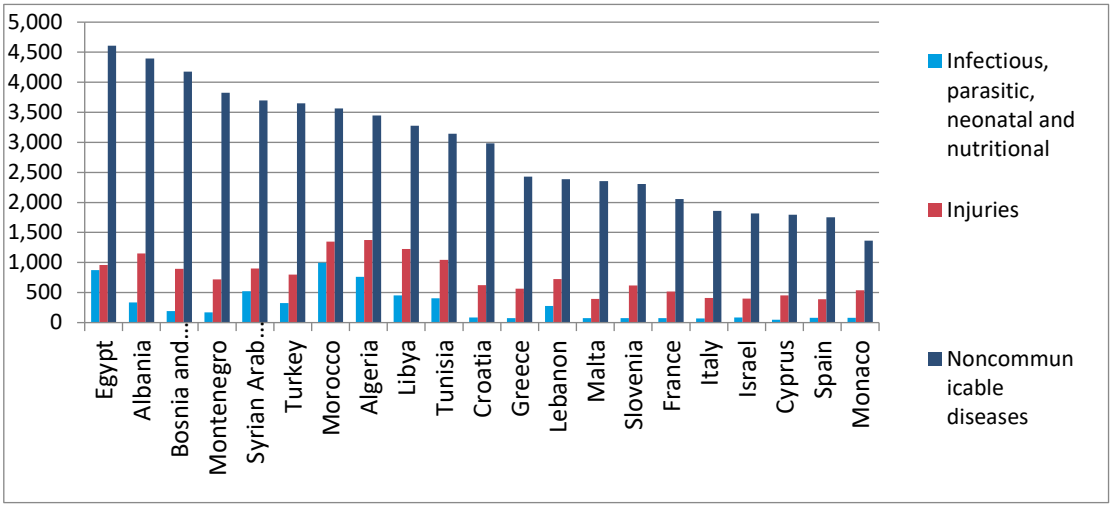


Figure 16: Age-standardized disability adjusted life years (DALYs) attributable to the environment per 100,000 population in 2012 (Source: WHO, 2019)

47. In Mediterranean countries, it is estimated that more than 228,000 persons died prematurely in 2016 because of exposure to ambient air pollution. Pollutants with the strongest evidence for public health concern include particulate matter (PM), ozone (O3), nitrogen dioxide (NO2) and sulphur dioxide (SO2), most of which stemming from transport and other fuel consumption. Air pollution has a high cost for countries, the World Bank estimated the welfare losses due to PM2.5, derived from transport, at 2.3% of GDP in the MENA region and 7.4% in Europe and Central Asia. Especially dangerous is the case of Egypt where more than 85% of the population is exposed to ambient pollution beyond the WHO threshold[107]. NMCs generally show lower exposure levels, with between 25% and 42% of population exposed. The general trend in NMCs keeps relatively constant, with

exposure to particulate matter decreasing only slightly after a peak in 2011, whereas in SEMCs, particulate matter exposure has increased, except in Israel where the situation has improved slightly.

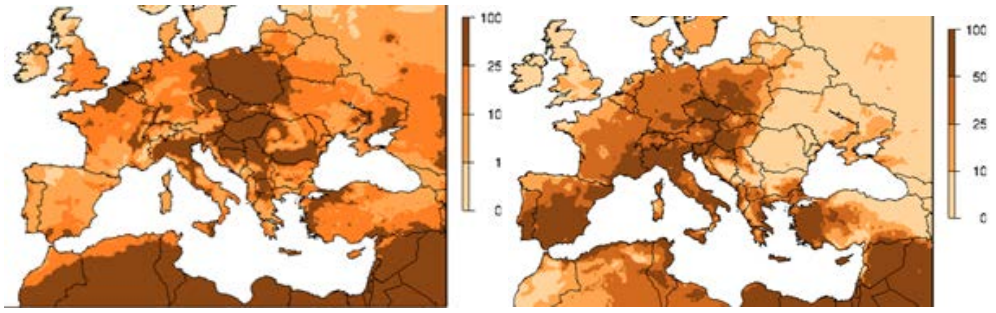


Figure 17: Left – Number of days when WHO recommended threshold of exposure to 25 μg/m3 of particulate matter (PM2,5) was exceeded in 2016. Right - Number of days when WHO recommended threshold of exposure to ozone of 100 μg/m3 was exceeded in 2016 (Source: Copernicus Atmosphere, European Commission, 2019)

48. Man-made and natural disaster risks and emergencies are a reality in the Mediterranean region and have the potential to temporarily or permanently alter the inhabitants' access to safe environmental infrastructure and services. The Mediterranean is an area of relatively high seismic and volcanic activity with a series of destructive earthquakes, volcanic eruptions and tsunamis on record, having displaced and killed thousands of Mediterranean inhabitants. In addition, man-made emergencies linked to political turbulence and war force large numbers of people to flee these situations and find new, often improvised, housing and means of living including water and sanitation services. Providing healthy environments for people is thus a particular challenge. Forced displacement of people can also cause environmental degradation, not only in the (destroyed) areas left behind but also in the areas that receive massive population flows. Emergency and preparedness plans, integrating health and environment considerations are key to disaster management in order to protect the health of humans and ecosystems.

49. Human health and well-being are influenced by goods and services provided by Mediterranean ecosystems. The relationship between human health and natural ecosystems is receiving increasing attention by researchers. In marine areas, overfishing and sea warming contribute to the depletion of some fish stocks, while microbial and chemical contamination, and toxins from harmful algal blooms threaten the quality of seafood, which is an important component of the Mediterranean diet. Human activities such as bottom trawling, and microbial and chemical contamination, threaten the Mediterranean marine organisms that furnish bioactive substances, which are used to develop new drugs to treat major human diseases, such as cancer. Contamination also negatively affects the recreational use of coastal and marine waters, and their capacity to provide benefits to users. Thus, there is a need to safeguard the goods and services provided by the Mediterranean marine ecosystem in order to enhance health benefits and minimize health risks. Researchers, policymakers, healthcare providers and public health practitioners, and the public should further address the interactions and the value of Mediterranean ecosystems for human health and wellbeing.

VIII. Governance

50. The United Nations Convention on the Law of the Sea (UNCLOS, adopted in 1982) requires countries sharing an enclosed or semi-enclosed sea to cooperate with each other to coordinate the management, conservation, exploration, and exploitation of the living resources of the sea, and to protect and preserve the marine environment. Several agreements are in place in the Mediterranean

region to protect the coastal and marine environment. The most important is the Convention for the Protection of the Mediterranean Sea against Pollution (the Barcelona Convention), signed in 1976 and revised in 1995 (Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean), administrated by UNEP, aiming to prevent, abate, combat and, to the fullest extent possible, eliminate pollution of the Sea, and to protect and enhance the marine and coastal environment so as to contribute to its sustainable development. Seven Protocols to the Convention are in place, covering aspects such as the protection of the sea against pollution from both land- and sea-based sources (including from hazardous waste, and from the exploration and exploitation of the continental shelf), for fostering cooperation in preventing and combating pollution from ships, promoting Specially Protected Areas and Integrated Coastal Zone Management (ICZM).

51. The Mediterranean Commission on Sustainable Development (MCSD) is a multi-stakeholder advisory body established in 1995. It assists countries in integrating environmental issues into socio-economic programmes and promotes sustainable development, giving a strong voice to all actors that work towards sustainability in the Mediterranean region. Other regional initiatives address environmental governance, including the Union for the Mediterranean (UfM), Union of Arab Maghreb, League of Arab States, Dialogue 5+5 (a framework for intergovernmental cooperation in the Western Mediterranean), etc.

52. The multiplication of governance frameworks on environment and sustainable development in the Mediterranean region calls to address sustainable development in an integrated way, along three main axes: the integration of regional governance among existing bodies; the integration of different governance levels, from regional to national and local; and, the integration of both land and marine governance. This is in line with the Mediterranean Strategy for Sustainable Development (MSSD), adopted in 2016 by the Contracting Parties to the Barcelona Convention, as a strategic guiding document for all stakeholders to translate the 2030 Agenda for Sustainable Development at the regional, sub-regional and national levels.

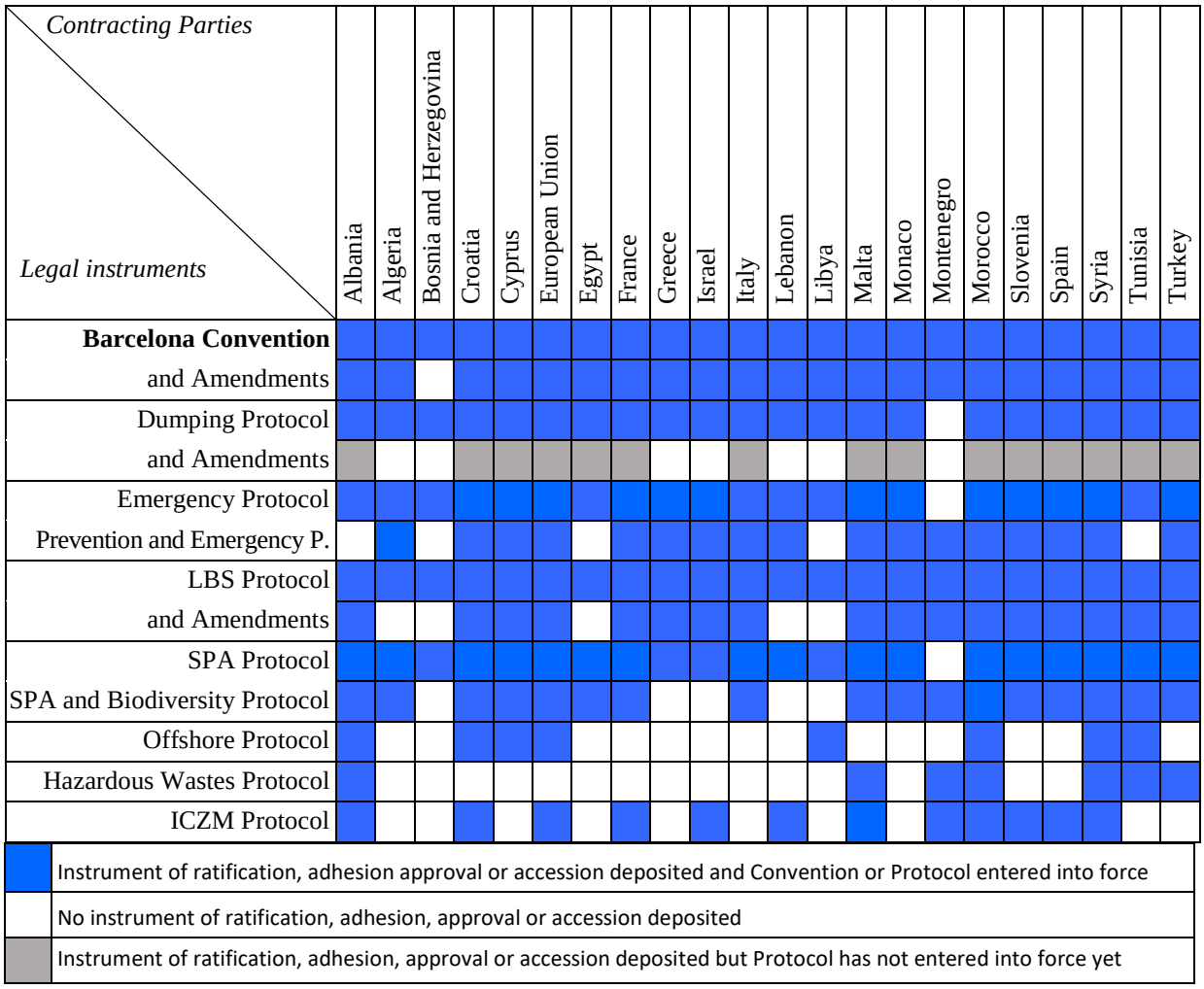


Figure 18: Ratification of Barcelona Convention and Protocols by the individual Contracting Parties.

53. Local planning approaches and decentralization are at differing stages of implementation in Mediterranean countries. It is at the local scale that concrete action for conservation and management of natural resources for human wellbeing can be taken based on the best knowledge about specific local contexts. The challenge of adaptation to environmental and climate change particularly relies on local planning and implementation. The local translation and implementation of national and international agreements as well as the coordination between local administrations and decentralized sectoral technical services requires further capacity building and implementation support.

54. Public and stakeholder engagement is central in sustainable development planning. Mediterranean countries have established a set of commitments to apply participatory processes for policies such as Environmental Impact Assessment (EIA; all countries), Strategic Environmental Assessment (SEA; about three quarters of countries have SEA legislation in place), and Integrated Water Resource Management (IWRM), following the approach established in the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. Informed participation in decision-making leads to better decisions, enhancing public confidence in governmental decisions and, ultimately, contributing to achieve political stability and sustainable economic development. So far, 12 of the 22 Mediterranean countries are Parties of the Aarhus Convention. New opportunities for access to information and public

participation in the environmental debate, are possible thanks to the strong increase of mobile phone subscriptions and people using the Internet and social media in Mediterranean countries.

55. Education, research, innovation, and capacity building are inherently interlinked and offer significant opportunities to develop Mediterranean natural and cultural assets, acting as drivers of economic and social development. There is an active North-South interface and a series of political and socio-economic driving forces, such as the capacity-building activities of the Mediterranean Action Plan (MAP), various EU-led initiatives, and the activities of the Union for the Mediterranean (UfM) for cooperation in higher education and research, including the Mediterranean Strategy on Education for Sustainable Development (MSESD), adopted in 2014 as the first of its kind in the world. These instruments should be further streamlined to address sustainable development issues and strengthen the capacity to develop 'fit-for-purpose' scientific information that can be communicated to decision-makers via effective science-policy interfaces.

IX. Synthesis of progress achieved, and persisting and remaining challenges

56. Throughout the last decade, significant progress in addressing sustainability issues in the Mediterranean has been achieved and the Barcelona Convention system has largely contributed to these achievements:

- Over the last ten years, Mediterranean countries have adopted global and regional common objectives and cooperation frameworks, setting a shared path towards sustainable development;
- Integration and system-based approaches are increasingly recognized as the most efficient way to address systemic factors, and combined pressures and impacts;
- Investments and collaborations have addressed and reduced some major pollution sources and health hazards;
- Common monitoring and assessment frameworks have been adopted to improve information-based decision-making; and
- The diffusion of stakeholder networks, inclusive approaches, and technological development have provided improved opportunities for stakeholder participation and engagement.

57. In spite of these efforts and innovations, major challenges persist and emerge:

- Despite achievements in designing and agreeing on common commitments, critical gaps remain in implementation and enforcement;
- The profile of environmental institutions and stakes remains to be raised for effective environmental integration;
- The passage from national and international engagements to concrete action at the local level remains challenging and requires further capacity building and support, while recognizing needs for local adaptations;
- The ambition of specific environmental regulations would gain to be upgraded; scientific evidence demonstrated in particular that declaring the Mediterranean an Emission Control Area would generate benefits largely overweighing costs;
- Adopting efficient policy mixes, upscaling the use of economic tools, land tenure instruments, stakeholder awareness and involvement remain areas of needed improvement. Efficient policy

mixes are in particular a key condition to ensure a transition towards a blue, green and circular economy by scaling-up promising technical and social innovations, through a range of complementary funding mechanisms. Coordinated policy mixes are also required to efficiently prevent further land take and economic pressure on the coastal zone on both sides of the land sea interface as highlighted in the Common Regional ICZM framework to be adopted at COP 21;

- Further efforts are required for developing permanent collaboration frameworks across specialised stakeholder networks and governance fora;
- Specific funding is needed for environmental and economic transitions; investments will in particular be required to adapt to climate change and develop water efficiency and reuse in water scare areas. Sustainable management of biodiversity protected areas is dependent on sustainable funding mechanisms to cover recurrent management, surveillance and enforcement costs;
- The transformation of coastal and marine areas, activities and landscapes needs to be further anticipated in policies and actions.

58. In a transversal way, knowledge and understanding of all aspects of sustainability are key to support evidence-based action for transition. Ways to improve the effective use of knowledge include:

- Capitalising, i.e. gathering, analysing, transferring and disseminating existing knowledge, good practices, and local innovations;
- Conducting further research to communicate on the stakes of environmental degradation;
- Implementing, sustaining and expanding common monitoring frameworks; and
- Learning from experience by conducting ex-post evaluation of policies for more effective decisions.

X. Conclusions

59. The progress achieved throughout the last decade in developing and improving sustainable development policies, strategic frameworks, action plans and other initiatives and improved knowledge on ecosystems and their role for human wellbeing has not been sufficient to reduce pressures on and degradation of the Mediterranean coastal and marine environment. It has also not allowed to help Mediterranean coastal populations adapt to current and projected environmental and climate change and to increase their resilience. To reach commonly set goals and objectives such as GES of the Mediterranean coast and sea and more largely SDGs in the region, and to avoid or at least mitigate projected systemic failures, current trajectories must be urgently corrected. This requires radical changes in behavior at all levels and in all areas, the main driver for the increasing pressures and degradation being our production and consumption patterns.

60. The needed systemic transition cannot be brought about by policy-makers alone. It is a shared responsibility of all stakeholders including civil society, the private sector including the banking system, the science community, judicial systems etc. Fostering participation of actors and taking advantage of mobilization of stakeholders to engage into dialogue and coordinated action will improve outcomes of policy-making at all levels. The current mobilization of youth for sustainable development must be seized as an opportunity for policy-makers to facilitate the taking into account of the long term into policy-making. Scientists are increasingly collaborating towards organized science-policy interfaces such as IPCC, IPBES or, at the Mediterranean level, MedECC to provide

clear scientific messages to policy-makers. Judicial systems increasingly deal with environmental and climate litigation and support the enforcement of sustainability regulation, while the private sector holds a powerful role in funding and inventing sustainable lifestyles.

61. A major opportunity for fostering the needed transition within the Barcelona Convention system is the urgent passage from planning and engagement in measures to their implementation and effective enforcement of actions on the ground in collaboration with local authorities. Implementation and enforcement are lagging behind the ambition of commonly agreed objectives and measures and discredit their comprehensiveness and the major achievements in environmental diplomacy in the region. The effective enforcement of agreed actions requires adequate monitoring and evaluation, to ensure that measures are leading to the desired effects and to make potential necessary adjustments. Articles 26 and 27 of the Barcelona Convention provide for such monitoring and evaluation, but lack effective application. Strengthening a more rigorous fulfillment of the provisions of the Barcelona Convention represents an opportunity which can be seized by Contracting Parties, together with the Secretariat and the Convention's Compliance Committee in order to close the adaptive policy cycle from planning, to implementation, enforcement, monitoring and evaluation, to adapting the commonly agreed measures. The imminent threat of severe damage of ecosystems and irreversibility calls for the urgent implementation of corrective measures in application of the precautionary principle (Article 4.3.a of the Convention) "by virtue of which where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".

Annex III

Draft Revised Roadmap for the MED 2050 Foresight Study

Annex III: Draft Revised Roadmap for the MED 2050 Foresight Study

Introduction

1. Since the late 1970's, Mediterranean countries have decided to cooperate to put "*at the disposal of political leaders and decision-makers all information that will enable them to develop plans likely to ensure sustained optimal socio-economic development without degrading the environment*" and help "*governments of coastal states in the Mediterranean region to increase their knowledge of the joint problems they have to face, both in the Mediterranean Sea and in their coastal areas*" (Inter-Governmental Meeting, UNEP/IG.5/7, 1977).

2. Within this context and in the framework of the implementation of article 4 of the Barcelona Convention and of the Mediterranean Strategy for Sustainable Development (MSSD), Plan Bleu/Regional Activity Centre (Plan Bleu) has been mandated with the "*preparation of analyses and prospective studies to assist in constructing visions of the future as an aid to decision-making*" and the "*dissemination of the findings of this work in the various appropriate forms and channels, including the regular publications of state of environment and development reports and environment and development outlook for the Mediterranean region*" (Decision IG.19/5, 2009).

3. Plan Bleu has coordinated and published two major foresight studies to date: "*Futures for the Mediterranean Basin: The Blue Plan*" (1989) and "*A sustainable future for the Mediterranean: The Blue Plan's Environment and Development Outlook*" (2005). Those reports have served as a reference to prepare environment and sustainable development policies in the Mediterranean, including the MSSD. They have supported regional, national and sectoral planning in various domains, and been cited hundreds of times. While they are now outdated and best used as historical references, decision- makers and experts continue to request Plan Bleu with information drawn from those reports given the lack of work fulfilling the same objectives.

4. The MAP Mid-Term Strategy (MTS) 2016-2021 reiterates the objective "*to deliver knowledge- based assessments of the Mediterranean environment and scenario development for informed decision-making and stakeholder work*" (Decision IG.22/1). To implement this decision, Contracting Parties to the Barcelona Convention included in the MAP Programme of Work and Budget 2016-2017 the development of "a roadmap for the preparation of MED 2050 report", as the Main Activity 1.4.1.3 (Decision IG.22/20).

5. To prepare such roadmap, Plan Bleu organized an expert workshop (December 2016), conducted a benchmark study on the strengths, weaknesses and gaps of 35 recent foresight studies in the Mediterranean region[10], and consulted with national representatives and experts. The Draft MED 2050 Roadmap was presented and discussed at the meeting of Plan Bleu Focal Points (April 2017), the 17th Meeting of the Mediterranean Commission on Sustainable Development (MCSD) (July 2017), the Meeting of the MAP Focal Points (September 2017) and the 20th Ordinary Meeting of the Contracting Parties (COP 20, Tirana, Albania, December 2017). The Contracting Parties welcomed this roadmap, adopted its Phase I, and requested the Secretariat (Plan Bleu) to present the progress of Phase I at COP 21 to enable them to provide guidance

[10] http://planbleu.org/en/publications/to-a-new-prospective-exercise-on-the-environment- and-the-developments-in

for Phase II (Decision IG.23/4). This involves preparing a revised roadmap for Phase II. The present document fulfils this objective.

I. MED 2050 Scoping and Key Directions

6. Preparatory activities (benchmark, expert workshops, and stakeholder consultations) established that a new foresight on environment and development was necessary in the Mediterranean region. The Mediterranean context has considerably evolved since MAP last foresight exercise published in 2005, with the Arab springs, acceleration of climate change, oil counter-shock, national, regional and global geopolitical upheavals, etc. The preparation of upcoming strategic documents, including the new MAP Medium term strategy and MSSD revision require a new vision for the future. The coming decades will be decisive for resolving environmental problems, seizing emerging opportunities and paving the way for a prosperous and peaceful Mediterranean region, in which people enjoy a good quality of life and where sustainable development takes place within carrying capacities of healthy ecosystems. MED 2050 will shed light on these critical objectives.

7. Preparatory activities for MED 2050 also provided insight on how this exercise should be shaped to fill gaps and facilitate decision-making in the next decade, while building on existing knowledge and resources. MED 2050 has thus been designed along the following key directions:

- A 2050 horizon - with an intermediate horizon at 2030 (corresponding to the SDGs). A 2050 perspective allows to consider long term issues, such as climate change, possible ecosystem disruptions and their economic and social outcomes (consequences on agriculture, fisheries, lifestyles, migrations, urbanization, energy policies, etc.), and to identify necessary transitions.
- In line with Barcelona Convention and MAP concerns, the sea and maritime economy are put upstream of the thought process, in a systemic framework.
- MED 2050 adopts a participatory approach, to support the documentation of contrasting visions of the Mediterranean future. It will acknowledge that countries and stakeholders start from different situations and viewpoints, and help co-construct shared objectives in the medium and long term.
- A balance between quantitative and qualitative approaches, combining use of existing trend information with a more qualitative analysis of disruptions and weak signals.
- Beyond forward anticipation (forecasting), MED 2050 will use a strategic approach, consider contrasting scenarios, and identify transition paths (backcasting).
- A stronger investment in communication. MED 2050 results, even at intermediate stages, will be made accessible to the different interested publics – from specialists to citizens.

8. The proposed revised roadmap is organized around four main activity modules: Module 1: Trends, ruptures and weak signals; Module 2: Comparing and sharing contrasting visions; Module 3: Designing scenarios; Module 4: Co-constructing transition strategies. Scientists and MAP experts are already or will be associated to all modules. A graph summarizing these components is presented in Appendix 1. A provisional schedule is in Appendix 2.

9. Phase I of MED 2050, carried out during the biennium 2018–2019, included start-up activities (mobilizing existing resources, creating a network and designing a participation strategy), and Module 1 on the evaluation of trends, disruptors and weak signals. Phase II of MED 2050 corresponds to the activities planned during the biennium 2020–2021 (Modules 2 to 5 below, detailed in Appendix 4).

II. Start-Up Activities: Mobilizing existing resources and building a network on Mediterranean futures (Phase I: 2018–2019)

10. **Consultation**. The Secretariat (Plan Bleu) consulted various Mediterranean stakeholders (Plan Bleu and MAP Focal Points, MCSD Members, MAP Partners, experts, etc.), to identify national experiences, expectations, and interested parties to participate in MED 2050 or to support regional, sub-regional or national workshops.

11. In April 2018, a brainstorming workshop was held in Plan Bleu, to frame the operationalization of MED 2050.

12. In June 2018, Plan Bleu organized an International Conference entitled “Environment and development in the Mediterranean, yesterday, today, tomorrow”, co-organized with Serge Antoine Foundation, which brought together more than 130 participants, experts and policymakers from Mediterranean countries, representatives of MAP components, national, European and international institutions, and members of the civil society. Major trends in the Mediterranean were presented and discussed, with MED 2050 objectives at the centre of the discussions.

13. Exchanges and relations with several thematic networks were established in 2018-2019, notably on the themes of the sea, the rural environment and agriculture, and demography. Contacts were also established with the network PROSPER (foresight managers for French public research). Contacts with foresight entities in other Mediterranean countries are ongoing with support from Plan Bleu Focal Points and MCSD members. Interviews are conducted to consolidate collaborations.

14. **Project organization**. MED 2050 relies on five complementary groups (Appendix 3):

- **Plan Bleu team** implements MED 2050, in close collaboration with other MAP entities. **MAP components** provide critical expertise and facilitate synergies with other MAP exercises.
- The **scientific committee** will be in charge of ensuring the scientific coherence of the project results. Its members, recognized experts, will only meet on few occasions.
- The **foresight group** will have a fundamental production role throughout the project.
- Ad hoc groups will be assembled for **specific workshops**, in particular to collect and discuss contrasting visions.
- The wider **MED 2050 foresight network** is at the heart of information exchange on the main results, analyses, points of view and questions, using in particular the web platform dedicated to MED 2050 (Box 1). Designed as a dynamic science-policy interface, the network facilitates the mobilization of existing resources, dialogue among stakeholders, and the uptake of research results in policy development. Participation in the network is open and may evolve throughout the project depending on the development of themes and interests. Many stakeholders expressed great interest in being involved to varying degrees in MED 2050

foresight network. Institutions and experts involved in recent and ongoing foresight studies in the Mediterranean, as well as relevant scientific networks and institutions were invited to participate in the network. MAP and Plan Bleu Focal Points were invited to participate and identify national participants and representatives. The network remains to be completed in the South and East of the Basin.

Box 1: The MED 2050 web platform, a strategic tool for thinking about the future of the Mediterranean Basin

The web platform dedicated to MED 2050 was created in June 2018. It will be further developed as the project advances. The platform is a place of experience and documents sharing (studies, events, written documents or videos...) to feed the reflection on the future of the Mediterranean basin by 2050. Once further developed, the MED 2050 platform will include:

A space dedicated to the MED 2050 initiative, with an introductory page on the project, its objectives, the successive modules, links to one or more specific consultation platforms, in particular to feed Module 2 on contrasting visions, and a more general work area with the possibility of posting comments, opinions, and ideas… This last section will not function as an open blog; to minimize moderation needs, comments and contributions will only be received by the coordination team not made publicly visible.

A space dedicated to foresight works at national and regional levels;

A space dedicated to foresight tools and their use, with a page on *Imagine* and *Climagine* local participatory foresight methods, examples of concrete cases using these methods, etc.

15. **Participatory approach**. MAP Phase II, adopted in 1995, states that "*information and public participation are essential dimensions of sustainable development and environmental protection*". At its 17th Meeting (Athens, Greece, 4-5 July 2017), the MCSD also called for greater attention to participatory approaches involving broader stakeholder consultations, including through the use of electronic tools (web platforms), in addition to the involvement of national governments. MED 2050 will therefore rely on an innovative and efficient participation strategy, making the initiative open and collaborative. As recommended by Plan Bleu Focal Point (Marseille, France, 28-29 May 2019), participation methods will give a specific place to youth representatives throughout the exercise.

16. **Newsletter.** A newsletter will be made available on the web platform. This newsletter will not focus solely on scientific results. It will leave room for questions, sharing of national, regional or international experiences, information on current projects, debate on future options and scenarios. Successive articles on the same subject could be grouped and synthesized to produce thematic booklets. These intermediate products will contribute to the preparation of the final report, and support the communication strategy by targeting a broader audience than the final report.

17. **Calendar**. The capitalization, consultation and setting up of the network have required particular attention in 2018–2019. Those activities will be continued during the biennium 2020–2021, to take advantage of new developments and ensure ongoing dialogue among interested parties. Intermediary outputs will be presented to the various bodies of the MAP system.

III. Module 1: Assessing trends, disruptors and weak signals in a new Mediterranean context (Phase 1: 2018–2019)

18. MED 2050 Module 1 focuses on describing major trends (both qualitative and quantitative), identifying and analysing disruptions and weak signals. Module 1 implementation is underway with a synthesis report expected by the end of the 2018-2019 biennium.

19. To ensure efficient use of resources, Module 1 takes advantage of synergies with ongoing MAP and non-MAP work, including the Report on the State of the Environment and Development in the Mediterranean 2019 in development (SoED 2019), the Shared Environmental Information System (SEIS), the Integrated Monitoring and Assessment Program (IMAP), the Mediterranean Sustainability Dashboard, the MedECC first assessment report, etc.

20. Module 1 includes the development of a long-series database to compare trends described in the previous MAP foresight report (2005) and trends actually observed. The 2019 Report on the State of the Environment and Development in the Mediterranean (SoED 2019) takes stock of environment and development trends in the Mediterranean. Its publication is planned for early 2020, and is the result of a collective effort of the Contracting Parties, MAP components, and external partners. The assessment report being prepared by the MedECC expert network on climate and environmental change in the Mediterranean will also be an essential contribution to MED 2050 Module 1.

21. To develop Module 1, Plan Bleu has formed a partnership with Labex Med, a programme of excellence for the promotion of interdisciplinary research in human and social sciences in the Mediterranean. This partnership is an important opportunity to collaborate with research laboratories, create synergies, and base MED 2050 on a scientifically recognized work, including in its interdisciplinary approach. This partnership gives the opportunity to a postdoctoral researcher to work for one year in Plan Bleu, to go beyond disjoint sectoral or institutional analyses and understand the structuring trends in a systemic framework, ensuring the coherence of hypotheses and putting forward interactions and interdependencies between thematic analyses. The results of this work will be presented for discussion to the foresight group, and will lead to the production of a first MED 2050 product: report on trends, disruptions and weak signals, by the end of 2019.

IV. Module 2: Sharing and comparing contrasting visions across the Mediterranean (Phase II: 2020–2021)

22. Unlike most analyses identified in the benchmark study, MED 2050 will not rely solely on expert work. Contracting Parties and stakeholders will be consulted on their visions for the future of the Mediterranean (their viewpoints and aspirations), with the aim of sharing potentially contrasting visions across Mediterranean sub-regions.

23. Two options are envisaged for Module 2 implementation, depending on resources:

- Option 1: remote consultation of national and local experts and decision-makers, on their visions of the future of the Mediterranean. This option would allow to collect contrasting visions, using reliable foresight consultation methods, although not reaching all the relevant stakeholders and not allowing for a real dialogue among them.

- Option 2: National and Sub-regional Workshops. Several foresight workshops would be organized in selected sub-regions to engage stakeholders (experts, policymakers, civil

society) on their visions for the future of the Mediterranean basin. These workshops could be organized around the following points: discussion in working groups on the results of Module 1 (trends, disruptions, and weak signals), joint foresight exercises allowing for the emergence of contrasting visions of the future, then sharing and consolidating these visions. This option would make it possible to reveal the specificities of sub-regional visions in the Mediterranean region.

24. Under both options, Module 2 can be opened to a wider consultation relayed by network leaders. Questionnaires will be prepared, disseminated and analysed, using recognized foresight methods, through partnerships with existing network leaders and representative of the main stakeholders and issues in the Mediterranean region, including interested MCSD Members.

25. Special attention will be given, in this context, to the sea, if possible through a specific workshop. Foresight experts and specialists of the marine environment would on this occasion be brought together to work and bring out contrasting visions of the future of the Mediterranean Sea.

V. Module 3: Reconciling trends, disruptors and weak signals, and contrasting visions to identify a preferred yet realistic scenario (Phase II: 2020–2021)

26. Under MED 2050 Module 3, the foresight group will be responsible for articulating the results of Modules 1 and 2. Taking into account the different viewpoints of countries, sub-regions and stakeholders, the foresight group will identify common or convergent objectives, and build several contrasting scenarios. As recommended by Plan Bleu Focal Points, this module will consider disruptive scenarios compatible with a sustainability transition. One of the scenarios, identified as the most realistic and desirable (consensual), will serve as a reference (target situation) to develop Module 4 on transition paths.

VI. Module 4: Co-creating transition pathways and strategies in the short, medium and long term (Phase III: 2020–2021)

27. The central question to which the prospective must be able to answer is not what will be the future in 2050, but that of transitions: how to move from current situations and crises to medium-term action plans and long-term objectives? In their 2019 meeting, Plan Bleu Focal Points encouraged the MAP system to pursue ambitious yet realistic transition objectives (Marseille, France, 28-29 May) MED 2050 Module 4 corresponds thus to a strategic foresight activity to co-design transition paths rooted in reality and operational. Module 4 will help identify major obstacles and early responses when they are still achievable as well as opportunities to achieve a desirable future. It will help anticipate emergencies, avoid repair costs and maximize co-benefits.

28. Transition paths will take into account the different temporalities. Agreeing on desirable or acceptable futures by 2050 (long-term) will make it possible to identify alternative transition strategies in the medium term (horizon 2030) and to make comparative assessments of their plausibility, as well as to put forward critical investments.

29. MED 2050 will take into account sub-regional heterogeneity. MED 2050 thus directly intends to feed into future strategies and agendas, including national and sectoral plans.

VII. Mobilization of financial resources

30. A set of core activities – sufficient to produce the MED 2050 report for COP 22 – will rely solely on technical partnerships, MTF funding and limited co-financing, as proposed in the 2018-2019 and 2020-2021 MAP Programmes of Work. The Secretariat through Plan Bleu applied for interdisciplinary research funding, with contrasting success. The necessary co-financing for the first biennium has been mobilized. Additional or more ambitious activities require the mobilization of additional co-financing or complementary partnerships. Although not selected at the final stage, an ambitious interdisciplinary project was for example preselected to the final stage of a H2020 funding, and could serve as a basis for another proposal. Other funding opportunities are under discussion but remain to be completed.

31. The organization of MED 2050 into modules and packages of activities will help find additional funds associated with explicit activities and products. For example, development or investment banks (World Bank, European Investment Bank, African Development Bank, French Development Agency, etc.) could be interested in obtaining benchmarks to design future investment strategies, by financing activities targeting transition trajectories and critical investments in different parts of the Mediterranean basin. Several preliminary contacts have been established. Presenting the first MED 2050 products should facilitate resource mobilization for the second Phase.

32. Funding by the MTF and the official support from the Contracting Parties will allow for the establishment of required co-financing and partnerships, while ensuring that MED 2050 products will feed into the specific objective of the MAP Mid-Term Strategy 2016-2021.

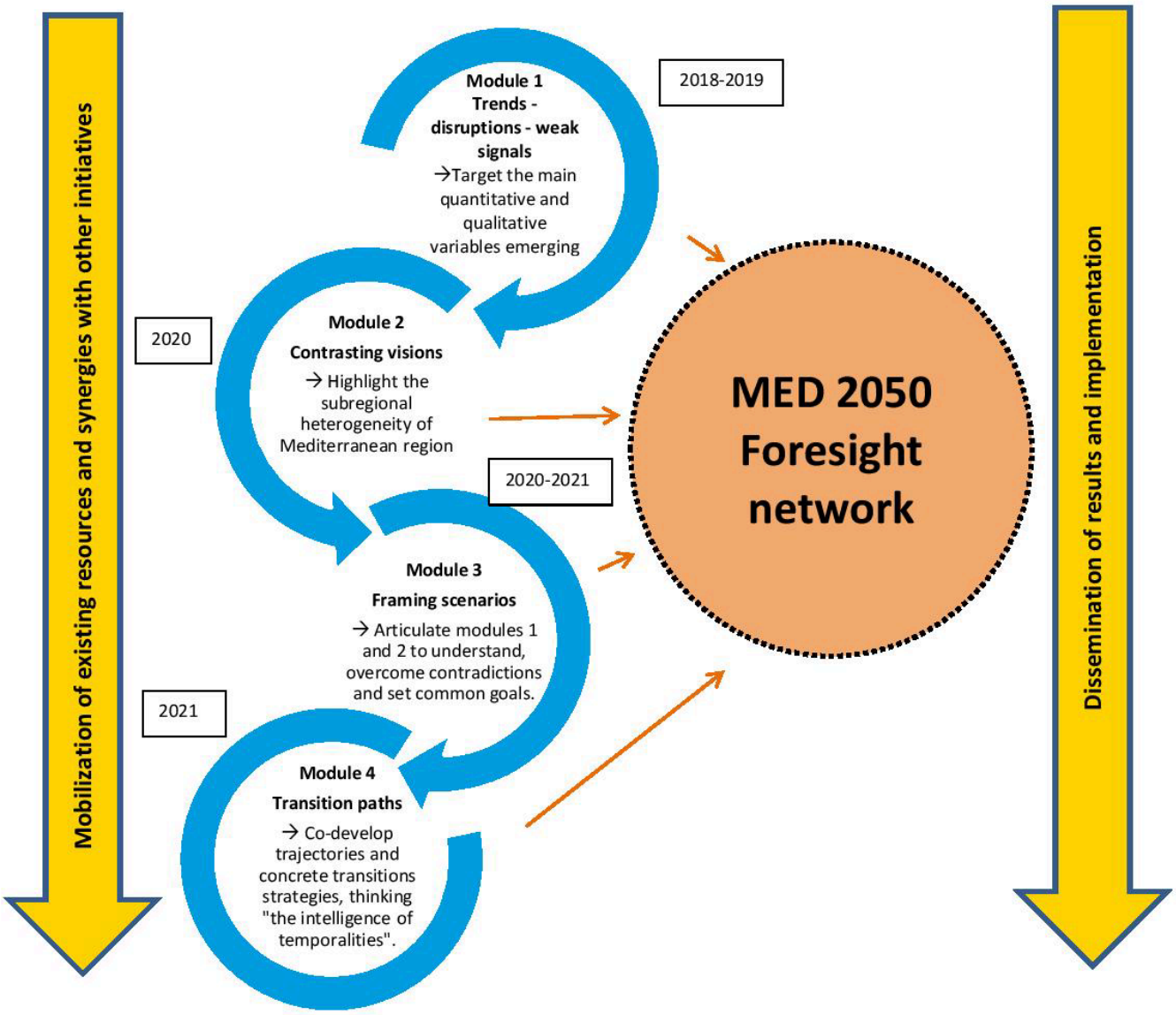
VIII. Expected outputs: dissemination of results, knowledge- and capacity building

33. The chapters of MED 2050 report will be delivered in stages, with a chapter on trends in 2019, a chapter on visions in 2020 and a chapter on transition pathways and critical investments in 2021. The final report will be discussed by MAP system bodies in 2021 with a view to being presented to COP 22 in 2021. The web platform will also be mobilized as a strategic tool to disseminate MED 2050 results, through newsletters and thematic leaflets among other products.

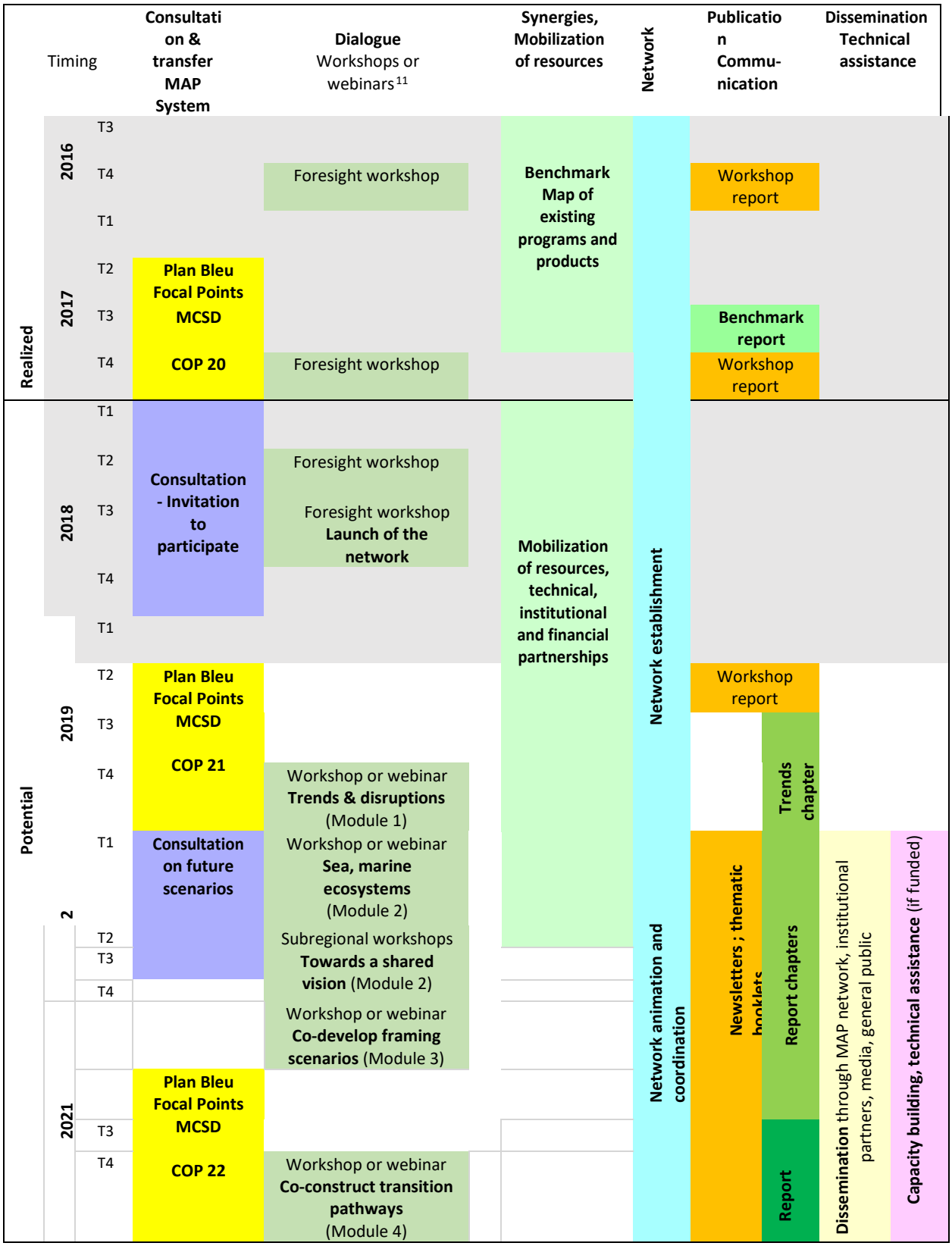
34. MED 2050 will thus contribute to the visibility of the MAP – Barcelona Convention system. Plan Bleu Focal Points (Marseille, France, 28-29 May 2019), and MCSD members (Budva, Montenegro, 11-13 June) emphasized the importance of developing communication products adapted to a wide audience, including youth.

35. Pending the identification of additional targeted funding, Plan Bleu could also support interested Contracting Parties in developing national or sub-regional MED 2050 declinations, by presenting MED 2050 results locally or providing technical assistance to integrate those results into foresight studies, strategies and action plans at the sub-regional, national and local levels. Plan Bleu could produce a methodological guide to share experience and good practices. The methodological approach, aiming to bring together Mediterranean initiatives, could be applied on different scales within the Mediterranean and beyond, and could attract and nurture initiatives in other regional seas.

Appendix 1: Proposed components for MED 2050



Appendix 2: Provisional timetable for MED 2050



[11] Subject to corresponding financial mobilization.

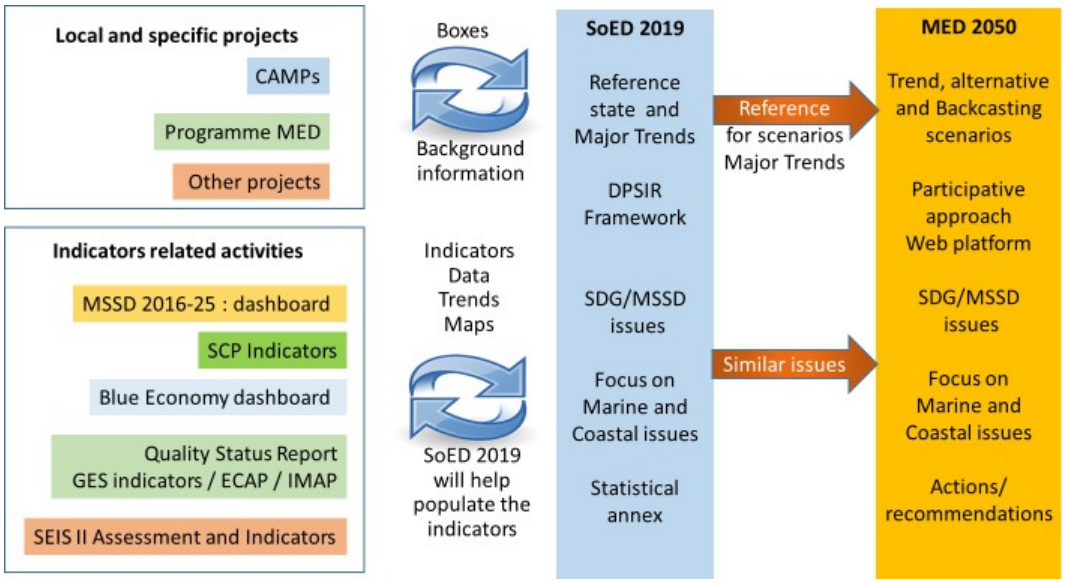
Appendix 3: Establishment of MED 2050 network

	Composition	Role	Frequency of meetings	Intervention stage
Plan Bleu team	MED 2050 team and MAP partners	MED 2050 **animation**	Regular	All along the project
Scientific committee	About 15 people Legitimacy Representativeness	**Scientific validation** MED 2050 « moral and scientific guarantee »	Twice (upstream of the project, and downstream for validation of work / results)	Upstream of Module 1 At the end of Module 4
Foresight group	15-20 people mobilized: Minimum 1/3 with foresight experience and 2/3 of thematic experts and other stakeholders, including PLAN BLEU and other RAC. Representativeness	**Production** role	Regular	All along the project Above all: Module 3 // framing scenarios
Specific workshops	« Decentralization » of the foresight group *(Composition : experts and representative groups → depending of financial means)*	Bring out contrasting visions Start from countries situations A focus workshop on the sea, if financial means	Workshops 2/3 days per sub-region or 2 times 2/3 days (Or contrasting visions of national experts, depending on the means)	Module 2 // contrasting visions
Expanded network	Informal network. Representativeness (countries, organisms)	**Exchange of information / consultation / resource center / ability to post documents / strategic watch**	Active continuously via the platform (to be developed on the new website) One-off consultations	One-off consultations // Module 2 All along the project and after (strategic watch // newsletters // thematic booklets // exchange of information)

Appendix 4: Modules, participation strategy and methodological elements

	Modules	**Who participates in this step?**	**Methodological elements**
1	**Trends – disruptions – weak signals**	RED 2019 team MedECC network **Post-doc, in partnership with LabexMed.** Plan Bleu team and MAP **Foresight group** Expanded network	**Post-doctorate**: trend analysis in connection with the PLAN BLEU team, and more qualitative work on disruptions and weak signals **Foresight group**: first meeting in November 2019 to work in groups on this module
2	**Contrasting visions**	Workgroups in **specific workshops (decentralized foresight groups)** *(ou just experts if lack of financial means)* Plan Bleu team and MAP partners **Expanded network**, especially by using a relay through partner network heads // one-off consultations	Hypothesis 1: **remote consultation of national and local experts and decision makers** to bring their visions of the future of the basin Hypothesis 2: **National and Subregional Workshops** Whatever the hypothesis adopted: **wider consultation** relayed by network heads, and, depending on the budget, specialized **workshop on sea foresight**
3	**Framing scenarios**	**Foresight group** Plan Bleu team and MAP partners Expanded network	The foresight group articulates results of Modules 1 and 2 in order to take into account the differences of points of view and aspirations, to build **several contrasted scenarios** and to retain the most realistic and desirable one
4	**Transition paths**	**Foresight group with increased participation of actors** (institutional, associations, civil society, donors) Plan Bleu team and MAP partners Expanded network	The foresight group and the actors participating in this module **prioritize obstacles, favorable factors, opportunities and risks to be overcome** in order to reach the shared objectives, and to **build concrete and realistic paths of transition** (including investments and critical policy measures)
All	**Dissemination of results and implementation**	**Plan Bleu team and MAP partners** **Foresight Group** **Expanded network**	Key role of **MED 2050 web platform** throughout the project: place of exchange, sharing of practices and experiences, information mutualization etc. One of the potential final outputs: methodological guide on setting up a participatory prospective exercise as MED 2050

Appendix 5: Synergies with other MAP initiatives and activities



Annex IV
Draft Roadmap for the Consultation of Decision-Makers and Stakeholders on the First Assessment Report on the Current State and Risks of Climate and Environmental Changes in the Mediterranean

Annex IV: Draft Roadmap for the Consultation of Decision-Makers and Stakeholders on the First Assessment Report on the Current State and Risks of Climate and Environmental Changes in the Mediterranean

Introduction

1. Mediterranean Experts on Climate and environmental Change" (MedECC, www.medecc.org) is a network of scientific experts aiming at gathering, updating and consolidating the best scientific knowledge about climate change in the Mediterranean basin and render it accessible to policymakers, key stakeholders and citizens. To date, MedECC counts more than 600 scientific members from 35 countries, including 19 Contracting Parties to the Barcelona Convention.
2. The MAP – Barcelona Convention Secretariat jointly supports MedECC with the Secretariat of the Union for the Mediterranean (UfMS) to contribute to well-established processes on assessment both at Mediterranean and global levels.
3. This Mediterranean initiative has an important role to play in the work of the Intergovernmental Panel on Climate Change (IPCC), as it contributes to the Sixth Assessment Report (AR6); the AR6 will include a cross-chapter paper dedicated for the first time to the Mediterranean, to be prepared under the leadership of one of MedECC coordinators, ensuring a strong synergy across assessment reports.
4. MAP's support to MedECC is in line with the following UNEP/MAP objectives:

- The UNEP/MAP Mid-Term Strategy (MTS) 2016-2021 identifies Climate Change Adaptation as one of its cross-cutting themes, setting the objective to better understand climate change impacts as a condition to strengthen resilience. To reach this objective, the MTS points out the necessity to strengthen the interface between science and policy-making through enhanced cooperation with scientific institutions (Key Output 1.4.4).
- Accordingly, the MAP Programme of Work and Budget for 2018-2019 includes the Activity 1.4.4.1 "Implement, sustain, and strengthen the mechanism to assist Barcelona Convention with scientific institutions".
- The Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025 identifies, under its Objective 4 "Addressing Climate Change as a Priority Issue for the Mediterranean", the establishment of "a regional science-policy interface mechanism (…) with a view to preparing consolidated regional scientific assessments and guidance on climate change trends, impacts and adaptation and mitigation options" as a regional Flagship Initiative.
- The Regional Climate Change Adaptation Framework for the Mediterranean also calls for "Better informed decision-making through research and scientific cooperation and availability and use of reliable data, information and tools" (Strategic Objective 4) through "Strengthening Science-policy interface and accessibility of related knowledge".

5. The Secretariat, through Plan Bleu Regional Activity Center, has supported the development of MedECC since its creation in 2015. The Secretariat participates in the MedECC Steering Committee, and the MedECC Scientific Secretariat is hosted by Plan Bleu in Marseille, France, and funded by the UfM through financial support from the Swedish International Development Cooperation Agency.
6. In 2016, MedECC launched, through a series of scoping and thematic workshops, the preparation of its first MedECC Assessment Report (MAR1) on current state and risks of climate and environmental change in the region.

7. In spring 2018, 160 scientists from 24 countries – including 15 Contracting Parties to the Barcelona Convention – applied to contribute on a voluntary basis to the preparation of MAR1. In March 2019, Coordinating lead authors met to ensure consistency, identify gaps and key messages, and work on chapters' executive summaries (Milan, Italy, 4-7 March 2019). In May 2019, the draft report went through a first internal review.
8. Upcoming steps include:
    - June-July 2019: Development of Second Order Draft (SOD)
    - August-October 2019: External Review of SOD by scientific experts (large call)
    - July-October 2019: Development of draft Summary for Policy-Makers (SPM)
    - October-December 2019: Development of Final Draft (FD)
    - January 2020: Review of FD and draft SPM by decision-makers and key stakeholders, including MAP Focal Points, MAP Components Focal Points, and MCSD Members;
    - February 2020: Finalization of First Assessment Report and its SPM for Plenary discussion, involving Plan Bleu Focal Points and the MCSD Steering Committee;
    - 2020: Plenary discussion on SPM, involving Plan Bleu Focal Points and the MCSD Steering Committee.

Proposed consultation process

9. The Meeting of Plan Bleu Focal Points (Marseille, France, 28-29 May 2019) highlighted the importance of MAR1 for all MAP policies, as climate change interacts with most themes of MAP interest. They recommended a broad consultation process of all MAP components and their Focal Points to be organized by the Secretariat (Plan Bleu) in collaboration with the MedECC Scientific Steering Committee and Secretariat.
10. Such consultation will also be coordinated with consultation through the UfM Climate Change and Environment Expert Groups.
11. A two steps process is proposed:

- MAP Components, their Focal Points and MCSD Members will be invited to participate in the review of the Final Draft and its Summary for Policy-Makers, tentatively planned in January 2020; and
- Plan Bleu Focal Points and the MCSD Steering Committee will be invited to a plenary discussion on the Summary for Policy-Makers in Spring 2020, pending confirmation of available budget. During the plenary discussion findings reported in the SPM will be discussed to ensure clarity and full justification.

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[50] TRWR per capita < 500 m3/inhab/year, Source: Plan Bleu calculations based on data from AQUASTAT, FAO, 2014

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[63] WHO Global Health Observatory, 2012

[64] WHO Global Health Observatory, 2012

[65] Mean annual concentration of fine suspended particles of less than 2.5 microns in diameters, Global Health Observatory data repository

[66] Evidence to be further substantiated.

[67] SOFI 2018

[68] To be further substantiated

[69] Becker et al. 2012

[70] IPCC Fifth Assessment Report (AR5) projects between 52 and 98 cm above present levels by 2100 (Church, J. A. et al. in Climate Change 2013: The Physical Science Basis (eds Stocker, T. F. et al.) Ch. 13 (IPCC, Cambridge Univ. Press, 2013)), and a semi-empirical model projects between 75 and 190 cm by 2100 (Vermeer, M. & Rahmstorf, S. Global sea level linked to global temperature. Proc. Natl Acad. Sci. USA 106, 21527–21532 (2009))

[71] Ramirez et al. 2018

[72] Satta et al., 2015

[73] MSSD is also built around a vision which consists in "*A prosperous and peaceful Mediterranean region in which people enjoy a high quality of life and where sustainable development takes place within the carrying capacity of healthy ecosystems*".

[74] Latest report on General Status of Progress in the Implementation of the Barcelona Convention and its Protocols (UNEP (DEPI)/MED IG.23/Inf.14)

[75] Algeria, Egypt, France, Israel, Morocco, Spain, Turkey.

[76] Algeria, Croatia, France, Israel, Malta, Montenegro, Spain.

[77] Spain, France, Italy, Algeria, Israel, Tunisia.

[78] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (linked to the Convention on Biological Diversity) (2014)

[79] Minamata Convention on Mercury (2017)

[80] UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (2001), and Protocol on Pollutant Release and Transfer Registers (PRTRs) (2009). The Aarhus Convention and its Protocol on PRTRs are the only legally binding global instruments on environmental democracy, empowering people with the rights to access information, participate in decision-making in environmental matters and to seek justice.

[81] Convention on Environmental Impact Assessment in a Transboundary Context (1997). The Espoo Convention sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries.

[82] Data from the World Bank

[83] Convention on Biological Diversity COP 5, CBD 2000

[84] Decision IG.17/6; 2008

[85] Global Reservoirs and Dams Database

[86] Safely managed = improved water source, located/accessible on premises, available when needed, and free from contamination (Source: WHO/UNICEF JMP for Water Supply, Sanitation and Hygiene, WDI)

[87] WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (2017)

[88] Unstats and WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, 2017

[89] Mediterranean countries excluding Turkey, Syrian Arab Republic, Palestine, Egypt, Libya and Algeria

[90] Mediterranean countries except Monaco, Montenegro and Syrian Arab Republic

[91] EEA, Quality of European bathing water in 2017

[92] REMPEC, 2014

[93] Verify if 2013.

[94] UNEP, 2019, Sand and sustainability: Finding new solutions for environmental governance of global sand resources. GRID-Geneva, United Nations Environment Programme, Geneva, Switzerland. See for example Box 2, p25.

[95] UNEP, 2017, The Status of climate change litigation: A global review

[96] Where 900 citizens sued the national government for its revision of GHG emission reduction goals constituting a violation of its constitutionally imposed duty of care.

[97] Examples, illustrations to be included.

[98] Prepared by REMPEC and two other studies commissioned by the European Commission and France.

[99] European Chemicals Agency, 1 February 2019, https://echa.europa.eu/fr/registration-statistics-infograph#

[100] Base Chemical Abstract Service, American Chemical Society.

[101] European Commission, in IPEMED 2019 Reuse of treated wastewater in the Mediterranean.

[102] Citizens' Network for the Observation of Marine Biodiversity

[103] Coralligenous based Indicators to evaluate and monitor the "Good Environmental Status" of the Mediterranean coastal waters

[104] Last amended in March 2019.

[105] Decrease of water pH due to the absorption of the CO_2 emitted by human activities.

[106] first sale value

[107] Natural sources of air pollution (desert dust and sea salt) are very active in SEMCs. Unfortunately, not much source apportionment studies were done in these countries. The WHO data base of sources apportionment studies indicates that more than 50% of PM10 and PM 2.5 are coming from natural resources, which is a very important issue when talking about air quality management and when dealing with perceptions that natural air pollution is not as poisonous as pollution coming from other sources.

Draft Decision IG.24/5

Common Regional Framework for Integrated Coastal Zone Management

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Having regard to the Protocol on Integrated Coastal Zone Management in the Mediterranean (2008), in particular Article 17 thereof, on Mediterranean Strategy for Integrated Coastal Zone Management,

Recalling Decision IG.22/11, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the Mid-term evaluation of the action plan for the implementation of the Integrated Coastal Zone Management Protocol for the Mediterranean (2012 - 2019),

Recalling also Decision IG.23/7, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017), on the implementation of the Integrated Coastal Zone Management Protocol: annotated structure of the common regional framework for integrated coastal zone management and conceptual framework for marine spatial planning,

Recalling the mandate of PAP/RAC within the MAP-Barcelona Convention system and its relevance to the implementation of this Decision,

Committed to strengthening cooperation for the promotion of sustainable development and integrated management of coastal zones, by ensuring that activities on the marine and land parts of coastal zones are compatible and mutually supportive, thus respecting the ecosystem integrity and achieving or maintaining Good Environmental Status (GES),

Acknowledging the efforts made insofar by the Contracting Parties to facilitate the coordinated planning and management of the marine and land parts of coastal zones, as defined by the Article 3 of the Integrated Coastal Zone Management Protocol,

Bearing in mind that the purpose of the Common Regional Framework for Integrated Coastal Zone Management is to provide guidance to the Contracting Parties for the coordinated and enhanced implementation of the Integrated Coastal Zone Management without expanding the legal obligations under the Integrated Coastal Zone Management Protocol and as a tool for its implementation,

Having considered the conclusions of the Meeting of the PAP/RAC Focal Points, held in Split, Croatia, on 8-9 May 2019,

Adopt the Common Regional Framework for Integrated Coastal Zone Management, set out in Annex to the present decision, as a guiding document to facilitate the implementation of the Integrated Coastal Zone Management Protocol;

Recognize the living nature of the Appendix to the Common Regional Framework for Integrated Coastal Zone Management and the need to keep it under review;

Request the Secretariat (Priority Actions Programme Regional Activity Centre) to continue refining the Appendix to the Common Regional Framework for Integrated Coastal Zone Management;

Urge the Contracting Parties that have not yet done so, to ratify the Integrated Coastal Zone Management Protocol as early as possible with the view to ensuring its entry into force for the entire Mediterranean region;

Urge the Contracting Parties to continue their work in developing or updating their National Integrated Coastal Zone Management/Coastal Strategies in accordance with the provisions of the Integrated Coastal Zone Management Protocol and by using the Common Regional Framework for Integrated Coastal Zone Management as a guiding tool;

Urge the Contracting Parties to support and proceed with the introduction and implementation of Marine Spatial Planning tools in line with the ICZM Common Regional Framework and undertake to exchange best practices in the region.

Annex

Common Regional Framework for Integrated Coastal Zone Management

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Common Regional Framework for Integrated Coastal Zone Management

Introduction (Artt 1, 17 and 18)

The ultimate objective of the Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol) is to contribute to the vision for the Mediterranean Sea and coast as: "A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse, contributing to sustainable development for the benefit of present and future generations". (UNEP/MAP Mid-Term Strategy 2016-2021).

As for Article 1 of the ICZM Protocol, the Contracting Parties (CPs) to the Barcelona Convention "shall establish a common framework for the integrated management of the Mediterranean coastal zone and take the necessary measures to strengthen regional cooperation for this purpose" to be implemented with the assistance of UNEP/MAP and its Components, and the overall coordination ensured by PAP/RAC.

Article 17 of the ICZM Protocol on Mediterranean strategy for integrated coastal zone management, states that the CPs "undertake to cooperate for the promotion of sustainable development and integrated management of coastal zones, taking into account the Mediterranean Strategy for Sustainable Development and complementing it where necessary. To this end, the Parties shall define, with the assistance of the Centre, a common regional framework for integrated coastal zone management in the Mediterranean to be implemented by means of appropriate regional action plans and other operational instruments, as well as their national strategies".

Article 18, provides that "each Party shall further strengthen or formulate a national strategy for integrated coastal zone management and coastal implementation plans and programmes consistent with the common regional framework".

This Common Regional Framework (CRF) is to be considered as the strategic instrument meant to facilitate the implementation of the ICZM Protocol. It shall operate without prejudice to the ICZM Protocol, the provisions of which shall always prevail.

Scope of the CRF (Artt. 3 and 8)

The combined Art. 4 of the Barcelona Convention and Artt. 3 and 28 of the ICZM Protocol identify the geographical scope and scale of the CRF inviting CPs, individually or jointly, to take for the Mediterranean Sea area – as defined in Art. 1 of the Barcelona Convention within the geographical coverage as defined by ICZM Protocol – all appropriate measures to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and to protect and enhance the marine environment and the natural resources in that Area so as to contribute towards its sustainable development and, in particular, to promote the integrated management of coastal zones, taking into account the protection of areas of ecological and landscape interest and the rational use of natural resources, coordinating, where appropriate, bilaterally or multilaterally their national coastal strategies, plans and programmes related to contiguous coastal zones.

ICZM needs to be approached at different geographic scales and administrative levels: at the Mediterranean scale addressing the entire sea basin through cooperation among all riparian states; at the sub-regional scale – where relevant and possible – addressing transboundary issues in sub-regions as defined for the purpose of the Ecosystem Approach (EcAp) roadmap implementation, and seeking synergies with other existing sub-regional strategies and plans; at the national and sub-national (local) scale in line with the regionally agreed principles.

The CRF provides strategic orientations on how the ICZM Protocol is jointly implemented within the geographical coverage between the external limit of the territorial sea of the CPs and the limit of the competent coastal units as defined by the CPS, using coordinated and harmonized approaches.

ICZM is also an essential tool to fulfil the purposes of the Barcelona Convention within the Mediterranean Sea Area as it provides a commonly shared context with specific recommendations focusing on: (a) coherence of policies/strategic documents and orientation of actions; and (b) ways to strengthen integration and regional/sub-regional cooperation, taking also into consideration the land-sea interactions and the transboundary aspects.

The CRF is aimed to provide recommendations and measures to strengthen regional cooperation for:

Processes: to accelerate achievement of results agreed and outcomes/outputs set out;

Indicators: essential tools for tracking progress, supporting policy evaluation and informing the public and decision makers;

Methods and practices: to achieve objectives and the general principles of the ICZM Protocol.

In addition, the 20th Meeting of the Contracting Parties to the Barcelona Convention (COP 20, Tirana, Albania, 2017) adopted the decision IG.23/7 that envisages the introduction of Marine Spatial Planning (MSP) into the system of the Barcelona Convention and its Protocols, implying the development, through this CRF, of appropriate means to include MSP in the implementation of the ICZM Protocol. In that respect, the CRF has two main objectives:

to introduce MSP in the framework of the Barcelona Convention, and in particular link it to ICZM, considering MSP as the main tool/process for the implementation of ICZM in the marine part of the coastal zone and specifically for planning and managing maritime human activities according to EcAp goals (as specifically addressed by section 3 of the CF);

to provide a common context to CPs for the implementation of MSP in the Mediterranean Region.

Objectives and General Principles of the CRF (Artt. 5-7, 18, 19, 22, 28 and 29)

In order to promote ICZM through the CRF and achieve sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development, the following objectives with related general principles are to be envisaged:

a) Use **the ecosystem-based management** to ensure **sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes,** by**:**

taking into account in an integrated manner all coastal zone elements to respect carrying capacity, address cumulative impacts and prevent and/or reduce negative effects of natural disasters or risks and of development;

taking into account land-sea interactions as a complex phenomenon involving the interactions of both, natural processes and human activities, as a criterion for defining areas to be managed and as a parameter in planning processes and procedures;

formulating appropriate land/sea use strategies, plans and programmes for activities in the coastal zone, also through appropriate tools, in particular Marine Spatial Planning (MSP) and Strategic Environmental Assessment (SEA);

promoting cooperation between and among CPs in Environmental Impact Assessment (EIA) procedures related to activities under their jurisdiction or control, which are likely to have a significant adverse effect on the marine and coastal environment of other CPs or

areas beyond the geographical scope of the ICZM Protocol, on the basis of notification, exchange of information and consultation.

Address **natural hazards** and the **effects of natural disasters**, in particular **coastal erosion** and **climate change** by:

taking into account the commitments to the Paris agreement on climate change, the 2030 Agenda for Sustainable Development to build climate change resilience and the Strategic Programme of the Convention on Biological Diversity (CBD);

preparing timely management plans to prevent, reduce and minimize negative impacts to coastal zones;

promoting ecosystem approach and /nature-based solutions to maintain or restore the natural capacity of the coast to adapt to changes;

assisting in mainstreaming coastal adaptation into appropriate institutional and policy frameworks;

participating in awareness raising, stakeholder engagement and capacity building for addressing coastal risks;

promoting the use of best practices and best available data, information and tools.

Achieve **good governance** among actors involved in and/or related to coastal zones by:

ensuring appropriate governance schemes, in particular cross-sectorial and multi-level institutional coordination and proper participation of all stakeholders in a transparent decision-making process;

ensuring coherence and complementarity of all strategies, policies, plans, initiatives, planning processes and funding at all levels affecting coastal zones: to this end, further strengthening cooperation among components of the Barcelona Convention system and coordinated efforts, ensuring synergies with other related strategic documents and promoting integration and harmony among coastal environment, relevant socio-economic activities and human communities living in the coastal zones;

promoting appropriate coordination between the various authorities competent for both the marine and the land parts of coastal zones in the different administrative services, at all relevant levels;

organising the acquisition, exchange and use of the best available relevant information and data based in particular on Shared Environmental Information System (SEIS) principles;

promoting consistency and coherence of ICZM at regional and sub-regional level ensuring trans-boundary cooperation where appropriate;

ensuring cooperation with all relevant/competent international and regional organizations.

Ecosystem-based Management for Good Environmental Status and Sustainable Development (Artt. 8-15 and 22-24)

The essence of the ecosystem-based management approach is to address the coastal zone as a continuum made of land and sea space, preserving the integrity of its ecosystems and dealing with the processes that occur in them and influence on them in an integrated manner (Fig. 1). This approach aims at ensuring sustainable use of natural resources and quality of life of coastal populations. Ecosystem-based management is inherently based on an integrated approach where the focus is on the ability to understand and address cumulative risks and effects on the natural world arising from human activities.

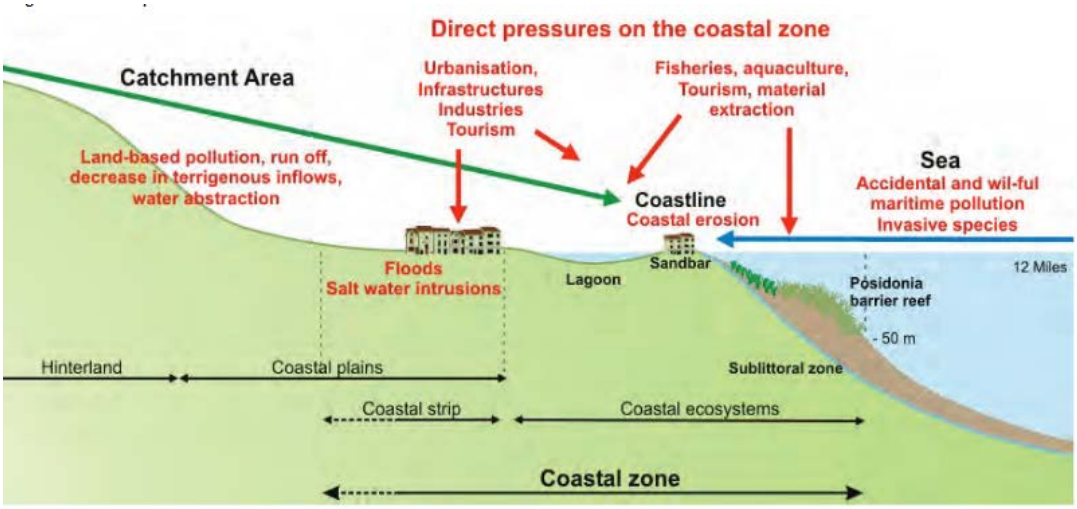

Figure 1: Pressures on the coastal zone (Source: Plan Bleu, 1995)

ICZM has evolved as the most appropriate approach to manage potential conflicts among various sectoral policies (conflicts for space, resources, infrastructures…), as well as between maritime and terrestrial policies by ensuring the integration dimension and the coherent governance of planning and management of the coastal zones and their activities on either land or sea parts. It provides for better coherence, maximizes synergies and increases coordinated implementation of sectoral policies with a view to ensuring the integrity of ecosystems, as well as adequately addressing land-sea interactions (LSI) and ensuring the compatibility of land and sea uses by implementing MSP and clarifying its links with ICZM.

Applying ICZM principles also allows for the integration of environmental protection into spatial planning and economic development i.e. the integration of policies and establishment of frameworks for cooperation among all concerned stakeholders. Their active participation, raised awareness and sufficient capacity are the best guarantees of the needed change of behaviour towards environment: by acting on the source of pollution through the application of the prevention and precautionary principles it is possible to cope with the pollution before it happens, this being the crucial dimension for attaining sustainability. These challenges should be handled by applying the integrated approach to the management of coastal zones that helps control urbanization; preserve the integrity of coastal and marine ecosystems; and guide towards a sustainable use of natural and cultural resources.

IV.1 Reaching Good Environmental Status through ICZM (Artt. 5 and 6)

The objective of reaching Good Environmental Status (GES) of the Mediterranean Sea and Coast has been adopted by UNEP/MAP Barcelona Convention as the ultimate objective to be reached by CPs, which have committed to apply the Ecosystem Approach (EcAp) as an overarching principle.
EcAp can be defined as a holistic approach to land, water and living resources targeting sustainable delivery of ecosystem services in an equitable way. It goes beyond examining single issues, species, or ecosystem functions in isolation. Instead, it recognizes ecological systems for what they are: rich mixes of elements that interact with each other continuously. This is particularly important for coasts and seas, where the nature of water keeps systems and functions highly connected.

Therefore, achieving Ecological Objectives (EOs) and GES requires an integrated approach in order to address combined pressures and cumulative impacts in coastal and marine areas. This approach is actually embedded in the ICZM Protocol, which provides for reaching GES with regard to the targets of all three clusters of EOs: Pollution and eutrophication; Biodiversity and fisheries; and Coast and hydrography. These are all crucial for achieving GES, and tools used by ICZM contribute to a more comprehensive approach looking at the integrity of coastal ecosystems.

Based on the Matrix of interactions between the ICZM Protocol provisions of parts II and IV, EOs and main regional strategic and policy documents contained in Annex I.2 of the Decision IG.23/7 adopted by COP 20, a methodological guidance for reaching GES through ICZM has been proposed in Appendix.

IV.2 Addressing Land-Sea Interactions (Artt. 3, 5, 6, 9 and 22)

Understanding and addressing land-sea interactions (LSI) is crucial to ensure sustainable management and development of coastal areas and coherent planning of land and sea-based activities. Although there is not a single and recognized definition of LSI, they can be defined as "interactions in which land-based natural phenomena or human activities have an influence or an impact on the marine environment, resources and activities and *vice versa* interactions in which marine natural phenomena or human activities have an influence or an impact on the terrestrial environment, resources and activities". As a consequence of the above definition, three main levels of LSI should be taken on board:

Interactions related to land-sea natural processes. Implication of such processes on coastal management and planning of alternatives for land and marine activities have to be identified and assessed, considering their dynamic nature. At the same time, human activities can interfere with natural processes, impacting on the coastal and marine environment. The analysis of expected impacts of land and marine activities – within the SEA framework – should include the evaluation of their effects on LSI natural processes and the potential consequent impacts on natural resources and ecosystem services.

Interactions among land and sea uses and activities. Almost all maritime uses need support installations on land, while several uses existing mostly on the land part expand their activities to the sea as well. These interactions have to be identified and mapped, assessing their cumulative impacts, benefits and potential conflicts and synergies. Interactions between land and sea activities can extend further beyond the coastal zones, for example in terms of long-distance connections related to transport and energy distribution or fish migration up-stream and stemming need for blue corridors. Although the primary focus is on costs, identification and mapping of those wider connections and assessment of their environmental, social, economic and spatial implications are also important. It is important to note that the Art.9 of the ICZM Protocol requires that CPs "shall accord specific attention to economic activities that require immediate proximity to the sea". This is also one of the general principles of ICZM (Art.6 para g).

Interactions of planning processes and plans for land and sea areas. It is important to ensure that legal, administrative, consultation and technical processes are coordinated (and hopefully linked) to avoid unnecessary duplications, incoherence, conflicts, waste of resources and/or excessive demand of stakeholders' efforts. The challenge is to plan and manage inshore and offshore activities in harmonized manner considering the functional integrity of the land-sea continuum. This also implies allocation of land space (and related infrastructure and services) to some maritime activities (and/or the allocation of maritime space to some land-based activities). Finally, the achievement of this coherence also requires alignment/integration of the different approaches, methodologies and tools applied respectively on land and at sea (Fig. 2).

LSI need to be addressed at a variety of spatial scales: (i) local scale to deal with specific issues and implement related actions, (ii) sub-national and national scales where strategies and plans can orientate specific LSI-related efforts, (iii) sub-regional where transnational cooperation may produce a common strategy for guiding national LSI efforts and address transboundary issues.

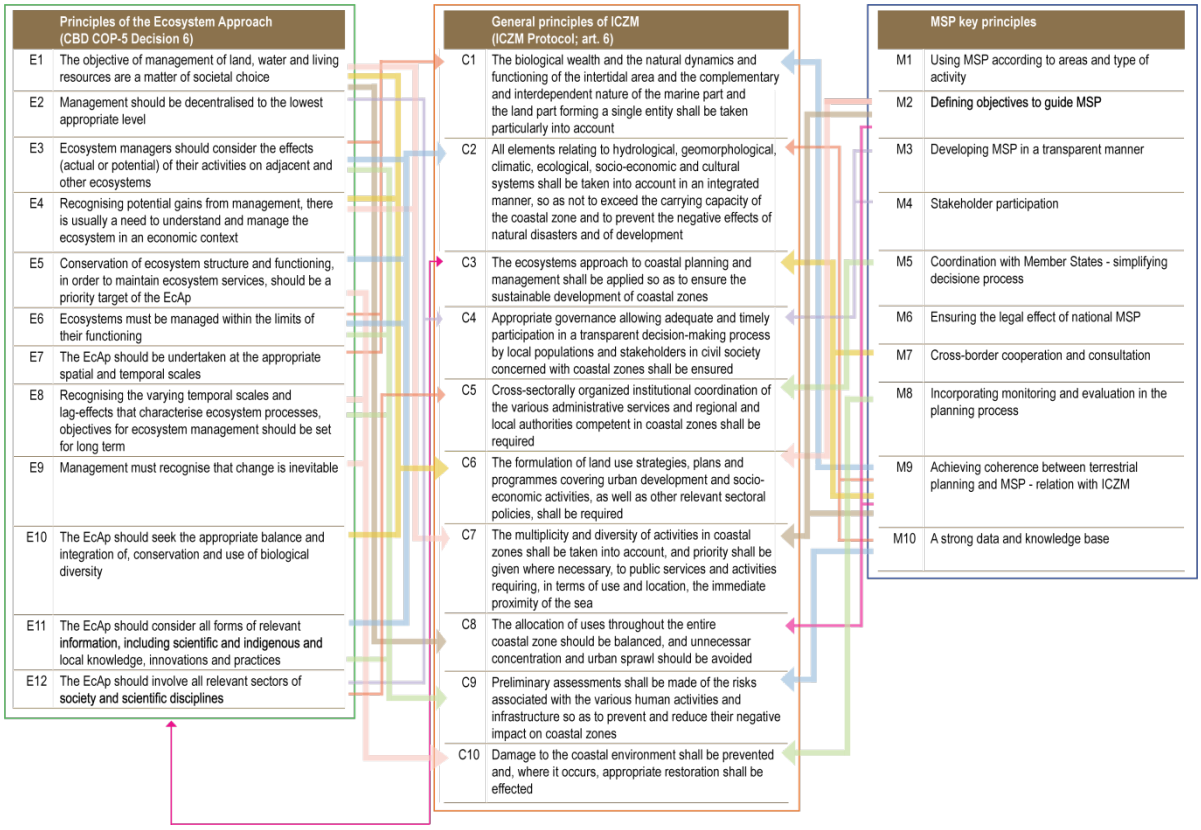

Figure 2: Links between EcAp, MSP and ICZM principles

Natural risks and hazards, in particular climate change and coastal erosion, will influence on all three levels of LSI previously defined. The coastal zone is actually on the frontline for these climate challenges. Land-sea natural processes cannot be taken into consideration separately from the changes induced by humans in the nature. Sea level rise, extreme weather events and storm surges are expected to generate additional pressures resulting in alternation of the shoreline and increase of coastal erosion. Sea level rise will also impact the underground as it will amplify the salinization of coastal aquifers due to water extraction and other human activities. The increase of temperature will impact on both, terrestrial and marine ecosystems. Climate change impacts will also affect land and sea activities, for example aggravation of water conditions for tourism. Therefore, planning processes and plans for LSI should necessarily take into account expected climate change by adapting to the increase of uncertainty and to the higher likelihood of natural hazards and risks.

Tools and Instruments to Implement the CRF (Artt. 16-22)

ICZM is a long-term strategic process that implies the availability and proper use of a variety of operational tools and instruments to ensure sustainable use and management of coastal zones, ensuring that needs for human settlement and economic activities minimise the impacts on the natural resources and protect the fragile natural habitats, ecosystems, landscapes and cultural heritage from pollution and other types of degradation including those caused by natural risks and hazards. This refers primarily to the tools and instruments quoted in the ICZM Protocol itself, many of which already have certain “history and tradition” of use by the CPs, while others still need to be developed, explained, tested and verified.

Some of these tools and instruments are of major importance for implementing the ICZM Protocol but also for implementing other important policies and strategies in the Mediterranean coastal zones, in

particular those adopted at the sub-regional level. Among these instruments, the following ones are of particular importance and relevance for the implementation of the CRF:

V.1 Monitoring of environment and activities (Artt. 8-21 and 25-29)

There is a need to monitor in a consistent way the environment of the coastal zone (both terrestrial and marine) *and* the human activities (coastal or not) that are likely to have an impact on it (individually or cumulatively):

- monitoring of marine *environment* should be based on the Integrated Monitoring and Assessment Programme (IMAP)[1];
- monitoring of terrestrial environment should be based on the best available experiences in implementing national monitoring programmes of the status of coastal environment (terrestrial biodiversity, coastal waters, air, soil), that is aligned with relevant UN MEAs, and where appropriate, EEA's requirement, including Directives of European Commission (e.g. Habitat and Bird Directives, Water Framework Directive, etc.)
- monitoring of marine and terrestrial environment should take into account the assessment of anthropogenic pressures (both at source and at sea) of human activities (land and maritime coastal activities) and their impacts that prevent the achievement of good environmental status (GES) of marine environment and environmental protection of terrestrial environment. Management of human activities aimed at reduction of the pressures, including their impacts on landscapes, cultural values, social patterns, has to be based on information collected through monitoring of marine and terrestrial environment, and their assessment as appropriate, including binding implementation of the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA);
- monitoring information should be accessible to all relevant stakeholders.

To this aim and according to Artt. 8-21 and Artt.25-29 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

- *Use, strengthen and create appropriate mechanisms for regular monitoring and observation of the state and evolution of their coastal zones and the resources and activities they encompass;*
- *Establish or enhance their governance systems, institutions, legislation and planning that may influence coastal zones, taking all necessary means to ensure public access to information;*
- *Cooperate on definition and use of coastal management, resource use and economic activities indicators, taking into account existing ones, to ensure sustainable use of coastal zones and to reduce pressures that exceed their carrying capacity;*
- *Implement appropriate assessments on the use and management of coastal zones and ensure the results are utilized for formulation of adequate policy responses;*

[1] Monitoring and assessment of the sea and coast, based on scientific knowledge, are the indispensable basis for the management of human activities, in view of promoting the sustainable use of the seas and coasts and conserving marine ecosystems and their sustainable development. COP 19 in 2016 agreed on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) in its Decision IG. 22/7 which lays down the principles for an integrated monitoring, which will, for the first time, monitor biodiversity and non-indigenous species, pollution and marine litter, coast and hydrography in an integrated manner. The IMAP implementation is in line with Art. 12 of the Barcelona Convention and several monitoring related provisions under different protocols with the main objective to assess GES. Its backbone are the 27 common indicators as presented in decision IG 22/7: Integrated Monitoring and Assessment Programme.

Exchange scientific and technical information and experience, data and good practices, enhance provision of scientific and technical assistance through, inter alia, training of scientific, technical and administrative personnel, coordination of research programmes and carrying out of activities of common interest (such as ICZM demonstration projects), within the Mediterranean coastal zone network;

Exchange available results and experiences in implementation of the integrated monitoring and assessment programmes of marine environment with other Regional Seas Conventions and the EEA and ensure exchanges with the European Commission/EU Member States on implementation of the MSFD, MSP and other relevant EU Directives.

V.2 Environmental Assessments (Artt. 19 and 29)

Environmental assessment i.e. SEA at strategic level for policies, plans and programmes, and EIA at operational level for individual projects and activities, are the frontline tools for the achievement of GES and sustainable development.

The contribution that EIA makes to the development of decision-making is widely acknowledged, and practically all of the Mediterranean countries apply this tool to large-scale development proposals. Scope for further progress exists, particularly in relation to the impact of climate change. Compared to EIA, SEA is still less developed and used although its importance in seeking to achieve better environmental quality through higher decision-making level for policies, strategies, plans and programmes is recognised by all the riparian countries. However, since SEA takes multiple forms and employs diverse methods and procedures, sometimes without an adequate legal framework and institutional set-up, difficulties still arise, particularly for comparability in a transboundary context.

The application of EIA and SEA supports the implementation of ICZM principles (Art. 6 of the ICZM Protocol) including the need to take into account all elements of natural and cultural systems in an integrated manner; the application of the ecosystems approach to spatial planning, preparation of policies and strategies; the timely participation in decision making and ensuring that economic activities minimise the use of natural resources and take into account the needs of future generations. SEA can be introduced through ICZM as an important integral part of the spatial planning process, providing a mechanism for the strategic consideration of environmental effects, assessment of different planning options, and identification and evaluation of mitigation measures, thus ensuring the environmental sustainability.

Through the SEA process plans and policies addressing the coastal zone, whether geographically (e.g. coastal strategies) or thematically (e.g. plans for aquaculture development, tourism), can assist in creating a policy framework that steers development to more appropriate locations. Similarly to EIA, SEA is also an instrument that supports transparency and accountability as it provides an opportunity for the public to participate in the process and be aware of the decisions taken concerning the approved plans and policies.

Both environmental assessment processes seek to identify alternative options and the consideration of cumulative impacts, encouraging policy makers and decision takers to look at different policy and technological options and reflect on future scenarios that may result from approved plans and projects. The management of coastal zones is dependent on the application of similar long-term approaches in order to safeguard healthy ecosystems particularly within a changing climate.

Within a transboundary context, the application of SEA and EIA helps to foster co-operation between neighbouring States as both processes allow for consultations to be carried out when potential significant issues of a transboundary nature are identified through the evaluation process. As a result, whilst respecting national jurisdiction, the SEA and EIA can assist in fostering co-operation so that national plans and policies and projects undertaken have a higher potential to contribute towards regional efforts at safeguarding the Mediterranean.

For these tools to support ICZM it would be ideal to maintain a database of assessments undertaken and reports prepared with a view to monitor the type and degree of development related pressures on the coast; inform new environmental assessments to prevent duplication of efforts particularly where data is already available; and support other initiatives particularly EcAp implementation through the data collected and decisions taken. Such databases may be available at national and regional level, to enhance knowledge at the regional and facilitate transboundary co-operation. No new data bases should be created; instead, the existing ones are to be enhanced owing to close cooperation and contribution of all MAP Components.

In the context of the CRF, the following needs to be stressed:

SEA forms an important part of the EcAp implementation;

A transboundary SEA process, including transboundary consultation, should be activated, when appropriate, when a policy, strategy, plan or programme is expected to have significant transboundary environmental effects;[2]

SEA and EIA should assess impact on both land and sea, consider also mutual impacts of maritime activities on land and terrestrial activities on sea, based on most relevant LSI identified;

SEA should take into account new and emerging issues in particular climate change and its impacts.

To this aim and according to Artt. 19 and 29 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

Implement environmental assessments, taking into considerations cumulative impacts on the *coastal zones and their carrying capacity. These may be based on the use of EcAp EOs and related indicators, as described in the methodology recently developed and tested by PAP/RAC[3]: by using EcAp indicators, the methodology enables assessing the value of marine and coastal natural environment as well as the level of the existing pressures on it. In addition, the methodology allows to identify spatial impacts of those pressures. It also enables the identification of the level of vulnerability of marine and coastal environment to the future (planned) activities by looking at the existing pressures, the extent of expected change and the capacity of the environment to adapt to the change. Such an approach enables identifying most fragile and valuable areas that need to be preserved from future degradation and, therefore, the locations where activities need to be planned carefully. This methodology is presented here as an example and its possible application cannot replace or impact the existing national SEA and EIA processes.*

Take on board LSI in environmental assessments (including the transboundary ones), in particular interactions and impacts that can alter the equilibrium of marine and terrestrial areas due to natural processes (such as coastal erosion, flooding, seismic events, saline intrusion…) as well as mutual impacts of maritime activities on land and

[2] As an example of good practice in transboundary cooperation between neighboring countries, carrying out a SEA of the Framework Plan and Program (FPP) for Exploration and Exploitation of Hydrocarbons in the Adriatic Sea is worth mentioning. The said FPP was developed in order to keep precise track of hydrocarbons exploration and exploitation activities, permit issuing, contract awarding, investor liabilities, imposition of charges and penalties as well as to keep track of the hydrocarbon reserve in the subsoil of the Adriatic Sea. It was produced by Croatian Hydrocarbon Agency together with the accompanying environmental report and, in accordance with the UN/ECE Espoo Convention and the Protocol on SEA to the 1991 UN/ECE Espoo Convention, competent authorities of the Italy, Montenegro and Slovenia were notified of the SEA process, the FPP and accompanying environmental report. In the process of transboundary SEA, Italy, Montenegro and Slovenia forwarded their opinions on both documents, which were amended accordingly.

[3] The methodology was tested in Bokakotorska Bay, Montenegro (http://msp-platform.eu/practices/ecap-base-marine-vulnerability-assessment-basis-msp-montenegro).

terrestrial activities on sea that can alter the environmental stability and decrease the resilience of natural systems. Such interactions between land and sea might therefore involve complex interactions among environmental, social, economic and governance elements. Assessing such interactions should be done in the appropriate geographical scope, taking into considerations temporal dynamic of interactions as well.

Acknowledging the complexity of the environmental assessment processes, in particular in transboundary context, adopt as means of cooperation guidelines on the procedures for notification, exchange of information and consultation at all stages, as appropriate, to be developed with the assistance of the Coordinating Unit (CU) and its Components. These guidelines should address the abovementioned issues (GES and related targets, LSI aspects including coastal erosion, cumulative impact and vulnerability assessment, carrying capacity) as well as issues such as climate change effects, life cycle analysis, etc.

V.3 Coordination of planning processes and governance mechanisms (Artt. 6, 7, 14, 20, 28 and 29)

The establishment and smooth functioning of a multi-level governance mechanism is fundamental for achieving complex and ambitious goals of ICZM as it sets the scene for efficient management and cooperation. Success will depend on mutual feeding between international- and national-level cooperation frames as well as forging partnerships and linking local-scale initiatives to higher-level policies. Achieving a balance between strategic and local concerns is perhaps one of the most difficult issues in coastal zone management. Finally, a new challenge for all planning initiatives is to adapt to the new, considerably higher level of uncertainties brought by natural hazards, in particular climate change impacts on coastal zones.

To achieve the objectives of ICZM and facilitate integration through effective planning, there is a need for cross-sectorally organised institutional coordination of the various administrative authorities competent in coastal zones, covering both the marine and the land parts. There is also a need to put in place appropriate governance schemes allowing adequate and timely participation in transparent decision-making of local populations and stakeholders concerned.

To this aim and according to Artt. 6d-e, 7, 14, 20, 28 & 29 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

Establish administrative schemes and processes facilitating horizontal (sectoral) and vertical (among different geographic scales and administrative levels) coordination of the ICZM implementation (such as intersectoral coordination bodies, joint working and training groups, etc.), adopt legal forms of promotion/setting out of such processes such as regulations and decrees at the national level or memoranda of agreement at the regional or sub-regional levels, participate in networking for ICZM in order to create the critical mass of people, experience and knowledge for its efficient implementation;

Ensure the introduction and use of appropriate land policy tools in the process of coastal zone planning;

Coordinate as appropriate, national coastal strategies, plans and programmes related to contiguous coastal zones;

Ensure notification, exchange of information and consultation in cases of environmental assessments with transboundary implications, including transboundary environmental assessment, as appropriate;

Ensure stakeholder engagement early in the planning process.

V.4 Marine Spatial Planning (Artt. 3, 5, 6, 10 and 11)

Spatial planning of the coastal zone is considered an essential instrument of the implementation of the ICZM Protocol. One of the main objective of ICZM is to "facilitate, through the rational planning of activities, the sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development" (Art. 5). Planning is recalled also in other articles of the ICZM Protocol, as in the case articles dealing with the protection of wetlands, estuaries and marine habitats (Art. 10) or the protection of coastal landscape (Art. 11).

Although MSP is not expressly mentioned in the ICZM Protocol, the geographical scope of the Protocol and the definition of the coastal zone given in its Art. 3 include both the land and the sea. It follows that planning should be equally applied to both components and that planning of marine space is already taken on board.

MSP is a cross-sectoral coordination and decision-making tool enabling public authorities and stakeholders to apply an integrated, policy-based, transboundary approach to the ecosystem-based regulation, management and protection of marine environment, considering the competition in seas for maritime transportation, oil and gas development, offshore renewable energy, offshore aquaculture, oil and gas mining, fisheries, sand and gravel mining, tourism and recreation, waste disposal and the other issues like marine conservation and military defense issues; and to analyze and allocate the spatial and temporal distribution of human activities in marine areas for achieving ecological, economic and social objectives that have been specified through both technical and political process.

Environmental aspects of MSP focus on the effective resolution of conflicts between maritime uses and preservation of the marine environment. The implementation of MSP by countries provides an opportunity to develop maritime sectors and use ecosystem functions and resources in a sustainable way. Therefore, environmental objectives of MSP can be generally summarized as:

- achieving sustainable use of ecosystem services and ensuring maintenance of ecosystem integrity;
- ensuring timely identification and reduction of cumulative effects of human activities on marine ecosystems;
- allowing conservation and sustainable management of marine environment including the identification and conservation of ecologically or biologically significant marine areas;
- integrating biodiversity objectives into planning process and allocating space for biodiversity and nature conservation;
- developing adequate planning approaches for marine protected areas.

Economic aspects of MSP cover goals and objectives that contribute to the economic return obtained from the use of the marine resources and can be formulated as:

- ensuring sustainable growth of different maritime activities with affecting income and employment;
- ensuring secure environment for long-term investments;
- promoting efficient use of natural resources and reduction of conflicts among incompatible uses and between nature and uses, such as fisheries' relation with nature and, therefore, secure the long-term future of the industries that depend on them;
- ensuring maximum benefits derived from the use of the sea by encouraging compatible uses to be located within the same area and bring the most value;
- enhanced coherence with other planning systems;

leading to reduced transaction costs for maritime activities.

Socio-spatial aspects of MSP process are also important. The social and cultural dimension of MSP cover goals and objectives that contribute to the well-being of the human population and ensure balanced socio-economic development in marine environment, such as objectives related to:

- supporting the environmental economy through promoting activities that depend on environmental quality such as recreation, fishing and tourism opportunities (diving, wildlife tourism, etc.);
- improving stakeholder involvement and citizen participation in the planning process by establishing a transparent and structured mechanism in which the interests of different sectors can be represented and reconciled and potential conflicts and spatial impacts managed in a coordinated way;
- enhanced legal certainty for all stakeholders in the maritime arena;
- enhanced coordination and simplified decision processes;
- enhanced cross border cooperation, as appropriate;
- preservation of cultural and historical heritage;
- identification and preservation of social and intangible values specific to the region in terms of marine area usage;
- allocation of space for different uses through a comprehensive analysis, thus increasing security for business operations in the marine environment.

Also, MSP is considered as one of the tools to implement the EcAp as a strategic approach towards sustainable development in the region that integrates all of its three components (environmental, social and economic) and guarantee that they are in balance. The relationship between EcAp and MSP is a two-way relation, as the second can contribute to the overall objective of achieving the GES, also through the identification of the appropriate location and intensity of maritime activities and strengthen the related regulatory framework.

The marine component of the coastal zone has traditionally not been affected by the same quantity and variety of pressures as the terrestrial part, with the result that for many years the management tools adopted have been sectoral ones mainly addressing transport, fisheries, infrastructure and environment protection. As a result, in coastal areas where spatial planning has been limited to the landward side, synergies in governance with a view to reduce environmental impacts and user conflicts at sea and along the lands and sea interface continue to be a challenge. Within this framework, MSP based on ecosystem-approach focuses on the sea part where the boundaries are defined according to ecologically significant areas, and it provides integration with the terrestrial part covering coastal area and its hinterland. Where spatial planning is extended to include the sea, regulatory procedures have improved co-ordination amongst the different regulators and also supported the application of tools such as environmental assessments. Measures taken through MSP for data collection and management, environmental monitoring, plan making, policy formulation, decision taking and enforcement, enhance the potential for considering land and sea interactions within an integrated approach, within a given territory.

The context of the specific coastal zone, in terms of existing regulatory frameworks, existing and predicted levels of pressures from human activities and the environmental characteristics usually guide how MSP is introduced. Different options exist where MSP can either be developed as a stand-alone discipline or as an extension to an existing regulatory mechanism ranging from land-use planning, environmental protection, fisheries management or transport management. The ultimate decision should ideally be guided by the aspiration to achieve the strongest co-ordination framework at a national level as possible, to achieve the objectives of the ICZM Protocol.

In this perspective MSP can be considered the main tool/process for the implementation of ICZM in the marine part of the coastal zone and specifically for its sustainable planning and management. Art. 3 of the ICZM Protocol also defines the geographic scope of the operational application of MSP that shall focus on the marine area within the territorial sea of a country. Requirement to take land-sea interactions into account is specified in Art. 6.

To this aim and according to Artt. 3 and 6 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

Better address planning and management issues in the marine part of coastal zone;

Support implementation of ICZM in the marine part of the coastal zone by applying MSP with a strong focus on LSI and in line with general framework of the Barcelona Convention and its Protocols, in particular with regard to:

reducing marine-based source of pressure affecting the marine environment through spatial efficiency and control of temporal distribution of human activities;
reducing conflicts between maritime uses and protection of areas with high naturalistic and ecological relevance;
identifying areas to be protected in order to preserve processes and functions that are essential in achieving the GES;
identifying environmental hotspot areas at sea where specific measures are necessary;
identifying elements ensuring connectivity among relevant habitats.

V.5 Land policy (Art. 20)

Within the scope of ICZM and taking into account land-sea interactions, it is essential to coordinate both land and marine planning in consultation with all relevant stakeholders.

Land policy is one of the tools to implement land-use planning. It defines rights of ownership, rules and principles on land and the natural resources it contains; legal frameworks on access and usage; validation and transfer of these rights of ownership. Applied to ICZM, land policy contributes to planning land activities, maintain unoccupied natural areas, and facilitate public access to the coast and the sea. It is a relevant tool to limit coastal environment degradation due to urbanization and occupation of coastal areas by human activities development. Furthermore, preserving natural coastal areas by implementing land-use instruments is an efficient and economical solution to mitigate and adapt to climate change impacts.

Land policy is also an efficient tool not only in term of land-use planning but also to protect coastal landscapes, islands and cultural heritage.

As pressures and pollutions on marine environment mainly come from the land, land policy contributes to limit these pressures at the root and to conserve both terrestrial and marine coastal environment. When applying land policy instruments, it is important to take into account land-sea interactions. There are different kinds of land policy instruments and measures. Indicative analyses and good practices on the most specific instruments are detailed below.

Land acquisition is one of the instruments to preserve coastal natural areas. Within the scope of ICZM, it is advisable to facilitate amicable acquisition procedures for the benefit of public or private organizations in charge of the sustainable conservation of coastal areas, by pre-emption, land donation, and expropriation if necessary. The advantage of land acquisition is that it provides a strong and durable protection of a territory. It has to be used in the scope of a local planning strategy accommodating development, population and environment protection.

The main challenges for the implementation of acquisition mechanisms is its funding resources and establishment of efficient administrative and legal procedures. The pre-emptive right can facilitate

public land acquisition procedures. It allows public authorities aiming at acquiring sensitive coastal zones with the objective of sustainably managing them to take priority over the acquisition.

Concession is a land policy instrument that allows a land owner to grant the management of a specific site to a beneficiary (the concessionary) in return for usage fees. The beneficiary is in charge of implementing long-term management activities. Concession also enables a State or municipalities to authorize provisionally on their public domain a private occupation, in return for fees. This practice[4] is also a way to raise funds (via the concession fees) that can be reinvested in ICZM activities. This kind of contractual relation also enables to consider a non-permanent occupation on areas potentially vulnerable to immersion or coastal erosion risks, in the perspective of their temporary touristic or economic valorization.

Separation between ownership and right of use is a potential instrument for ICZM land policy: a land owner consents to a loss of a part of the rights he exercises on his land. For example, to renounce to build or to destroy natural or patrimonial elements of the site in exchange of compensations. These deliberate abstentions can also be combined to obligations of actions to ensure the management of the coastal site. There are different kinds of practices for separation of ownership, including easement, which is an obligation imposed to a land owner for the benefit of another land owner that can be applied to ICZM. For example, in order to facilitate the access of public to the coast, an easement can be designed to establish a right of way along the coastline on private properties bordering maritime public domain.

Land Stewardship is a land policy tool that involves landowners and users in the conservation of nature and landscape, with the support of civil society. Through voluntary agreements between land owners/users and land stewardship organizations (also known as land trusts), land stewardship enables to conserve, manage and restore the environment. The stewardship approach is an especially helpful concept in the many instances where sustainable management — rather than absolute protection or preservation — of coastal areas is the objective. In the Mediterranean region this instrument is used for example by the region of Catalonia (Spain) who developed a network for the land stewardship[5]. There are three level of land stewardship agreements between land owner and land stewardship organization: management support agreements; management transfer agreements; and property transfer agreement.

To this aim and according to Art. 20 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

Conduct a diagnosis of sensitive coastal zones threatened by urbanization and climate change on the whole coastal zones in order to identify priority areas to acquire or protect, and design a coastal areas acquisition and protection strategy in addition to land-use planning activities;

Elaborate a land register, or an equivalent land tool, that provides accurate and mapped land property information, and couple it with relevant knowledge on occupation and usage of coast line areas;

Apply land policy instruments and mechanisms in coordination with spatial planning, including marine spatial planning, as land policy is an essential tool to limit at the root pressures coming from the land;

Support continuous scientific observation of coastal zones' evolutions, in particular observations and climate change impacts scenarios, in order to support decision-making in coastal planning and development;

[4] This public domain concession is regularly practiced by the SPNL in Lebanon.
[5] Xarxa de Custodià del Territori (XCT)

Exchange experience and good practices on land policy instruments and mechanisms, in particular through a network of coastal zone management agencies and/or administration.

V.6 Economic, financial and fiscal instruments (Art. 21)

Sustainable funding of actions reducing pressures affecting the Mediterranean coastal zones is essential to effectively implement sustainable management and achieve a good environmental status in the region. Funds for ICZM are mainly available through national governmental budgets, donors' programmes, voluntary contributions, partnerships with private sectors, and other financial mechanisms (including e.g. specialized environmental funds). Fiscal instruments (including taxes and subsidies) and market mechanisms (payment for ecosystem services, for example) are commonly introduced to address externalities and help achieve environmental protection goals.

Environmental fiscal instruments for coastal zone have two different purposes. Some instruments only have a financial objective; they are created to generate funds for public budgets. In this case, it is recommended that these funds be redistributed to fund ICZM activities. Some other fiscal instruments have a strategic objective to affect stakeholders' practices. They are created to influence economic stakeholders and people's behavior through incentives or dissuasive instruments.

In addition to the establishment of fiscal instruments to generate funds or support stakeholders' change of practice, it is also important to reduce or avoid fiscal instruments and subsidies that have a negative impact on the environment (environmentally harmful instruments). It mainly concerns fiscal and economic incentives aiming at promoting sectoral economic activities on the coastal zones that go against ICZM objectives. For example, fiscal instruments supporting natural areas destruction (subsidies for wetlands drainage). In the process of reforming the environmentally harmful instruments, distributional impacts and trade-offs should be carefully considered.

Regarding taxes generating incomes, there are a few Mediterranean examples of good practices of redistribution towards ICZM actions: the establishment of a tax on building construction work that is redistributed to local public authorities to implement land policies contributing to coastal areas conservation[6], or the allocation of fishing license fees or tourist tax to local authorities' environmental budgets [7]. The decision to allocate incomes generated by a tax to a specific budget is of course a political decision, however ICZM stakeholders can orientate these decisions by identifying relevant actions to fund and fiscal incomes that could be redistributed. Some taxes can also be specifically created to fund coastal and marine conservation. For example, a tax on passengers on board maritime transports going to protected natural areas. The tax is collected by transports companies for the benefit of the public entity managing the protected natural area and is assigned to the preservation of the area[8].

Fiscal incentive can also be established, for example the system of land donations through tax compensation payment schemes (payment in kind), which can help to place land under public ownership, that can be transferred to organizations in charge of their sustainable management[9]. Some fiscal instruments aim at supporting stakeholders in a change of practice in favor of the of coastal areas conservation. For example, relating to changing behaviors, plastic bags tax has been introduced in some Mediterranean countries such as Croatia, Greece, Israel, Malta, Slovenia and Spain[10].

Consideration of ecosystem services: Ecosystem services are the benefits people get from ecosystems without having to pay directly to obtain them. Coastal zones, both the terrestrial and marine part,

[6] French example of the Regional Tax on sensitive natural areas.
[7] This example is established in Morocco.
[8] French example of the Tax on maritime passengers going to protected natural areas.
[9] French example of dation in payment.
[10] Surfrider Foundation. Time for Europe to act against plastic bag pollution. 2018. 24p

provide many ecosystem services, that are however threatened by increasing pressures on the environment. The loss of these services would require to develop costly alternatives. It is therefore necessary to raise awareness of the economic value of ecosystem services. Investing now in the natural capital would enable to save money on the long term.

Payments for ecosystem services (PES) consists of paying for the provision of a service: stakeholders are paid provided that an identified ecosystem service is maintained or restored. In the scope of ICZM, PES can be payments made to farmers or landowners who agreed to implement actions to manager their land providing an ecosystem service. Given that payment provides an incentive to land owners and managers, PES are considered as a market mechanism, similar to taxes or subsidies. The aim is to support natural resources conservation with a specific objective (buffer zone for immersion or flooding, blue carbon sink, wetlands for natural water sanitation etc.).

Use of economic analysis for the assessment of various ICZM policy options, measures and projects:
Economic analysis and evaluation tools can support efficient decision-making relating to ICZM policies and projects. The cost-benefit analysis consists in a set of methodologies for economic valuation of the environment. It is used to value the change in ecosystem services caused by a project or a policy. The cost-efficiency analysis compares the cost and efficiency of two alternative strategies to achieve the same objective. In the scope of ICZM, this approach enables to define coastal conservation objectives and to analyze the means to achieve it in the most efficient way. Finally, multi criteria decision analysis is a methodology for supporting complex ICZM decision-making situations with multiple and often conflicting objectives that stakeholders value differently. All these economic analysis and evaluations tools also contribute to raise awareness of ecosystem services values.

To this aim and according to Art. 21 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

Strengthen Mediterranean stakeholders' capacities to identify available resources and programmes, develop financial proposals and monitor allocated funds in an efficient way;

Develop sustainable funding strategies for ICZM implementation at the national and regional scale;

Share information on good practices and results achieved with implementation of economic, financial and fiscal instruments in the region. Instruments that have proved their effectiveness could be considered to be applied in other countries;

Work towards a better redistribution of public revenues for ICZM funding in order to ensure sustainable funding and reduce dependence on external funds. For example, public revenues from public maritime domain usage fees or public properties fees could be allocated in priority to ICZM activities;

Promote the application of relevant economic/ market-based instruments for the ICZM implementation;

Gradually reduce environmentally harmful subsidies while putting in place compensatory measures to address socio-economic losses that might occur;

Strengthen the use of economic analysis for the assessment of various ICZM policy options, to ensure sustainability and efficient decision-making in formulating ICZM plans and strategies;

Strengthen the use of valuation of ecosystem services to raise awareness of the economic value of coastal ecosystem services.

V.7 Training, communication and information (Artt. 14, 15, 25 and 26)

In order to contribute to the effective implementation of ICZM and to achieve a good environmental status in the Mediterranean region, it is important to establish training communication, awareness and research tools within CPs but also at a regional scale. These tools should be aimed at policymakers, economic stakeholders involved in land and marine activities, associations, universities and researchers, civil society.

Trainings should in particular focus on economic benefits of coastal environment conservation, environmental assessment and conflict management. Within these trainings and ICZM tools, it is essential to include components to facilitate the understanding and appropriation of the ICZM Protocol itself by Mediterranean stakeholders. As a legally binding tool, the Protocol is a strong advocacy tool in favor of ICZM that can be used by local stakeholders as an argument when facing criticism on the legitimacy of ICZM local policies.

Regarding research tools and mechanisms, they should support multidisciplinary scientific research on ICZM. The objective is to increase knowledge on ICZM in order to facilitate public and private decision making and to contribute to public information. Public should be involved in ICZM decision-making via public consultation tools.

To this aim and according to Artt. 14, 15, 25 and 26 of the ICZM Protocol, the CPs are encouraged to accomplish the following with the support of UNEP/MAP and its Components, as appropriate:

Develop tools and trainings on ICZM good practices for Mediterranean local stakeholders;

Develop tools and trainings on the ICZM Protocol itself to facilitate its appropriation and usage by Mediterranean stakeholders;

Include components on sustainable management of coastal and marine areas in universities relevant programmes to train future ICZM professionals;

Develop mechanisms to support multidisciplinary scientific research on ICZM and on the interactions between human activities, their impacts on coastal areas and innovative solutions to make economic practices more sustainable;

Develop dissemination tools to make scientific research results available to all.

Involve public participation in ICZM plans and programmes and ICZM related decision-making.

V.8 International Cooperation for the Implementation of the CRF (Artt. 16, 25-28)

The success of ICZM largely rely on the cooperation among CPs supported by international organisations, institutions and fora. Many instruments and tools are already provided or foreseen within the Barcelona Convention system, for which guidance should be provided in particular to enhance synergies among them for the purpose of implementing the ICZM Protocol and the CRF:

a) In the field of monitoring and observation (Art. 16)

IMAP with GES set as the ultimate environmental goal to be reached by managing anthropogenic pressures on coastal and marine environment in an attempt to ensure sustainability;

Standardised and harmonised national coastal inventories, as well as reporting on state and evolution of coastal zones;

Reporting processes on the implementation of the Barcelona Convention and its Protocols;

Mediterranean coastal zone network including an ICZM Platform as a hub for ICZM-labelled initiatives, CAMP and other projects, information, documentation, as well as a

networking device for decision- and policy-makers, practitioners and other ICZM-prone actors at all levels.

In the field of ICZM/coastal strategies preparation and implementation (Art. 28)

Mediterranean Strategy for Sustainable Development (MSSD), which rely on the Barcelona Convention system for its Objective 1 on Ensuring sustainable development in marine and coastal areas and its Strategic Direction 1.1. Strengthen implementation of and compliance with the Protocols of the Barcelona Convention and other regional policy instruments and initiatives supplemented by national approaches;

Regional strategies, plans and programmes for contiguous coastal zones, which will use SEA and EIA in transboundary context as one of the main tools (Art. 28).

In the field of training and research, technical and scientific cooperation (Artt. 25-27)

MedOpen virtual training course as an excellent way of teaching on ICZM principles, objectives and ways of implementation;

Info/MAP platform for stocking and exchange of interoperable data and information;

Cooperation within research projects tailored for the need of multi-sectoral coastal zone management, focused on science-policy interface.

The timely and proactive involvement of international donors is also instrumental to the effective implementation of the above-mentioned activities. The donors should be involved in an early stage to ensure that the activities identified under the CRF will be framed in project proposals which would meet the specific requirements of each funding organization. In the recent past, the Global Environment Facility (GEF) has been active in supporting the ICZM process in the region. This support has been renewed in 2016 through the approval of the "GEF Adriatic" project and of the "Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security" currently under development. The European Commission expressed interest in supporting the ICZM process in coordination with MSP and IMAP. Efforts should be made to inform these and other donor organisations active in the Mediterranean to maximize their support to the CRF.

Implementation of the CRF

A considerable number of sectoral policies and related tools have been developed within the Barcelona Convention system addressing pollution, biodiversity, climate change, socio-economic aspects, marine litter, key economic sectors, etc. the implementation of which contributes to the protection of the coastal zone. The commitment made by the CPs with regard to these policies is supposed to be implemented in a coordinated manner. However, the sectoral approach still prevails in the mind of actors and stakeholders, and integration is seen as an additional burden instead of an added value that increases efficiency and allows the rationalisation of effort, time and money.

Aware of the need to provide a strategic framework for better coherence and efficiency of the Barcelona Convention system, at their 19th Ordinary Meeting (COP19) held in Athens in February 2016 the CPs adopted the UNEP/MAP Mid-Term Strategy 2016-2021 (Decision IG.22/1) as a guiding document aimed at ensuring synergy, harmonisation of efforts and optimisation of the use of resources.

This objective has been fully reflected in the UNEP/MAP biennial Programmes of Work (PoW), in particular through its Cross-cutting Theme 1 on Integrated Coastal Zone Management (ICZM) as "a transversal policy, with strategic options, plans and management measures, which can integrate and reflect on the same coastal geographic unit (with its terrestrial and marine parts) all thematic policies and horizontal dimensions, encompassing development measures, environmental protection, SCP, adaptation to climate change, etc.".

Given the definition of the coastal zone in the ICZM Protocol, almost all other Protocols of the BC are related in one or the other way to it. Thus, ICZM can and should provide support to the implementation of several of these Protocols, and therefore the relevant objectives and provisions of these Protocols should be taken into account in all ICZM related activities. In view of maximizing synergies with other policies, ICZM activities should also take into consideration, on an exceptional basis, some technical guidelines adopted by the Contracting Parties, which do not have the same legally binding character as the Protocols and Regional Plans, but provide guidance and obligations, as it is the case of four guidelines approved in the framework of the Dumping Protocol. At the same time, policy decisions and action plans stemming from the other Protocols should be coherent with the ICZM objectives and complementary to the ICZM ones.

VI.1 Support to CPs by UNEP/MAP Secretariat and its Components

To the aim of enhancing the coastal zone management practice, the UNEP/MAP Secretariat and its Components commit themselves to provide the following specific assistance to the CPs for the implementation of the ICZM Protocol and CRF:

At the regional / sub-regional level

Enhancing the coherence of the legal and strategic framework for the protection and management of the coastal-marine environment by acceding to, implementing, coordinating and enforcing the instruments that are already in force, as well as adapting them as necessary;

Providing guidance for consistent and complementary implementation of ICZM and MSP, particularly addressing LSI;

Tailoring the existing and developing new methods and tools to operationalise the EcAp concepts within ICZM and MSP, such as: guidelines for the implementation of EcAp, cumulative impact assessment, ecosystem service mapping and quantification, identification of blue corridors, etc.;

Developing additional coastal indicators to complement the existing, predominantly marine-oriented EcAp indicators so as to better reflect the interaction between terrestrial and marine ecosystems, habitats and species, and to reduce pressures of economic activities that exceed the carrying capacity, taking into consideration existing sets of indicators, such as the IMAP, NAPs, MSSD, SCP, and SDG indicators, in view of maximising synergies and facilitating monitoring and reporting. An indicative list of existing indicators that could be used as potential ICZM indicators is provided below:

1. Length of coastline subject to physical disturbance due to the influence of man-made structures
2. Land use change
3. Integrity and diversity of coastal ecosystems, landscapes and their geomorphology are preserved
4. Ratio of land consumption rate to population growth rate
5. Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically
6. Percentage of protected coastal and marine areas [under national jurisdiction];

Providing guidance for the establishment of standardised and harmonised national coastal inventories, as well as for the reporting on the state and evolution of coastal zones;

Providing guidance for a timely and proper response to the emerging issues, such as in the case of climate change;

Harmonising the SEA procedures across the Mediterranean Region and strengthening of national capacities to carry out SEA, including the transboundary context;

Promoting codes of good practice among public authorities, economic actors and non-governmental organisations;

Updating and delivery of educational programmes, training and awareness raising on ICZM;

Boosting the network of ICZM and MSP initiatives, in particular CAMPs and CAMP-like projects.

At the national level

Supporting the preparation of National ICZM Strategies based on the Guidelines for National ICZM Strategy[11], to consider and enhance their consistency with the ICZM Protocol, taking also into account national action plans developed in the framework of other BC Protocols and Regional Plans, including those related to land-based sources of pollution, SCP, biodiversity, etc.;

Supporting the development or updating of National Action Plans (NAPs) in line with the provisions of the relevant Protocols, strategic action plans and regional action plans;

Supporting the implementation of CAMPs and other ICZM and MSP projects for selected coastal zones.

VI.2 Action Plan for Implementation

The Action Plan (AP) contained in the Table 1 below has been designed to provide concrete support and guidance for joint implementation of the ICZM Protocol through the CRF. The AP has set the year 2027 as target, corresponding to the biennium 2020-21 in which the next 6-year Mid-Term Strategy (MTS) of UNEP/MAP will be prepared and the period covered by the MTS. The AP defines the main outputs to be delivered, associated with estimated costs, key actors and corresponding progress indicators. The resources are indicative, estimated only for the support to be provided by the Barcelona Convention system to the CPs through MTF and other sources mobilised by the system. They do not include the resources that the CPs themselves may mobilise for the purpose of the AP implementation or other external partners that may join forces with the CPs and the BC system.

[11] UNEP/MAP/PAP: Guidelines for the preparation of National ICZM Strategies required by the Integrated Coastal Zone Management (ICZM) Protocol for the Mediterranean. Split, Priority Actions Programme. 2015. http://pap-thecoastcentre.org/pdfs/National%20ICZM%20Guidelines.pdf and http://pap-thecoastcentre.org/pdfs/National%20ICZM%20Guidelines%20FR.pdf

Table 1: Action Plan for Implementation

Outputs	Activities	Key actors	Indicative resources (in 000 €)	Indicative timeline	Progress indicators
Governance framework for ICZM implementation set-up and functional at all levels	Ratification of the ICZM Protocol[12]	CPs with the support of PAP/RAC and CU	50	2020-2025	Number of ratifications; Number of CPs having adopted a National ICZM Strategy; Number of sub-regional strategies prepared; Number of intersectoral bodies established and functional; Number of CPs having established a coastal observatory
	Preparation of National Strategies for ICZM (including MSP and climate action)[13]	CPs with the support of PAP/RAC	750	2020-2027	
	Establishment and functioning of national intersectoral bodies for the implementation of the ICZM Protocol	CPs with the support of PAP/RAC	150	2020-2027	
	Preparation of sub-regional strategies for ICZM (including MSP and climate action)	CPs with the support of PAP/RAC and other sub-regional bodies	1,200	2023-2027	
	Establishment and functioning of sub-regional bodies for the implementation of sub-regional strategies for ICZM (including MSP and climate action)	CPs with the support of PAP/RAC and other sub-regional bodies	250	2023-2027	
	Definition of a mechanism for observing the state and evolution of Mediterranean coastal zones	Plan Bleu and INFO/RAC in collaboration with CPs and other MAP Components	200	2022-2024	
	Strengthening or establishment of national mechanisms for observing the state and evolution of coastal zones	CPs with the support of Plan Bleu and INFO/RAC	200	2022-2027	
Necessary methodological guidance and tools provided to CPs for a consistent and complementary	Providing guidance for consistent and complementary implementation of ICZM and MSP, particularly addressing Land Sea Interactions and adaptation to climate change[14]	PAP/RAC with the support of MEDPOL, REMPEC and SPA/RAC	120	2020-2021	Number of guidelines prepared and adopted by CPs; Number of CPs using the IT platform;
	Preparation of guidelines for respecting carrying capacity of coastal and marine zones	PAP/RAC in collaboration with other MAP Components	200	2022-2024	

12 Assistance to the CPs in the ratification process is a permanent activity and it is included also in the PoW 2020-2021.

13 Support to the preparation of National ICZM Strategies in Egypt, Lebanon and Tunisia within GEF MedProgramme is included in the PoW 2020-2021.

14 Included in the PoW 2020-2021.

Outputs	Activities	Key actors	Indicative resources (in 000 €)	Indicative timeline	Progress indicators
implementation of ICZM and MSP	Development of additional coastal indicators to complete EO8, highlighting the interaction between terrestrial and marine ecosystems	PAP/RAC	200	2024-2027	Number of indicators agreed
	Preparation of guidelines for mainstreaming climate change adaptation in National ICZM and MSP Strategies and coastal plans	PAP/RAC in collaboration with other MAP Components	100	2022-2023	
	Preparation of guidelines for the application of ICZM principles and objectives by main coastal and maritime sectors	PAP/RAC in collaboration with other MAP Components	600	2024-2027	
	Design of an interactive IT platform as an operational tool to support the implementation of the CRF[15]	INFO/RAC with the support of PAP/RAC	100	2020-2021	
	Setting-up of a dedicated interactive IT platform to support the implementation of the CRF	INFO/RAC with the support of PAP/RAC	200	2022-2023	
	Updating of the methodological guidance for reaching GES through ICZM	PAP/RAC with the support of MEDPOL and SPA/RAC	100	2023-2025	
	Definition of a set of indicators to be used by coastal observatories[16]	Plan Bleu with the support of PAP/RAC and other MAP Components	200	2020-2021	
ICZM Protocol implemented in practice	Implementation of national and transboundary CAMP and other demonstration projects focusing on the implementation of the ICZM Protocol provisions[17]	CPs with the support of PAP/RAC and other MAP Components, as appropriate	1,000	2020-2027	Number of CAMP projects implemented; Number of pilot projects having tested the CRF methodological guidance; Number of MSP-related projects implemented;
	Testing in practice of the methodological guidance for reaching GES through CRF in pilot sites at sub-national, national and transboundary contexts[18]	CPs with the support of PAP/RAC in collaboration with MEDPOL and SPA/RAC	600	2020-2023	

15 Recommended to be included in the PoW 2020-2021.

16 Recommended to be included in the PoW 2020-2021.

17 One national and at least one transboundary CAMP included in the PoW 2020-2021.

18 Testing on voluntary basis included in the PoW 2020-2021.

Outputs	Activities	Key actors	Indicative resources (in 000 €)	Indicative timeline	Progress indicators
	Implementation of MSP as a part of the ICZM Protocol implementation, addressing LSI and adaptation to climate change[19]	CPs with the support of PAP/RAC in collaboration with MEDPOL, REMPEC and SPA/RAC	1,000	2020-2027	Number of sub-regions having produced a specific ICZM vs. EOs matrix
	Elaboration of a specific matrix of interactions between ICZM Protocol provisions and EOs for all sub-regions of the Mediterranean	CPs with the support of PAP/RAC in collaboration with MEDPOL and SPA/RAC	600	2023-2025	
Capacities of CPs for the implementation of ICZM and MSP strengthened	Delivering MedOpen Advanced training courses[20]	PAP/RAC	400	2020-2027	Number of training courses organised; Number of trainees
	Inclusion of the MedOpen Advanced training course into the academic curricula[21]	PAP/RAC and CPs' academic institutions	100	2020-2027	
	Organisation of face-to-face training sessions on ICZM and MSP processes and tools (e.g. LSI, SEA, CC adaptation, etc.)[22]	PAP/RAC	400	2020-2027	
Information, communication and awareness of the CPs and other actors enhanced with regard to environmental protection and sustainable development of coastal zones	Organisation of regional celebrations of the Mediterranean Coast Day[23]	PAP/RAC and CPs	400	2020-2027	Number of awareness raising events organised; Number of participants to the events; Number of uploads to the ICZM Platform; Number of participants in the network
	Organisation of national/local Coast Day celebrations[24]	CPs with the support of PAP/RAC	80	2020-2027	
	Continuous upgrading of the ICZM Platform and ICZM projects network[25]	PAP/RAC with the support of INFO/RAC	200	2020-2027	
	Preparation of reports on the state and development of coastal zones (within QSR, SoED, etc.)[26]	PAP/RAC under the guidance of the CU	300	2020-2027	

19 Included already in the PoW 2020-2021.

20 One advanced course per year including in 2020 and 2021, included in the respective PoW.

21 Included in the PoW 2020-2021.

22 Regional trainings on MSP and SEA included in the 2020-2021 PoW.

23 Yearly activity since 2007, included in 2020-2021 PoW.

24 Included in the PoW 2020-2021 as a part of the MAVA project.

25 Permanent activity, included in the PoW 2020-2021 too.

26 Included in the PoW 2020-2021.

Evaluation and assessment of the implementation of the CRF

The indicators contained in the AP will serve to assess the progress made and will complement the regular reporting by the CPs on the implementation of the Barcelona Convention and its Protocols within the existing reporting format for the ICZM Protocol.

Appendix: Methodological guidance for reaching Good Environmental Status (GES) through ICZM

1. Introduction

The CRF on ICZM, as a strategic instrument meant to facilitate the implementation of the ICZM Protocol, provides guidance mainly for the regional (Mediterranean) and sub-regional (four Mediterranean sub-regions, according to EcAp) levels, based on a flexible approach that can be replicated at lower geographical levels (national, sub-national).

The present methodological guidance aims to support the implementation of the ICZM Protocol, within the CRF, towards the achievement of EcAp Ecological Objectives (EO), in a coordinated and integrated manner with the UNEP/MAP-Barcelona Convention System (thus considering the other Protocols and related key documents), and in light with the relevant international instruments.

The proposed methodological guidance is based on three major phases (Figure 1):

Phase A - Elaboration of a **matrix of interactions** between the EcAp EOs and the economic activities and natural and cultural elements that have great relevance for the coastal areas, according to the content of the ICZM Protocol (hereafter briefly called "elements of the ICZM Protocol").

Phase B - Detailed **analysis of the provisions of the main relevant documents** part of the UNEP/MAP-Barcelona Convention System related to key interactions between EcAp EOs and ICZM elements. The analysis is performed by clusters of EOs: 1. Biodiversity, 2. Fisheries, 3. Coast and Hydrography, 4. Pollution and Litter.

Phase C - Process towards the identification of **operational recommendations to implement the CRF on ICZM** with the aim of contributing to the achievement of EcAp Eos and GES, coherently with other instruments of the Barcelona Convention System.

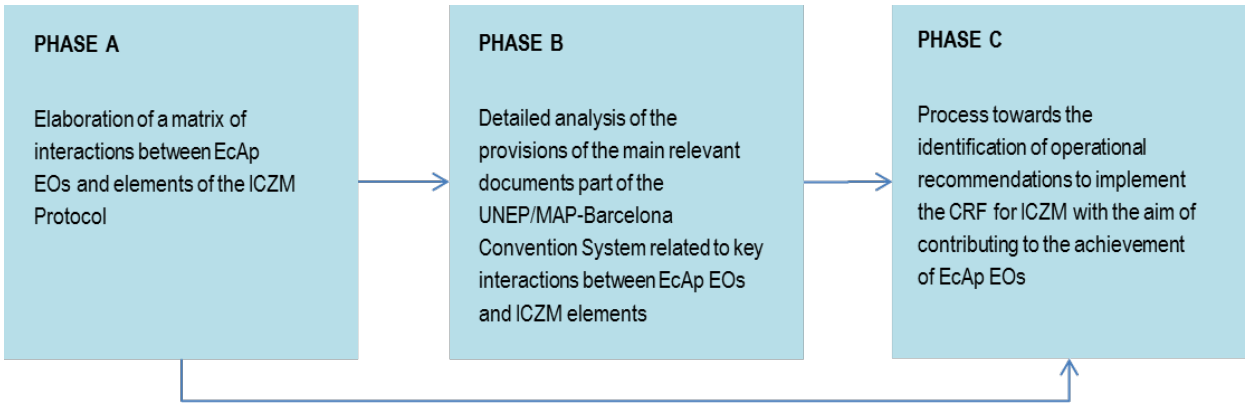

Figure 1: Phases of the methodological guidance.

The present document - with the understanding that is a living document and that Phase C requires further development - therefore proposes a methodology towards the identification of a set of operational recommendations, if needed and as appropriate, which shall be calibrated on the specific considered **geographic** and **temporal** context, as well as on the **cumulative impact integration rules**, and **regularly updated**.

Considering that the CRF on ICZM should be seen and managed as a practical instrument (which operationally interprets the provisions of the ICZM Protocol in an integrated and synergic manner with

the UNEP/MAP-Barcelona Convention System and the other connected instruments governing matters related to ICZM, translating it at the regional, sub regional and national levels) **a specific interactive IT platform** should be set up as an operational tool to support the implementation of the process. This IT tool should be coordinated and supported by an existing data information centre and integrated into an existing platform. The platform would provide access to decision makers and relevant institutions to:

Find and download all relevant material, documentation, data and information;

Upload the requested information and data;

Use specially designed tools (e.g. evaluation matrices, indicators, etc.);

Periodically update the information and data entered.

2. Phase A - Matrix of interactions

The first Phase of the methodological guidance consists in the elaboration of a matrix of interactions between EcAp EOs and elements of the ICZM Protocol. The proposed matrix is based on the **principle of ecosystem-based management to reach GES**, as well as on the **principles of integration** and **cumulative impact**, and consists on cross-check elements of the ICZM Protocol with the EOs organised in four clusters: 1. Biodiversity, 2. Fisheries, 3. Coast and Hydrography, 4. Pollution and Litter. The matrix is developed and should be directly utilized as an assessment tool supporting decision-making mechanisms at the different levels (regional, sub-regional, national, sub-national): the **identification of the spatial and temporal** (short, medium and long-term) scales is therefore an essential initial step of the overall analysis (from Phase A to Phase C), including the elaboration of the matrix of interactions.

For the analysis at the regional scale (i.e. entire Mediterranean), the matrix contained in the COP20 Decision IG.23/7 was updated and further integrated based on suggestions expressed by the National Focal Points at the meeting held in Split on 26-27 September 2018 and the outcome of the analysis of the key documents considered in Phase B (Figure 2).[27] The matrix is organized as follows.

In the first cell on the top left hand the abbreviated version of the three main objectives of the CRF on ICZM are indicated; namely: (i) Using the ecosystem-based management to ensure sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes; (ii) Addressing natural hazards and the effects of natural disasters, in particular coastal erosion and climate change; (iii) Achieving good governance.

They are recalled in the matrix to provide a logical link with the overall scope of the CRF on ICZM and the ICZM Protocol, since the beginning of the analysis (Phase A). As described in Phase C, these objectives are also used to frame the formulation of the operational recommendations for the identified key interactions of the matrix.

In the **VERTICAL AXIS**, the **economic activities and the natural (ecosystems) and cultural (landscape, cultural heritage) elements** that have great relevance for the coastal areas, according to the ICZM Protocol, are identified. Such elements are clustered in the three main components which make a continuum throughout the coastal zone (**coastal zone landward, land-sea interface, coastal zone seaward**, plus a specific category referring to **islands**) consistently with what has been developed in the field of ICZM, MSP and LSI. Despite this distinction, the analysis of interactions between EcAp EOs and

[27] In particular, few lines along the vertical axis have been added: specifically, the element “maritime activities” was split in various lines to properly take care of the heterogeneity and different characteristics of such activities. Minor revisions of the matrix were also introduced based on the outcome of the analysis of the key documents considered in Phase B (see Table 8). Contents of the matrix were double checked with the 2017 Mediterranean Quality Status Report (QSR).

elements of the ICZM Protocol shall always take in consideration the integrity (interconnections) of the entire coastal zone. Moreover, the considered elements of the ICZM Protocol are distinguished in two categories: "**pressures**" (i.e. activities causing pressure on the coastal and marine environment), which in the matrix are indicated in blue; and "**state"** (components of the environment, i.e. coastal landscapes, coastal forests and woods, cultural heritage, water quality, habitat, etc.) or "**impacts**" (i.e. coastal erosion), which in the matrix are indicated in black.

In the **HORIZONTAL AXIS**, the EcAp EOs are listed and grouped in four clusters identified by different colours. Biodiversity and Fisheries clusters are both in blue, but differentiated with 2 shades of this colour, since they are strongly connected.

Colours of the cells identify the relevance of interactions between EcAp EOs and elements of the ICZM Protocol: red indicates high relevance, yellow moderate relevance, blue low relevance, whereas white is related to absence of interactions. The level of relevance should be evaluated considering the knowledge on both existing interactions and interactions that are expected in the future as a consequence of known strategic programmes and plans.

It shall be noted that the matrix of Figure 2 illustrates the current understanding of interactions among ICZM elements and EOs at the scale of the entire Mediterranean (regional scale). Such evaluation can change in response to the specific dimensional, geographic and temporal conditions considered by the analysis. Therefore, three main aspects should be taken in consideration in any application of the matrix tool:

1. **Dimensional** aspects, referring to the considered scale of analysis, i.e.: regional (entire Mediterranean), sub-regional, national or sub-national level.

Geographic aspects, referring to the specific characteristic of the area under evaluation. Geographical aspects should be considered along the landward - interface - seaward transect, in order to follow the geographical continuum of the coastal zone (from land to sea; adding islands as a specific component when relevant).

Temporal, referring to the period of the analysis; this might take in consideration the short, medium or long-term perspective.

Indeed, the matrix is a **dynamic tool** even when the scale and the geographic and temporal dimensions of the analysis are fixed. As soon as new data, information and knowledge become available, there might be the need to update the matrix evaluation.

The matrix itself can be improved and more detailed depending on the availability of information and the priorities identified: coastal and maritime activities, considered in the provisions of the ICZM Protocol and indicated in the matrix of Figure 1, can be further detailed based on the pressures they generate and the way they affect the ecosystem. Various tools can be used to support the matrix updating and improvement. One of these has been developed by MED POL, based on the well-known DPSIR (Driver-Pressure-State-Impact-Response) approach, which is also recommended for assessment under the umbrella of the UN Environment/MAP-Barcelona Convention System. A brief description of the tool is included in Box 1, while a more detailed illustration is contained in the information document "Example of overall interrelationships between the IMAP and the DPSIR framework applied to the coastal and marine ecosystem" (UNEP/MED WG. 463/Inf.9).

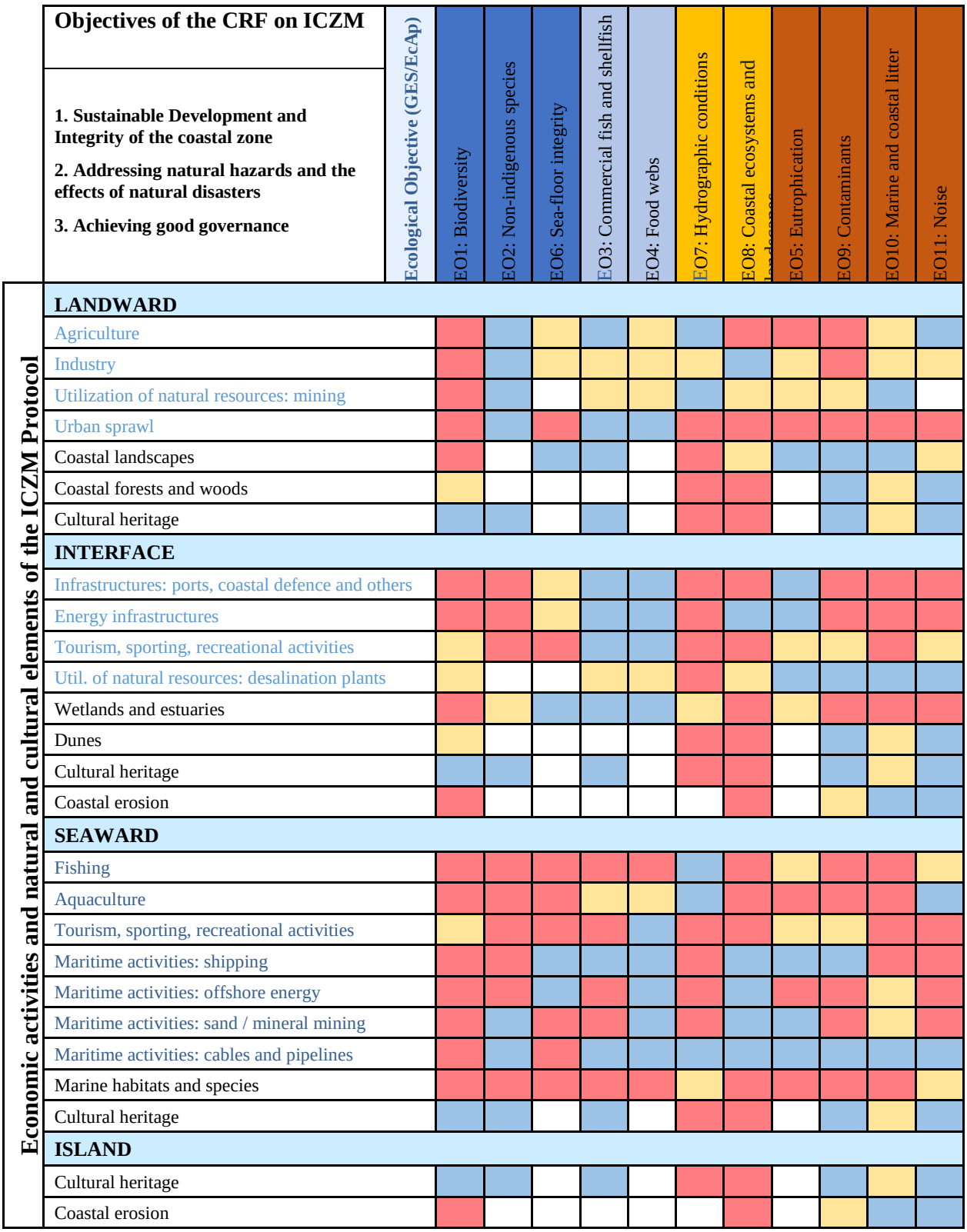

Figure 2: Matrix of interactions between elements of the ICZM Protocol and EOs (red = interaction of high relevance; yellow = interactions of moderate relevance; blue = interactions of low relevance; white = not relevant).

Box 1 – Example of a tool for the detailed analysis of interactions between EcAp EOs and elements of the ICZM Protocol

The tool elaborated by MEDPOL considers that semi-quantitative methodologies - as the scorecards system here considered - are recommended and can be applied when quantitative assessment is not or is only partially feasible. Although these systems are not quantitative, they rely on the best available expert judgment and provide a basis for identifying the interrelation among drivers, pressures, impacts, state and responses. Given the fact that monitoring and assessment scales of IMAP must still to be updated/agreed and tested, the semi-quantitative scorecards methodology is considered useful to address driver-pressure-state-impact assessments of complex processes, such as those occurring in the coastal zone.

According to the proposed scorecard methodology and as illustrated in the template of Table 6, human activities insisting on the coast are categorised as drivers. The template discriminates each activity in specific typologies and for each typology indicate related pressures, affected states and generated impacts. Coherently with the approach used in the matrix of Figure 2, the DPSIR analysis is implemented along the land to sea transect of the coastal zone.

For each chain of elements part of the analysis (Economic Driver > Activity type > Pressure > State > Impacts) the table template provides the link to the related Ecological Objective (EOs) and Common Indicators (CIs) of the Barcelona Convention measurements system (i.e. IMAP) adopted by the Contracting Parties in its decision IG.22/7 at the 19th Ordinary Meeting (COP 19, Athens, Greece, 9-12 February 2016). The added value of the proposed methodology is to provide a clear vision of requirements and responsibilities from the perspective of both the managerial and measurement systems. In particular, the Table 6 details the activity types (originated by main drivers), which are commonly known and aligned with the current IMAP multidimensional measurement system (with their Ecological Objectives and Common Indicators) to address current scenarios of pressures-state-impacts.

The above described approach is then complemented by an Excel tool which can be used for an expert-based evaluation. The structure of the Excel file reflects the content of the template provided in Table 6. In one hand, one of the Excel spreadsheet (Table 7) allows to estimate (in %) how many items (Economic Driver > Activity type > Pressure > State > Impacts) occurring in the coastal zone have the potential to threat it. Experts involved in such evaluation can provide an assessment for each activity type through a 0/1 score: 1 indicates the presence of the potential risk and 0 its absence. The final score is then expressed in percentage, dividing the sum of all scores by the number of scored items (activity types).

On the other hand, a different spreadsheet (Table 8) enables to estimate the magnitude of impacts (in %). For each activity type, experts involved in the evaluation are invited to express a 0 to 3 score: 0 indicates the absence of the impact, while 1, 2 and 3 respectively indicate the presence of an impact with low, moderate and high magnitude. Similarly to the analysis on the occurrence of potential threats, the final score is expressed in percentage and is obtaining dividing the sum of all scores by the maximum theoretical score (equal to the number of scored items x 3). It should be noted, that the proposed tool does not provide an *a priori* definition of the length of the coastal stretch where the same should be applied; this has to be previously defined by the users.

The complete analysis is available in the information document “Example of overall interrelationships between the IMAP and the DPSIR framework applied to the coastal and marine ecosystem” (UNEP/MED WG. 463/Inf.9).

3. Phase B - Analysis of the provisions of the main relevant documents of the UNEP/MAP-Barcelona Convention System

The initial part of Phase B relates to the identification of the most relevant interactions between EcAp EOs and elements of the ICZM Protocol, based on the analysis performed in Phase A. It shall be noted that different approaches and methods can be applied to identify such interactions, which also depends on the specific scale of analysis (regional, sub-regional, national, sub-national). Examples of prioritization methods may include: (i) selection of the elements of the ICZM Protocol with the highest number of red cells in the matrix; or (ii) selection of the elements of the ICZM Protocol with at least a minimum number of red cells in the matrix; etc. Prioritization could also focus on very important interactions among pressure factors (human activities) and EOs (and related status of the environment) strongly and clearly emerging form the analysis of the available information and expert knowledge (e.g. the existence of a specific a very well-known environmental problem in a given context).

The second part of Phase B provides a detailed analysis of the provisions of the main relevant documents part of the UNEP/MAP-Barcelona Convention System related to key interactions between EcAp EOs and the elements of the ICZM Protocol previously identified. For the purpose of this Regional level (entire Mediterranean) assessment key interactions were identified by considering the elements of the ICZM Protocol that shows at least one highly relevant interaction (those in red in the matrix of Figure 2) with one of the EOs. This approach brought to select all the elements of the ICZM Protocol included in the matrix of Phase A for the specific purpose of Phase B analysis at the regional scale

For each of the element of the ICZM Protocol, the analysis has identified the main relevant documents and instruments part of the UNEP/MAP-Barcelona Convention System (Table 1) to be considered and major strategic elements/provisions included in these documents. Table 1 also provides an indication of the grade of priority (1 or 2) of each listed document, as well as the link to the official version of the document. The analysis focused on level 1 documents. Level 2 documents have not been analysed in detail, but these documents have been quoted for some specific ICZM aspects.

As an overarching framework, the main international and EU references on the different considered subjects are also taken into consideration and listed in Table 2. These documents have been considered as a basis to correctly frame the interpretation of the analysed documents of Table 1 - which remain the core of the analysis - being aware that not all the Contracting Parties to the Barcelona Convention are part of them.

Table 3 provide the template that has been used to scan the priority documents listed in Table 1 (specifically those identified by Id n. 1-16). For each of the element of the ICZM Protocol, which is characterised by a relevant interaction with the EOs, the table requires the identification of:

- References to the ICZM Protocol (third column);
- Priority documents listed in Table 1 which are relevant for that specific interaction (fourth column);
- Provisions and guidelines included in each of the documents which assume relevance for the interaction (fifth column).

Reference to more specific documents of level 2 listed in Table 1 is also included, when relevant.

Results of the performed analysis of key documents are reported in Table 5, which is meant **to provide a sort of "manual" to be consulted by users according to their specific focus**.

Finally, it shall be noted that Table 1 includes other two key documents: “EcAp Implementation Roadmap” (id 17) and “Progress Report on the implementation of Decision IG.22/7 on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP)” (id 18) which are cross-cutting/cross-sector by nature. Therefore, these two documents should support the entire analysis and can be used, together with the results of Phase B, to draft the operational recommendations, coherently with the entire referred system, according to the process of Phase C.

The same process should be followed in applying Phase B analysis at a different spatial scale. Beyond those listed in Table 1 (and in Table 2), other relevant documents and instruments might assume particular relevance at a more detailed scale and should be considered in Phase B.

Table 1: Documents part of the UNEP/MAP-Barcelona Convention System taken into account in Phase B of the analysis, categorized by level of priority (1 or 2)

Id	Document	Priority	Link
	Protocols		
1	Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol)	1	http://www.rac-spa.org/sites/default/files/protocole_aspdb/protocol_eng.pdf
2	Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol)	1	http://wedocs.unep.org/bitstream/handle/20.500.11822/7096/Consolidated_LBS96_ENG.pdf?sequence=5&isAllowed=y
3	Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol)	1	https://wedocs.unep.org/rest/bitstreams/2190/retrieve
4	Protocol for the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (Offshore Protocol)	1	https://wedocs.unep.org/rest/bitstreams/2336/retrieve
5	Protocol on the prevention of pollution of the Mediterranean Sea by transboundary movements of hazardous wastes and their disposal (Hazardous Wastes Protocol)	1	https://wedocs.unep.org/rest/bitstreams/2593/retrieve

Id	Document	Priority	Link
6	Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (Dumping Protocol)	1	http://wedocs.unep.org/bitstream/id/53181/95ig6_7_dumping_protocol_eng.pdf
	Regional Strategies		
7	Mediterranean Strategy for Sustainable Development 2016-2025	1	https://planbleu.org/sites/default/files/publications/mssd_2016-2025_final.pdf
8	Strategic Action Programme to address pollution from land-based activities (SAP-MED)	1	
9	Strategic Action Plan for the conservation of marine and coastal biodiversity in the Mediterranean - (SAP BIO (2003):	1	http://sapbio.rac-spa.org/sapbioeng.pdf
	SAP BIO update on climate change (2009)	2	http://www.rac-spa.org/sites/default/files/doc_climate_change/cca_med_adriatic.pdf http://www.rac-spa.org/sites/default/files/doc_climate_change/ccb_north_med_non_adriatic_and_israel.pdf http://www.rac-spa.org/sites/default/files/doc_climate_change/ccc_med_arab.pdf http://www.rac-spa.org/sites/default/files/doc_climate_change/ccd_synthesis.pdf
10	Regional Strategy for the Prevention of and Response to Marine Pollution from Ship (2016-2021)	1	http://www.rempec.org/rempec.asp?theIDS=1_87&theName=ABOUT%20REMPEC&theID=6&daChk=2&pgType=1
	Other Regional Frameworks		
11	Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA)	1	http://wedocs.unep.org/bitstream/id/56761/rccaf_eng.pdf
	Thematic Action Plan (AP)		
12	Sustainable Consumption and Production (SCP) AP	1	https://wedocs.unep.org/bitstream/handle/20.500.11822/20731/unepmap_SCPAP_eng_web.pdf?sequence=1&isAllowed=y
13	Mediterranean Offshore AP in the framework the “Offshore Protocol"	1	http://www.rempec.org/rempec.asp?theIDS=1_165&theName=ABOUT%20REMPEC&theID=6&daChk=3&pgType=1
14	Mediterranean Strategy on Ships’ Ballast Water Management	1	http://www.rempec.org/admin/store/wyswigImg/file/Prevention/Invasive%20species%20and%20ballast%20water/Strategy%20-%20ballast%20water/ANNEX%20II_Decision%2011%20-%20Ballast%20waters.pdf

Id	Document	Priority	Link
19	AP for the management of the Monk Seal	2	AP: http://www.rac-spa.org/sites/default/files/action_plans/monkap.pdf Strategy: http://www.rac-spa.org/sites/default/files/doc_monackus/monk_seal_strategy.pdf
20	AP for the conservation of marine turtles	2	AP: http://www.rac-spa.org/sites/default/files/action_plans/marine_turtles_ap_fr_en.pdf Timetable: http://www.rac-spa.org/sites/default/files/doc_turtles/turtles_timeplan.pdf
21	AP for the conservation of cetaceans	2	http://www.rac-spa.org/sites/default/files/action_plans/ap_cetaceans_en.pdf
22	AP for the conservation of marine vegetation	2	AP: http://www.rac-spa.org/sites/default/files/action_plans/apveg2012en.pdf Timetable: http://www.rac-spa.org/sites/default/files/doc_vegetation/veg_work_program_01_06_2012.pdf
23	AP for the conservation of bird species registered in annex II of the SPA/BD Protocol	2	AP: http://www.rac-spa.org/sites/default/files/action_plans/bird.pdf Timetable: http://www.rac-spa.org/sites/default/files/doc_birds/birds.pdf
24	AP for the conservation of cartilaginous fishes (*Chondrichtyans*) in the Mediterranean Sea	2	http://www.rac-spa.org/sites/default/files/action_plans/elasmo.pdf
25	AP concerning species introduction and invasive species	2	http://www.rac-spa.org/sites/default/files/action_plans/pa_alien_en.pdf
26	AP for the conservation of the coralligenous and other calcareous bio-concretions in the Mediterranean Sea	2	http://www.rac-spa.org/sites/default/files/action_plans/pa_coral_en.pdf
27	AP for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea	2	http://www.rac-spa.org/sites/default/files/action_plans/dark_habitats_ap.pdf
	Regional Plans (RP) adopted in line with the provisions under the SAP MED		
15	RP on Marine Litter Management in the Mediterranean	1	Decision IG.21/7 - Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol Decision IG.22/10 - Implementing the Marine Litter Regional Plan in the Mediterranean

Id	Document	Priority	Link
28	RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Betahexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene	2	Draft decision IG.20/8 - Regional Plans in the framework of Article 15 of the Land Based Sources and Activities Protocol of the Barcelona Convention
29	RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene	2	Decision IG.19/9 "Regional Plan on the phasing out of DDT in the framework of the implementation of Article 15 of the LBS Protocol" Decision IG.19/7 "Regional Plan on the reduction of BOD5 from urban waste water in the framework of the implementation of Article 15 of the LBS Protocol Decision IG.19/8 "Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene in the framework of the implementation of Article 15 of the LBS Protocol"
	Roadmaps		
16	MPAs Roadmap	1	http://www.rac-spa.org/sites/default/files/action_plans/fdr_en.pdf
17	EcAp Implementation Roadmap	1	Decision IG.20/4 - Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap
	Others		
18	Progress Report on the implementation of Decision IG.22/7 on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP)	1	

Table 2: Main international and EU references on the subject, to be considered to frame the detailed analysis

Id	For the overarching framework, International and EU level references	
a	UN Convention on the Law of the Sea (UNCLOS)	http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf
b	IMO system (conventions adopted under the auspices of IMO. i.e. MARPOL 73/78, London Convention and London Protocol)	http://www.imo.org **Key IMO Conventions** • International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended • International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and by the Protocol of 1997 (MARPOL) • International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW) as amended, including the 1995 and 2010 Manila Amendments **Other conventions relating to maritime safety and security and ship/port interface** • Convention on the International Regulations for Preventing Collisions at Sea (COLREG), 1972 • Convention on Facilitation of International Maritime Traffic (FAL), 1965 • International Convention on Load Lines (LL), 1966 • International Convention on Maritime Search and Rescue(SAR), 1979 • Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA), 1988, and Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms located on the Continental Shelf (and the 2005 Protocols) • International Convention for Safe Containers (CSC), 1972 • Convention on the International Maritime Satellite Organization (IMSO C), 1976 • The Torremolinos International Convention for the Safety of Fishing Vessels (SFV), 1977, superseded by the 1993 Torremolinos Protocol; Cape Town Agreement of 2012 on the Implementation of the Provisions of the 1993 Protocol relating to the Torremolinos International Convention for the Safety of Fishing Vessels • International Convention on Standards of Training, Certification and Watch keeping for Fishing Vessel Personnel (STCW-F), 1995 • Special Trade Passenger Ships Agreement (STP), 1971 and Protocol on Space Requirements for Special Trade Passenger Ships, 1973 **Other conventions relating to prevention of marine pollution** • International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (INTERVENTION), 1969 • Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LC), 1972 (and the 1996 London Protocol) • International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990

Id	For the overarching framework, International and EU level references	
		• Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRC-HNS Protocol) • International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS), 2001 • International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 • The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 **Conventions covering liability and compensation** • International Convention on Civil Liability for Oil Pollution Damage (CLC), 1969 • 1992 Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND 1992) • Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR), 1971 • Athens Convention relating to the Carriage of Passengers and their Luggage by Sea (PAL), 1974 • Convention on Limitation of Liability for Maritime Claims(LLMC), 1976 • International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996 (and its 2010 Protocol) • International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 • Nairobi International Convention on the Removal of Wrecks, 2007 **Other subjects** • International Convention on Tonnage Measurement of Ships (TONNAGE), 1969 • International Convention on Salvage (SALVAGE), 1989 **Convention establishing IMO** • Convention on the International Maritime Organization
c	Espoo Convention and Kiev Protocol (SEA/EIA)	http://www.unece.org/fileadmin/DAM/env/eia/Publications/2015/ECE.MP.EIA.21_Convention_on_Environmental_Impact_Assessment.pdf https://www.unece.org/fileadmin/DAM/env/eia/documents/legaltexts/protocolenglish.pdf
d	UNFCCC on climate change	https://unfccc.int Text of the Convention: http://unfccc.int/cop4/conv/conv_002.htm Kyoto Protocol: http://unfccc.int/cop4/resource/docs/cop3/l07a01.pdf
e	UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention)	https://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf
f	Convention on Biological Diversity	https://www.cbd.int/convention/text/

Id	For the overarching framework, International and EU level references	
g	Convention on the Conservation of Migratory Species of Wild Animals (CMS/Bonn Convention)	https://www.cms.int/sites/default/files/instrument/CMS-text.en_.PDF
h	Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)	https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/0900001680078aff
i	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	https://www.cites.org/sites/default/files/eng/disc/CITES-Convention-EN.pdf
j	Conventions and instruments adopted under the auspices of FAO and the General Fisheries Commission for the Mediterranean Strategy	FAO Code of Conduct for Responsible Fisheries (CCRF) http://www.fao.org/3/a-i5450e.pdf http://www.fao.org/3/a-i7340e.pdf
k	EU Natura 2000 Directives (Birds and Habitat)	Birds Directive: http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm Habitat Directive: http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm
l	IMP	**EU Integrated Maritime Policy, including the following extended list of documents (to be refined)** • Progress Report (11.09.2012) and Annex to the Progress Report (11.09.2012) • Integrated Maritime Policy work programme (12.03.2012) • Regulation (EU) No 1255/2011 of the European Parliament and of the Council of 30 November 2011 establishing a Programme to support the further development of an Integrated Maritime Policy (05.12.2011) • Progress Report (15.10.2009) and Annex to the Progress Report listing all actions from the Action Plan (15.10.2009) • "Blue Book" - Communication on an Integrated Maritime Policy for the European Union (10.10.2007) • Guidelines to Member States on an Integrated Approach to Maritime Policy • Communication on the international dimension of the Integrated Maritime Policy
m	EU Water Framework and Flood Directives	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060
n	EU Marine Strategy Framework Directive	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056
o	EU MSP Directive	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0089
p	The Common Fisheries Policy (CFP)	https://ec.europa.eu/fisheries/cfp_en

Table 3: Table template for the analysis of main documents (Table 1) for key interactions related to pressure and state/impacts elements of the ICZM Protocol

Interactions addressing *activities* at stake (**pressure**)

Identified interactions		**Relevant provisions of the ICZM Protocol**	**Relevant legal and policy instruments**	**Related provisions and guidelines**
Coastal zone Landward	*Specify the identified key interaction highlighted in red in the matrix of Figure 2* *e.g. Agriculture*	*Specify the main related relevant provisions of the ICZM Protocol* *Art., co., lett.*	*Id. and Name of the relevant documents of Table 1*	*Brief description of the main relevant related elements.*
Land-Sea Interface	*Specify the identified key interaction highlighted in red in the matrix of Figure 2.* *e.g. Infrastructures: Ports, Coastal defence and other Coastal infrastructures*	*Art., co., lett.*	*Id. and Name of the relevant documents of Table 1*	*Brief description of the main relevant related elements.*
Coastal zone Seaward	*Specify the identified key interaction highlighted in red in the matrix of Figure 2.* *e.g. fishing*	*Art., co., lett.*	*Id. and Name of the relevant documents of Table 1*	*Brief description of the main relevant related elements.*

Interactions related to ***state of*** and ***impacts on*** coastal and marine areas

Identified interactions		**Relevant provisions of the ICZM Protocol**	**Relevant legal and policy instruments**	**Related provisions and guidelines**
Coastal zone Landward	*Specify the identified key interaction highlighted in red in the matrix of Figure 2.* *e.g. coastal landscapes*	*Specify the main related relevant provisions of the ICZM Protocol* *Art., co., lett.*	*Id. and Name of the relevant documents of Table 1*	*Brief description of the main relevant related elements*
Land-Sea Interface	*Specify the identified key interaction highlighted in red in the matrix of Figure 2.* *e.g. coastal erosion*	*Art., co., lett.*	*Id. and Name of the relevant documents of Table 1*	*Brief description of the main relevant related elements*
Coastal zone Seaward	*Specify the identified key interaction highlighted in red in the matrix of Figure 2.* *e.g. marine habitats*	*Art., co., lett.*	*Id. and Name of the relevant documents of Table 1*	*Brief description of the main relevant related elements*

4. Phase C - Process towards the identification of operational recommendations

Based on results of Phases A and B, the third Phase (C) of the methodological guidance proposes a process towards the identification of operational recommendations to implement the CRF on ICZM towards the achievement of EcAp EOs. It is worthwhile to remember that the operational recommendations are strictly dependent on the **spatial** (regional, sub-regional, national, sub-national or local) and **temporal** (short, medium and long-term) **scale of analysis,** that shall be identified at the beginning of the methodological process. Moreover, they have to focus on the **elements of the ICZM Protocol which show most relevant interactions with the EcAp EOs** (priority interactions), according to the previous phases and for which policy documents are analysed in Phase B.

Operational recommendations are therefore expected to be developed for each priority interaction and in relation with **the first two main objectives of the CRF on ICZM (**provided the third objective on 'good governance' is cross-cutting the two others):

Ensure sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes, in such a way to:
- address the process through which relevant sectors can ensure sustainable use of natural resources; and
- improve protection of coastal and marine ecosystems and the preservation of related ecosystem services.

Address natural hazards and the effects of natural disasters - in particular coastal erosion and other climate-related impacts - thus contributing to reduce, as much as possible, the factors of risks, which can prevent the achievement of the EcAp EOs.

It should be noted that some of the selected elements could be subject to the same or similar recommendations. In this case it is recommended to cluster them, as in the examples of clustering reported in the following Boxes 2 and 3, respectively for coastal and maritime activities and natural and cultural elements considered by the ICZM Protocol.

Box 2 – Example of clustering of coastal and maritime activities

Coastal and maritime activities (pressures) considered in the provisions of the ICZM Protocol can be clustered categorised as follows:

Landward activities, which can be further distinguished in:

- Land-based economic activities: (i) agriculture, with particular focus on hazardous substances and nutrients; (ii) industry, with particular focus on hazardous substances; (iii) mining, with particular focus on hazardous substances;
- Urban sprawl: focus on physical degradation (sediment turbidity) and production of wastes, hazardous substances (synthetic) and nutriments.

Activities mainly occurring at the land-sea interface, which are further distinguished in:

- Localised activities: (i) ports, coastal defence and other coastal infrastructures, with particular focus on physical degradation (sediment turbidity, abrasion of habitats) and hazardous substances; (ii) energy infrastructure along the coast, with particular focus on physical degradation and biological perturbation; (iii) desalination plants, with particular focus on biological perturbation;
- Diffuse activities: tourism and recreational activities on the coast. Focus on direct (disturbance, use of biotic resources, etc.) and indirect (increase production of contaminants and marine litter, etc.) impacts on fauna, flora and natural habitats.

Seaward activities, which are further distinguished in:

- Activities based on natural resource: (i) fishing, with particular focus on physical degradation (trawling) and biological perturbation; (ii) marine aquaculture, with particular focus on physical degradation and release of nutrients and hazardous waste.
- Activities based on hard infrastructure and solutions: (i) offshore energy, with particular focus on physical degradation and hazardous substances; (ii) sand extraction and mineral mining, with particular focus on physical degradation and hazardous substance; (iii) marine cables and pipelines, with particular focus on physical degradation and biological perturbation.
- Vessel based activities: (i) tourism and recreational activities at the sea (including yachting and cruising), with particular focus on physical abrasion and disturb to fauna; (ii) shipping, with particular focus on noise pollution, waste and hazardous substances, disturb and direct impact (collision) to fauna, biological perturbation (introduction of non-indigenous species).

Box 3 – Example of sub-categories for the major category "Preserving the natural and cultural heritage and addressing risks"

State and impact issues (related to the natural environment and cultural heritage) considered in the provisions of the ICZM Protocol can be further categorised as follows:

- Preservation of biodiversity.
- Preservation of vulnerable ecosystems; the ICZM Protocol mentions the following specific coastal and marine ecosystems: coastal forests and woods, dunes, wetlands and estuaries, marine species and habitats, and islands.
- Preservation of cultural heritage, in particular the archaeological and historical heritage including the underwater cultural heritage.
- Preservation of coastal landscapes
- Improving knowledge on ecosystems, including: inventories, monitoring and observation mechanisms, and networks.
- Addressing risk, including in particular coastal erosion.

Operational recommendations can be of different nature and are expected to focus on **assessment and management aspects**. As **governance** aspects are at the core of the ICZM Protocol and the CRF document, each of these operational recommendations should also be considered from a governance point of view for their proper implementation.

Once identified, operational recommendations can be organised in the common template proposed in Table 4. The template should be adapted to different scales, taking into consideration extrapolated lessons from national implementation in order to further develop the operational recommendations at i) national and sub-national level, with the short-term temporal perspective, and ii), regional and sub-regional level, on the long and medium temporal perspective.

The template is organised as follows:

- the first column identifies the priority interaction (or cluster of interactions) for which operational recommendations are developed;
- the second column contains the operational recommendations;
- the third column enables to propose progress indicators to monitor the implementation of each operational recommendations;
- the fourth and fifth columns are used to indicate to which main objective of the CRF for ICZM the proposed recommendation is related to: either one of the two or even both of them can be selected;
- Columns from sixth to ninth are used to indicate to which clusters of Ecological Objectives the proposed recommendation contributes to in terms of GES achievement;
- the tenth column can be used to specify the aspects covered by the identified operational recommendations: assessment (A), management (M) and/or governance (GO).

The proposed template should be finalised based on the results of its application. As mentioned in the introduction of this methodological guidance, the template might be part of an IT platform set up as an operational tool to support the implementation of the entire process; this will simplify its compilation and operational use.

As it is expressly mentioned in the CRF on ICZM main document, it is well-known and commonly acknowledged that coordination and integration (across vertical levels of governance and horizontally among different sectors) as well as stakeholder participation are essential components of the ICZM process. The implementation of all phases of this methodological guidance, and in particular Phase C, therefore, requires the creation or the use of an already shaped mechanisms enabling **stakeholder engagement and improving policies, strategies, plan and practices integration and coordination**. This will enable the co-generation of the operational recommendations and improve their ownership, which is essential for their implementation.

Step-wise approach of all three phases is shown in Figure 3.

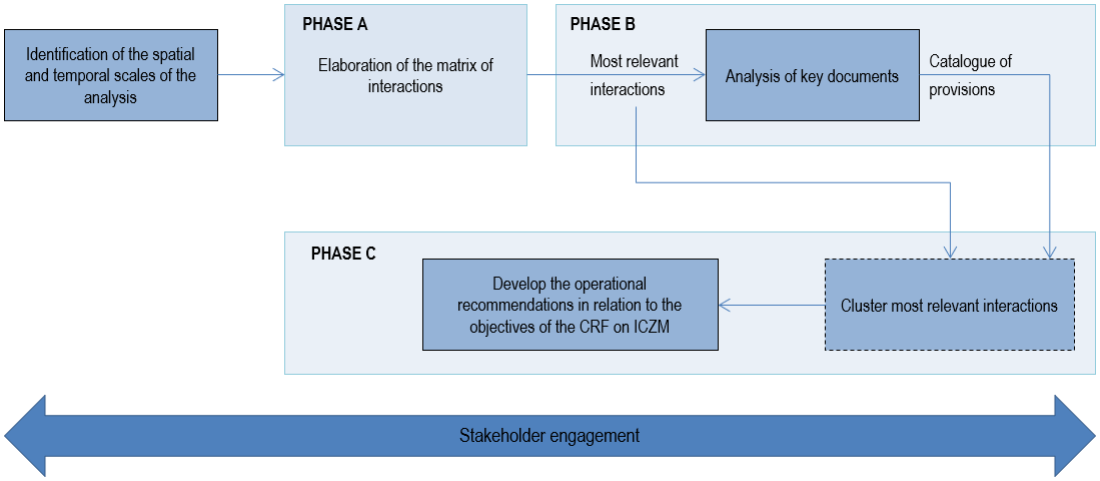

Figure 3: Step-wise process towards development of the operational recommendations

Table 4: Template for the identification of the operational recommendations

UNITED NATIONS ENVIRONMENT PROGRAMME MEDITERRANEAN ACTION PLAN									
			Objective of the CRF for ICZM		Clusters of Ecological Objectives				
Priority interactions (or cluster of interactions)	**Operational recommendations**	**Progress indicators**	**Sustainable Development and Integrity of the coastal zone**	**Addressing natural hazards and disasters**	**Biodiversity**	**Fisheries**	**Coast and Hydrography**	**Pollution and Litter**	**Nature of the recommendation**

Table 5: Analysis of main documents of Table 1 for interactions between ICZM issues and EOs (Figure 2).

Interactions addressing *activities* at stake (**pressure**)

Identified interactions		**Relevant provisions of the ICZM Protocol**	**Relevant legal and policy instruments**	**Related provisions and guidelines**
Coastal zone Landward	Agriculture	Art. 9, co. 1 and 2, lett. a Art. 5, co. 1, lett. c (water use) and Art. 6 Art. 8 Articles 17 and 18; 14, 19 and 27	2. LBS Protocol	Articles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6: point source discharge strictly subjected to authorization and regulation. **Agriculture and animal husbandry** (Annex I) are sectors of activity to be taken into consideration to this regard.
			8. SAP-MED	Chapter 5: **Targets and proposed activities** at regional and national levels for the prevention, reduction and elimination of pollution; to be implemented through NAP (Chapter 10). Section 5.2.5 provides specific targets and actions for (intensive) **agriculture** and aquaculture in relation to **nutrient loads**.
			12. SCP AP	Operational objectives and actions 1 – focused also on agriculture, e.g.: adopt **good agriculture practices** (1.1), **life cycle approach** in food and fisheries processing (1.1), **green financing for sustainable farming** (1.2), information and education **campaigns** (1.3), etc.
			15. RP on Marine Litter	Article 17 – Major **agriculture stakeholders** shall be involved in the implement of the regional plan and related actions
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene. 29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			5. Hazardous Wastes Protocol	Article 8: regional cooperation for **clean production method** concerning wastes from production, formulation and use of **biocides and phytopharmaceuticals** (Annex I) in agriculture including land treatment (Annex III)
			1. SPA/BD Protocol	Even with respect to activities such as agriculture, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17)
			9. SAP BIO	SAP BIO is the **background document of CRF** and EcAp, which provides principles, measures and concrete and coordinated priority actions, relevant targets, objectives, and specific actions at national, transboundary and regional level for the **conservation of the Mediterranean marine and coastal biodiversity**, within the framework of sustainable use and through the implementation of the SPA/BD Protocol. **Objectives**: improving knowledge; management of Marine and Coastal PAs; protection of endangered species and habitats; reinforcement of legislation and capacity building; fund-raising efforts. Among others, endorses concrete and practical actions aiming at promoting bio-conservation-friendly sector policies, procedures and techniques, in particular related to **agriculture.**
			7. MSSD 2016-2025	**Objective (Obj.) 1 (Sustainable Development Goal-SDG14)**: Ensuring sustainable development in marine and coastal areas. **Strategic Directions (SD)** complemented by national and regional actions: Strengthen implementation of and compliance with the Barcelona System and related; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj.2 (SDG 2, 15, 6)**: Promoting resource management, food production and food security through sustainable forms of rural development. **SD**: conservation and use of indigenous or traditional plant varieties and domestic animal breeds, valuing traditional knowledge and practices in rural management decisions, access of local producers to distribution channels and markets, including the tourism market. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector. **Obj.5 (SDG 8 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RFCCA	Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **agriculture** and forestry, as well as of **water resource management**.
	Industry	Art. 9, co. 1 and 2, lett. a Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 27	2. LBS Protocol	Articles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6: point source discharge strictly subjected to authorization and regulation. **Industry** (Annex I) is one of the sectors of activity to be taken into consideration to this regard.
			8. SAP-MED	Chapter 5: **Targets and proposed activities** at regional and national levels for the prevention, reduction and elimination of pollution, to be implemented through NAP (Chapter 10). Chapter 5.2 focuses on **industry**: (1) substances that are toxic, persistent and liable to bioaccumulation, (2) other heavy metals, (3) organohalogen compounds, (4) radioactive substances, (5) nutrients and suspended solids, (6) hazardous waste.
			12. SCP AP	Operational objectives and actions 2 – focused on goods manufacturing, e.g.: promote **Best Available Technologies** (BAT) and **Best Environmental Practices** (BEPs) (2.1), in particular in waste management, **cost accounting** and market-based instruments (2.2), etc.
			15. RP on Marine Litter	Article 17 – Major **industry stakeholders** shall be involved in the implement of the regional plan and related actions. Article 9 Prevention of marine litter - (3g): establish procedures and manufacturing methodologies together with **plastic industry** to minimize the decomposing characteristics of plastics, to reduce micro-plastic.
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene.	

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
			29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			5. Hazardous wastes Protocol	Article 8: regional cooperation for **clean production method** concerning all **hazardous wastes** (Annex I), all characteristics (Annex II), and all disposal operations listed (Annex III).
			1. SPA/BD Protocol	Even with respect to activities such as industry, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and related; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj. 5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
	Utilization of specific natural resources: mining	Art. 9, co. 1 and 2, lett. e Articles 5 and 6 Article 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 27	2. LBS Protocol	Articles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6: point source discharge strictly subjected to authorization and regulation. **Mining** (Annex I) is one of the sectors of activity to be taken into consideration to this regard.
			12. SCP AP	Operational objectives and actions identified for good manufacturing (2) and for housing and construction (3) apply also to **mining**, as specified in the introduction.
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and	

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
			perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene. 29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			5. Hazardous wastes Protocol	Article 8: regional cooperation for clean production method concerning residues arising from **industrial waste disposal operations** (Annex I), toxic and ecotoxic (Annex II), and deposit into or onto land (Annex III).
			1. SPA/BD Protocol	Even with respect to activities such as the utilization of specific natural resources, in particular mining, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value**. (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj. 1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and related; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj. 5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
	Urban sprawl	Articles 5 and 6 Art. 8 Art 23, co. 2	8. SAP-MED	Chapter 5: **Targets and proposed activities** at regional and national levels for the prevention, reduction and elimination of pollution, to be implemented through NAP (Chapter 10). Chapter 5.1 focuses on **urban environment**: (1) municipal sewage, (2) urban solid waste, (3) air pollution.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
		Articles 17 and 18; 14, 19 and 27	12. SCP AP	Operational objectives and actions 4 – focused on housing and construction, e.g.: **sustainable coastal urban development and green construction** for efficient use or resources and protection of ecosystems (4.2).
			15. RP on Marine Litter	Article 9 Prevention of marine litter - (1): base urban solid waste management on reduction at source, (4) establish **urban sewer, wastewater treatment plants, and waste management systems** to prevent run-off and riverine inputs of litter.
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene. 29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			5. Hazardous wastes Protocol	Article 8: regional cooperation for clean production method concerning **household wastes** (Annex I), infectious and ecotoxic substances (Annex II), surface impoundment and release into water body and into seas/oceans (Annex III).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and related; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj.3 (SDG 11, 7)**: Planning and managing sustainable Mediterranean cities. **SD**: Apply holistic and integrated spatial planning processes; Encourage inclusive urbanization; Enhance urban resilience in order to reduce vulnerability to risks from natural and human-induced hazards; Promote the protection and rehabilitation of historic urban areas; the sustainable waste management; the urban spatial patterns and technological options that reduce the demand for transportation and stimulate sustainable mobility; the green buildings and reduce ecological footprint of the built environment. **Target**: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries; and substantially reduce waste generation through prevention, reduction, recycling and reuse. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector. **Obj.6 (SDG 16, 17)**: Improving governance in support of sustainable development. **SD**: Enhance international dialogue and cooperation, including on emergency-preparedness; and the regional capabilities for information management; Promote stakeholder engagement to secure inclusive processes and integrity in decision-making; implementation and compliance with environmental obligations and agreements, including through policy coherence based on inter-ministerial coordination; education and research. **Target**: By 2025, two-thirds of Mediterranean countries have acceded to the Aarhus Convention.
			11. RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: risk and impact assessment in relation to climate change prior to **major infrastructure investments** in coastal and marine areas. Strategic Direction 1.5 (Integrating climate adaptation into local plans for the protection and management of areas of special interest) – including **coastal mega-cities** Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **urbanization**.
Land-Sea Interface	Infrastructures: ports, coastal defence and other coastal infrastructures	Art. 9, co. 1 and 2, lett. f Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 27	2. LBS Protocol	cles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6: point source discharge strictly subjected to authorization and regulation. **Harbour operation** (Annex I) is one of the sectors of activity to be taken into consideration to this regard.
			8. SAP-MED	Harbours are **not expressly mentioned** in the SAP-MED when defining targets and proposed activities. However, harbours can be assimilated to industry (Chapter 5.2). They are also mentioned among **hot-spots** (chapter 11).
			15. RP on Marine Litter	Article 17 – Major **maritime sector stakeholders** shall be involved in the implement of the regional plan and related actions. Article 9 Prevention of marine litter - (5): implement means to charge **cost for the use of port reception** facilities and apply **No-Special-Fee system**.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
			5. Hazardous wastes Protocol	Article 6 relates to transboundary movement and notification procedures whilst Article 8 encourages regional cooperation for clean production method, and Article 9 condemn illegal traffic. Here are potentially concerned all hazardous wastes **including hydrocarbons** (Annex I), with varied hazardous characteristics (Annex II), and all operations listed in regard to resource recovery, recycling, reclamation, direct reuse or alternative uses.
			3. Prevention and Emergency Protocol	**Port reception facilities** (Article 14) are concerned in meeting the needs of ships: they should be adequate and operate efficiently to limit any impact of discharges to the marine environment.
			10. Strategy on pollution from ships	Under section 4, several **specific objectives** (Nb. 4, 5, 6) are directly related to **ports** including MoU on port State Control (4), provision of reception facilities in ports (5), and delivery of ship-generated wastes (6). This imply that each Contracting Party maintains its mandate to REMPEC (4), enabling the use of adequate reception and facilities at a reasonable fee for garbage, oily wastes, NLS, sewage, ozone-depleting substances and exhaust gas cleaning residues, ballast water and sediments (5), establishing a system of notification to a vessel's next port of call of the status of its on-board retention substances (6).
			14. Strategy on ballast water	In Annex I, two important **port-related 'Action points'** are mentioned: 1) for establishing a solid Port State Control and Compliance Monitoring and Enforcement (CME) system in the Mediterranean region, and 2) for establishing a survey, biological monitoring and risk assessment system for Mediterranean ports under the guidance of REMPEC.
			1. SPA/BD Protocol	Even with respect to infrastructures and the related activities, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas **Obj.3 (SDG 11, 7)**: Planning and managing sustainable Mediterranean cities. **SD**: Apply holistic and integrated spatial planning processes; Encourage inclusive urbanization; Enhance urban resilience in order to reduce vulnerability to risks from natural and human-induced hazards; Promote the protection and rehabilitation of historic urban areas; the sustainable waste management; the urban spatial patterns and technological options that reduce the demand for transportation and stimulate sustainable mobility; the green buildings and reduce ecological

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				footprint of the built environment. **Target**: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries; and substantially reduce waste generation through prevention, reduction, recycling and reuse. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: Integrated approach for the reduction of **non-climate related threats** that undermine the capacities of communities and ecosystems to adapt to climate change, including **damming**. Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: risk and impact assessment in relation to climate change prior to **major infrastructure investments** in coastal and marine areas. Strategic Direction 3.1 – Priorities include: avoidance of maladaptive actions and **non-efficient "hard" infrastructures** to low-regret measures to improve climate resilience. Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **key infrastructure** and **transport**.
		Art. 9, co. 1 and 2, lett. f	2. LBS Protocol	Articles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6:

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
	Energy infrastructures along the coast	Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 27		point source discharge strictly subjected to authorization and regulation. **Energy production** (Annex I) is one of the sectors of activity to be taken into consideration to this regard.
			8. SAP-MED	**Energy production is considered within the industry sector**, for which Chapter 5.2 defines targets and proposed activities at regional and national levels for the prevention, reduction and elimination of pollution (See Industry), to be implemented through NAP (Chapter 10).
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene. 29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			1. SPA/BD Protocol	Even with respect to energy infrastructures and the related activities, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: risk and impact assessment in relation to climate change prior to **major infrastructure investments** in coastal and marine areas.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				Strategic Direction 3.1 – Priorities include: avoidance of maladaptive actions and **non-efficient "hard" infrastructures** to low-regret measures to improve climate resilience. Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **energy**.
	Tourism, sporting, recreational activities: Activities along the coast	Art. 9, co. 1 and 2, lett. d Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 27	2. LBS Protocol	Articles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6: point source discharge strictly subjected to authorization and regulation. **Tourism** (Annex I) is one of the sectors of activity to be taken into consideration to this regard.
			8. SAP-MED	In the Mediterranean region, **pollution related to the urban context is exacerbated by tourism**. This sector is considered in chapter 5 which identifies targets and proposed activities at regional and national levels for the prevention, reduction and elimination of pollution (see urban sprawl), to be implemented through NAP (Chapter 10).
			12. SCP AP	Operational objectives and actions 3 – focused on tourism, e.g.: **sustainable tourisms** and network of sustainable destinations (3.1), **diversification** (3.1), **eco-taxes and eco-fees** (3.2), tourism carrying capacity assessment (3.2), etc.
			15. RP on Marine Litter	Article 17 – Major **tourism stakeholders** shall be involved in the implement of the regional plan and related actions.
			10. Strategy on pollution from ships	Under section 4, one specific objective (Nb.9) is related to the reduction of **pollution generated by pleasure craft activities**, more particularly (high priority) the implementation of the Guidelines concerning Pleasure Craft Activities and the Protection of the Marine Environment in conjunction with the relevant provisions of the MARPOL Convention and the Regional Plan on Marine Litter Management
			1. SPA/BD Protocol	Even with respect to activities such as tourism, sporting etc., all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			9. SAP BIO	SAP BIO is the **background document of CRF** and EcAp, which provides principles, measures and concrete and coordinated priority actions, relevant targets, objectives, and specific actions at national, transboundary and regional level for the **conservation of the**

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				Mediterranean marine and coastal biodiversity, within the framework of sustainable use and through the implementation of the SPA/BD Protocol. **Objectives**: improving knowledge; management of Marine and Coastal PAs; protection of endangered species and habitats; reinforcement of legislation and capacity building; fund-raising efforts. Among others, endorses concrete and practical actions aiming at promoting bio-conservation-friendly sector policies, procedures and techniques, in particular related to **tourism.**
			16.MPAs Roadmap	The Roadmap includes recommended actions fully in line with the EcAp process, with the following main objectives (O): **O.3**: Promote the sharing of environmental and socio-economic benefits of Mediterranean MPAs and the MPAs integration into the broader context of sustainable use of the marine environment and the implementation of the ecosystem and MSP approaches. **Suggested actions**: Promote cross-sectorial policies and mechanisms for integrating the MPA national strategies and policies with other human activity sectors, in particular fisheries and tourism, through the development of appropriate governance frameworks, including the related legal and institutional arrangements. These could include, but will not be limited to, cross-sectorial coordination, MSP legislation, support groups from the business sectors for MPA management, and legal instruments for public-private partnerships.
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and related; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj.2 (SDG 2, 15, 6)**: Promoting resource management, food production and food security through sustainable forms of rural development. **SD**: access of local producers to distribution channels and markets, including the tourism market. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				Obj.5 (SDG 8, 9, 12: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11.RFCCA	Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **tourism**.
	Utilization of specific natural resources: desalination plants	Art. 9, co. 1 and 2, lett. e Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 27	1. SPA/BD Protocol	Even with respect to the utilization of specific natural resources and the related activities, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **Obj.5 (SDG 8, 9, 12**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
Coastal zone Seaward	Fishing	Art 9, co. 1 and 2, lett. b Articles 5 and 6 Art. 8, co. 1	12. SCP AP	Operational objectives and actions 1 – focused also on fisheries, e.g.: **adopt sustainable fishing practices** (1.1), **life cycle approach** in food and fisheries processing (1.1), **green financing** for sustainable fisheries (1.2), information and education **campaigns** (1.3).
			15. RP on Marine Litter	Article 17 – Major **fisheries stakeholders** shall be involved in the implement of the regional plan and related actions.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
		Articles 17 and 18; 14, 19 and 29, 27 and 28		Article 9 Prevention of marine litter - (3e): establishment of deposits, return and restoration system for expandable **polystyrene boxes**; (6) implement the **fishing for litter** practice; (7) implement "**gear marking** to indicate ownership" and "**environmental neutral** upon degradation nets and traps" concepts.
			6. Dumping Protocol	Article 4: Dumping of wastes and other matter from ships and aircraft is prohibited with the exception of those in Article 4.2, which also include **fish waste and organic materials** resulting from the processing of fish and other marine organisms. Their dumping requires **special permit** (Article 5).
			5. Hazardous wastes Protocol	Article 8 encourage regional cooperation for clean production method concerning **waste oils/water, hydrocarbons/water mixtures** (Annex I) of ecotoxic nature (Annex II), and **disposal operations** including release into a water body (port); release into the sea (Annex III).
			13. Offshore AP	Appendix III Indicative Potential Research and Development Topic: **Fisheries**: Short-term and long-term impact of the oil and gas (O&G) industry on Mediterranean fisheries.
			1. SPA/BD Protocol	Even with respect to fishing and the related activities, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			9. SAP BIO	SAP BIO is the **background document of CRF** and EcAp, which provides principles, measures and concrete and coordinated priority actions, relevant targets, objectives, and specific actions at national, transboundary and regional level for the **conservation of the Mediterranean marine and coastal biodiversity**, within the framework of sustainable use and through the implementation of the SPA/BD Protocol. **Objectives**: improving knowledge; management of Marine and Coastal PAs; protection of endangered species and habitats; reinforcement of legislation and capacity building; fund-raising efforts. Among others, endorses concrete and practical actions aiming at promoting bio-conservation-friendly sector policies, procedures and techniques, in particular related to **fisheries.**
			16. MPAs Roadmap	The Roadmap includes recommended actions fully in line with the EcAp process, with the following main objectives (O):

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				O.3: Promote the sharing of environmental and socio-economic benefits of Mediterranean MPAs and the MPAs integration into the broader context of sustainable use of the marine environment and the implementation of the ecosystem and MSP approaches. **Suggested actions**: Promote cross-sectorial policies and mechanisms for integrating the MPA national strategies and policies with other human activity sectors, in particular **fisheries** and tourism, through the development of appropriate governance frameworks, including the related legal and institutional arrangements. These could include, but will not be limited to, cross-sectorial coordination, MSP legislation, support groups from the business sectors for MPA management, and legal instruments for public-private partnerships.
			25. AP concerning species introduction and invasive species	
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and relates; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Target**: By 2020, effectively regulate harvesting and end over fishing, IUU fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristic. **Obj.2 (SDG 2, 15, 6)**: Promoting resource management, food production and food security through sustainable forms of rural development. **SD**: conservation and use of indigenous or traditional, domestic animal breeds, valuing traditional knowledge and practices in rural management decisions, access of local producers to distribution channels and markets, including the tourism market. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: Integrated approach for the reduction of **non-climate related threats** that undermine the capacities of communities and ecosystems to adapt to climate change, including **overfishing**. Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **fisheries**.
	Aquaculture	Art 9, co. 1 and 2, lett. b Articles 5 and 6 Art. 8, co. 1 Art 23, co. 2 Articles 17 and 18; 14, 19 and 29, 27 and 28	2. LBS Protocol	Articles 5, 7 and 15: Parties shall elaborate **action plans, programmes and measures** to reduce LBS pollution, with priority to toxic, persistent, liable to bioaccumulation substances. Article 6: point source discharge strictly subjected to authorization and regulation. **Aquaculture** (including mariculture?) is a sector of activity to be taken into consideration to this regard.
			8. SAP-MED	Chapter 5: **Targets and proposed activities** at regional and national levels for the prevention, reduction and elimination of pollution. Section 5.2.5 provides specific targets and actions for agriculture and (intensive) aquaculture (including mariculture?) in relation to **nutrient loads,** to be implemented through NAP (Chapter 10).
			12. SCP AP	Operational objectives and actions 1 identified for fisheries apply also to **aquaculture**, as specified in the introduction.
			15. RP on Marine Litter	Article 17 – Major **aquaculture stakeholders** shall be involved in the implement of the regional plan and related actions. Some of article 9 actions on fisheries are also relevant for aquaculture.
			5. Hazardous wastes Protocol	Article 8 encourage regional cooperation for clean production method regarding **waste pharmaceuticals (antibiotics)** (Annex I), of ecotoxic nature (Annex II), released into seas/oceans (Annex III).
			1. SPA/BD Protocol	Even with respect to aquaculture and the related activities, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect,

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14):** Ensuring sustainable development in marine and coastal areas **Obj.2 (SDG 2, 15, 6):** Promoting resource management, food production and food security through sustainable forms of rural development. **SD**: conservation and use of indigenous or traditional, domestic animal breeds, valuing traditional knowledge and practices in rural management decisions, access of local producers to distribution channels and markets, including the tourism market. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
	Tourism, sporting, recreational activities: yachting and cruising	Art. 9, co. 1 and 2, lett. d Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 29, 27 and 28	12. SCP AP	Operational objectives and actions 3 – focused on tourism, e.g.: **sustainable tourisms** and network of sustainable destinations (3.1), **diversification** (3.1), **eco-taxes and eco-fees** (3.2), tourism carrying capacity assessment (3.2), etc.
			15. RP on Marine Litter	Article 17 – Major **tourism stakeholders** shall be involved in the implement of the regional plan and related actions.
			6. Dumping Protocol	Article 3: Provision of the Protocol also applies to **yachting and cruising** vessels. Dumping of wastes and other matter is prohibited (See "*Maritime activities: shipping*" for more information).

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
			10. Strategy on pollution from ships	Under section 4, one specific objective (Nb.9) is related to the **reduction of pollution generated by pleasure craft activitie**s, more particularly (high priority) the implementation of the Guidelines concerning Pleasure Craft Activities and the Protection of the Marine Environment in conjunction with the relevant provisions of the MARPOL Convention and the Regional Plan on Marine Litter Management.
			1. SPA/BD Protocol	Even with respect to tourism, sporting etc., all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			9. SAP BIO	SAP BIO is the **background document of CRF** and EcAp, which provides principles, measures and concrete and coordinated priority actions, relevant targets, objectives, and specific actions at national, transboundary and regional level for the **conservation of the Mediterranean marine and coastal biodiversity**, within the framework of sustainable use and through the implementation of the SPA/BD Protocol. **Objectives**: improving knowledge; management of Marine and Coastal PAs; protection of endangered species and habitats; reinforcement of legislation and capacity building; fund-raising efforts. Among others, endorses concrete and practical actions aiming at promoting bio-conservation-friendly sector policies, procedures and techniques, in particular related to **tourism.**
			16. MPAs Roadmap	The Roadmap includes recommended actions fully in line with the EcAp process, with the following main objectives (O): **O.3**: Promote the sharing of environmental and socio-economic benefits of Mediterranean MPAs and the MPAs integration into the broader context of sustainable use of the marine environment and the implementation of the ecosystem and MSP approaches. **Suggested actions**: Promote cross-sectorial policies and mechanisms for integrating the MPA national strategies and policies with other human activity sectors, in particular fisheries and **tourism**, through the development of appropriate governance frameworks, including the related legal and institutional arrangements. These could include, but will not be limited to, cross-sectorial coordination, MSP legislation, support groups from the business sectors for MPA management, and legal instruments for public-private partnerships.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RCCAF	Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **tourism**.
	Maritime activities: shipping	Art 9, co. 1 and 2, lett. f and g Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 29, 27 and 28	12. SCP AP	Transport is one of the **transversal issues** (chapter 2) considered by the SCP AP and therefore approach by each of the 4 priority areas.
			15. RP on Marine Litter	Article 17 – Major **maritime sector stakeholders** shall be involved in the implement of the regional plan and related actions. See also actions related to ports (article 9).
			6. Dumping Protocol	Article 4: **Dumping of wastes** and other matter from **ships and aircraft is prohibited** with the exception of those in art. 4.2 (dredged material, fish waste and organic materials resulting from the processing of fish, vessels until 31.12.2000, platforms and other man-made structures under specific conditions). Their dumping requires **special permit** (article 5)
			5. Hazardous wastes Protocol	Transboundary movement and notification procedures are described in Article 6, whilst Article 8 encourage regional cooperation for **clean production method, fight against illegal traffic** (Article 9), in regard of potentially all wastes identified (Annex I), with hazardous characteristics listed in Annex II, mainly release into a water body (port) and into seas/oceans (Annex III).

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
			3. Prevention and Emergency Protocol	Article 7 encourage disseminating and sharing information about new ways in which pollution from ships may be avoided, new measures for **combating pollution**, new developments in monitoring and research programmes, whilst Article 10 give the **operational measures**: any Party shall make the necessary assessments of nature, extent and possible consequences of pollution incident. As regards **emergency measures** (Article 11), necessary steps are to be taken to ensure that ships flying its flag have on board a pollution emergency plan, whilst environmental risks (Article 15) include the assessment of environmental risks of recognized routes used in maritime traffic.
			10. Strategy on pollution from ships	Two specific objectives (Nb. 10 and 11) are directly related to shipping by **reducing the risk of collisions** by establishing Ship's Routeing Systems (10), and by **improving control of maritime traffic** (11). Where necessary, where and when possible, Contracting Parties should propose to IMO additional appropriate Routeing Systems in accordance with international law and through articulated Marine Spatial Plans (MSP) under their jurisdiction (10), and should continuously improve technical cooperation among VTS Centres and exchange information about ships by using AIS in the common surveillance area (11).
			14. Strategy on ballast	In Annex I, there are two important shipping-related 'Action Points': 1) **ratification by Contracting Parties of the International Convention** for the Control and Management of Ships' ballast water and sediments (BWM Convention), and 2) adoption of **harmonised arrangements for ballast water exchange** in the Mediterranean with support from REMPEC.
			1. SPA/BD Protocol	Even with respect to shipping, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RFCCA	Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **transport**.
	Maritime activities: offshore energy (oil and gas, renewables)	Art 9, co. 1 and 2, lett. f and g Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 29, 27 and 28	2. LBS Protocol	Article 4: The Protocol also applies to polluting discharges from **fixed man-made offshore structures** other than those used for exploration and exploitation of mineral resources; to be taken into account in action plans, programmes and measures for the elimination of LBS pollution (Article 5), with priority to toxic, persistent, liable to bioaccumulation substances.
			15. RP on Marine Litter	Article 17 – Major **maritime sector stakeholders** shall be involved in the implement of the regional plan and related actions.
			6. Dumping Protocol	Article 3: Provision of the Protocol also applies to **platforms and other man-made structures** at sea and their equipment. Dumping of wastes and other matter from ships and aircraft is in prohibited (See "*Maritime activities: shipping*" for more information).
			5. Hazardous wastes Protocol	Article 8 stipulate regional cooperation for clean production method essentially regarding **waste oils/water, hydrocarbons/water mixtures (**Annex I), of ecotoxic nature (Annex II), through disposal operations like release into a water body (port), release into the sea (Annex III).
			4. Offshore Protocol	**Measures for pollution** (the use, storage and discharge of harmful or noxious substances and materials) resulting from activities concerning exploration and/or exploitation of the resources shall be adopted, using best available, environmentally effective and economically appropriate techniques; required the **removal of installations**, including pipelines, abandoned or disused, taking into account existing guidelines and standards. (Articles 1, 3, 4, 5 and 6, 20; Section III, articles 8-14). Sanctions shall be prescribed to be imposed for breach of obligations (Art 7) **Safety measures** shall be taken with regard to the design, construction, placement, equipment, marking, operation and maintenance of installations, having adequate equipment and devices to prevent and combat accidental pollution and facilitating prompt response to an emergency; the related contingency plans shall be coordinated and established in accordance with guidelines adopted by the competent international organisation and with the provisions of Annex VII of the Offshore Protocol (Articles 15 and 16, Annex VII)
			13. Offshore AP	The AP aims to develop in conformity with EcAp and its relevant indicators a regional commonly agreed reporting and monitoring. **Specific objective (SO) 1**: To ratify the Offshore Protocol. **SO 2**: To designate CPs' Representatives to participate to the regional governing bodies.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				SO 3: To establish a technical cooperation and CB programme, to cooperate with a view to formulating and implementing programmes of assistance to DCs. **SO 4:** To mobilise resources for the implementation of the AP. **SO 5**: To promote access to information and public participation in decision-making. **SO 6**: To enhance the regional transfer of technology. **SO 7**: To develop and adopt regional offshore standards. In particular: (a) EIA regional standards developed based on existing ones; (b) Common standards, on the use and discharge of harmful or noxious substances and material, in line with relevant international standards and conventions defining inter alia limits and prohibitions at regional level formulated and adopted; (c) Identification of the required modifications of Annex I, II and III and definition of which chemicals should be covered and not covered by such standards and under which conditions; (d) Common standards on the disposal of oil and oily mixtures and on the use and disposal of drilling fluids and cutting formulated and adopted, and revision of the limits set in Article 10 of the Offshore Protocol and the prescriptions referred in Annex V of the Protocol; (e) The method to be used to analyse the oil content is commonly agreed and adopted; (f) Procedures for contingency planning, notification of accidental spills and transboundary pollution established in accordance with the Emergency Protocol; (g) Special restrictions or conditions for SPAs defined and adopted; (h) Common criteria, rules and procedures for the removal of installations and the related financial aspects adopted; (i) Common criteria, rules and procedures for safety measures including health and safety requirements adopted; (j) Common minimum standards of qualification for professionals and crews adopted. **SO 8**: To develop and adopt regional offshore guidelines. In particular: - Regional Guidelines on a. EIA; b. on the use and discharge of harmful or noxious substances and material; c. on the disposal of oil and oily mixtures and the use and disposal drilling - Fluids and cutting and analytical measurement; d. on removal of installations and the related financial aspects; e. on installation safety measures including health and safety requirements; f. on minimum standards of qualification for professionals and crews; g. on authorisation requirements based on the abovementioned Standards; - A report assessing national, regional and international rules, procedures and practices regarding liability and compensation for loss and damage resulting from the activities dealt with in the Offshore Protocol.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				SO 9: To establish regional offshore monitoring procedures and programmes, to be developed in line with the EcAp Roadmap and in particular with the Integrated Monitoring and Assessment Programme. **SO 10**: To report on the implementation of the Action Plan.
			1. SPA/BD Protocol	Even with respect to maritime activities such as offshore energy, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			27. AP for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea.	
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and relates; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11. RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: risk and impact assessment in relation to climate change prior to **major infrastructure investments** in coastal and marine areas. Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: vulnerability and **interactions of sectors**, including **energy**.
	Utilization of specific natural	Art. 9, co. 1 and 2, lett. e	15. RP on Marine Litter	Article 9 Prevention of marine litter - (8): measures to prevent **marine littering from dredging** activities in line with guidelines developed in the frame of the dumping protocol.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
	resources: sand extraction and mineral mining	Articles 5 and 6 Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 29, 27 and 28	5.Hazardous wastes Protocol	Article 8 stipulate regional cooperation for clean production method regarding **wastes with heavy metals** (Annex I), of ecotoxic nature (Annex II), when release into seas/oceans (Annex III).
			1.SPA/BD Protocol	Even with respect to the utilization of natural resources such as sand extraction and mineral mining, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			27. AP for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea.	
			7.MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and relates; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			11.RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: Integrated approach for the reduction of **non-climate related threats** that undermine the capacities of communities and ecosystems to adapt to climate change, including **sand mining** (at land?).
	Maritime activities: cables and pipelines	Art. 9, co. 1 and 2, lett. f and g Articles 5 and 6	4. Offshore Protocol	**Measures for pollution** (the use, storage and discharge of harmful or noxious substances and materials) resulting from activities concerning exploration and/or exploitation of the resources shall be adopted, using best available, environmentally effective and economically appropriate techniques; required the **removal of installations**, including pipelines, abandoned or disused,

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
		Art. 8 Art 23, co. 2 Articles 17 and 18; 14, 19 and 29, 27 and 28		taking into account existing guidelines and standards. (Articles 1, 3, 4, 5 and 6, 20; Section III, articles 8-14). Sanctions shall be prescribed to be imposed for breach of obligations (Art 7). **Safety measures** shall be taken with regard to the design, construction, placement, equipment, marking, operation and maintenance of installations, having adequate equipment and devices to prevent and combat accidental pollution and facilitating prompt response to an emergency; the related contingency plans shall be coordinated and established in accordance with guidelines adopted by the competent international organisation and with the provisions of Annex VII of the Offshore Protocol (Articles 15 and 16, Annex VII).
			1. SPA/BD Protocol	Even with respect to maritime activities, all the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **Obj.5 (SDG 8, 9, 12)**: Transition towards a green and blue economy. **SD**: Create green and decent jobs for all; Review the definitions and measurement of development, progress and well-being; Promote sustainable consumption and production patterns; Encourage environmentally-friendly and social innovation; Promote the integration of sustainability principles and criteria into decision-making on public and private investment; Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities. **Target**: By 2025, the majority of Mediterranean Countries are committed to green or sustainable public procurement programmes.
			27. AP for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea.	

Interactions related to ***state of*** and ***impacts on*** coastal and marine areas

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
Coastal zone Landward	Coastal landscapes	Art. 11 Articles 5 and 6 Art. 8, co. 1 Art 23 Articles 17 and 18; 14, 19 and 29, 27 and 28	15. RP on Marine Litter	Article 10 – (c) international **coastal clean-up campaigns**; (d) "**Adopt a beach**" and similar practices to enhance awareness. Article 11 – (1) assess state of marine litter and the **impacts of marine litter** on the coastal and marine environment.
			1. SPA/BD Protocol	All the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17). All the necessary **protection measures** shall be taken (Articles 6, 7, 11, 12 and 13, 15 and 16, 18) including continuous monitoring of ecological processes, population dynamics, landscapes, as well as the impacts of human activities (Article 7b).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector.
	Coastal forests and woods	Art. 10, co. 3	SPA/BD Protocol	All the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17). All the necessary **protection measures** shall be taken (Articles 6, 7, 11, 12 and 13, 15 and 16, 18) including continuous monitoring of ecological processes, population dynamics, landscapes, as well as the impacts of human activities (Article 7b).
Land-Sea Interface	Wetland and estuaries	Art. 10, co. 1 Articles 5 and 6 Art. 8 Articles 17 and 18; 14, 19, 27	8. SAP-MED	In Chapter 5, the SAP-MED identified targets and priorities for the prevention, reduction and elimination of pollution. Chapter 5.3 focuses on physical alteration and destruction of habitats, with the aim of safeguarding ecosystem functions, habitats and species. **ICZM programmes are among proposed activities.**
			12. SCP AP	Introduction – SCP AP addresses **key human activities** (food, fisheries and agriculture; goods manufacturing; tourism; housing and construction) which have impact on the marine and coastal environment; these are main upstream drivers of pollution generation and pressures on ecosystems.
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene. 29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			5. Hazardous wastes Protocol 3. Prevention and Emergency Protocol	The 2017 Mediterranean Quality Status Report indicate heavy metal in coastal sediment (riverine inputs and coastal diffuse runoff; urban and industrial areas; shipping and port development), with chronic sources (illicit discharges) from ships (though source from accidents is decreasing). **Monitoring must be developed in heavy populated areas like estuaries and wetlands.**
			1. SPA/BD Protocol	All the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17).

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				All the necessary **protection measures** shall be taken (Articles 6, 7, 11, 12 and 13, 15 and 16, 18).
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector.
			11. RFCCA	Introduction – the main objective of the RCCAF is to set a strategic approach to increase the resilience of the **Mediterranean marine and coastal natural** and socio-economic **systems** to climate change. Strategic Direction 1.5 (Integrating climate adaptation into local plans for the protection and management of areas of special interest) – including nature reserve, biodiversity and other **natural hot-spots** Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: mapping and resilience role **of coastal ecosystems**, **seal level rise and saltwater intrusion** affecting groundwater and wetlands.
	Dunes	Art. 10, co. 4 Articles 5 and 6	1. SPA/BD Protocol	All the necessary measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17). All the necessary **protection measures** shall be taken (Articles 6, 7, 11, 12 and 13, 15 and 16, 18) including continuous monitoring of ecological processes, population dynamics, landscapes, as well as the impacts of human activities (Article 7b).
			9. SAP BIO	SAP BIO is the **background document of CRF** and EcAp, which provides principles, measures and concrete and coordinated priority actions, relevant targets, objectives, and

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				specific actions at national, transboundary and regional level for the **conservation of the Mediterranean marine and coastal biodiversity**, within the framework of sustainable use and through the implementation of the SPA/BD Protocol. **Objectives**: improving knowledge; management of Marine and Coastal PAs; protection of endangered species and habitats; reinforcement of legislation and capacity building; fund-raising efforts. Among others, endorses concrete and practical actions aiming at reducing the causes, modification of conditions (stress reduction), prevention or mitigation of impacts, that are adverse for **biodiversity conservation**; implementing comprehensive joint actions of relevant MAP centres and programmes concerning wider aspects of **biodiversity conservation**; promoting and implementing participatory actions, programmes and campaigns; information and raising of public awareness concerning **biodiversity conservation.**
	Coastal erosion	Art. 23 Articles 5 and 6 Art. 8 Articles 17 and 18; 14, 19 and 27	7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector.
			11. RFCCA	Strategic Direction 1.2 (Promoting adequate institutional and policy frameworks) – Priorities include: integrated approach for the reduction of **non-climate related threats** that undermine the capacities of communities and ecosystems to adapt to climate change, including **sand mining and damming**. Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: patterns affecting **shoreline dynamics**.
Coastal zone Seaward	Marine habitats and species	Art 10, co. 2 Art 16, co. 1 (inventories) Articles 5 and 6	2. LBS Protocol	Potential **impacts on marine ecosystems, habitats and species** (Annex II) shall be taken in consideration when applying the Protocol and in particular when authorizing point source discharge (Article 6).
			8. SAP-MED	In Chapter 5, the SAP-MED identified targets and priorities for the prevention, reduction and elimination of pollution, considering these factors: (i) **degradation of the marine**

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
		Art. 8 Articles 17 and 18; 14, 19 and 29, 27 and 28		**environment**, (ii) **perturbation of the biological diversity**, (iii) land-based origin, (iv) transboundary nature (Chapter 4). Chapter 5.3 focuses on physical alteration and destruction of habitats, with the aim of safeguarding the ecosystem functions, habitats and species. **ICZM programmes are among proposed activities.**
			12. SCP AP	Introduction – SCP AP addresses **key human activities** (food, fisheries and agriculture; goods manufacturing; tourism; housing and construction) which have impact on the marine and coastal environment; these are main upstream drivers of pollution generation and pressures on ecosystems.
			15. RP on Marine Litter	Article 4 – Objective (a): prevent and reduce **marine litter pollution** in the Mediterranean and its impact on ecosystem services, habitats and species. Article 10 – (a) identify **hot spots of marine litter** and implement programmes for their removal; (b) national **marine litter clean-up campaigns**. Article 11 – (1) assess state of marine litter and the **impacts of marine litter** on the coastal and marine environment.
			28. RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenil ether; RP on the on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene. 29. RP on the Phasing Out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.	
			6. Dumping Protocol	Dumping of wastes and other materials is prohibited (Article 4). Dumping (Article 3) is defined as any "**deliberate disposal at sea** of wastes or other matter from ships and aircraft" as well as any "deliberate disposal or storage and burial of wastes or other matter on the **seabed** or in the marine **subsoil**". Protection of marine habitats is one goal of the Protocol.
			5.Hazardous wastes Protocol 3. Prevention and Emergency Protocol	**Chronic sources** (illicit discharges) from ships whilst source from accidents is decreasing (2017 Mediterranean Quality Status Report).
			10. Strategy on pollution from ships	Under section 4, there are 3 specific **objectives related to habitats and marine life** (Nb. 2, 12, 13) regarding **ships' biofouling** in order to minimize the transfer of invasive aquatic species (2), the identification of **Particularly Sensitive Sea Areas** –PSSA- (12), and the reduction of

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				marine noise caused by ships (13). This imply that the application of the 2011 Guidelines for control and management of ship's biofouling and report to IMO accordingly (2), initiate the process of requesting IMO to enable the designation of PSSAs with support from REMPEC and RAC/SPA (12), and urge designers, shipbuilders, and operators to implement noise mitigation strategies on board their ships.
			14. Strategy on ballast water	Consistent with the requirements and standards of the BWM Convention, this strategy is focused on ship's ballast water control and management in regard to the possible release of '**invasive alien species', meaning 'harmful aquatic organisms and pathogens'** as defined in Article 1.8 of the 2004 International Convention for the Control and Management of Ships' ballast Water and Sediments (BWM Convention). A first assessment of the strategy was made by REMPEC (REMPEC/WG.41/7, 10 May 2017).
			4.Offshore Protocol	Special measures shall be taken to prevent, abate, combat and control **pollution arising from activities concerning exploration and/or exploitation of the resources**, including special restrictions or conditions when granting authorisations, such as the **EIA** and the elaboration of **special provisions concerning monitoring, removal of installations and prohibition of any discharge**; and intensified exchange of information among operators, the competent authorities, Parties and the Organisation regarding matters which may affect protected areas. (Art 21)
			13.Mediterranean Offshore AP	Appendix III - Indicative Potential Research and Development Topics: EIA on noise generated by offshore activities; marine environment monitoring; response to marine pollution through EIA of multiple in situ burning operations on major oil spills from offshore platforms, EIA of extended use if dispersants on major oil spills from offshore platforms, oil spill monitoring and forecasting modelling, Mediterranean offshore oil spill risk assessment study and tool.
			1. SPA/BD Protocol	Measures shall be taken to **protect, preserve and manage in a sustainable and environmentally sound way threatened or endangered species of flora and fauna, and areas of particular natural or cultural value** (Art. 3). To this end, some specific tools and process are needed: cooperation; identification and compilation of inventories of the components of biological diversity important for its conservation and sustainable use; adoption of strategies, plans and programmes including the conservation of biological diversity and the sustainable use of marine and coastal biological resources; monitoring the components of biological diversity, identifying processes and categories of activities which have or are likely to have a significant adverse impact on the conservation and sustainable use of biological diversity, and monitoring their effects. (Articles 3, 4 and 5).

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				In the planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment** (Art. 17). **Protection measures** shall be taken, in particular prohibiting the dumping or discharge of wastes and other substances likely directly or indirectly to impair the integrity of the area; regulating the passage of ships and any stopping or anchoring; regulating the introduction of not indigenous species, genetically modified species, and species which are or have been present in the area; regulating or prohibiting any activity of exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil; regulating the scientific research activity; regulating or prohibiting fishing, hunting, taking of animals and harvesting of plants or their destruction, trade in animals, parts of animals, plants, parts of plants, which originate in the area; regulating and prohibiting any other activity or act likely to harm or disturb the species or that might endanger the state of conservation of the ecosystems or species or might impair the natural or cultural characteristics of the area; adopting any other measure aimed at safeguarding ecological and biological processes and the landscape; adopting planning, management, supervision and monitoring measures, inventories, guidelines and common criteria (Articles 6, 7, 11, 12 and 13, 15 and 16, 18).
			9. SAP BIO	SAP BIO is the **background document of CRF** and EcAp, which provides principles, measures and concrete and coordinated priority actions, relevant targets, objectives, and specific actions at national, transboundary and regional level for the **conservation of the Mediterranean marine and coastal biodiversity**, within the framework of sustainable use and through the implementation of the SPA/BD Protocol. **Objectives**: improving knowledge; management of Marine and Coastal PAs; protection of endangered species and habitats; reinforcement of legislation and capacity building; fund-raising efforts. Among others, endorses concrete and practical actions aiming at reducing the causes, modification of conditions (stress reduction), prevention or mitigation of impacts, that are adverse for **biodiversity conservation**; implementing comprehensive joint actions of relevant MAP centres and programmes concerning wider aspects of **biodiversity conservation**; promoting and implementing participatory actions, programmes and campaigns; information and raising of public awareness concerning **biodiversity conservation.**
			16. MPAs Roadmap	The Roadmap includes recommended actions fully in line with the EcAp process, with the following main objectives (O):

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				O.1: Strengthen networks of PAs at national and Mediterranean levels, including in the high seas and in 8 ABNJ, as a contribution to the relevant globally agreed goals and targets **O.2**: Improve the Mediterranean MPA network through effective and equitable management **O.3**: Promote the sharing of environmental and socio-economic benefits of Mediterranean MPAs and the MPAs integration into the broader context of sustainable use of the marine environment and the implementation of the ecosystem and MSP approaches **O.4**: Ensure the stability of the Mediterranean MPA network by enhancing their financial sustainability
			7. MSSD 2016-2025	**Obj.1 (SDG 14)**: Ensuring sustainable development in marine and coastal areas. **SD**: Strengthen implementation of and compliance with the Barcelona System and relates; Establish and enforce regulatory mechanisms, including MSP, to prevent and control unsustainable open ocean resource exploitation. **Target**: By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on best available scientific information. **Obj.2 (SDG 2, 15, 6)**: Promoting resource management, food production and food security through sustainable forms of rural development. **SD**: promotion of networks of ecologically protected areas, enhancing stakeholder awareness on the value of ecosystem services and the implications of biodiversity loss. **Target**: Take urgent and significant action to reduce the degradation and fragmentation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species, and take further action as needed by 2030. **Obj.4 (SDG 13)**: Addressing climate change as a priority issue for the Mediterranean. **SD**: Increase scientific knowledge, raise awareness, develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Accelerate the uptake of climate smart and climate resilient responses; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks, particularly in the energy sector.
			11. RFCCA	Introduction – the main objective of the RCCAF is to set a strategic approach to increase the resilience of the **Mediterranean marine and coastal natural** and socio-economic **systems** to climate change.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				Strategic Direction 1.5 (Integrating climate adaptation into local plans for the protection and management of areas of special interest) – including nature reserve, biodiversity and other **natural hot-spots** Strategic Direction 4.1 (Understanding vulnerability) – Priorities include: **sensitivity and adaptive capacity of marine species** and ecosystems (including alien species introduction), mapping and resilience role **of marine ecosystems**, vulnerability of **MPAs**.
			19.AP for the management of the Monk Seal 20 AP for the conservation of marine turtles 21 AP for the conservation of cetaceans 22.AP for the conservation of marine vegetation 23.AP for the conservation of bird species registered in annex II of the SPA/BD Protocol 24.AP for the conservation of cartilaginous fishes (*Chondrichtyans*) in the Mediterranean Sea 25.AP concerning species introduction and invasive species 26.AP for the conservation of the coralligenous and other calcareous bio-concretions in the Mediterranean Sea 27.AP for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea	
Other elements	Cultural heritage *(from land to sea)*	Art 13, co. 1 and 2 (in situ conservation), co. 3 (underwater cultural heritage) Articles 5 and 6 Art. 8 Articles 17 and 18; 14, 19, 27	--------	Analysed key documents of Table 1 do not contain specific provisions or guidelines related to cultural heritage. Besides being addressed clearly by the ICZM Protocol, the issue is somehow considered in the Barcelona Convention that refers to: “Partnership in social, cultural and human affairs: developing human resources, promoting understanding between cultures and exchanges between civil societies”. Additional important references are: (i) the 2001 UNESCO Convention on the protection of the underwater cultural heritage, inviting States to cooperate at the regional level to foster in situ conservation and to prohibit the commercial exploitation of underwater cultural heritage; (ii) the 2003 UNESCO Convention for safeguarding intangible cultural heritage.
	Islands	Art. 12 Articles 5 and 6 Art. 8 Articles 17 and 18; 14, 19, 27	--------	As the Mediterranean includes 162 islands of over 10 km² and almost 4,000 smaller islets, the ICZM Protocol (art. 12) encourages special management and protection of these areas, taking into account their specific characteristics. This does not necessarily imply the development of strategies, plans and programmes particularly focused on these areas, but means that their specific nature must at least be taken into consideration in programme-based instruments.

Identified interactions		Relevant provisions of the ICZM Protocol	Relevant legal and policy instruments	Related provisions and guidelines
				This also implies that all key documents of Table 1 and their provision/guidelines analysed in above lines of the present Table 5 might be relevant (based on site-specific characteristics) for these areas, in particular taking into consideration four key areas for islands: biodiversity, water resources, energy supply, and disaster prevention.

Table 6: Template to frame coastal and maritime activities according to the DPSIR approach and links them to the Barcelona Convention measurements system (MAP/IMAP). Below template include agriculture as an example.

	LANDWARD – INLAND					COASTAL AREA					SEAWARD – LAGOONS – ISLANDS – OFFSHORE				
Economic Driver		**Pressure**	**State**	**Impact (ES)**	**IMAP EOs CIs**		**Pressure**	**State**	**Impact (ES)**	**IMAP EOs CIs**		**Pressure**	**State**	**Impact (ES)**	**IMAP EOs CIs**
	Activity type				**Pressure, Impact and State-based indicators**	**Activity type**				**Pressure, Impact and State-based indicators**	**Activity type**				**Pressure, Impact and State-based indicators**
1) Agriculture	Crops (any)	Hydrological alterations	River diversions	Habitats deterioration	COAST (EO8): cCI25	Crops (any)	Runoff/River (organochlorinated and other chemicals)	Coastal contamination /pollution Eutrophication	Habitats deterioration Seafood contamination	BIODIVERSITY (EO1): CI1-CI5 EUTROPHICATION (EO5): CI13-CI14 CONTAMINATION (EO9):CI17, CI18, CI20	Crops (effects seaward)	Runoff/River (organochlorinated and other chemicals)	Coastal and offshore contamination /pollution Eutrophication	Ecosystems deterioration Seafood contamination	BIODIVERSITY (EO1): CI1-CI5 EUTROPHICATION (EO5):CI13-CI14 CONTAMINATION (EO9):CI17, CI18, CI20
		Geomorphological changes	Land alteration	Loss of biodiversity Population (species) decreases	COAST (EO8): cCI25	Crops (any)	Runoff (river litter)	Costal litter occurrence (beach, surface and seabed)	Species threaten Natural resources affected Landscape visual impairment	BIODIVERSITY (EO1): CI1-CI5 MARINE LITTER (EO10):CI22, CI, cCI24	Crops (effects seaward)	Runoff (river litter)	Costal litter occurrence (surface, water column, seabed and deep-sea bed)	Long-lived species threaten Natural resources affected Marine ecosystems deterioration	BIODIVERSITY (EO1): CI1-CI5 MARINE LITTER (EO10):CI22, CI, cCI24
	Land crops	Land use	Land degradation	Soil degradation (contaminated, inert)	COAST (EO8): cCI25	Crops (any)	Seaward sediment flux alterations	Coastal erosion	Coastal surface decrease (beaches, dunes, etc.)	CI16	Crops (effects seaward)	Seaward sediment flux alterations	Subsidence, sediment dynamics	Loss of coastline	CI16
	Wetland crops	Wetlands use	Wetlands degradation	Flooding vulnerability Clean water provision	COAST (EO8): cCI25	Deltaic crops	Delta use	Delta degradation (contaminated, inert)	Exploited resources affected	CI16	Crops (harvesting)	Coastal micro- and macro algae harvesting	Habitat alterations	Natural resources affected	N/A

Table 7: Excel spreadsheet for the evaluation of the number of items potentially treating the coastal zone. Below template include agriculture as an example.[28]

ITEM SCORES		Yes (1)			NO (0)									
(choose YES/NO)														
				Overall items (Ecosystem Services) affecting the ICZM (%)					98.3					
	LANDWARD - INLAND				ITEMS SCORE	COASTAL AREA				ITEMS SCORE	SEAWARD - LAGOONS - ISLANDS - OFFSHORE				ITEMS SCORE
Economic (Driver)		Pressure	State	Impact (Ecosystem))	% of total items		Pressure	State	Impact (Ecosystem)	% of total items		Pressure	State	Impact (Ecosystem)	% of total items
	Activity type				100.0	Activity type				98.0	Activity type				97.5
1) Agriculture	Crops (any)	Hydrological alterations	River diversions	Habitats deterioration	1	Crops (any)	Runoff/River (organochlorinated and other chemicals)	Coastal contamination/ pollution Eutrophication	Habitats deterioration seafood contamination	0	Crops (effects seaward)	Runoff/River (organochlorinated and other chemicals)	Coastal and offshore contamination/ pollution Eutrophication	Ecosystems deterioration Seafood contamination	0

[28] Table 7 and Table 8 represent just the initial parts of longer Excel spreadsheets, which include a complete analysis of the entire set of activities affecting the coast. The percentage scores included in both Tables refer to the entire analysis (i.e. the one contained in the Excel spreadsheets) and are not coherent with the limited information reported as example in such tables. The complete analysis is available in the information document "Coupling of management systems and measurement systems for an operational framework of the ICZM Protocol in the Mediterranean Sea".

Table 7 (continued)

	Crops (any)	Geomorphological changes	Land alteration	Loss of biodiversity/ Population (species) decreases	1	Crops (any)	Runoff (river litter)	Costal litter occurrence (beach, surface and seabed)	Species threaten Natural resources affected Landscape visual impairment	1	Crops (effects seaward)	Runoff (river litter)	Costal litter occurrence (surface, water column, seabed and deep-sea bed)	Long-lived species threaten Natural resources affected Marine ecosystems deterioration	1
	Land crops	Land use	Land degradation	Soil degradation (contaminated, inert)	1	Crops (any)	Seaward sediment flux alterations	Coastal erosion	Coastal surface decrease (beaches, dunes, etc.)	1	Crops (effects seaward)	Seaward sediment flux alterations	Subsidence, unsustained costaline	Loss of coastline	1
	Wetland crops	Wetlands use	Wetlands degradation	Flooding vulnerability / Clean water provision	1	Deltaic crops	Delta use	Delta degradation (contaminated, inert)	Exploited resources affected	1	Crops (harvesting)	Coastal micro- and macro algae harvesting	Habitat alterations	Natural resources affected	1

***Table 8: Excel spreadsheet for the evaluation of the magnitude of impacts. Below template include agriculture as an example.*[29]**

IMPACT SCORES ESTIMATION	None (0)	Low (1)	Moderate (2)	High (3)
(choose 0, 1, 2 or 3 to estimate impact)				

Overall of Pressure-Impact (Ecosystem Services) at the ICZM (%) 98.3

	LANDWARD - INLAND				IMPACT SCORE	COASTAL AREA				IMPACT SCORE	SEAWARD - LAGOONS - ISLANDS - OFFSHORE				IMPACT SCORE
Economic (Driver)		**Pressure**	**State**	**Impact (Ecosystem))**	**% of maximum impact**		**Pressure**	**State**	**Impact (Ecosystem)**	**% of total impacts**		**Pressure**	**State**	**Impact (Ecosystem)**	**% of total impacts**
	Activity type				98.8	**Activity type**				98.7	**Activity type**				97.5
1) Agriculture	Crops (any)	Hydrological alterations	River diversions	Habitats deterioration	2	Crops (any)	Runoff/River (organochlorinated and other chemicals)	Coastal contamination/ pollution Eutrophication	Habitats deterioration seafood contamination	1	Crops (effects seaward)	Runoff/River (organochlorinated and other chemicals)	Coastal and offshore contamination/ pollution Eutrophication	Ecosystems deterioration Seafood contamination	0

[29] See previous footnote.

Table 8 (continued)

	Crops (any)	Geomorphological changes	Land alteration	Loss of biodiversity/ Population (species) decreases	3	Crops (any)	Runoff (river litter)	Costal litter occurrence (beach, surface and seabed)	Species threaten Natural resources affected Landscape visual impairment	3	Crops (effects seaward)	Runoff (river litter)	Costal litter occurrence (surface, water column, seabed and deep-sea bed)	Long-lived species threaten Natural resources affected Marine ecosystems deterioration	3
	Land crops	Land use	Land degradation	Soil degradation (contaminated, inert)	3	Crops (any)	Seaward sediment flux alterations	Coastal erosion	Coastal surface decrease (beaches, dunes, etc.)	3	Crops (effects seaward)	Seaward sediment flux alterations	Subsidence, unsustained costaline	Loss of coastline	3
	Wetland crops	Wetlands use	Wetlands degradation	Flooding vulnerability / Clean water provision	3	Deltaic crops	Delta use	Delta degradation (contaminated, inert)	Exploited resources affected	3	Crops (harvesting)	Coastal micro- and macro algae harvesting	Habitat alterations	Natural resources affected	3

Draft Decision IG.24/6

Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012, in particular those paragraphs relevant to oceans and sea and biodiversity,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", and acknowledging the importance of conservation, the sustainable use and management of biodiversity in achieving the Sustainable Development Goals,

Recalling further the United Nations Environment Assembly resolution UNEP/EA.4/Res.10 of 15 March 2019, entitled "Innovation on biodiversity and land degradation",

Mindful of the objectives of the Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets, of the Convention on Biological Diversity, the outcome of the United Nations Conference on Sustainable Development and the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals, in particular Goal 14: Life below water,

Bearing in mind the international community's commitment expressed in the Ministerial Declaration of the United Nations Environment Assembly at its fourth session to undertake actions to restore and protect marine and coastal ecosystems,

Noting with appreciation the comprehensive and preparatory process for the development of an ambitious and transformational post-2020 global biodiversity framework,

[Recalling the Memorandum of Understanding between UNEP/MAP and GFCM and the need to implement measures to avoid significant adverse impact of fisheries on threatened Coral Species under Annex II of the SPA-BD Protocol also to comply with obligations under Articles 11 and 12 of the Protocol],

Having regard to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, in particular articles 8, 16, 19 and 23 and annex I thereof, on the establishment of the list of Specially Protected Areas of Mediterranean Importance; guidelines and common criteria; publicity, information, public awareness and education; reports to the Parties; and the common criteria for the choice of protected marine and coastal areas that could be included in the list of Specially Protected Areas of Mediterranean Importance, respectively,

Recalling decision IG.17/12, adopted by the Contracting Parties at their fifteenth meeting (COP 15) (Almeria, Spain, 15-18 January 2008), on the procedure for the revision of the areas included in the list of Specially Protected Areas of Mediterranean Importance, stating that for each of the Specially Protected Areas of Mediterranean Importance, a periodic review should be carried out every six years by a mixed national/independent technical advisory commission,

Recalling also decision IG.19/13, adopted by the Contracting Parties at their sixteenth meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009), on the Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean, Including the High Sea,

Recalling the mandate of SPA/RAC within the MAP-Barcelona Convention System and its relevance to the implementation of this Decision*;*

Recalling further decision IG.22/13, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the roadmap for a comprehensive coherent network of well-managed marine protected areas to achieve Aichi Target 11 in the Mediterranean,

Recalling further decision IG.23/9, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017), on the identification and conservation of sites of particular ecological interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance,

Taking note of the definition of "other effective area-based conservation measures" adopted by decision 14/8 of the 14th Meeting of the conference of the Parties to the Convention on Biological Diversity (Sharm El-Sheikh, Egypt, 17-29 November 2018),

Considering the outcomes of the 14th Meeting of specially protected areas and biological diversity thematic focal points (Portoroz, Slovenia, 18-21 June 2019)[30],

Expressing appreciation for the progress made by the Contracting Parties towards achieving the quantitative aspects of Aichi Target 11 in the Mediterranean, and especially with regard to marine protected areas and other effective area-based conservation measures coverage estimated to 8.9% of the Mediterranean Sea, and noting the need to further advance to achieve a comprehensive coherent network of well-managed marine protected areas, as the above-mentioned overall coverage shows a geographical unbalance and a strong bias regarding the type of ecosystems protected, as they are mainly coastal and located in waters less than 50 meters deep, resulting in an under-representation of deeper ecosystems,

Having considered the proposals made respectively by France, Italy, Slovenia and Spain, pursuant to article 9(3) of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and as decided by the 14th meeting of SPA/RAC Focal Points (Portoroz, Slovenia, 18-21 June 2019) in accordance with article 25 (h) of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, to include four new areas in the list of Specially Protected Areas of Mediterranean Importance,

Having also considered the results of the ordinary review of Specially Protected Areas of Mediterranean Importance submitted to the thematic focal points for specially protected areas and biological diversity at their 14th Meeting (Portoroz, Slovenia, 18-21 June 2019) and to their recommendations,

Deeply concerned by the outcome of the 2019 ordinary review of Specially Protected Areas of Mediterranean Importance, where five Specially Protected Areas of Mediterranean Importance out of the nineteen reviewed are recommended by the SPA/RAC Focal Points to be included into a period of provisional nature in line with Decision IG.17/12 (COP 15, Almeria, Spain, 15-18 January 2008) on the procedure for the revision of the areas included in the list of Specially Protected Areas of Mediterranean Importance ,

1. *Strongly encourage* the Contracting Parties to take significant action towards achieving in the Mediterranean Aichi Target 11, including through setting up an effective and equitable management, enhancing ecological representativeness, connectivity and integration of their

[30] See UNEP/MED WG.468/Inf.7 ("Reports of the MAP Components' Focal Points Meetings (April-June 2019)": Report of the 14th Meeting of SPA/BD Thematic Focal Points (UNEP/MED WG.461/28)).

marine and coastal protected areas and other effective area-based conservation measures into the wider landscape and seascape;

2. *Request* the Secretariat to elaborate an [ambitious and transformational] post-2020 roadmap on marine protected areas and other effective area-based conservation measures in the Mediterranean, in line with the Post-2020 Global Biodiversity Framework of the Convention on Biological Diversity and other regional and global processes, and in consultation with relevant global and regional organizations, for consideration by the Contracting Parties at their twenty-second meeting (COP 22);

3. *Decide* to set up a multidisciplinary ad hoc group of experts for marine protected areas in the Mediterranean to support the Specially Protected Areas Regional Activity Centre and the Contracting Parties to progress with the 2020 and post-2020 marine protected areas agenda in the Mediterranean and to work on related issues such as preparing guidelines, setting up definitions and measurable indicators, and tailoring global concepts and approaches to the Mediterranean context;

4. *Request* the Secretariat to establish a directory of Mediterranean Specially Protected Areas according to articles 16 (guidelines and common criteria), 19 (publicity, information, public awareness and education) and 23 (reports of the Parties) of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and the Specially Protected Areas Regional Activity Centre to elaborate criteria for inclusion of specially protected areas in the directory, for consideration by the Contracting Parties at their twenty-second meeting (COP 22);

5. *Encourage* the Contracting Parties to promote the role of marine protected areas as reference sites under the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria;

6. *Decide* to include the Cerbère-Banyuls Marine Nature Reserve (France), the Egadi Islands Marine Protected Area (Italy), the Landscape Park Strunjan (Slovenia) and the Cetaceans Migration Corridor in the Mediterranean (Spain) in the list of Specially Protected Areas of Mediterranean Importance;

7. *Encourage* further cooperation and collaboration in the management and conservation of Specially Protected Areas of Mediterranean Importance among Contracting Parties as well as among individual Specially Protected Areas of Mediterranean Importance, mainly through (i) technical, institutional and financial support; (ii) transfer of technology; (iii) capacity-building; (iv) best practices and experience sharing; and (v) twinning and other appropriate means;

8. *Request* the Secretariat to draft the concepts in order to set up the Specially Protected Areas of Mediterranean Importance Day and Specially Protected Areas of Mediterranean Importance Certificate(Mediterranean Diploma for Specially Protected Areas of Mediterranean Importance), and submit them for consideration by the Contracting Parties at their 22nd Meeting (COP 22);

9. *Decide* to include the five Specially Protected Areas of Mediterranean Importance listed below in a period of provisional nature of a maximum of six years:

- Palm Islands Nature Reserve (Lebanon),
- Tyre Coast Nature Reserve (Lebanon),
- Kneiss Islands (Tunisia),
- La Galite Archipelago (Tunisia), and
- Zembra and Zembretta National Park (Tunisia);

10. *Request* the Secretariat to support as a matter of priority Lebanon and Tunisia in identifying and launching a set of adequate corrective measures and informing [the fifteenth meeting of the thematic focal points for Specially Protected Areas/Biological Diversity] of the progress made,

and encourage other Parties, other SPAMIs and appropriate funding mechanisms to contribute to their implementation;

11. *Request* Lebanon and Tunisia to inform the [fifteenth meeting of the thematic focal points for Specially Protected Areas/Biological Diversity] about the identification and launching of the adequate corrective measures for these areas;

12. *Welcome* the willingness of the Environmental Fund for Mediterranean marine protected areas (The MedFund) to support the Specially Protected Areas of Mediterranean Importance in general, and in particular those included in a period of provisional nature, and encourage support and sponsorship from any other relevant donors;

13. *Adopt* the updated format for the periodic review of Specially Protected Areas of Mediterranean Importance, as set out in the annex to this decision, and request the Secretariat to reflect it accordingly in the online evaluation system of Specially Protected Areas of Mediterranean Importance;

14. *Request* the Secretariat to work with the relevant designated national authorities in Cyprus, France, Italy, Morocco and Spain to carry out the ordinary periodic review for the eleven Specially Protected Areas of Mediterranean Importance listed below, in accordance with the procedure established in decision IG.17/12, adopted by the Contracting Parties at their 15th Meeting (COP 15) (Almeria, Spain, 15-18 January 2008), and bring the outcome of that review process to the attention of the Contracting Parties at their twenty-second meeting (COP 22);

15. The following five Specially Protected Areas of Mediterranean Importance are to be reviewed in 2020:

- Lara-Toxeftra Turtle Reserve (Cyprus),
- Marine Protected Area of Tavolara-Punta Coda Cavallo (Italy),
- Marine Protected Area and Natural Reserve of Torre Guaceto (Italy),
- Miramare Marine Protected Area (Italy), and
- Plemmirio Marine Protected Area (Italy);

16. The following six Specially Protected Areas of Mediterranean Importance are to be reviewed in 2021:

- Bouches de Bonifacio Nature Reserve (France),
- Marine Protected Area of Capo Caccia-Isola Piana (Italy),
- Punta Campanella Marine Protected Area (Italy),
- Al-Hoceima National Park (Morocco),
- Archipelago of Cabrera National Park (Spain), and
- Maro-Cerro Gordo Cliffs (Spain).

Annex

Draft Updated Format for the periodic review of SPAMIs

Draft Updated Format for the periodic review of SPAMIs

www.rac-spa.org/spami_eval

The SPAMI List was established in 2001 (Monaco Declaration) in order to promote cooperation in the management and conservation of natural areas, as well as in the protection of threatened species and their habitats. Furthermore, the areas included in the SPAMI List are intended to have a value of example and model for the protection of the natural heritage of the region.

During their COP 15 (Almeria, Spain, January 2008), the Contracting Parties adopted a procedure for the revision of the areas included in the SPAMI List and requested SPA/RAC to implement it.

The procedure aims to evaluate the SPAMI sites in order to examine whether they meet the SPA/BD Protocol's criteria. An ordinary review of SPAMIs shall take place every six years, counting from the date of the inclusion of the site in the SPAMI List.

SPAMI Name:	

SECTION I: CRITERIA WHICH ARE MANDATORY FOR THE INCLUSION OF AN AREA IN THE SPAMI LIST

1. MEDITERRANEAN VALUE OF THE SPAMI

	Score
1.1 The SPAMI still fulfils at least one of the criteria related to the regional Mediterranean value as presented in the SPA/BD Protocol's Annex I. Assessment scale: 0 = No, 1 = Yes	**?**
Score justification	

	Score
1.2 Level of adverse changes occurred during the evaluation period for the habitats and species considered as natural features in the SPAMI presentation report submitted for the inclusion of the area in the SPAMI List. Assessment scale: 0 = Significant changes 1 = Moderate changes 2 = Slight changes 3 = No adverse change	**?**
Score justification	

	Score
1.3 Are the objectives, set out in the original SPAMI application for designation, actively pursued? Assessment scale: 0 = No 1 = Only some of them 2 = Yes for most of them 3 = Yes for all of them	**?**
Score justification	

2. LEGAL AND INSTITUTIONAL ARRANGEMENTS

	Score
2.1 The legal status of the SPAMI (with reference to its legal status at the date of the previous evaluation report). Assessment scale: 0 = Significant negative change in the legal status of the SPAMI 1 = Slight negative change in the legal status of the SPAMI 2 = The SPAMI has maintained or improved its legal status 1.	**?**
Score justification	

	Score
2.2 Are competencies and responsibilities clearly defined in the texts governing the area? Assessment scale: 0 = competencies and responsibilities are not clearly defined 1 = The definition of competencies and responsibilities needs slight improvements 2 = The SPAMI has clearly defined competencies and responsibilities	**?**
Score justification	

	Score
2.3 Does the area have a management body, endowed with sufficient powers? (Not applicable for multilateral (transboundary high sea) SPAMIs) Assessment scale: 0 = No management body, or the management body is not endowed with sufficient powers 1 = The management body is not fully dedicated to the SPAMI 2 = The SPAMI has a fully dedicated management body and sufficient powers to implement the conservation measures	**?**
Score justification	

In the case of multilateral (transboundary high sea) SPAMIs:

	Score
2. 2.3 Does the area have governance bodies in line with the original application for inclusion in the SPAMI List? Assessment scale: 0= No governance bodies 1= Only some governance bodies are in place 2= The governance bodies are in place, but they are not functioning on a regular basis (e.g.: no regular meetings or works) 3= The SPAMI has fully dedicated governance bodies and sufficient powers to address the conservation challenges	**?**
Score justification	

3. MANAGEMENT AND AVAILABILITY OF RESOURCES

	Score
3.1 Does the SPAMI have a management plan? Assessment scale: 0 = No management plan 1 = The level of implementation of the management plan is assessed as "insufficient" 2 = The management plan is not officially adopted but its implementation is assessed as "adequate" 3 = The management plan is officially adopted and adequately implemented	**?**
Score justification	

	Score
3.2 Assess the adequacy of the management plan taking into account the SPAMI objectives and the requirements set out in article 7 of the Protocol and Section 8.2.3 of the Annotated Format (AF[31]). Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	**?**
Score justification	

	Score
3.3 Assess the adequacy of the human resources available to the SPAMI. Assessment scale: 0 = Very low/Insufficient 1 = Low 2 = Adequate 3 = Excellent	**?**
Score justification	

c.

[31] Annotated format for the presentation reports for the areas proposed for inclusion of the SPAMI list

	Score
3.4 Assess the adequacy of the financial and material means available to the SPAMI (Not applicable for multilateral (transboundary high sea) SPAMIs) Assessment scale: 0 = Very low 1 = Low 2 = Adequate 3 = Excellent	**?**
Score justification	

In the case of multilateral (transboundary high sea) SPAMIs:

	Score
3.4.1. Assess the adequacy of the financial and material means available for the implementation of the SPAMI conservation/management measures at national level Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	**?**
Score justification	

In the case of multilateral (transboundary high sea) SPAMIs:

	Score
3.4.2. Assess the adequacy of the financial and material means available to the multilateral governance bodies of the SPAMI Assessment scale: 0= Low 1= Medium 2= Good 3= Excellent	**?**
Score justification	

	Score
3.5 Does the area have a monitoring programme? Assessment scale: 0 = No monitoring programme 1 = The level of implementation of the monitoring programme is assessed as "insufficient" 2 = The monitoring programme needs improvement to cover other parameters that are significant for the SPAMI 3 = The monitoring programme is adequately implemented and allows the assessment of the state and evolution of the area, as well as the effectiveness of protection and management measures	**?**
Score justification If the TAC identified important parameters that are not covered by the monitoring programme of the SPAMI, these should be listed here with the related rationale.	

	Score
3.6 Is there a feedback mechanism that establishes an explicit link between the monitoring results and the management objectives, and which allows adaptation of protection and management measures? Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	**?**
Score justification	

	Score
3.7 Is the management plan effectively implemented? Assessment scale: 0= Low 1= Medium 2= Good 3= Excellent	**?**
Score justification	

	Score
3.8 Have any concrete conservation measures, activities and actions been implemented? Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	**?**
Score justification	

SECTION II: FEATURES PROVIDING A VALUE-ADDED TO THE AREA

(Section B4 of the Annex I, and other obligatory for a SPAMI, and Art. 6 and 7 of the Protocol))

4. THREATS AND SURROUNDING CONTEXT

4.1 Assess the level of threats within the site to the ecological, biological, aesthetic and cultural values of the area (B4.a Annex I).

In particular:

	Score
4.1.1. a) Unregulated exploitation of natural resources (e.g. sand mining, water, timber, living resources) See 5.1.1. in AF Score: 0 means "no threats"; 3 means "very serious threats"	**?**
Score justification	

	Score
4.1.1. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the unregulated exploitation of natural resources (e.g. sand mining, water, timber, living resources) See 5.1.1. in AF Score: 0 means "no effort"; 3 means "significant effort"	**?**
Score justification	

	Score
4.1.2. a) Threats to habitats and species (e.g. disturbance, desiccation, pollution, poaching, introduced alien species ....) See 5.1.2. in AF Score: 0 means "no threats" ; 3 means "very serious threats"	**?**
Score justification	

	Score
4.1.2. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the threats to habitats and species (e.g. disturbance, desiccation, pollution, poaching, introduced alien species ....) See 5.1.2. in AF Score: 0 means "no effort"; 3 means "significant effort"	**?**
Score justification	

	Score
4.1.3. a) Increase of human impact (e.g. tourism, boats, building, immigration...) See 5.1.3. in AF Score: 0 means “no threats”; 3 means “very serious threats”	**?**
Score justification	

	Score
4.1.3. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the increase of human impact (e.g. tourism, boats, building, immigration...) See 5.1.3. in AF Score: 0 means “no effort”; 3 means “significant effort”	**?**
Score justification	

	Score
4.1.4. a) Conflicts between users or user groups. See 5.1.4. and 6.2. in AF Score: 0 means “no threats”; 3 means “very serious threats”	**?**
Score justification	

	Score
4.1.4. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the conflicts between users or user groups. See 5.1.4. and 6.2. in AF Score: 0 means “no effort”; 3 means “significant effort”	**?**
Score justification	

Please include here a prescriptive list of threats (not evaluated or mentioned above) that are of concern and are evaluated individually

3.

4.2 Assess the level of external threats to the ecological, biological, aesthetic and cultural values of the area (B4.a of the Annex I) and the efforts made to address/mitigate them. See 5.2. in the AF

In particular:

	Score
4.2.1. a) Pollution problems from external sources including solid waste and those affecting waters up-current. See 5.2.1. in the AF. Score: 0 means "no threats"; 3 means "very serious threats"	**?**
Score justification	

	Score
4.2.1. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the pollution problems from external sources including solid waste and those affecting waters up-current. See 5.2.1. in the AF. Score: 0 means "no effort"; 3 means "significant effort"	**?**
Score justification	

	Score
4.2.2. a) Significant impacts on landscapes and on cultural values. See 5.2.2 in AF. Score: 0 means "no threats"; 3 means "very serious threats"	**?**
Score justification	

	Score
4.2.2. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the significant impacts on landscapes and on cultural values. See 5.2.2 in AF. Score: 0 means "no effort"; 3 means "significant effort"	**?**
Score justification	

	Score
4.2.3. a) Expected development of threats upon the surrounding area. See 6.1. in AF. Score: 0 means “no threats”; 3 means “very serious threats”	**?**
Score justification	

	Score
4.2.3. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the expected development of threats upon the surrounding area. See 6.1. in AF. Score: 0 means “no effort”; 3 means “significant effort”	**?**
Score justification	

Please include here a prescriptive list of threats (not evaluated or mentioned above) that are of concern and are evaluated individually:

Please include the list of threats (not evaluated or mentioned above) that were of concern and were eliminated or solved:

4.3 Is there an integrated coastal management plan or land-use laws in the area bordering or surrounding the SPAMI? (B4.e Annex I). See 5.2.3. in AF

	Score
Score: 0 = No / 1 = Yes	**?**
Score justification	

4.4 Does the management plan for the SPAMI have influence over the governance of the surrounding area? (D5.d Annex I). See 7.4.4. in the AF

	Score
Score: 0 = No / 1 = Yes	**?**
Score justification	

5. ENFORCEMENT OF PROTECTION MEASURES

5.1 Assess the degree of enforcement of the protection measures

In particular:

	Score
5.1.1. Are the area boundaries adequately marked on land and, if applicable, adequately marked at sea? See 8.3.1. in AF (Not applicable for multilateral (transboundary high sea) SPAMIs) Score: 0 = No / 1 = Yes	**?**
Score justification	

In the case of multilateral (transboundary high sea) SPAMI:

	Score
5.1.1. a) Is the area officially depicted on the international marine / terrestrial maps? Score: 0 = No / 1 = Yes	**?**
Score justification	

In the case of multilateral (transboundary high sea) SPAMI:

	Score
5.1.1. b) Is the area officially reported on the marine / terrestrial maps of each SPAMI Member State? Score: 0 = No / 1 = Yes	**?**
Score justification	

In the case of multilateral (transboundary high sea) SPAMI:

	Score
5.1.1. c) Are the coordinates of the area easily accessible (maps, internet, etc.)? Score: 0 = No / 1 = Yes	**?**
Score justification	

	Score
5.1.2. Is there any collaboration from other authorities in the protection and surveillance of the area and, if applicable, is there a coastguard service contributing to the marine protection? See 8.3.2. and 8.3.3. in AF Score: 0 = No / 1 = Yes	**?**
Score justification	

	Score
5.1.3. Are third party agencies also empowered to enforce regulations relating to the SPAMI protective measures? (Not applicable for multilateral (transboundary high sea) SPAMIs) Score: 0 = No / 1 = Yes	**?**
Score justification	

	Score
5.1.4. Are there adequate penalties and powers for effective enforcement? See 8.3.4. in AF Score: 0 = No / 1 = Yes	**?**
Score justification	

	Score
5.1.5. Is the field staff empowered to impose sanctions? See 8.3.4. in AF Score: 0 = No / 1 = Yes	**?**
Score justification	

	Score
5.1.6. Has the area established a contingency plan to face accidental pollution or other serious emergencies? (Art. 7.3. in the Protocol, Recommendation of the 13th Meeting of Contracting Parties) Score: 0 = No / 1 = Yes	**?**
Score justification	

6. COOPERATION AND NETWORKING

	Score
6.1 Are other national or international organizations collaborating to provide human or financial resources? (e.g. researchers, experts, volunteers...). See 9.1.3. in the AF Score: 0 = No / 1 = Weakly / 2 = Fairly / 3 = Excellent	**?**
Score justification	

	Score
6.2 Assess the level of cooperation and exchange with other SPAMIs (especially in other nations) (Art. 8, Art. 21.1, Art. 22.1., Art. 22.3 of the Protocol, A.d in Annex I) Score: 0 = No / 1 = Insufficient / 2 = Fairly / 3 = Excellent	**?**
Score justification	

SECTION III: FOLLOW-UP OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATION(S)

(If applicable: Not applicable for SPAMIs undergoing their first ordinary periodic review)

7. IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATIONS

7.1 Assess to what extent the recommendations possibly made by the previous evaluations were implemented: Recommendations made by the TAC(s) and/or approved by the Focal points for SPAs <u>regarding Section I</u>

	Score
Assessment scale: 0 = 'No' for all of them 1 = 'Yes' for some of them 2 = 'Yes' for most of them 3 = 'Yes' for all of them	**?**

7.2 Assess to what extent the recommendations possibly made by the previous valuations were implemented: Recommendations made by the TAC(s) and/or approved by the Focal points for SPAs <u>regarding Section II</u>

	Score
Assessment scale: 0 = 'No' for all of them 1 = 'Yes' for some of them 2 = 'Yes' for most of them 3 = 'Yes' for all of them	**?**

CONCLUSIONS & RECOMMENDATIONS

SECTION I: CRITERIA WHICH ARE MANDATORY FOR THE INCLUSION OF AN AREA IN THE SPAMI LIST

1. **MEDITERRANEAN VALUE OF THE SPAMI**
   Total Score: ?
   (Coastal national SPAMI - max: 7; Multilateral (transboundary high sea) SPAMI - max: 7)

2. **LEGAL AND INSTITUTIONAL ARRANGEMENTS**
   Total Score: ?
   (Coastal national SPAMI - max: 6; Multilateral (transboundary high sea) SPAMI - max: 7)

3. **MANAGEMENT AND AVAILABILITY OF RESOURCES**
   Total Score: ?
   (Coastal national SPAMI - max: 24; Multilateral (transboundary high sea) SPAMI - max: 27)

SECTION II: FEATURES PROVIDING A VALUE-ADDED TO THE AREA

4. **THREATS AND SURROUNDING CONTEXT**
   Total Score: ?
   (Coastal national SPAMI - max: 42; Multilateral (transboundary high sea) SPAMI - max: 42)

5. **ENFORCEMENT OF PROTECTION MEASURES**
   Total Score: ?
   (Coastal national SPAMI - max: 6; Multilateral (transboundary high sea) SPAMI - max: 7)

6. **COOPERATION AND NETWORKING**
   Total Score: ?
   (Coastal national SPAMI - max: 6; Multilateral (transboundary high sea) SPAMI - max: 6)

SECTION III: FOLLOW-UP OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATION(S)

7. **IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATIONS** (Not applicable for SPAMIs undergoing their first ordinary periodic review)
   Total Score: ?
   (National SPAMI - max: 6; Multilateral (transboundary high sea) SPAMI - max: 6)

GRAND TOTAL SCORE: ?
(National SPAMI - max: 99[32]; Multilateral (transboundary high sea) SPAMI - max: 104[33])

[32] 93 if the SPAMI is subject to its first ordinary periodic review.
[33] 98 if the SPAMI is subject to its first ordinary periodic review.

Score evaluation:

The TAC will propose to include the SPAMI in a period of provisional nature (in accordance with paragraph 6 of the Procedure for the revision of the areas included in the SPAMI List) if the SPAMI has:

- a score < 1 for 1.1, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6
- a score < 2 for 1.2, 1.3, 7.1 or 7.2

Furthermore, considering that the sites included in the SPAMI List are intended to have a value of example and model for the protection of the natural heritage of the region (Paragraph A.e of Annex 1 to the SPA/BD Protocol), the TAC shall also propose to include the SPAMI in a period of provisional nature if the total score of the evaluation is less than 69[34] for a coastal national SPAMI or less than 72[35] for a multilateral (transboundary high sea) SPAMI (=70% of the maximum total score of 99 and 104, respectively).

CONCLUSION (BASED ON THE SCORE EVALUATION) BY THE TAC FOR THE PRESENT EVALUATION:

RECOMMENDATIONS BY THE TAC FOR THE FUTURE EVALUATION:
Recommendation 1:
Recommendation 2:
etc.

SIGNATURES

National Focal Point	**Independent Experts**
SPAMI Manager(s)	**National Expert**

[34] 65 if the SPAMIs subject to its first periodic review.
[35] 68 if the SPAMI is subject to its first ordinary periodic review.

Draft Decision IG.24/7

Strategies and Action Plans under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, including the SAP BIO, the Strategy on Monk Seal, and the Action Plans concerning Marine Turtles, Cartilaginous Fishes and Marine Vegetation; Classification of benthic marine habitat types for the Mediterranean region, and Reference List of Marine and Coastal Habitat Types in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at its twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012, in particular those paragraphs relevant to biodiversity,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", and acknowledging the importance of conservation, the sustainable use and management of biodiversity in achieving the Sustainable Development Goals,

(a) *Recalling* further the United Nations Environment Assembly resolutions UNEP/EA.4/Res.10 of 15 March 2019, entitled "Innovation on biodiversity and land degradation",

Bearing in mind the international community's commitment expressed in the Ministerial Declaration of the United Nations Environment Assembly at its fourth session to implement sustainable ecosystems restoration, conservation and landscape management measures to combat biodiversity loss, as well as to develop an ambitious and realistic post-2020 global biodiversity framework,

Noting with appreciation the comprehensive and preparatory process for the development of an ambitious and transformational post-2020 global biodiversity framework,

Having regard to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, in particular Articles 11 and 12 thereof, addressing national and cooperative measures for the protection and conservation of species,

Recalling the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO), adopted by the Contracting Parties at their 13th Meeting (COP 13) (Catania, Italy, 11-14 November 2003),

Recalling also the Catania Declaration, adopted by the Contracting Parties at their 13th Meeting (COP 13), by which the Contracting Parties agreed, *inter alia*, that the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO) constitutes a major contribution to the sustainable development in the Mediterranean and should be implemented, as appropriate, and followed up effectively with adequate support and resources,

Recalling Decision IG.22/7, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria,

Recalling further Decision IG.23/8, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017), on Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean, which requested the Specially Protected Areas Regional Activity Centre to finalize, in consultation with Focal Points, the classification of benthic marine habitat types for the Mediterranean region and the Reference List of Marine and Coastal Habitat Types

in the Mediterranean, with a view of submitting them to the Contracting Parties at their 21st Meeting (Naples, Italy, 2-5 December 2019),

Recalling the mandate of SPA/RAC within the MAP-Barcelona Convention System and its relevance to the implementation of this Decision*;*

Noting with appreciation the efforts so far undertaken by the Contracting Parties and relevant organisations to the implementation of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO), stressing the need to continue to concentrate efforts and resources to ensure an effective implementation of the SAP BIO,

Bearing in mind the developments in the Mediterranean Action Plan-Barcelona Convention work since the adoption of the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO), as well as ongoing biodiversity-driven global processes, such as the Post-2020 Global Biodiversity Framework,

Taking into account the results of the assessment of the implementation of the Regional Strategy for the Conservation of Monk Seal in the Mediterranean, the Action Plan for the Conservation of Mediterranean Marine Turtles, the Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea and the Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea,

Committed to further streamlining the Mediterranean Action Plan Ecological Objectives and associated Good Environmental Status and Targets, as well as the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria into the Regional Action Plans for the conservation of endangered and threatened species and key habitats adopted within the framework of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean,

Having considered the outcomes of the 14th Meeting of Specially Protected Areas and Biological Diversity Thematic Focal Points (Portoroz, Slovenia, 18-21 June 2019) [36],

1. *Request* the Secretariat to prepare in 2020-2021 the "Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region" (Post-2020 SAP BIO), aligned with the Sustainable Development Goals, harmonised with the CBD Post-2020 Global Biodiversity Framework through the optic of the Mediterranean context, and following the recommendations and roadmap proposed in the evaluation document[37], as set out in the Annex I to the present decision, and submit it for consideration by the Contracting Parties at their 22nd Meeting (COP 22);

2. *Invite* the relevant organisations, in particular the members of the SAP BIO Advisory Committee, to contribute in developing the new Post-2020 SAP BIO;

3. *Adopt* the Updated Strategy for the Conservation of Monk Seal in the Mediterranean, the Updated Action Plan for the Conservation of Mediterranean Marine Turtles, the Updated Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea and the Updated Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea, as set out in Annexes II, III, IV and V to the present Decision;

4. *Request* the Contracting Parties to take the necessary measures for the implementation of the updated Strategy and Action Plans and to report on their implementation in a timely manner, using the online Barcelona Convention reporting system;

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[36] See UNEP/MED WG.468/Inf.7 ("Reports of the MAP Components' Focal Points Meetings (April-June 2019)": Report of the Fourteenth Meeting of SPA/BD Thematic Focal Points (UNEP/MED WG.461/28)

[37] See UNEP/MED WG.468/Inf.11, ("Evaluation of the implementation of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO) and orientations for the elaboration of a post-2020 SAP BIO, as reviewed by the Fourteenth Meeting of SPA/BD Thematic Focal Points")

5. *Also request* the Secretariat, to continue to provide technical support and capacity building for the full and effective implementation of the updated Strategy and Action Plans;

6. *Further request* the Secretariat to update the Action Plan for the conservation of cetaceans in the Mediterranean Sea and the Action Plan for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea and submit them for adoption by the Contracting Parties at their 22nd Meeting (COP 22);

7. *Adopt* the Updated Classification of benthic marine habitat types for the Mediterranean region and the Updated Reference List of Marine Habitat Types for the Selection of Sites to be included in National Inventories of Natural Sites of Conservation Interest in the Mediterranean, as set out in annexes VI and VII to the present Decision;

8. *Encourage* the Contracting Parties to use the Reference List of Marine Habitat Types for the Selection of Sites to be included in National Inventories of Natural Sites of Conservation Interest in the Mediterranean, where necessary, as a basis for identifying reference habitats to be monitored at the national level under the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria.

Annex I

Conclusions and recommendations of the consultation process to evaluate the implementation of the SAP BIO (Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region), as reviewed by the 14th Meeting of SPA/BD Thematic Focal Points

1. The SAP BIO, adopted in December 2003, played an important role as a strategic framework for implementation of the SPA/BD Protocol at national and regional levels in terms of harmonization and alignment of planning for biodiversity conservation. It also played a role in facilitating exchanges among departments within and among countries on common concerns in biodiversity conservation.

2. Changes in the context of and the policies on biodiversity during the 15 years since adoption of the SAP BIO indicate that the post-2020 SAP BIO should have new orientations and should focus on priorities tailored to address current and future regional and national challenges in the Mediterranean.

3. While taking into account (as appropriate) the results of the assessment of implementation of SAP BIO during the period 2004-2018, it is crucial to ensure maximum harmonization between the new orientations and priorities to be promoted in the post-2020 SAP BIO and those that will be decided at global level in the post-2020 Biodiversity Framework to be adopted in October 2020 by the CBD. Harmonization should also be ensured between the post-2020 SAP BIO and other relevant global and regional frameworks, such as the 2030 Agenda and the SDGs.

4. The evaluation showed that one difficulty in implementation of SAP BIO during 2004-2018 was related to the complexity of the priorities, activities and NAPs. To facilitate its implementation, the post-2020 SAP BIO, while including high ambitions, should be based on a short list of concrete, realistic priorities and be focused and easy to monitor and evaluate, with well-defined benchmarks.

Recommended steps for elaboration of the post-2020 SAP BIO

Step A: Identification of priorities and orientations

5. The post-2020 SAP BIO should be based first on consultations in countries to identify national priorities for the conservation of marine and coastal biodiversity and the actions required. Common guidelines should be defined to ensure harmonization among national consultations and to establish close links with the orientations to be included in the post-2020 biodiversity framework of the CBD and with relevant initiatives at regional level, in particular the EcAp process and its IMAP.

6. The regional consultation to be conducted in step A should be done by a dedicated working group, facilitated by SPA/RAC and with online tools (such as video conferences and common online working platforms) to ensure collaboration and exchange among countries.

7. Based on the results of the consultations to be conducted at national level, SPA/RAC will identify the needed regional supporting activities to include in the regional component of the post-2020 SAP BIO, supported by a first meeting of the Advisory Committee and a first meeting of National Correspondents for the Post-2020 SAP BIO.

8. As step A will take place in parallel with meetings and workshops of the Secretariat of the CBD for elaboration of the post-2020 biodiversity framework, SPA/RAC should identify and participate in the most relevant of those meeting and workshops in order to ensure maximum harmonization between the new SAP BIO and the post-2020 biodiversity framework and to highlight work on the post-2020 agenda in the Mediterranean in a global arena.

Step B: Elaboration of the draft post-2020 SAP BIO

9. A first draft of the new SAP BIO will be prepared by SPA/RAC from the results of step A. It will be submitted for consultation by relevant organizations and the secretariats of relevant regional bodies (such as GFCM, ACCOBAMS, European Commission, IUCN). To this end, a second meeting of the SAP BIO Advisory Committee will be convened by SPA/RAC.

10. Should external funding support become available, technical expertise and expert coordination meetings could be organized to support preparation of key thematic regional documentation and draft marine and coastal NBSAPs in every country.

11. The first draft of the new SAP BIO could be presented to potential donors to indicate the main orientations and priorities and the funding required for implementation of the new SAP BIO.

12. A second meeting of National Correspondents for the post-2020 SAP BIO will be convened to review the first draft and amend it as necessary, with a view to submission for adoption by the Contracting Parties. The meeting should be held after COP15 of the CBD in October 2020, which is expected to adopt the post-2020 biodiversity framework.

Step C: Adoption of the post-2020 SAP BIO

13. The draft post-2020 SAP BIO finalized during the second meeting of National Correspondents for the post-2020 SAP BIO, held under Step B, will be reviewed by the SPA/BD thematic[38] focal points and the MAP focal points and submitted for adoption by the Contracting Parties during COP 22 of the Barcelona Convention.

Tentative calendar

Step A: Identification of priorities and orientations	January 2020 – February 2021
Step B: Elaboration of the draft post-2020 SAP BIO	January 2021 – May 2021
Step C: Adoption of the post-2020 SAP BIO	According to the calendar of meetings of thematic focal points, MAP focal points and Contracting Parties

[38] If the Contracting Parties agree to pursue such a thematic approach for future focal points meetings. Otherwise “SPA/BD focal points”

Annex II
Draft updated Regional strategy for the conservation of monk seal in the Mediterranean

Contents

I. Introduction and methodology

1. This draft Strategy follows guidelines which are detailed in "the manual for the construction of Species Conservation Strategies" (IUCN/SSC 2008). Accordingly, this draft Strategy is structured with the following elements:

   a. ***Vision**, with associated **Goals** and **Goal Targets** that are SMART*[39]*;*
   b. *the **Objectives** needed to achieve the Goal Targets within the stated time span, with associated SMART **Objective Targets**.*

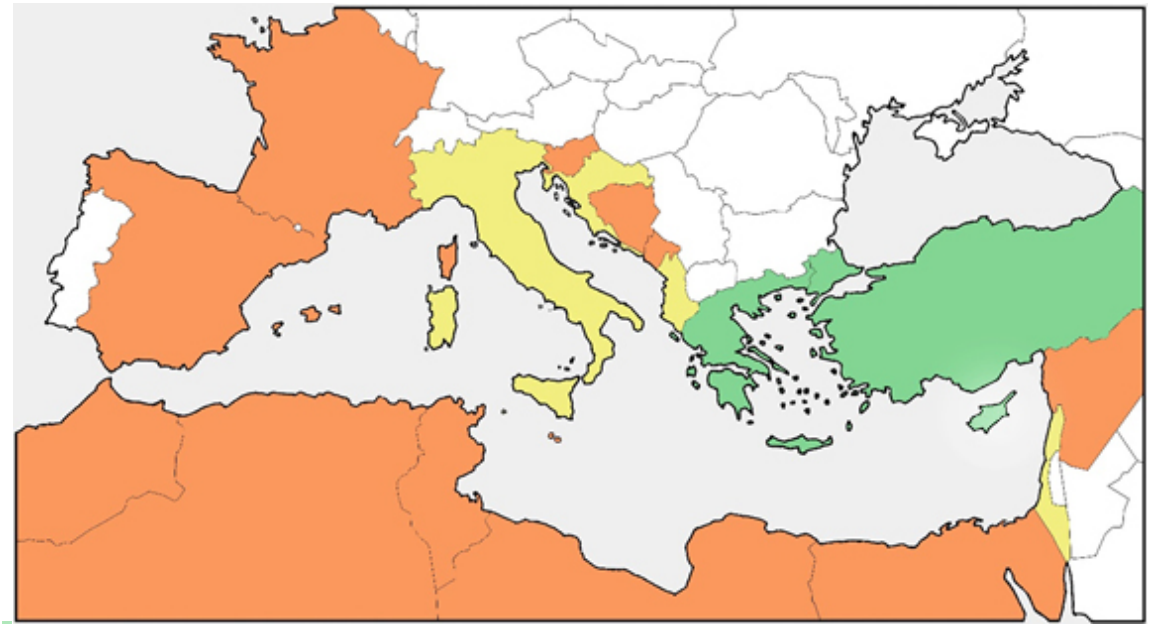

Figure 1. Monk seal conservation status by country (updated at 31.04.2019). Green: "Group A" countries (where monk seal breeding has been reported after year 2010). Yellow: "Group B" countries (where no monk seal breeding is reported, but where repeated sightings of monk seals (>3) were reported since 2010). Tan: "Group C" countries (where no monk seal breeding is reported, and where very rare or no sightings of monk seals (≤3) were reported since 2010).

2. The main problem encountered in envisaging a region-wide Strategy derives from the quite diverse conservation status of monk seals in the different portion of the Mediterranean and by consequence the quite different priorities and responsibilities saddled onto the various monk seal Range States.

3. To handle this challenge, it is here proposed to assign Mediterranean countries to three groups (Figure 1):
   A. *Countries where monk seal breeding has been reported after year 2010*[40]*;*
   B. *Countries where no monk seal breeding is reported, but where repeated sightings of monk seals (>3) were reported since 2010;*
   C. *Countries where no monk seal breeding is reported, and where very rare or no sightings of monk seals (≤3) were reported since 2010.*

[39] Specific, Measurable, Achievable, Relevant, Time-bound

[40] Year 2010 was selected as a criterion to separate the present from the country assessment described in the past regional strategy (UNEP-MAP RAC/SPA, 2013)

4. We realise that the above are rough indicators (e.g., monk seals can be present in a location even if they are not seen, as sightings depend on the presence of observers and the animals can have very inconspicuous behaviours; breeding may not occur in some countries because of lack of breeding habitat, but there may be a healthy presence of animals in that country; etc.). However, the above indicators are conceived to separate countries into major categories according to their current importance for monk seals, thereby involving different types of actions.

5. **Group A** countries is where action is most urgent, because at the moment these countries are our best hope for the survival of the species. These countries host monk seal resident breeding populations and the majority of the species population.

6. **Group B** countries are important, because current monk seal sighting records suggest the potential for the species' survival and expansion in areas beyond Group A country borders. Group B countries may contain different extensions of monk seal critical coastal habitat, which is likely to be re-colonised, and may lead to resident breeding nuclei, if conditions are favourable (as demonstrated by the frequent appearances of monk seals in many locations).

7. **Group C** countries are also important because, although they are characterized by rare monk seal occurrence, they contain historical monk seal critical habitat. The reestablishment of monk seal presence will become more likely if actions in nearby Group B countries are successful and if environmental conditions in historical critical habitat become favourable. In the absence of sighting data collection mechanisms, some countries, known to host seals and suitable environmental conditions in the recent past, may currently qualify as Group C.

8. To fulfil the Vision, this draft Strategy identifies four Goals. The first Goal relates to the creation of a conservation support structure at the international level, whereas the other three Goals relate to each of the three Groups the various countries have been assigned to.

II. The Strategy

II.1 Vision

9. Over the next two decades, the ecological recovery of monk seals in the Mediterranean will deem to have occurred, when multiple colonies have become established within all major habitats in their historic range, interacting in ecologically significant ways with the fullest possible set of other species, and inspiring and connecting human cultures.

II.2 . Goals

10. **Goal 1.** Mediterranean Range States implement this Strategy in pursuance of the Vision, through the expeditious development and adoption of appropriate national policies and administrative frameworks, and with the effective, coordinated support from relevant international organizations and civil society.

11. **Goal 2.** Monk seal breeding nuclei in sites located in "Group A" countries are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and seals are able to disperse to and re-colonize the surrounding areas.

12. **Goal 3.** Monk seal presence in sites where they are repeatedly seen today in "Group B" countries is permanently established, and breeding resumes. "Group B" countries are upgraded to "Group A".

13. **Goal 4.** Monk seal presence is reported repeatedly in the species' historical habitat in "Group C" countries, and these "Group C" countries are upgraded to "Group B". Once all "Group C" countries are upgraded, Group C is deleted.

II.2 Goal Targets, Objectives and Objective Targets

GOAL 1. STRATEGY IMPLEMENTATION.

14. Mediterranean Range States implement this Strategy in pursuance of the Vision, through the development and adoption of appropriate national policies and administrative frameworks, and with the effective, coordinated support from relevant international organizations and civil society.

Goal Target 1.1. A framework for the implementation of the Mediterranean Monk Seal Conservation Strategy is established by the Mediterranean Range States. The framework will include the establishment of a Monk Seal Advisory Committee (MSAC).

15. **Objective 1.1.1.** SPA/RAC establishes a **Monk Seal Advisory Committee (MSAC).** Tasks of the MSAC will include:
    - provide support to SPA/RAC in the implementation of the Strategy and its review and updating (e.g., by defining the Actions needed to attain the different Objective Targets);
16. provide recommendations and advice on issues related to monk seal conservation;
    - support SPA/RAC in the creation and maintenance of a forum for monk seal conservation practitioners, where relevant information and experience is shared, exchanges are facilitated, challenges are discussed, cooperative initiatives are enhanced, transparency and openness of procedures are safeguarded.

17. The MSAC should be composed of geographically representative members of the region and membership to the committee should rotate within a specific timeframe to allow for adequate share of advisory roles by different experts.

18. The MSAC functioning is supported by SPA/RAC, and may benefit from relevant bodies within IUCN, the GFCM and other international organizations.

19. **Objective Target 1.1.1.1.** MSAC established by 2020. The Advisory Committee meets at least once a year to evaluate up-to-date achievement of Goals and Objectives within the Strategy's timeframe and to support the implementation of the Actions foreseen in the Strategy.

20. **Objective Target 1.1.1.2.** First meeting of MSAC in June 2020. Recommendations are submitted to SPA/RAC for coordination with Contracting Parties as appropriate.

21. **Objective Target 1.1.1.3.** MSAC activities are harmonized, wherever appropriate, with prescriptions of the EU Habitats Directive, and with efforts by UNEP-MAP within the Ecosystem Approach process for the attainment of Good Environmental Status in the Mediterranean, i.e., to attain Ecological Objective EO1 "Biodiversity" and Operational Objectives 1.1 ("Species distribution is maintained"), 1.2 ("Population size of selected species in maintained"), 1.3

("Population condition of selected species is maintained"), 1.4 ("Key coastal and marine habitats are not being lost"), as far as monk seals are concerned.

22. **Objective Target 1.1.1.4**. Member States establish a national multiannual program that draws from the Action Plan and the Strategy objectives, that incorporates monitoring, capacity building and conservation measures into relevant existing national programs involving monitoring of marine biodiversity and spatial protection measures that have been formulated for national and international policy implementation (i.e. monitoring as per ECAP region-wide programs and Habitats Directive and MSFD for EC Member States, MPA network development and marine Natura 2000 establishment for Mediterranean EC countries). The MSAC reviews the multiannual programs and reports to SPA/RAC, recommending content improvement so as to harmonize conservation efforts at a regional level with common objectives and comparable efforts. MSAC will provide support to SPA/RAC so national multiannual programs are defined by end of 2020.

23. **Objective 1.1.2.** The Parties to the Barcelona Convention ensure that the activities that the MSAC recommends are addressed.

24. **Objective Target 1.1.2.1.** The Parties to the Barcelona Convention adopt resolutions in support of specific MSAC recommendations concerning the implementation of this Strategy.

Goal Target 1.2. Based on this Strategy, the MSAC provides support to SPA/RAC in the development and implementation of specific conservation actions having a regional scope.

25. **Objective 1.2.1.** The first task of the MSAC is to support SPA/RAC on supervising the attainment of Goals 2, 3 and 4.

26. **Objective 1.2.2.** The Capacity building and awareness activities are planned and promoted in monk seal Range States by SPA/RAC with the advice and support of MSAC so that monk seal protection and recovery is effectively embraced at the national level. This will include the preparation of a dedicated website and the regular issuing and widely distributed monk seal information newsletter in an adequate number of different languages.

27. **Objective Target 1.2.2.1.** Capacity building: Categories of stakeholders are screened and suggested by MSAC and identified by SPA/RAC, taking stock of national frameworks pertaining to the relevant sectors, tailored to each different monk seal Range State (with first priority given to "Group A Countries" and second priority given to "Group B Countries"), and training courses are prepared and planned (see Goal Targets 2.2. and 3.5). Preferably, training events will be developed *in situ* at selected locations having special relevance to monk seal conservation, in collaboration with the local groups, and will be followed by a constant "advice service" or accompanying process to ensure that full and long-lasting advantage derives from the effort.

28. **Objective Target 1.2.2.2.** In order to facilitate collaboration and communication amongst monk seal conservation experts throughout the region, the MSAC provides support to SPA/RAC for organizing periodical workshops on best practices of monk seal monitoring and conservation techniques, preferably taking advantage of other meetings being periodically organized (e.g., CIESM Congresses, ECS Annual meetings). Proceedings are edited and widely diffused (e.g., by pdf through the Internet) in formats that will serve as "best practice guidelines".

29. **Objective Target 1.2.2.3.** In consultation with MSAC awareness actions are promoted by SPA/RAC, with first priority given to “Group A Countries” (with the exception of Greece) and second priority given to “Group B Countries”, in cooperation with local groups, targeting special-interest stakeholders such as fishermen and local coastal communities.

30. **Objective Target 1.2.2.4.** An electronic monk seal newsletter will be issued yearly by SPA/RAC based on the recommendations from the MSAC (e.g., by resuming the *Monachus Guardian*), starting in 2020.

31. **Objective 1.2.3.** Monitoring of monk seal distribution and abundance, as well as advances in knowledge important for monk seal conservation, are promoted and supported by SPA/RAC through training, workshops and the facilitation of research and monitoring programmes. The monitoring process is made to coincide with the similar monitoring requirements within the framework of the Ecosystem Approach process by UNEP-MAP, and (where appropriate) with the Marine Framework Strategy Directive and Habitats Directive of the EC. MSAC supports SPA/RAC to investigate ways of storing and of making the available monitoring data publicly accessible.

32. **Objective Target 1.2.3.1.** MSAC supports SPA/RAC in the completion of monk seal breeding site inventories in “Group A Countries” by 2025.

33. **Objective Target 1.2.3.2.** MSAC supports SPA/RAC in the yearly monitoring of monk seal population parameters (e.g., population abundance, trends, pup production) in breeding sites in “Group A Countries”, starting in 2025.

34. **Objective Target 1.2.3.3.** MSAC supports SPA/RAC in the monitoring of monk seal parameters (e.g. species distribution, population abundance, mortality levels and causes) in areas of “Group B countries” with recurrent sightings, habitat availability, and spatial protection measures for the species.

35. **Objective Target 1.2.3.4.** MSAC supports SPA/RAC in the set-up of common databases (e.g., photo-id catalogues).

36. **Objective 1.2.4.** The MSAC will provide support to SPA/RAC in facilitating the definition of a region-wide protocol for rescue and rehabilitation centres and programmes, and will provide support and advice, as required, to such centres and programmes supported by the different Range States.

37. **Objective Target 1.2.4.1.** Region-wide protocol for rescue and rehabilitation centres and programmes defined by the MSAC by 2022, taking stock of the successful initiatives developed during the last 30 years

38. **Objective 1.2.5.** MSAC supports SPA/RAC in the development of contingency plans for disastrous events (e.g., lethal epizootic outbreaks, massive oil spills within monk seal habitat), and for emergency conditions which may derive from catastrophic environmental change. Ideally, this should be done in cooperation with equivalent bodies dealing with the conservation of Mediterranean monk seals in the Atlantic, with the conservation of cetaceans in the Mediterranean (i.e., within the ACCOBAMS framework), and with the appropriate bodies within the “Barcelona System” (e.g., REMPEC). The contingency plan will include the collection and safe storage of Mediterranean monk

seal germplasm which may support in the future the recovery of the species, should it become necessary.

39. **Objective Target 1.2.5.1.** Contingency plan coordinated by SPA/RAC with support of MSAC in 2023 and adopted by the subsequent Barcelona Convention COP.

40. **Objective Target 1.2.6** MSAC supports SPA/RAC for the organization of a regular Mediterranean conference as an opportunity to assess the knowledge gained, to strengthen cooperation and the implementation of the Mediterranean strategy. This should be done in synergy with other regional bodies dealing with the conservation of the Monk seal.

GOAL 2. "GROUP A" COUNTRIES.

41. Monk seal breeding nuclei in sites located in "Group A" countries are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and seals are able to disperse to and re-colonise the surrounding areas.

Goal Target 2.1. Maintain and secure monk seal presence in Important Marine Mammal Areas (IMMAs) identified by the IUCN Marine Mammal Protected Areas Task Force[41], with special attention to the following locations: a) Greek Ionian islands (Lefkada, Kefallinia, Ithaca, Zakynthos, and surrounding islets and seas); b) Northern Sporades; c) Gyaros; d) Kimolos and Polyaigos; e) Karpathos-Saria; f) Turkish Aegean and Mediterranean coasts; g) Cyprus. Breeding nuclei in the locations listed above are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and young seals are able to disperse and re-colonise the surrounding areas.

42. **Objective 2.1.1.** Current legislation prohibiting to carry firearms and explosives aboard fishing vessels in Greece, Turkey, and Cyprus is enforced, with a special attention in locations listed in Goal Target 2.1.

43. **Objective Target 2.1.1.1.** Compliance with existing laws concerning firearms and explosives aboard fishing vessels in Greece, Turkey, and Cyprus is routinely enforced everywhere, to come into effect with immediate urgency. Appropriate statistics of infringements are kept and publicised. Infringements are prosecuted with penalties appropriate to address the destruction of an endangered, highly species. Current illegal fishing practices are eradicated.

44. **Objective 2.1.2.** Locations listed in Goal Target 2.1, and other equally important locations that may be eventually discovered in the future, are geographically delimited and legally protected/managed. The resulting MPA network should be ecologically coherent and effectively managed in order to guarantee favourable conservation status.

45. **Objective Target 2.1.2.1.** A monk seal MPA (or an MPA network) encompassing the most important monk seal habitat in the area is formally established in the Greek Ionian islands by 2024.

46. **Objective** Target **2.1.2.2.** The current Natura 2000 site around the island of Gyaros is formally established as a monk seal MPA by 2020.

[41] See https://www.marinemammalhabitat.org/imma-eatlas/

47. **Objective Target 2.1.2.3.** A monk seal MPA is formally established in Kimolos - Polyaigos by 2024.

48. **Objective Target 2.1.2.4.** A monk seal MPA is formally established in Karpathos - Saria by 2024[42].

49. **Objective Target 2.1.2.5.** Monk seal MPAs are formally established along the Aegean and Mediterranean coastline of Turkey by 2024, to protect monk seal critical habitat as determined and mapped by the Turkish National Monk Seal Committee.

50. **Objective Target 2.1.2.6.** Monk seal MPAs are formally established in Cyprus- Davlos, Karpasia Peninsula, and to the west of Limnidis and Peyia Sea Caves by 2024.

51. **Objective 2.1.3.** Areas in locations listed under Goal Target 2.1 are effectively protected through a) appropriate management actions, and b) the involvement of the local communities, which will both ensure the good conservation status of monk seals found there. A management framework is in place and implemented, defining the spatial, temporal and specific measures needed in the species' critical habitats (e.g., regulating access to caves), thereby affording effective protection to haul out and pupping sites.

52. **Objective Target 2.1.3.1.** Until formal protection of the areas listed under Goal Target 2.1 is established and enforced, patrolling of the most important haul out and pupping locations and caves is organised at least during the summer and breeding season, starting in 2020. Patrolling can be done by volunteers, well-trained and possibly local, who could also be performing awareness actions *in situ*, as well as solicit the intervention of law enforcers in case of need.

53. **Objective Target 2.1.3.2.** All monk seal MPAs established under Objective 2.1.2, as well as the National Marine Park of Alonissos – Northern Sporades, are endowed with an operant Management Body and a management plan that is adaptive, ecosystem-based and fully implemented by 2024.

54. **Objective Target 2.1.3.3.** Management in monk seal MPAs established under Objective 2.1.2, as well as the National Marine Park of Alonissos – Northern Sporades, is conducted in a participatory fashion, with the full involvement of local artisanal fishermen and local communities at large, and in cooperation with the fisheries sectors (e.g., see GFCM 2011). All proposals and decisions aiming at establishing or modifying conservation and protection measures must be based on sound and scientific data and evidence. Elements of participatory approach will include awareness campaigns as well as the experimentation/adoption of innovative mechanisms to address opportunity costs, damage mitigation and the generation of alternative sources of income (e.g., ecotourism).

Goal Target 2.2. Implementation of Goal Target 2.1. is enabled through appropriate capacity building activities.

55. **Objective 2.2.1.** Training sessions are organised in areas relevant to locations listed in Goal Target 2.1, with the support of the MSAC (see Objective Target 1.2.2.1). Training will concentrate, at least initially, on mitigating the main threats to monk seals (deliberate killing, habitat degradation, and accidental entanglements or bycatch), and will target stakeholders identified by the MSAC (e.g.,

[42] Greece has already established the protected area Management Body in Karpathos in 2007, however the MPA has not been legally declared yet.

fishermen, tourist operators, enforcement officers, judges). Training will be developed together with the local groups and will be followed by a constant “advice service” or accompanying process to ensure that full advantage is taken from the effort.

GOAL 3. “GROUP B” COUNTRIES.

56. Monk seal **presence** in sites where they are occasionally seen today in “Group B” countries is permanently established, and breeding resumes in areas characterised by sufficient and suitable coastal habitat. “Group B” countries are upgraded to “Group A”.

57. Monk seal presence in “Group B” countries must be verified with appropriate methods so as to define the actual species’ **use** of the coastal seas and identify the areas in which priority monitoring, awareness and protection actions need to be carried out. This implies that priority areas of usage be identified thorough sighting collection campaigns, habitat surveys in areas of hotspot sightings, and where the coastal habitat is most pristine (which implies analysis of coastal habitat characteristics and their distribution in each nation), followed by *in situ* monitoring to assess the eventual degree of habitat use by monk seals. Coastal areas with confirmed repeated use must be evaluated in terms of pressures and risks. Awareness activities to be carried out in each site will depend on the type of use of the coasts by the species, the degree of the pressures insisting in each site, and the risks involved. Spatial protection measures are established, and site-specific management actions are implemented to reduce the pressures on the basis of the monitoring and risk analysis outcomes.

Goal Target 3.1. Monk seal presence in Albania is confirmed and permanently established.

58. **Objective 3.1.1.** A **reporting** scheme to detect monk seal presence and alert authorities continues to be implemented along the Albanian coastal zone and awareness actions are conducted in areas with seal sightings.

59. **Objective 3.1.2**. Long-term cave monitoring is established in the caves identified in previous studies in the Karaburun Peninsula and nearby locations.

Goal Target 3.3. Monk seal presence in Italy, in areas with recurrent sightings, habitat availability and proximity to nearby breeding colonies, is permanently established, and monk seal breeding resumes.

60. **Objective 3.3.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is enhanced along the coastal areas characterised by recurrent sightings and coastal habitat historically used by the species

61. **Objective 3.3.2.** Monitoring of monk seal distribution, abundance and behaviour (including eventual pup production) is continued in the Egadi islands.

62. **Objective Target 3.3.2.1.** Non-invasive and scientifically sound monitoring technologies, applied to caves in appropriate locations within the Egadi Islands MPA, is continued and enhanced.

63. **Objective Target 3.3.2.2.** A programme targeting the local community and visitors, aimed at increasing awareness and fostering species’ protection measures is continued and enhanced.

64. **Objective 3.3.3.** Regular monitoring of monk seal presence and awareness actions are conducted in areas historically containing monk seal habitat and characterised by recurrent sightings in Sardinia.

65. **Objective 3.3.4.** Regular monitoring of monk seal presence and awareness actions are conducted in areas historically containing monk seal habitat in the Tuscan Archipelago.

66. **Objective 3.3.5.** Regular monitoring of monk seal presence and awareness actions are conducted in areas historically **containing** monk seal habitat and recurrent recent sightings in the lesser islands of the Sicily Strait (Pantelleria, Pelagie islands).

67. **Objective 3.3.5. Regular** monitoring of monk seal presence is conducted in Salento (Apulia) in coastal areas containing historical monk seal habitat and characterised by recurrent sightings.

Goal Target 3.4. Monk seal presence in Lebanon is permanently established.

68. **Objective 3.4.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented along the Lebanese coastal zone; awareness actions are conducted in the concerned areas.

69. **Objective 3.4.2.** A coastal habitat assessment study is conducted in the areas characterised by recent recurrent monk seal sightings and long-term cave monitoring program is initiated in northern Lebanon.

Goal Target 3.5. Monk seal presence in Israel is permanently established.

70. **Objective 3.5.1.** A **reporting** scheme to detect occasional monk seal presence and alert authorities is implemented along the Israeli coastal zone and awareness actions are conducted in areas characterised by recent sightings or coastal habitat suitability.

71. **Objective 3.5.2.** A coastal habitat assessment study is conducted, and a long-term cave monitoring program is **implemented** in northern Israel.

Goal Target 3.6. Monk seal presence in Montenegro is permanently established.

72. **Objective 3.6.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented along the coastal zone of Montenegro.

73. **Objective 3.6.2.** Coastal habitat assessment studies are completed, and long-term cave monitoring programmes are implemented in Montenegro.

Goal Target 3.7. Implementation of Goal Targets 3.1 - 3.6 is enabled through appropriate capacity building activities and sub-regional cooperation.

74. **Objective 3.7.1.** Capacity building. Training sessions are organised in areas relevant to locations listed in Goal Targets 3.1 - 3.6, with the support of the MSAC (see Objective Target 1.2.2.1). Training will concentrate, at least initially, on national / local groups working on the development of monitoring and awareness programs directed at mitigating the main threats to monk seals (deliberate killing, habitat degradation, and accidental entanglements). Capacity building activities can also target stakeholders identified by national/local groups with the support of the MSAC (e.g., fishermen, tourist operators, enforcement officers, judges). Training will be developed together with

the local groups and will be followed by a constant “advice service” or accompanying process to ensure that full advantage is taken from the effort.

75. **Objective 3.7.2.** Streamlining of sighting and cave monitoring results carried out in Goal Targets 3.1 - 3.4 above is discussed at sub regional level in order to better assess the population status in the “Group B” countries within a geographic context that goes beyond country borders, and in order to identify priority areas in which spatial protection measures are necessary.

76. **Objective 3.7.3.** Capacity building of MPA managers acting in monk seal distribution areas identified through the implementation of Goal Targets 3.1 - 3. 6, is carried out so as to discuss improved management and mitigation measures to be introduced in existing MPAs.

77. **Objective 3.7.4.** The implementation of Goals 3.1-3.6 is carried out, as much as possible, through the development of international collaboration frameworks, directed at guaranteeing sharing of expertise and monitoring results amongst neighbour countries for the purpose of sub regional status assessments and conservation goal attainment. The latter is particularly important for countries that have limited suitable coastal habitat and recurrent sightings and which border countries with breeding colonies or countries with sightings and extensive and suitable habitat. This may involve cross collaboration initiatives that involve an array mixture of Group A, B and C countries (i.e. Turkey-Cyprus-Syria-Lebanon-Israel, Libya-Egypt, Greece-Albania-Italy-Montenegro-Croatia, Italy-Tunisia-Algeria-Morocco).

GOAL 4. “GROUP C” COUNTRIES.

78. Monk seal presence is again repeatedly reported in the species’ historical habitat in “Group C” countries, and these “Group C” countries are upgraded to “Group B”. Once all “Group C” countries are upgraded, Group C is deleted.

Goal Target 4.1. Monk seal presence in locations of the Maghreb’s Mediterranean coasts and annexed islands in Algeria, Morocco, Tunisia, and the Chafarinas Islands (Spain) is repeatedly reported and permanently established.

79. **Objective 4.1.1.** A reporting scheme to detect monk seal presence through sightings and to alert authorities is implemented along Maghreb’s Mediterranean coasts and annexed islands characterised by monk seal historical presence and recent sightings. This includes areas such as: northern Tunisia, Algeria, Morocco, and the Chafarinas Islands (Spain); awareness actions are conducted in the concerned areas.

80. **Objective 4.1.2.** Long-term cave monitoring activities are initiated in the coastal habitat identified as suitable in the Al Hoceima National Park and Cap Trois Fourches in order to assess monk seal presence in the Moroccan coastal area.

81. **Objective 4.1.3.** Long-term cave monitoring activities are initiated in the coastal habitat identified as suitable in the Chafarinas islands in order to assess monk seal presence in the area.
82. **Objective 4.1.4.** Long-term cave monitoring activities are initiated in the coastal habitat identified as suitable in previous studies carried out in selected Algerian locations in order to assess monk seal presence in the area.

83. **Objective 4.1.5.** Long-term cave monitoring activities are initiated in the coastal habitat identified as suitable in the La Galite Archipelago in order to assess monk seal presence in the area.

Goal Target 4.2. Monk seal presence in the Balearic Islands, Spain, is repeatedly reported and permanently established.

84. **Objective 4.2.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented; awareness actions are conducted around the Balearic Islands, Spain.

Goal Target 4.3. Monk seal presence in Bosnia Herzegovina and Slovenia repeatedly reported and permanently established.

85. **Objective 4.3.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species' historical habitat in, Bosnia Herzegovina and Slovenia.

Goal Target 4.4. Monk seal presence in Corsica is repeatedly reported and permanently established.

86. **Objective 4.4.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species' historical habitat in Corsica.

Goal Target 4.5. Monk seal presence is reported again from continental France.

87. **Objective 4.5.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species' historical habitat in Corsica and continental France.

Goal Target 4.6. Monk seal presence in Libya and nearby western Egypt is repeatedly reported and permanently established.

88. **Objective 4.6.1.** Monk seal ecology and behaviour is monitored in Libya (Cyrenaica) and nearby Egyptian coast (from the border with Libya, including Sallum MPA, to Marsa Matrouh).

89. **Objective Target 4.6.1.1.** Full survey of monk seal habitat in the Libyan easternmost coast bordering with Egypt is conducted and long-term cave monitoring is established in this area as well as in the caves identified in previous projects.

90. **Objective Target 4.6.1.2.** Awareness actions are conducted in Libya, targeting local residents and most notably fishermen, with the aim of fostering respect and data collection on sightings.

91. **Objective Target 4.6.1.3.** Full survey of monk seal presence through data collection on sightings and awareness actions organised in Egypt (from the border, including Sallum MPA, to Marsa Matrouh) by 2025.

92. **Objective Target 4.6.1.4.** Full survey of monk seal habitat in the Egyptian areas characterised by recurrent sightings and a geomorphologically suitable coast is conducted, and long-term cave monitoring is established.

Goal Target 4.7. Monk seal presence is reported from Malta.

93. **Objective 4.7.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species' historical habitat in Malta.

Goal Target 4.8. Monk seal presence in Syria is repeatedly reported and permanently established.

94. **Objective 4.8.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented along the Syrian coastal zone; awareness actions are conducted in the concerned areas.

Goal Target 4.9. Implementation of Goal Targets 4.1 - 4.8. is enabled through appropriate capacity building activities and sub-regional cooperation.

95. **Objective 4.9.1.** Capacity building: training courses are organised in locations listed in Goal Targets 4.1-4.8, with the support of the -MSAC (see Objective Target 1.2.2.1).

96. **Objective 4.9.2.** The implementation of Goals 4.1-4.8 is carried out, as much as possible, through the development of international collaboration frameworks, directed at guaranteeing sharing of expertise and monitoring results amongst neighbour countries for the purpose of sub regional status assessments and conservation goal attainment (see Objective 3.7.4).

III. Revision of the Strategy

97. The suggested time horizon of this Strategy is six years, to be concluded in 2025, when a comprehensive review of the Strategy's accomplishments and failures, with a consideration for potential actions to be taken beyond 2025, should be conducted. Such timing also coincides with the process requiring EU Member States to report concerning the Habitats, thereby facilitating the implementation of the Strategy's actions by such States. It will also contribute to the Marine Strategy Framework Directive (MSFD) programme of measures in 2022.

98. A mid-term assessment of the implementation results in 2022 is also recommended, to evaluate up-to-date attainment of Goals and Objectives within the Strategy's timeframe and to identify, if needed, moderate adjustments.

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Annex III

Draft updated Action Plan for the Conservation of Marine Turtles in the Mediterranean

TABLE OF CONTENT

I. Introduction

1. The Parties to the Barcelona Convention included among their priority targets for the period 1985-1995 the protection of Mediterranean marine turtles (Genoa Declaration, September 1985). To this purpose and as a response to growing international concern about the status of Mediterranean marine turtles, which encounter various threats, including mortality in fishing gear and loss of vital habitats on land (nesting beaches), they adopted in 1989 the Action Plan for the Conservation of Mediterranean Marine Turtles. In 1996, the Parties confirmed their commitment to the conservation of marine turtles by including the 5 species of marine turtle recorded for the Mediterranean in the List of Endangered and Threatened Species annexed to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (Barcelona, 1995). The Protocol calls on the Parties to continue to cooperate in implementing the Action Plans already adopted.

2. Since 1989, the Action Plan has been revised three times. The first review was in 1999, when the updated version of the Action Plan was adopted by the 11th Conference of the Contracting Parties to the Barcelona Convention (COP11 Malta). The second review was in 2007 and concerned only the update of the timetable for the period 2008-2013. The last revision occurred in 2013 where the timetable has been updated for the period 2014-2019.

3. Two species of turtle nest in the Mediterranean, the Loggerhead turtle (*Caretta caretta*) and the Green turtle (*Chelonia mydas*). The Leatherback turtle (*Dermochelys coriacea*) is recorded fairly regularly in this sea, while the other two species (*Eretmochelys imbricata, Lepidochelys kempii)* are very rarely encountered. Loggerhead turtles also enter the Mediterranean from the Atlantic as juveniles in their oceanic stage and return to the Atlantic.

4. Marine turtles are reptiles and reptiles evolved on land. Though they have adapted well to living in the sea, their ties to their ancestors, leads them back to land to lay their eggs and reproduce. The intensive exploitation of turtles during much of last century has led to a virtual collapse of the turtle populations in the Mediterranean. Relatively new threats such as incidental catches and mortality in fishing gear and loss of nesting habitats as well as the plastic ingestion and entanglement face the remaining populations. The conservation of turtles, as a result of their biology, needs to address threats and issues both on land and in the sea. Marine turtles are long living reptiles and the recovery of populations is therefore a long process. Their reproduction on land poses threats to them, but it also provides opportunities, in a practical way, to help the species recover, for example by reducing predation. Good knowledge of their biology and needs is essential if this opportunity is to be used properly. Turtles do not nest every year and significant fluctuations from year to year in nesting activity are common, especially in green turtles. As a consequence, long term data are needed in studying populations and in drawing conclusions.

5. The wider issues of biodiversity conservation need to be taken into consideration in conserving any species, such as sea turtles. Threatened species are components of an ecosystem and the interdependence of the implementation of the various SPA/RAC Action Plans for endangered species and biodiversity conservation is stressed here.

6. There is clear evidence of important negative impacts on the populations of Mediterranean marine turtles by human activities. The most serious current threats/effects to turtles are:

a. deterioration of the critical habitats for the life cycle of marine turtles, such as nesting, feeding and wintering areas, and key migration passages
b. direct impacts on turtle populations of incidental capture in fisheries, intentional killing, consumption, egg exploitation and boat strikes
c. pollution, which can have impacts on both habitats and species

7. Knowledge of the genetic stocks, status, biology and behaviour of marine turtles is increasing rapidly in the Mediterranean and though gaps still exist, sufficient information is available for conservation purposes. This information has been used in updating and improving the provisions of the present MAP Action Plan for the Conservation of the Mediterranean Marine Turtles[45]. Sufficient information is also available in most cases to draw up National Action Plans for the conservation of marine turtles.

8. Elaborating and implementing action plans to confront the threats to biological diversity is an effective way of guiding, coordinating and stepping up the efforts made by the Mediterranean countries to safeguard the region's natural heritage. The adopted Ecosystem Approach (EcAp) to management of human activities with a view to conserve natural marine heritage and protecting vital ecosystem services recognizes that to achieve good environmental status "Biological diversity is maintained or enhanced". In this context, three common indicators related to marine turtles have been elaborated within the 27 common indicators of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and related Assessment Criteria (IMAP):

COMMON INDICATOR 3: Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles);
COMMON INDICATOR 4: Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles);
COMMON INDICATOR 5: Population demographic characteristics (EO1, e.g.body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)

9. The 2017 Mediterranean Quality Status Report (QSR)43, within the analysis conducted on Common Indicators 3 (Species distributional range), 4 (Population abundance of selected species) and 5 (Population demographic characteristics) related to EO1 on marine mammals, seabirds and marine reptiles, focused on the major existing gaps related to the current knowledge about the presence, distribution, habitat use and preferences of these marine species stressing the need to increase efforts on filling these gaps in order to predict with any certainty the future viability of sea turtles populations in the Mediterranean. .

10. Information from various sources has been taken into account in this Action Plan. Effective protection and management of nesting areas, practical measures to reduce turtle by-catches, as well as the management of feeding grounds, based on scientific information, are some of the key elements that can help to ensure the survival and the recovery of populations of marine turtles. These elements have been paid due attention. Scientific information on population dynamics, tagging, biology, physiology, public awareness etc have also been given due attention in this plan.

11. The effective and sustainable protection of the Mediterranean marine turtles implies

[43] UNEP(DEPI)/MED IG.23/23 – Annex I "Key findings of the Mediterranean Quality Status Report and Recommendations for the Further Implementation of the Ecosystem Approach Roadmap".

management of the Mediterranean as a whole, taking into account the ecosystem approach, and should take advantage of the actions of all the concerned stakeholders and be carried out in cooperation with organisations, programmes and plans, at the supranational and national level such as the Mediterranean Action Plan (MAP); Fisheries Management Plans (FAO/GFCM); the Marine Turtle Specialist Group (IUCN/SSC); International Commission for the Conservation of Atlantic Tunas (ICCAT); International Commission for the Scientific Exploration of the Mediterranean Sea (ICSEM); relevant NGOs, Research institutions, Universities etc.

12. This Action Plan outlines objectives, priorities, and implementation measures in different fields as well as their coordination. The different components of the Action Plan are mutually reinforcing and may act synergistically.

13. The progress in implementing the Action Plan will be reviewed at each meeting of the National Focal Points for SPAs/DB, on the basis of national reports and of reports by SPA/RAC on the regional aspects of the Action Plan. The Action Plan will be assessed and revised and updated as necessary, every five years, unless the SPA Focal Point Meetings deem otherwise.

II. Objectives

14. The objective of this Action Plan is the recovery of the populations of *Caretta caretta* and *Chelonia mydas* in the Mediterranean (with priority accorded to *Chelonia mydas*, wherever appropriate) through:

- Appropriate protection, conservation and management of marine turtle habitats, including nesting, feeding and wintering areas and key migration passages.
- Improvement of the scientific knowledge by research and monitoring

III. Priorities

15. Acknowledging the progress achieved over the past years and the proliferation of projects, activities and actions in many countries in the region, it is considered an overarching priority action to continue and enhance such ongoing projects and activities related to marine turtle conservation, research and monitoring. The following priorities have been identified for each component of this Action Plan:

III.1. Protection and management of the species and their habitats

a. Development, implementation and enforcement of specific legislation on sea turtles;
b. Protection and effective management of nesting areas (including the adjacent sea);
c. Protection and management of feeding, wintering and mating areas and key migration passages;
d. Minimization of incidental catches and elimination of intentional killings.
e. Restoration of degraded nesting beaches.

III.2. Research and monitoring

16. Knowledge needs to be improved in the following topics:

a. Identification of mating, feeding and wintering areas and key migration passages;
b. Identification of potential and new nesting areas;
c. Biology of the species, in particular aspects related to life cycles, population dynamics and population trends and genetics;
d. Assessment of fisheries interactions (e.g. Bycatch) and associated mortalities, including modification of fishing gear and related socioeconomic issues;
e. Assessment and improvement of nesting beach management techniques;
f. Strengthening the regional network of stranding networks
g. Strengthening the data collection of stranded sea turtles through National stranding networks and rescue centers;
h. Assessment of population trends through long term monitoring programmes, both on nesting beaches and at sea based on the IMAP developed within the framework of the EcAp process of the Barcelona Convention as well as the monitoring requirements set under the MSFD of the EU.
i. Impact of pollutants (including plastics) on the health of individuals and populations, as well as the impact of climate change.

III.3. Public awareness and education

17. For the implementation of this action plan, public support is needed. Information and education campaigns on relevant turtle conservation issues should target groups such as:

a. Local residents and visitors to nesting areas;
b. Fishermen and other stakeholders;
c. Tourists and tourism-related organizations;
d. Schoolchildren and teachers;
e. Decision makers at national, regional and local levels.
f. Appropriate training/education of stakeholders can be given (e.g., to fishermen and tourism workers)

III.4. Capacity building/Training

18. Training of managers and other staff of protected areas in conservation and management techniques and of scientists, researchers and other staff in conservation, research and monitoring in the priority issues covered by the Action Plan.

III.5. Coordination

19. Promote and enhance cooperation and coordination among the Contracting Parties, the UNEP/MAP partners, relevant organizations and projects carried out in the field of sea turtles conservation. Priority should be given to the regular assessment of the progress in the implementation of this Action Plan.

IV. Implementation Measures

20. The implementation of the measures recommended in this Action Plan will only be possible with the appropriate support by the Parties and by competent international organizations, particularly as regards the provision of adequate financial support, through national and regional funding programmes and through support for applications to donors for projects. Much progress has been achieved over the past years, with the proliferation of projects, programmes, activities and actions in many countries around the Mediterranean. The implementation and coordination of such ongoing activities related to marine turtle conservation, research and monitoring is expected to benefit from the provisions of this Action Plan.

IV.1. Protection and Management

21. With regard to protection and management, the following measures are recommended:

(a) Legislation

22. The Contracting Parties that have not yet extended legal protection to marine turtles should do so as soon as possible.

23. Each Contracting Party should develop and implement as soon as possible the necessary legislation for the protection, conservation and/or management of areas important for marine turtles, such as nesting (including the adjacent sea), feeding, wintering and mating areas and key migration passages.

24. In pursuing the above the Contracting Parties should take into account the provisions of the relevant international conventions and supranational legislation as well as the SPA/RAC “Guidelines to Design Legislation and Regulations Relative to the Conservation and Management of Marine Turtles Populations and their Habitats”.

25. Legislation on deliberate killing must be enforced and updated in some Countries and developed in others totally lacking these measures

(b) Protection and Management of Habitats

26. Integrated management plans should be elaborated and implemented for terrestrial and marine areas critical for nesting, feeding, wintering and mating, as well as key migration passages.

27. Measures and management rules aimed at protecting critical habitats, on land and at sea, should be developed and implemented. In the case of nesting areas, such measures should cover issues such as public access, use of vehicles and horse riding, use of artificial lights, nautical activities, minimization of predation, inundation, disturbance during nesting, disturbance in adjacent waters, etc. In the case of marine areas such measures should address boat traffic and fishing. Contracting Parties are encouraged to use the SPA/RAC "Guidelines for setting up and management of Specially Protected Areas for marine turtles in the Mediterranean"[44]

28. Training of the staff involved in protection and management activities is a pre-requisite to good management.

(c) Minimisation of Incidental Catches and Elimination of Intentional Killings

29. A reduction of incidental catches and mortality can be achieved by:

a. Applying appropriate regulations concerning fishing depth, season, gear, etc, especially in areas with a high concentration of turtles;
b. The modification of fishing gear, methods and strategies proven to be effective, and as appropriate, their introduction in fisheries legislation and fishing practices;
c. Education/training of fishermen to correctly haul, handle, release and record incidentally caught turtles. Use of appropriate methods are described inter alia in the SPA/RAC publication "sea turtle handling guidebook for fishermen"

30. Deliberate killing and exploitation of marine turtles can be eliminated by:

a. Applying and enforcing appropriate legislation;
b. Carrying out campaigns among fishermen in order to urge them to release marine turtles caught incidentally and to participate in the information networks on turtles (report sightings of turtles, of tags, participation in tagging programmes, etc.);
c. Carrying out campaigns for fishermen and local populations to facilitate the implementation of legislation to ban the exploitation/consumption and trade/use of all products derived from marine turtles.
d. The above will help also in reducing mutilations and killing of turtles due to ignorance and/or prejudice.

(d) Other Measures to Minimise Mortality

31. The setting up and proper operation of Rescue Centers and First Aid Stations is suggested as an additional means to minimize individual turtle mortality. Rescue Centers may also play an important role for the conservation of the populations by contributing to

[44] http://www.rac-spa.org/sites/default/files/doc_turtles/g_l_manag_mpa_turtles_en_fr.pdf

activities such as awareness, education, and data collection. The use of the SPA/RAC "Guidelines to Improve the Involvement of Marine Rescue Centers for Marine Turtles is recommended.

32. There is a need to develop a common methodology for the management of rescue centers including methods for the collection and transfer of related data

33. Training of the staff involved is necessary. In addition, a Mediterranean-wide rescue network should be set up, to assist the exchange of knowledge and experience among those who work with turtles in facing difficulties. The network should include already existing rescue centers and promote the establishment of new rescue centers in countries, which are currently lacking adequate structures.

IV.2. Scientific Research and Monitoring

34. The development of research and monitoring programmes and the exchange of information, should focus on the priority fields for the conservation of marine turtle populations, by using various methods, such as beach surveys and monitoring of nesting beaches - especially long term monitoring, tagging (keeping in mind the provisions of the SPA/RAC tagging guidelines), data logging, satellite telemetry, Geographic Information Systems (GIS), genetics, on-board observers and modelling.

(b) Scientific Research

For research these should cover inter alia the following (not in order of priority):

a. Identification of mating, feeding and wintering areas and key migration passages;
b. Identification of potential or new nesting areas;
c. Biology of the species, in particular aspects related to life cycles, population dynamics and population trends and genetics. Contracting parties are encouraged to use the "Guidelines to standardize methodologies to estimate demographic parameters for marine turtles populations in the Mediterranean".
d. The assessment of turtle by-catch and respective mortality rates from different fishing gear, including small scale and artisanal fisheries;
e. Data on the effects of gear modifications (new hooks etc.) and fishing strategies should be collected to evaluate the effects of these on turtle mortality and catch rates as well as the effects on other species;
f. The socio-economic effects of the implementation of turtle conservation measures that can impact fisheries need to be evaluated;
g. Development of management techniques for nesting beaches and foraging areas;
h. Impact of climate change on marine turtles;

(c) Monitoring

35. For monitoring, programmes should follow the recommendation of the MAP ecological objectives, the IMAP and the relevant Protocol[45]. They should cover inter alia the following (not in order of priority):

a. Encourage long-term monitoring programmes for important nesting beaches and foraging areas. All Contracting Parties that have nesting beaches or foraging areas should encourage the uninterrupted and standardized monitoring taking

[45] Monitoring protocol of marine turtles in the Mediterranean

into account their national monitoring programmes related to the biodiversity. Where such programmes do not exist, the Parties should set up such programmes or encourage them. Surveys of nesting beaches of lesser importance and of scattered nesting need also to be undertaken occasionally if possible, so that a more complete picture of populations can be formed. Contracting Parties are encouraged to use the SPA/RAC" Guidelines for the long-term Monitoring programmes for marine turtles nesting beaches and standardized monitoring methods for nesting beaches, feeding and wintering areas"

b. Onboard observation programmes to gather precise data on species biology and fisheries induced mortality should complement nesting beaches and foraging areas monitoring;
c. Strengthening the data collection of stranded sea turtles through National stranding networks and rescue centers
d. Contracting Parties, with the help of national, regional or international organisations, should undertake, when appropriate, joint monitoring initiatives on a pilot basis, with the aim to share and exchange best practices, using harmonized methodologies, and ensuring cost efficiency.
e. Contracting Parties should support and take part in regional initiatives and projects led by competent partner organizations that will contribute to the implementation of the initial phase of the IMAP in order to strengthen strategic and operational regional synergies.
f. Contracting Parties should report regularly quality assured data

36. For some Contracting Parties there is still little information on turtle nesting beaches and size of breeding populations. These Parties should undertake urgently more comprehensive surveys and encourage the setting up of long-term monitoring programmes taking into account their national monitoring programmes related to biodiversity.

IV.3. Public Awareness and Education

37. Public-awareness programmes, including appropriate multiple information tools (special documentary information material, electronic media etc), should be developed for fishermen, local residents, tourists and tourism-related organizations, to help reduce the mortality rates of marine turtles, to induce respect for nesting, feeding and wintering and mating areas, and to promote the reporting of any useful information concerning sea turtles. Appropriate training/education of stakeholders can be given (e.g., to fishermen, tourism workers).

38. Information campaigns directed at local authorities, residents, teachers, visitors, fishermen, decision makers at local, regional and national levels and other stakeholders, are urgently needed in order to enlist their participation in the efforts for the conservation of marine turtles and for their support for conservation measures.

IV.4. Capacity Building/Training

39. Existing training programmes should be continued, particularly for those Parties that need more expertise and/or experts with specialized knowledge of marine turtles, and for managers and other staff of protected areas, in the conservation and management techniques needed (these include inter alia beach management, tagging and monitoring).

40. In particular, training programmes in the setting up and operation of Rescue Centers should be continued, with the aim of guaranteeing that these centers have skilled personnel,

appropriate equipment and adopt common methodologies for data collection. Training programmes to be elaborated for other fields, as needed, especially where fisheries managers are concerned.

IV.5. National Action Plan

41. Contracting Parties should establish National Action Plans for the conservation of marine turtles.

42. National Action Plans should address the current factors causing loss or decline of turtle population and their habitats, suggest appropriate subjects for legislation, give priority to the protection and management of coastal and marine areas, the regulation of fishing practices and ensure continued research and monitoring of populations and habitats as well as the training and refresher courses for specialists and the awareness-raising and education for the general public, actors and decision-makers.

43. The national plans must be brought to the attention of all concerned actors and, when possible, coordinated on a regional basis.

IV.6. Regional Coordination Structure

44. It is necessary to develop cooperation and exchange of information among the Contracting Parties for the implementation of the Action Plan and to improve the coordination of activities within the region.

45. SPA/RAC is considered to be the most appropriate existing mechanism for this coordination. The implementation of the Action Plan may be carried out, in cooperation with other bodies concerned, through establishing MoCs, as necessary.

46. The major function of the coordinating mechanism with regard to marine turtles would be to:

47. Assess the progress achieved in implementing this Action Plan. SPA/RAC will request at regular intervals, not exceeding two years, update reports from the Parties and, on the basis of these ongoing national reports and of its own assessment of the progress in the regional component of this Action Plan, prepare reports to be submitted to the SPA National Focal Point meetings, which will make follow-up suggestions to the Contracting Parties.

- Collect and evaluate the data at Mediterranean level
- Prepare inventories of networks of protected areas for marine turtles in the Mediterranean and facilitate the operation of such networks and of networks on such issues as marine turtle habitats, ecology, conservation etc
- Prepare a timetable of activities and financing proposals for the Contracting Parties' meetings;
- Contribute to the dissemination and exchange of information;
- Work further and create more opportunities with relevant partner organizations, in order to strengthen technical support that countries might need to implement the IMAP in relation with marine turtles.
- Assist and/or organize expert meetings on specific topics regarding marine turtles
- Continue to support the organisation of the Mediterranean Marine Turtle Conferences
- Assist and/or organise, training courses and support and catalyse the participation of appropriate scientists and other staff in such courses.

48. Complementary work carried out by other international bodies, NGOs and UNEP/MAP partners aiming at the same objectives should be encouraged and capitalized to prevent possible overlapping and help disseminate their knowledge across the Mediterranean Community.

49. Coordinate the activities needed for the revision/updating of this Action Plan every five years, or earlier, if this is deemed necessary by the SPA/DB National Focal Point meetings, or on the basis of important new information becoming available.

50. The inventory of marine turtle critical habitats, including key migrations passages, in the Mediterranean, should be regularly reviewed in the light of increased knowledge and published online through the Mediterranean biodiversity Platform[46].

IV.7. Participation

51. Any interested international and/or national organisation is invited to participate in actions necessary for the implementation of this Action Plan

52. Links with other bodies responsible for Action Plans dealing with one or more species of marine turtles should be made, to strengthen co-operation and avoid duplication of work.

53. The co-ordination structure shall set up a mechanism for regular dialogue between the participating organisations and where necessary, organise meetings to this effect.

IV.8. "Action Plan Partners"

54. Implementing the present Action Plan is the province of the national authorities of the Contracting Parties. The concerned international organisations and/or NGOs, laboratories and any organisation or body are invited to join in the work necessary for implementing the Action Plan. At their ordinary meetings, the Contracting Parties may, at the suggestion of the meeting of National Focal Points for SPAs/BD, grant the status of «Action Plan Partner» to any organization or laboratory which so requests and which carries out, or supports (financially or otherwise) the carrying out of concrete actions (conservation, research, etc.) likely to facilitate the implementation of the present Action Plan, taking into account the priorities contained therein.

[46] http://data.medchm.net

Annex I - Implementation Timetable

ACTION	Deadline[47] / periodicity	By Whom
A. PROTECTION AND MANAGEMENT		
A.1 Legislation		
a. Protection of turtles – general species protection	As soon as possible	Contracting Parties
b. Enforce legislation to eliminate deliberate killing	As soon as possible	Contracting Parties
c. Habitat protection and management (nesting, mating, feeding, wintering and key migration passages)	As soon as possible	Contracting Parties
A.2 Protection and Management of habitats		
a. Setting up and implementing management plan	Immediate and continuous	Contracting Parties
b. Restoration of damaged nesting habitats	Immediate and continuous	Contracting Parties
A.3 Minimisation of incidental Catches		
a. Fishing regulations (depth, season, gear) in key areas	Immediate and continuous	Contracting Parties
b. Modification of gear, methods and strategies	Immediate and continuous	SPA/RAC, Partners & Contracting Parties
A.4 Other Measures to Minimise individual Mortality		
a. Setting up and/or improving operation of Rescue Centres	Continuous	Contracting Parties
a.1 Elaborate guidelines for the management of rescue centers, including methods for data collection	1 year after adoption	SPA/RAC
B. SCIENTIFIC RESEARCH AND MONITORING		
B.1 Scientific Research		
a. Identification of new mating, feeding and wintering areas and key migration passages;	Continuous	Contracting Parties and Partners
b. Elaboration and execution of cooperative research projects of regional importance aimed at assessing the interaction between turtles and fisheries	Continuous	SPA/RAC, Partners & Parties
c. Tagging and genetic analysis (as appropriate)	Continuous	SPA/RAC and Contracting Parties and Partners
d. Facilitate the networking between managed and monitored nesting sites, aiming at the exchange of information and experience	Continuous	SPA/RAC
B.2. Monitoring		

[47] The deadlines mentioned are not intended in any way to postpone or delay the drafting and/or the implementation of legislation or management plans or of monitoring programmes etc. that already exist and/or are ongoing

a. Setting up and/or improving long-term monitoring programmes for nesting beaches, feeding and wintering areas	Continuous	Contracting Parties and SPA/RAC
b. Elaboration of protocol for data collection on stranding	2 years from adoption	SPA/RAC
d. Setting up national stranding networks	As soon as possible	Contracting Parties
C. PUBLIC AWARENESS AND EDUCATION		
Public awareness and Information campaigns in particular for fishermen and local populations	Continuous	SPA/RAC, Partners and Contracting Parties
D. CAPACITY BUILDING		
Training courses	Continuous	SPA/RAC and Partners
E. NATIONAL ACTION PLANS		
Elaboration of National Action Plans	Continuous	Contracting Parties
F. COORDINATION		
a. Assessment of progress in the Implementation of the Action Plan	Every Five years	SPA/RAC and Parties
b. Cooperation in organising the Mediterranean Conferences on marine turtles	Every three year	SPA/RAC
c. Updating the Action Plan on Marine Turtles	Five years from adoption	SPA/RAC

Annex II - Recommendations and Guidelines on Tagging[48] in the Mediterranean

VI.1. General Recommendations:

a. It is stressed to all prospective tagging projects that **tagging is not a conservation measure** and that it is not an alternative to conservation. All it can do, at best, is to help get information on which to base conservation policy and actions

b. Encourage enforcement, at national level, of permitting legislation for tagging. This is to ascertain that **aimless tagging** does not take place and that tagging teams/persons or organizations have well thought out plans and aims and adequate training for what they are intending to do

c. There is a need for **training courses** in planning and undertaking tagging projects and/or support in training in the field (with the provision of experts), particularly for new projects

d. There is a need for **support** for tagging, with equipment, materials etc for projects that are qualified for such work (having undertaken adequate planning, training etc)

e. Tagging equipment should if possible be provided after a request and the tags provided should carry the **return address** of the project or country

f. There is a need in the countries for **advice and guidelines**, given inter alia through SPA/RAC and its website www.spa-rac.org, on tagging issues, providing links to key websites such as www.seaturtle.org and its **Tag Finder** site, as well as to the **ACCSTR Sea Turtle Tag Inventory** www.accstr.ufl.edu , encouraging visitors to register their tag series in this database. Duplication of effort will be avoided this way

g. Tagging is not to be taken lightly and minimum guidelines are needed to ensure the wellbeing of turtles (the basic **Guidelines to minimize damage/disturbance to turtles by tagging** were drafted by the relevant SPA/RAC WG - see below)

h. The development of simple practical materials (stickers etc) for **awareness** campaigns for fishermen and other stakeholders (e.g., coastal communities) will be useful.

i. A **Regional Inventory of Tagging Projects** is needed and is in fact a priority issue. This should be updated as new information becomes available and should be available on line. (A **questionnaire** was drafted by the working group and was submitted to the participants of the workshop for completion. It is available from SPA/RAC for anybody who wishes to be included in the Inventory).

VI.2. Guidelines to minimize disturbance/damage to turtles by tagging

Metal tags

j. Do not use Style 1005-49 metal tags (National Band and Tag Company (NBTC) USA)

k. Use size 681C (National Band and Tag Company (NBTC) USA) - for turtles over 30 cm CCL (i.e., do not tag turtles smaller than 30cm CCL)

l. Do not use tags in juvenile turtles in such a way as to constrict the growth of the flipper

Plastic tags

m. Do not use Jumbo tags (Jumbotag - Dalton supplies Ltd, UK) for turtles smaller than

[48] Though explicit mention is made in the Guidelines above of specific trade names (Dalton and National Band and Tag Company), the guidelines are applicable to similar tags (material, size etc) made by other manufacturers. Specific mention was made of these manufacturers and tags, as these are the tags most commonly used for tagging turtles and are hence well known.

50cm CCL

n. Do not use Rototags (Rototag - Dalton supplies Ltd, UK) for turtles smaller than 30 cm CCL

Pit tags

o. Do not use PIT tags (Passive Integrated Transponder tags) in turtles smaller than 30 cm CCL

p. If you use PIT tags, then apply them under the scales or between the digits, in the muscle, on the front left flipper.

General

q. Do not use tagging methods proven to be unsatisfactory

r. Do not tag a turtle on her way up the beach or during egg-laying. Tag after the egg chamber is covered or if the turtle is on her way back to the sea.

s. Do not turn turtles over for tagging

Annex IV

Draft updated Action Plan for the Conservation of Cartilaginous Fishes (Chondrichtyans) in the Mediterranean Sea

CONTENTS

FOREWORD

Chondrichthyan fishes constitute a class within the zoological classification which includes the cartilaginous fish commonly named sharks, skates, rays and chimaeras. The skates and the rays, or batoids, are flattened shark-like fish.

The Action Plan for the Conservation of Chondrichthyan Fishes in the Mediterranean Sea is in line with:

1) the Barcelona Convention adopted by the Mediterranean countries and the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean;

2) the International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks) proposed by FAO and adopted by the UN member states in 1999 [Note: in the FAO documents 'sharks' is used for chondrichthyans];

3) the UN Fish Stocks Agreement (UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks) in effect since 11th December 2001;

4) paragraph 31 of the Implementation Plan of the Resolution of the World Summit for Sustainable Development adopted in Johannesburg in September 2002.

In the implementation of the IPOA-Sharks, the Mediterranean Action Plan for the Conservation of Chondrichthyan Fishes constitutes a proposal for regional strategies, pointing out priorities and actions to be undertaken at national and regional level, since regional coordination is needed to ensure implementation of conservation measures. The IPOA-Sharks suggests that member states of the FAO should develop national action plans when their fishing fleets conduct target or by-catch fisheries for sharks. With regards to this recommendation, the Contracting Parties to the Barcelona Convention are strongly urged to elaborate national action plans according to the priorities herein defined, in order to ensure the conservation, management and long-term sustainable use of the chondrichthyan resources in their environment.

Twenty-four species enlisted in the Annex II (list of endangered or threatened species) of the SPA/BD Protocol are already protected which based on Recommendation GFCM/36/2012/1 (now GFCM/42/2018/2) cannot be retained on board, trans-shipped, landed, transferred, stored, sold or displayed or offered for sale, and must be released unharmed and alive to the extent possible. Also, some Mediterranean countries have taken specific protection measures for these species to reinforce their conservation status. Many species of the list appear on the IUCN Red List and in the appendices to the Bern and Bonn Conventions, and some have been included in the CITES appendices.

Although such conservation measures that focus on particular species have been proving to be useful at species level, they are not sufficient at ecosystem level. That is why habitat and environment parameters should be included in the Action Plan. As a result, the guidelines for elaborating an Action Plan are the following:

- species conservation
- biodiversity maintenance
- habitat protection
- management for sustainable use

- scientific research
- monitoring
- funding for research, implementation and monitoring
- public awareness
- international cooperation for controls in the open sea.

Thus, implementation of the Action Plan should involve a great number of stakeholders and its success requires increasing cooperation between different jurisdictions, professional fishermen, conservation and environmental bodies, recreational and game fishing associations, scientific and research organisations and academic institutions, and military and administrative bodies, at national, regional and international levels.

INTRODUCTION

1. The chondrichthyan fish fauna of the Mediterranean is relatively diverse, with at least 48 species of sharks, 40 of batoids and two of chimaeras, even if some of them have to confirmed. All species are fished as bycatch. however, many of them are sold at fish markets, among them some species are very rare and may never have been common. However, there is evidence of the important negative impact of unmanaged and irresponsible fisheries on the populations of these chondrichthyan species.

2. Chondrichthyan fishes have specific biological characteristics, such as low reproduction productivity due to late sexual maturity and low fecundity, which make them vulnerable to long-lasting stresses and disturbances and slow to recover once depleted.

3. For chondrichthyan fishes, there also exists a close relationship between the number of young produced and the size of the breeding biomass (stock-recruitment relationship) and complex spatial structures (size/sex segregation and seasonal migration) that contribute to their vulnerability to habitat deterioration, environmental pollution, and over-exploitation.

4. Most sharks and some skates and rays are apex predators and have an important trophic function in the marine ecosystem. Therefore, the ecosystem approach is particularly important to understand the role of these fishes in the structuring and functioning of this system. The integrated effects of irresponsible fishing, pollution, and habitat destruction can result in changes in abundance, size structure and biological features, and in the extreme could lead to extinction. The indirect impacts include changes in species prey/predator composition, with species replacement, since fishing tends to remove larger species and larger individuals from ecosystems. Exploitation of chondrichthyans should respect the principles of sustainability and the precautionary principle as defined in the FAO Code of Conduct for Responsible Fisheries.

5. Elasmobranches are by far the most endangered group of marine fish in the Mediterranean Sea. The IUCN Red List shows clearly the vulnerability of elasmobranchs and the lack of data; 39 species (53% of 73 assessed species (2016)) are critically endangered, endangered, or vulnerable.13 % are data deficient (DD).

6. The Contracting Parties to the Barcelona Convention, within the framework of the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Area of the Mediterranean (MAP Phase II), give priority to ensuring the protection of sensitive species, habitats and ecosystems in the Mediterranean Sea.

7. The decline of some chondrichthyan populations has become a matter for international concern, and a growing number of organisations have expressed the need for urgent measures to be introduced for the conservation of these fish. To this end, SPA/RAC was entrusted (Monaco, November 2001) by the Contracting Parties to the Barcelona Convention with the task of elaborating an action plan for the conservation of the chondrichthyan populations of the Mediterranean. This action plan was adopted within the frame work of the Barcelona Convention for the protection of the marine Environment and the Coastal Region of the Mediterranean in 2003.

8. Parties to Barcelona Convention requested SPA/RAC during the CoP 20 (Tirana, Albania, 17-20 December 2017) to update this Action Plan. The draft updating, herein presented, was based mainly on:

- New scientific contribution on the ecology, biology and systematic of cartilaginous fish;
- New conservation technics;
- New data, resolutions and recommendations (GFCM…);
- IUCN red list new assessment.

9. Today, the serious threats to the populations of chondrichthyan fishes are widely acknowledged: mainly unmanaged and irresponsible fishing, pollution and the negative aspects of some littoral development. These threats affect both chondrichthyan biodiversity and abundance. The Mediterranean Sea being a semi-enclosed sea with strongly populated coastal countries, critical habitats have been damaged by some littoral development and pollution. Pollution may harm the marine ecosystem because contaminants, concentrating along the food webs, can alter the physiology and good functioning of individuals and populations.

10. Although the Mediterranean chondrichthyan fish fauna have been studied for a long time, scientific research still needs to be undertaken to study the biology, ecology, population dynamics and status of stocks of most of the species. These studies are necessary to better understand their ecological role. The taxonomic status of several species is still uncertain. A few species are endemic to the Mediterranean. Some Red Sea species penetrate into the eastern Mediterranean through the Suez Canal (Lessepsian migrants); the progression of the populations of these species, and the effect of these invaders on the Mediterranean ecology, should be carefully studied.

11. Since many chondrichthyans are wide-ranging and/or migratory, regional coordination is required for research, monitoring and enforcement. Also, information should be widely disseminated amongst the public to make it aware of the threats to chondrichthyans and the urgent need for their conservation and the management of their exploitation.

A. OBJECTIVES

12. The present Action Plan is aimed at promoting:

12.1. The general conservation of the chondrichthyan populations of the Mediterranean, by supporting and promoting national and regional programmes on reducing bycatch and all other kind of disturbance.

12.2. The protection of chondrichthyan species, mainly whose populations are considered vulnerable;

12.3. The identification, the protection and the restoration of critical habitats, such as mating, spawning and nursery grounds;

12.4. The improvement of scientific knowledge by research and scientific monitoring, including the creating of regional standardised databases;

12.5. The recovery of depleted chondrichthyan stocks;

12.6. Public awareness and capacity-building about conservation of chondrichthyans.

B. PRIORITIES

13. The following general priorities are recommended:

13.1. Urgent provision of legal protection status for the species enlisted in the Annex II (list of endangered or threatened species) of the SPA/BD Protocol, which based on Recommendation GFCM/36/2012/1 (now GFCM/42/2018/2) cannot be retained on board, trans-shipped, landed, transferred, stored, sold or displayed or offered for sale, and must be released unharmed and alive to the extent possible.

13.2. Other species are currently data-deficient with inadequate information to assess extinction risk. Thus, there is an urgent need to assess the status of these species: marbled Stingray (*Dasyatis marmorata*), Reticulate Whipray (*Himantura uarnak*), Lusitanian Cownose (*Rhinoptera marginata*), Round Fantail Stingray (*Taeniurops grabata*), bignose Shark (*Carcharhinus altimus*), copper Shark (*Carcharhinus brachyurus*), blacktip Shark (*Carcharhinus limbatus*), dusky Shark (*Carcharhinus obscurus*), spinner Shark (*Carcharhinus brevipinna*), sharpnose Sevengill Shark (*Heptranchias perlo*), longnose Spurdog (*Squalus blainville*), Shortnose Spurdog (*Squalus megalops*), Bigeyed Sixgill Shark (*Hexanchus nakamurai*) and Longfin Mako (*Isurus paucus*).
13.3. Identify further management and technical measures to minimize bycatch and mortality of sharks and develop management programmes for species currently marketed.

*13.3.1. Primarily for the endangered species: the dogfish (*Squalus acanthias*), the thresher sharks (*Alopias* spp.), the blue shark (*Prionace glauca*).

*13.3.2. Secondly, for the other commercially important species: the catsharks (*Scyliorhinus* spp. and *Galeus melastomus*), the hound sharks (*Mustelus* spp.), the requiem sharks (*Carcharhinus falciformis, C. limbatus, C. obscurus* and *C. plumbeus*), the skates (*Leucoraja* spp., *Raja* spp.), and the stingrays (*Dasyatis* spp.).

13.4. Ensure good practice for handling rays and sharks caught accidentally and encourage fishing practices that reduce chondrichthyan by-catch and/or facilitate live release.

13.5. Identify critical habitats for their protection and restoration, especially mating areas, and spawning and nursery grounds.

13.6. Develop research programmes on general biology (feeding, reproduction and growth parameters), taxonomy, ecology and population dynamics, with particular regard to genetic and migration studies.

13.7. Develop both systems for the monitoring of fisheries and fishery-independent monitoring programmes.

13.8. Develop training to ensure capacity-building at national and regional level, mainly in the following fields: taxonomy, biology, ecology, monitoring methods and stock assessment.

13.9. Develop information and education programmes for professionals and public awareness.

C. IMPLEMENTATION MEASURES

In order to implement the above-mentioned general priorities, specific measures should be taken at national and regional level:

C.1. Protection

14. Strict legal protection of elasmobranchs species under Annex II (list of endangered or threatened species) of the SPA/BD Protocol to the Barcelona Convention, which concerned by Recommendation GFCM/42/2018/2 on fisheries management measures for the conservation of sharks and rays in the GFCM area of application, amending Recommendation GFCM/36/2012/3 (cf. paragraphs 10.2 and 11.1) in accordance with national and international laws and conventions. The status of Mediterranean chondrichthyans should be regularly reviewed in order to recommend, when necessary, legal protection for threatened species.

C.2. Fisheries management

15. According to the principles of the IPOA-Sharks and of the UN Straddling Fish Stocks Agreement, states that contribute to fishing mortality for a species or stocks should participate in their management.

16. Existing assessment reports and fisheries management programmes should be adjusted to chondrichthyan fishes or specific plans should be developed within the framework of the IPOA-Sharks and the GFCM recommendation GFCM/42/2018/2.

17. It is urgent to collect precise fisheries statistics, mainly on catches and landings by species. For this purpose, field identification sheets should be published in appropriate languages, with the vernacular names included, and dispatched to fishery people. Also, data on fishing efforts should be collected, as far as possible.

17. bis. capacity building training of statistics collectors should be ensured and statistics categories defined.

18. Management programmes for chondrichthyan fishes should be based on studies of the assessment of stocks and populations. Management should be also based on by-catch and measures to reduce incidental catches studies.

19. To this end, guidelines for measures reducing by-catch and good handling practices of caught protected species should be published in the appropriate languages and circulated to all potential users. Protected species must be promptly released unharmed and alive to the extent possible.

20. Implementing a permanent monitoring of fisheries where chondrichthyans are impacted is a fundamental management measure, useful for the conservation-of these species. This action would permit the timely detection of an obvious decline in their biomasses that could be an unequivocal sign of over-fishing. This monitoring could be done through surveys, landing-site observation and the examining of logbooks. This action should also address sightings (strandings and observations at sea).

21. For most species, cooperative management is necessary at national, regional and international levels. The mechanisms for achieving a cooperative approach may consist of the following elements:

- information on existing exploited resources and management systems;
- the defining and provision of legal instruments;
- the use of a participatory planning approach;
- the defining of clear management agreements;
- the building and development of national groups.

22. Mediterranean countries shall ban finning following GFCM recommendation GFCM/42/2018/2; it shall be prohibited to remove shark fins on board vessels and to retain, tranship or land shark fins.

C.3. Critical habitats and environment

23. Field studies are needed to inventory and map critical habitats around the Mediterranean.

24. Legal protection should be given to these habitats, in conformity with the national and international laws and conventions on the subject, to prevent their deterioration due to the negative effects of human activity. When these habitats have deteriorated, restoration programmes should be undertaken. One example of legal protection is the creation, where possible, of marine protected areas in which human activity is regulated.

25. Such protection measures could be part of fishery management programmes as well as of integrated coastal zone management.

C.4. Scientific research and monitoring

26. Parallel to protection and conservation measures, properly funded and staffed scientific research programmes should be undertaken or developed, mainly on species biology and ecology, emphasising growth, reproduction, diet, geographical and bathymetric distribution, migration, population genetics and dynamics and risk assessment. Regional tagging (conventional, pop-up and satellite tag) programmes should be developed for migratory species. Also, fishing efforts exploratory cruises and the status of resources within the precautionary principle, should be assessed. In the same way, discard should be evaluated in terms of quantity and composition. Research on tools to avoid or reduce by-catch should be fostered.

27. For the monitoring of fisheries, the standardised collection of data at landing places and fish markets should be supplemented and completed by on-board observation programmes to gather

precise data on fisheries and on species biology. Also, logbooks adapted to chondrichthyan fisheries should be distributed to fishermen. The following set of data would be required:

- species composition of the catch with length frequency distribution by sex;
- retained catch by species in number and weight;
- discarded catch in number and weight (+ reasons for discard);
- released species in number (sex, length when possible);
- gear and vessel specifications and cruise characteristics;

Furthermore samples (vertebrae, dorsal spines) should be taken and adequately preserved for age determination, and tissue samples for genetic analysis (DNA).

28. Mediterranean countries should design, at both national and regional level, specific programmes, or widen existing ones, to cover the whole Mediterranean Sea, and to collect standardised quantitative data to estimate fish density (relative abundance). This would help evaluate the risk status of the various species.

C.5. Capacity building/training

29. The Contracting Parties should promote the training of specialists, fisheries officers and managers in the study and conservation of chondrichthyan fishes. To this end, it is important to identify already existing initiatives and to give priority to taxonomy, conservation biology and techniques for monitoring research programmes (cf. above paragraph on scientific research).

30. Training programmes should also focus on methods of fisheries data collection and stock assessment, especially data analysis.

C.6. Education and public awareness

31. For protection and conservation measures to be effective, public support should be obtained. In this respect, (1) information campaigns should be directed at national authorities, residents, teachers, visitors, professional fishermen, sport anglers, divers and any other stakeholder (2) Publication materials should be produced to present the life history, and vulnerability, of chondrichthyans and (3) education programme on the issue should be taught for school children.

32. Also, guidelines for chondrichthyan watching should be published and widely distributed to potential observers such as anglers, yachtsmen, divers, shark-fans, etc, in order to make them actively involved in the conservation of chondrichthyan fishes.

33. In this process of education and public awareness, the help of associations and other bodies involved in nature conservation should be solicited.

C.7. Regional coordinating structure

34. All the above-mentioned recommended actions related to the protection and the conservation of species and their habitats, and the research and educational programmes, should be monitored and implemented, with as much regional cooperation between all the countries operating in the Mediterranean basin as is possible.

35. These actions should be undertaken in cooperation with, and with the support of, other regional fisheries organisations (e.g. GFCM, ICCAT), through establishing MoUs where necessary. Non-governmental organisations, associations and national environmental bodies should also be involved.

36. Implementation of the present Action Plan will be regionally coordinated by the Mediterranean Action Plan's (MAP) Secretariat through the Regional Activity Centre for Specially Protected Areas (SPA/RAC). The main functions of the coordinating structure shall consist in:

- favouring and supporting the collection of data and publishing and circulating results at Mediterranean level;
- promoting the drawing up of inventories of species and areas of importance for the Mediterranean marine environment;
- promoting transboundary cooperation;
- preparing reports on progress in the implementation of the Action Plan, to be submitted to the Meeting of National Focal Points for SPAs/BD and to meetings of the Contracting Parties;
- organising meetings of experts on specific subjects relating to Mediterranean chondrichthyans, and training courses;
- promoting the review of status of species and fisheries by relevant organisations;
- One year after the adoption of the Action Plan, coordinating the organisation of a Mediterranean symposium aiming at defining the state of knowledge on chondrichthyan fishes and taking stock of the progress made in implementing the Action Plan;
- five years after the present updating of the Action Plan, organising a meeting to review the progress of the Action Plan and to propose a revision of the Action Plan if needed.

37. Complementary work done by other international organisations with the same objectives shall be encouraged by SPA/RAC, promoting coordination and avoiding possible duplication of effort.

38. Initiatives aiming at ensuring enforcement of the current Action Plan, particularly in international waters, should be promoted.

D. PARTICIPATION IN THE IMPLEMENTATION

39. Implementing the present Action Plan is the responsibility of the national authorities of the Contracting Parties. Parties should facilitate coordination between their national, environmental and fisheries departments to ensure implementation of activities directed at protected and non-protected chondrichthyan species. Organisations or bodies concerned are invited to associate themselves with the work of implementing the present Action Plan. At their ordinary meetings, the Contracting Parties may, at the suggestion of the Meeting of National Focal Points for SPAs/BD, grant the status of 'Action Plan Associate' to any organisation or laboratory which so requests and which carries out, or supports (financially or otherwise) the carrying out of, concrete actions (conservation, research, etc.) likely to facilitate the implementation of the present Action Plan, taking into account the priorities contained therein. NGOs can submit their applications directly to SPA/RAC.

A. The coordinating structure shall set up a mechanism for regular dialogue between the Action Plan Associates and, where necessary, organise meetings to this effect. Dialogue should be conducted mainly by mail, including e-mail.

E. TITLE OF ACTION PLAN PARTNER

40. To encourage and reward outside contributions to the Action Plan, the Contracting Parties may at their ordinary meetings grant the title of 'Action Plan Partner' to any organisation (governmental, NGO, economic, academic etc.) that has to its credit concrete actions likely to help protect chondrichthyan fishes in the Mediterranean. The title of Action Plan Partner will be awarded by the Contracting Parties following recommendations made by the Meeting of National Focal Points for SPAs/BD.

F. ASSESSING THE IMPLEMENTATION AND REVISION OF THE ACTION PLAN

41. At each of their Meetings, the National Focal Points for SPAs/BD will assess the progress made in implementing the Action Plan, on the basis of national reports and of a report made by the SPA/RAC on implementation at regional level. In the light of this assessment, the Meeting of the National Focal Points for SPAs/BD will suggest recommendations to be submitted to the Contracting Parties, and, if necessary, suggest adjustments to the timetable given in the Annex to the Action Plan.

Implementation Timetable for the period 2020-2024

ACTIONS	CALENDER	BY WHOM
Tools		
1. Establish a network, enrich and update directory of national, regional and international experts on chondrichthyan fishes. (cf. § 33 of C.7 "Regional coordinating structure")	Continuous action (2020-2024)	SPA/RAC, CMS Shark MOU Secretariat, IUCN SSG, RFMO Shark Working Groups
2. Promote the use of the existing Field identification sheets (cf. § 15 of C.2. "Fisheries management")	Continuous action (2020-2024)	Contracting Parties & RFMOs
3. Promote the use of the GFCM manual (2019) “Monitoring the incidental catch of vulnerable species in the Mediterranean and the Black Sea: methodology for data collection” (cf. § C.2. "Fisheries management")	Continuous action (2020-2024)	Contracting Parties
Formalize/reinforce synchronous submission of catch, bycatch and discard data annually to the GFCM according to DCRF (Data Collection Reference Framework). (cf. § 25 of C.4. "Scientific research and monitoring")	Every year	Contracting Parties
5. Information campaigns and publishing materials for public awareness (cf. § C. 6 "Education and public awareness")	Continuous action (2020-2024)	SPA/RAC
6. Promote the use of existing guidelines for reducing the presence of sensitive species in by-catch and releasing them if caught. , (cf. § 16 of C.2 «Fisheries management")	Continuous action (2020-2024)	SPA/RAC and RFMO
7.Update and promote protocols and programmes for improved compilation and analysis of data, for contribution to regional stock assessment initiatives. (cf. § 16 of C2 “Fisheries management” and 25 of C.4. "Scientific research and monitoring")	From 2020 to 2024	National and regional agencies and advisory bodies, CMS, GFCM and FAO.
8. Training manual on cartilaginous fish eco-biology (Taxonomy, biological parameters determination, identification and monitoring of fisheries and	ASAP	SPA/RAC

critical habitats, conservation…) (cf. § 29 of C.6 "Education and public awareness")		
9. Training courses on cartilaginous fish eco-biology (cf. § 27 of C.5 "Capacity building / Training")	ASAP	SPA/RAC
10. Symposium on Mediterranean chondrichthyan fishes (cf. § 33 of C.7 "Regional coordinating structure")	One year after adoption	SPA/RAC
11. Meeting to review progress made on the Action Plan (cf. § 33 of C.7 and § F "Assessing the implementation and revision of the Action Plan")	5 years after adoption	SPA/RAC
Legal processes		
12 a. Legal protection established for endangered species, recommended in this Action Plan, identified by country (species enlisted in Annex II of the SPA/BD Protocol) 12 b. Urgent assessment of the status of data deficient species, recommended in this Action Plan (assessed by IUCN) (cf. § 11.1. of B "Priorities"; C1 "Protection")	ASAP	Contracting Parties,
13. Legal protection for prohibiting "finning" according to the GFCM recommendation (GFCM/42/2018/2) (cf. § 19 of C.2 "Fisheries management")	ASAP	Contracting Parties & RFMOs
14. Critical habitats legally protected and monitored, as soon as they are identified. (cf. § C.3 «Critical habitats and environment")	ASAP	Contracting Parties
15. Establish and promote national, sub-regional and regional plans or strategies for cartilaginous fish species (mainly listed in Annexes II and III). (cf. § 14 of C.2 "Fisheries management")	2020-2024	Contracting Parties, SPA/RAC, GFCM, CMS
16. Facilitating the enforcement of legal measures aiming to set up a system for enforcement of monitoring fisheries in international waters such as extending MEDITS programme to all Mediterranean countries (Mediterranean International Trawl Survey). (cf. § 35 C. 7 "Regional coordinating structure")	2020-2024	Contracting Parties SPA/RAC, GFCM, CMS and EU
Monitoring and data collection		

17. Establishing research programmes, mainly on the biology, ecology and population dynamics of the main species identified by the countries (cf. § C. 4 "Scientific research and monitoring")	2020-2024	Contracting Parties
18. Support the establishing of, or feed the existing, centralised databases (DCRF, MEDLEM…) (cf. § C.7 "Regional coordinating structure")	2020-2024	Contracting Parties and SPA/RAC
19. Inventory of critical habitats (mating, spawning and nursery grounds) (cf. § 11.4 of "Priorities" and § C.3 "Critical habitats and environment")	2020-2024	Contracting Parties
20. Promote existing research proposals developed under the SPA/RAC Action Plan to funding agencies (cf. § C. 4 "Scientific research and monitoring")	2020-2024	SPA/RAC, CPs, AP partners
21.Promote programs on the status of bycatch to propose measures for attenuation of the phenomenon. Such programs should be developed with onboard observers and multispecies approach. (cf. § C. 4 "Scientific research and monitoring")	2020-2024	SPA/RAC, CPs, AP partners
22. Increase compliance with obligations to collect and submit species-specific commercial catch and bycatch data to FAO and GFCM, including through increased use of observers. (cf. § C. 7 "Regional coordinating structure")	From 2020 to 2024	Contracting Parties
23. Support expert participation in RFMO and other relevant meetings and workshops, to share expertise and build capacity for data collection, stock assessment and bycatch mitigation. (cf. § C.5 "Capacity building / Training")	As soon as possible	Contracting Parties, RFMO, SPA/RAC
Management and assessment procedures		
18. Continuously review data and undertake new studies to clarify the status of Mediterranean chondrichthyan species focusing on endemics and species assessed as Data Deficient or Near Threatened (cf. § 11.2 of B "Priorities"; 12 of C.1 ‘Protection’; 25 of C.4 "Scientific research and monitoring")	2020-2024	International organisations
20. Develop and adopt (where these do not exist) national Shark Plans (cf. § C.1 ‘Protection’, C.2. "Fisheries management", & C.3 "Critical habitats and environment").	2020-2024	Contracting Parties
21. Identify further management and technical measures to minimize bycatch and mortality of sharks in fisheries impacting cartilaginous fishes. (cf. § 11.4 of B "Priorities"’)	2020-2024	Contracting Parties& RFMOs

Annex V

Draft Updated Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea

Draft Updating of the calendar of the Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea

1. Review and actions to be envisaged within the framework of continuing with the action plan

On the basis of the review of the actions carried out during the 2012-2018 period, it is possible to propose activities to be undertaken in the following five years:

A regulatory approach should take the marine magnoliophytes into consideration (e.g. inclusion on the list of protected species, impact studies procedures before any developments, creation of an MPA targeting these species) even if some progress still needs to be made for most of the other plant species of annex II, which, apart from the Cystoseira genus, are practically never mentioned in these procedures.

> **A better integration of all the plant species of annex II of the SPA/BD Protocol in regulatory procedures is to be encouraged.**

Several plant species of annex II are registered within the MPA perimeter, due to efforts deployed for the creation of an MPA in order to comply with the commitments of the States within the framework of international conventions (CBD) and deployment of the Natura 2000 Network on the seas. Several MPAs have management plans in order to take better care of the conservation of these plant species. However, natural monuments are still not adequately described, especially within the MPAs whereas the investigations undertaken by France show that they are not necessarily as rare as previously thought, but as they are so superficially located, they are strongly threatened by human activities.

> **A systematic inventory of natural monuments should be given more attention so that they can be included in future MPAs and thus guarantee their sustainability.**

A significant increase in communication in favour of protected species with much more diverse communication actions such as the means used and the target public; the most publicized species in this domain is still *Posidonia oceanica* and the seagrasses it creates.

> **Communication actions must also be undertaken in favour of other plant species.**

A high frequentation rate of symposiums focusing of the plant action plan which reflects the progress made by the scientific community in terms of knowledge of the plant formations and which identifies the prioritary actions to be undertaken. Thus the 2014 symposium in Slovenia stressed the necessity of identifying the cause of the observed regressions so as to propose concrete measures as a remedy (eg. Taking them into consideration during impact studies). The last edition (Turkey, January 2019), was along the same lines by requesting restoration actions to be carried out (Posidonia, Cystoseiras) to reconstitute/strengthen the natural populations and their ecological functions and allow them to maintain their eco-systemic services. These measures cannot compensate for the destruction of the species or habitats but must be part of a Code of Good Conduct so as to avoid any interventions which could fragilize these habitat (e.g. reimplantation, inappropriate sites):

These symposiums must be maintained as they provide an opportunity to assess the knowledge gained, to initiate cooperation and to elaborate strategies. There must also be a better understanding of the degradation of the plant formations (the cause and intensity) so as to implement measures (eg. restrictions, strengthening the populations, restoration) to effectively attenuate these impacts.

There is a significant improvement in knowledge in terms of the inventory and mapping of the seagrasses, compared with the previous evaluation. Despite the actions of several Parties to complete the data, considerable efforts still need to be deployed especially in the Southern and Eastern Mediterranean. The emergence of new investigation tools (Images Copernicus Sentinel 2/ Landsat 8, drones) should facilitate the mapping of large surface areas and other species of macrophytes (eg. Cymodosea, Cystoseira), especially as their distribution, apart from the Spanish littoral, are only partial and under-estimated. The adoption by the Contracting Parties of the Regional Climate Change Adaptation Framework (Decision IG 22/6; MAP/UNEP, 2016) made the mapping of marine and coastal ecosystems and the evaluation of the role of the services they provide and resilience to climate change a priority (operational objective 4.1). In view of the importance of the marine magnoliophytes meadows and in particular those of Posidonia in fixing and especially in the sequestration of organic carbon (Mateo et Romero, 1997 ; Pergent *et al*. 2014, Herr & Landis, 2016), actions in this domain should therefore be continued.

In conformity with the Regional Climate Change Adaptation Framework, the mapping of magnoliophyte meadows should be generalized so as to have an updated inventory of blue carbon sinks on a regional level and to ensure their future through adapted management measures (eg. restricted anchorage, prohibition of trawling, inclusion in the MPAs).

Initiatives have been taken for monitoring and the surveillance of plant formations. The implementation of the European directives (DHFF, DCE, DCSMM) as well as the commitments of the Contracting Parties to the Barcelona Convention for the implementation of the integrated monitoring and assessment programme (IMAP) within the framework of the ecosystemic approach process (UNEP-MAP-CAR/ASP- RAC/SPA, 2017) should, in the short term, be reflected through a generalisation of these approaches. Some Parties have indicated that they already started the planning process for the progressive introduction of IMAP into their national monitoring system. The experience acquired by the Parties who have pluri-annual monitoring systems shows that only long and sustainable chronological series can help to understand and quantify the evolutions of the habitats/species of conservation interest (vitality, habitats limits).

It is thus necessary to extend, strengthen and ensure the sustainability of the monitoring activities of the plant species in annex II, as envisaged within the IMAP framework.

Capacity building of the stakeholders on a regional and national level is ongoing even if the expectations of the Parties are still very high. Training sessions for national trainers, already mentioned during the previous evaluation, apparently have not been crystallized whereas this could be an approach to be tested in order to improve the competence of the local stakeholders.

Capacity building activities should be continued and aligned with the expectations of the Parties.

2. updated draft work programme and timetable

The work programme would be as follows:

Activities for implementation of Action Plan	Deadline	Who ?
Regulatory activities		
- Encourage the Parties to better integrate all the plant species in Annexe II in the Party's regulatory tools (eg. protected species, impact study procedures, …)	As soon as possible	Parties & SPA/RAC
- Assist the Parties who have not already done so, to create MPAs for the conservation of Annex II plant species	As soon as possible	SPA/RAC & Parties
- Assist the Parties to create MPAs to strengthen the conservation of blue carbon ecosystems and the services they provide in particular to attenuate climate change impacts (carbon sinks)	As soon as possible	Parties & SPA/RAC
Inventory activities and mapping		
- Initiate a systematic inventory of natural monuments so that they can be included in future MPAs to ensure their sustainability	As soon as possible	SPA/RAC & Parties
- Establish a first inventory of plant formations considered as carbon sinks and generalize mapping them	As soon as possible	SPA/RAC & Parties
- Assist the countries in identifying the main pressures which could degrade the marine vegetation and elaborate strategies to develop better practices (eg. restoration, strengthening of population)	Ongoing	SPA/RAC & Parties
Surveillance and monitoring activities		
- Promote the setting up of monitoring networks of the main marine vegetation assemblages in conformity with the principles and common indicators of the integrated monitoring and evaluation programme (IMAP)	As soon as possible	SPA/RAC & Parties
- Assist the countries so that the monitoring networks of the main marine plant formations can be rendered sustainable so as to obtain long chronological series	Ongoing	SPA/RAC & Parties
Capacity and knowledge building activities		
- Organize a symposium every 3 years and disseminate as widely as possible the conclusions and propositions formulated by the participants	From 2021	SPA/RAC
- Update and make accessible the data pertaining to the mapping of priority habitats and natural monuments	As soon as possible At symposiums	SPA/RAC & Parties
- Complete and regularly revise the list of specialists, laboratories and institutions and encourage exchanges amongst themselves		SPA/RAC
- Set up communication actions on annex II plant species by targeting the least well-known ones	As soon as possible Ongoing	SPA/RAC & Parties
- Continue with capacity building activities and align them with the expectations of the Parties		Parties & SPA/RAC
- Test the setting up of training of national trainers (professional staff – relays) and assess its efficacy	As soon as possible Ongoing	SPA/RAC
- Assist the countries in setting up regular national training sessions		Parties & SPA/RAC

Annex VI

Draft updated classification of benthic marine habitat types for the Mediterranean region

Draft updated classification of benthic marine habitat types for the Mediterranean region

LITTORAL

MA1.5 Littoral rock

MA1.51 Supralittoral rock

MA1.511 Association with Cyanobacteria and lichens (e.g. *Verrucaria* spp.)

MA1.512 Association with Ochrophyta

MA1.513 Facies with Gastropoda (e.g. Littorinidae, Patellidae) and Chthamalidae

MA1.51a Supralittoral euryhaline and eurythermal pools (enclave of mediolittoral)

MA1.51b Wracks of dead leaves of macrophytes

MA1.52 Mediolittoral caves

MA1.521 Association with encrusting Corallinales or other Rodophyta

MA1.53 Upper mediolittoral rock

MA1.531 Association with encrusting Corallinales creating belts (e.g. *Lithophyllum bissoides*, *Neogoniolithon* spp.)

MA1.532 Association with Bangiales or other Rodophyta, or Chlorophyta

MA1.533 Facies with Bivalvia (e.g. *Mytilus* spp.)

MA1.534 Facies with Gastropoda(e.g. *Patella* spp.) and with Chthamalidae

MA1.54 Lower mediolittoral rock

MA1.541 Association with encrusting Corallinales creating belts (e.g. *Lithophyllum bissoides*, *Neogoniolithon* spp.)

MA1.542 Association with Fucales

MA1.543 Association with algae (algal belts), except Fucales and Corallinales

MA1.544 Facies with *Pollicipes pollicipes*

MA1.545 Facies with Vermetidae (*Dendropoma* spp.) (vermetid reefs)

MA1.546 Facies with Bivalvia (e.g. *Mytilus* spp.)

MA1.547 Facies with Gastropoda (e.g. *Patella* spp.)

MA1.54a Mediolittoral euryhaline and eurythermal pools (enclave of infralittoral)

MA2.5 Littoral biogenic habitat

MA2.51 Lower mediolittoral biogenic habitat

MA2.511 Association with encrusting Corallinales creating platforms

MA2.512 Facies with *Sabellaria* spp. (reefs of *Sabellaria*)

MA2.513 Facies with Vermetidae (*Dendropoma* spp.) (vermetid reefs)

MA2.51a Banks of dead leaves of macrophytes (*banquette*)

MA3.5 Littoral coarse sediment

MA3.51 Supralittoral coarse sediment

MA3.511 Association with macrophytes

MA3.51a Deposit of dead leaves of macrophytes

MA3.51b Beaches with slowly-drying wracks

MA3.52 Mediolittoral coarse sediment

MA3.521 Association with indigenous marine angiosperms

MA3.522 Association with *Halophila stipulacea*

MA3.52a Deposit of dead leaves of macrophytes

MA4.5 Littoral mixed sediment

MA4.51 Supralittoral mixed sediment

MA4.511 Association with macrophytes

MA4.51a Deposit of dead leaves of macrophytes

MA4.51b Beaches with slowly-drying wracks

MA4.52 Mediolittoral mixed sediment

MA4.521 Association with indigenous marine angiosperms

MA4.522 Association with *Halophila stipulacea*

MA4.52a Deposit of dead leaves of macrophytes

MA5.5 Littoral sand

MA5.51 Supralittoral sands

MA5.511 Association with macrophytes

MA5.51a Deposit of dead leaves of macrophytes

MA5.51b Beaches with slowly-drying wracks

MA5.52 Mediolittoral sands

MA5.521 Association with indigenous marine angiosperms

MA5.522 Association with *Halophila stipulacea*

MA5.523 Facies with Polychaeta

MA5.524 Facies with Bivalvia

MA5.52a Deposit of dead leaves of macrophytes

MA6.5 Littoral mud

MA6.51 Supralittoral mud

MA6.511 Association with macrophytes

MA6.51a Beaches with slowly-drying wracks under glassworts

MA6.52 Mediolittoral mud

MA6.52a Habitats of transitional waters (e.g. estuaries and lagoons)

MA6.521a Association with halophytes (*Salicornia* spp.) or marine angiosperms (e.g. *Zostera noltei*, *Ruppia maritima*)

MA6.522a Habitats of salinas

INFRALITTORAL

MB1.5 Infralittoral rock

MB1.51 Algal-dominated infralittoral rock

MB1.51a Well illuminated infralittoral rock, exposed

MB1.511a Association with Fucales

MB1.512a Association with photophilic algae, except Fucales, Corallinales and Caulerpales

MB1.513a Association with encrusting Corallinales creating belts (e.g. *Titanoderma trochanter*, *Tenarea tortuosa*)

MB1.514a Association with indigenous Mediterranean *Caulerpa* spp.

MB1.515a Association with non-indigenous Mediterranean *Caulerpa* spp.

MB1.516a Facies with Scleractinia (e.g. *Cladocora caespitosa*)

MB1.517a Facies with Bivalvia (e.g. *Mytilus* spp.)

MB1.518a Facies with Echinoidea on encrusting Corallinales (barren ground)

MB1.51b Moderately illuminated infralittoral rock, exposed

MB1.511b Association with encrusting Corallinales

MB1.512b Association with indigenous Mediterranean *Caulerpa* spp.

MB1.513b Association with non-indigenous Mediterranean *Caulerpa* spp.

MB1.514b Facies with Hydrozoa

MB1.515b Facies with Scleractinia (e.g. *Astroides calycularis*)

MB1.51c Well illuminated infralittoral rock, sheltered

MB1.511c Association with Fucales

MB1.512c Association with photophilic algae, except Fucales, Corallinales and Caulerpales

MB1.513c Association with encrusting Corallinales

MB1.514c Association with indigenous Mediterranean *Caulerpa* spp.

MB1.515c Association with non-indigenous Mediterranean *Caulerpa* spp.

MB1.516c Facies with Scleractinia (e.g. *Cladocora caespitosa*)

MB1.51d Moderately illuminated infralittoral rock, sheltered

MB1.511d Association with encrusting Corallinales

MB1.512d Association with indigenous Mediterranean *Caulerpa* spp.

MB1.513d Association with non-indigenous Mediterranean *Caulerpa* spp.

MB1.514d Facies with Alcyonacea (e.g. *Eunicella* spp.)

MB1.51e Lower infralittoral rock moderately illuminated

MB1.511e Association with Fucales

MB1.512e Association with Laminariales (kelp beds)

MB1.513e Association with indigenous Mediterranean *Caulerpa* spp.

MB1.514e Association with non-indigenous Mediterranean *Caulerpa* spp.

MB1.515e Facies with Alcyonacea (e.g. *Eunicella* spp.)

MB1.516e Facies with Scleractinia (e.g. *Cladocora caespitosa*)

MB1.52 Invertebrate-dominated infralittoral rock

MB1.52a Moderately illuminated infralittoral rock, sheltered

MB1.521a Association with indigenous Mediterranean *Caulerpa* spp.

MB1.522a Association with non-indigenous Mediterranean *Caulerpa* spp.

MB1.523a Facies with small sponges (sponge ground)

MB1.524a Facies with Scleractinia (e.g. *Astroides calycularis,Cladocora caespitosa*, *Polycyathus muellerae*, *Pourtalosmilia anthophyllites*)

MB1.525a Facies with Alcyonacea (e.g. *Eunicella* spp., *Paramuricea clavata*, *Corallium rubrum*)

MB1.53 Infralittoral rock affected by sediments

MB1.531 Facies with small sponges (sponge ground)

MB1.532 Facies with large and erect sponges (e.g. *Axinella polypoides, Axinella cannabina*)

MB1.533 Facies with Scleractinia(e.g. *Cladocora caespitosa*)

MB1.534 Facies with Alcyonacea (e.g. *Eunicella* spp., *Leptogorgia* spp.)

MB1.535 Facies with Ascidiacea

MB1.536 Facies with Bivalvia (e.g. *Pholas dactylus*)

MB1.537 Facies with endolitic species (e.g. *Lithophaga lithophaga, Cliona* spp.)

MB1.54 Habitats of transitional waters (e.g. estuaries and lagoons)

MB1.541 Association with marine angiosperms or other halophytes

MB1.542 Association with Fucales

MB1.55 Coralligenous (enclave of circalittoral, see MC1.51)

MB1.56 Semi-dark caves and overhangs (see MC1.53)

MB2.5 Infralittoral biogenic habitat

MB2.51 Reefs in algal-dominated habitat

MB2.511 Facies with Vermetidae (*Dendropoma* spp.) (vermetid reefs)

MB2.52 Reefs on fine sand in very shallow waters

MB2.521 Facies with *Sabellaria* spp. (reefs of *Sabellaria*)

MB2.53 Reefs of *Cladocora caespitosa*

MB2.54 *Posidonia oceanica* meadows

MB2.541 *Posidonia oceanica* meadow on rock

MB2.542 *Posidonia oceanica* meadow on matte

MB2.543 *Posidonia oceanica* meadow on sand, coarse or mixed sediment

MB2.544 Dead matte of *Posidonia oceanica*

MB2.545 Natural monuments/Ecomorphoses of *Posidonia oceanica* (fringing reef, barrier reef, atolls)

MB2.546 Association of *Posidonia oceanica* with *Cymodocea nodosa* or *Caulerpa* spp.

MB2.547 Association of *Cymodocea nodosa* or *Caulerpa* spp. with dead matte of *Posidonia oceanica*

MB3.5 Infralittoral coarse sediment

MB3.51 Infralittoral coarse sediment mixed by waves

MB3.511 Association with maërl or rhodolithes (e.g. *Lithothamnion* spp., *Neogoniolithon* spp., *Lithophyllum* spp., *Spongites fruticulosa*)

MB3.52 Infralittoral coarse sediment under the influence of bottom currents

MB3.521 Association with maërl or rhodolithes (e.g. *Lithothamnion* spp., *Neogoniolithon* spp., *Lithophyllum* spp., *Spongites fruticulosa*)

MB3.522 Facies with Polychaeta

MB3.53 Infralittoral pebbles

MB3.531 Facies with *Gouania willdenowi*

MB4.5 Infralittoral mixed sediment

MB5.5 Infralittoral sand

MB5.51 Fine sand in very shallow waters

MB5.511 Facies with Bivalvia (e.g. *Lentidium mediterraneum*)

MB5.52 Well sorted fine sand

MB5.521 Association with indigenous marine angiosperms

MB5.522 Association with *Halophila stipulacea*

MB5.523 Association with photophilic algae

MB5.53 Fine sand in sheltered waters

MB5.531 Association with indigenous marine angiosperms

MB5.532 Association with *Halophila stipulacea*

MB5.533 Association with indigenous Mediterranean *Caulerpa* spp.

MB5.534 Association with non-indigenous Mediterranean *Caulerpa* spp.

MB5.535 Association with photophilic algae, except Caulerpales

MB5.536 Facies with Bivalvia

MB5.537 Facies with Polychaeta

MB5.538 Facies with Crustacea Decapoda

MB5.539 Facies of *Tritianeritea* and nematodes (in hydrothermal vents)

MB5.54 Habitats of transitional waters (e.g. estuaries and lagoons)

MB5.541 Association with marine angiosperms or other halophytes

MB5.542 Association with Fucales

MB5.543 Association with photophilic algae, except Fucales

MB5.544 Facies with Polychaeta

MB5.545 Facies with Bivalvia (e.g. *Mytilus* spp.)

MB6.5 Infralittoral mud sediment

MB6.51 Habitats of transitional waters (e.g. estuaries and lagoons)

MB6.511 Association with marine angiosperms or other halophytes

CIRCALITTORAL

MC1.5 Circalittoral rock

MC1.51 Coralligenous

MC1.51a Algal-dominated coralligenous

MC1.511a Association with encrusting Corallinales

MC1.512a Association with Fucales or Laminariales

MC1.513a Association with algae, except Fucales, Laminariales, Corallinales and Caulerpales

MC1.514a Association with non-indigenous Mediterranean *Caulerpa* spp.

MC1.51b Invertebrate-dominated coralligenous

MC1.511b Facies with small sponges (sponge ground, e.g. *Ircinia* spp.)

MC1.512b Facies with large and erect sponges (e.g. *Spongia lamella*, *Sarcotragus foetidus*, *Axinella* spp.)

MC1.513b Facies with Hydrozoa

MC1.514b Facies with Alcyonacea (e.g. *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Corallium rubrum*)

MC1.515b Facies with Ceriantharia (e.g. *Cerianthus* spp.)

MC1.516b Facies with Zoantharia (e.g. *Parazoanthus axinellae*, *Savalia savaglia*)

MC1.517b Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Leptopsammia pruvoti*, *Madracis pharensis*)

MC1.518b Facies with Vermetidae and/or Serpulidae

MC1.519b Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC1.51Ab Facies with Ascidiacea

MC1.51c Invertebrate-dominated coralligenous covered by sediment

See MC1.51b for examples of facies

MC1.52 Shelf edge rock

MC1.52a Coralligenous outcrops

MC1.521a Facies with small sponges (sponge ground)

MC1.522a Facies with Hydrozoa

MC1.523a Facies with Alcyonacea (e.g. *Alcyonium* spp., *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Corallium rubrum*)

MC1.524a Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MC1.525a Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madracis pharensis*)

MC1.526a Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC1.527a Facies with Polychaeta

MC1.528a Facies with Bivalvia

MC1.529a Facies with Brachiopoda

MC1.52b Coralligenous outcrops covered by sediment

See MC1.52a for examples of facies

MC1.52c Deep banks

MC1.521c Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MC1.522c Facies with Alcyonacea (e.g. *Nidalia studeri*)

MC1.523c Facies with Scleractinia (e.g. D*endrophyllia* spp.)

MC1.53 Semi-dark caves and overhangs

MC1.53a Walls and tunnels

MC1.531a Facies with sponges (e.g. *Axinella* spp., *Chondrosia reniformis, Petrosia ficiformis*)

MC1.532a Facies with Hydrozoa

MC1.533a Facies with Alcyonacea (e.g. *Eunicella* spp., *Paramuricea* spp., *Corallium rubrum*)

MC1.534a Facies with Scleractinia (e.g. *Leptopsammia pruvoti*, *Phyllangia mouchezii*)

MC1.535a Facies with Zoantharia (e.g. *Parazoanthus axinellae*)

MC1.536a Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC1.537a Facies with Ascidiacea

MC1.53b Ceilings

See MC1.53a for examples of facies

MC1.53c Detritic bottom

See MC3.51 for examples of associations and facies

MC1.53d Brackish water caves or caves subjected to freshwater runoff

MC1.531d Facies with *Heteroscleromorpha* spp. sponges

MC2.5 Circalittoral biogenic habitat

MC2.51 Coralligenous platforms

MC2.511 Association with encrusting Corallinales

MC2.512 Association with Fucales

MC2.513 Association with non-indigenous Mediterranean *Caulerpa* spp.

MC2.514 Facies with small sponges (sponge ground, e.g. *Ircinia* spp.)

MC2.515 Facies with large and erect sponges (e.g. *Spongia lamella*, *Sarcotragus foetidus*, *Axinella* spp.)

MC2.516 Facies with Hydrozoa

MC2.517 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Corallium rubrum*)

MC2.518 Facies with Zoantharia (e.g. *Parazoanthus axinellae*, *Savalia savaglia*)

MC2.519 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madracis pharensis*, *Phyllangia mouchezii*)

MC2.51A Facies with Vermetidae and/or Serpulidae

MC2.51B Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC2.51C Facies with Ascidiacea

MC3.5 Circalittoral coarse sediment

MC3.51 Coastal detritic bottoms (without rhodoliths)

MC3.511 Association with Laminariales

MC3.512 Facies with large and erect sponges (e.g. *Spongia lamella*, *Sarcotragus foetidus*, *Axinella* spp.)

MC3.513 Facies with Hydrozoa

MC3.514 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Eunicella* spp., *Leptogorgia*spp.)

MC3.515 Facies with Pennatulacea (e.g. *Pennatula* spp., *Virgularia mirabilis*)

MC3.516 Facies with Polychaeta (Salmacina-Filograna complex included)

MC3.517 Facies with Bivalvia (e.g. *Pecten jacobaeus*)

MC3.518 Facies with Bryozoa (e.g. *Turbicellepora incrassata*, *Frondipora verrucosa*, *Pentapora fascialis*)

MC3.519 Facies with Crinoidea (e.g. *Leptometra* spp.)

MC3.51A Facies with Ophiuroidea (e.g. *Ophiura* spp., *Ophiothrix* spp.)

MC3.51B Facies with Echinoidea (e.g. *Neolampas* spp., *Spatangus purpureus*)

MC3.51C Facies with Ascidiacea

MC3.52 Coastal detritic bottoms with rhodoliths

MC3.521 Association with maërl (e.g. *Lithothamnion* spp., *Neogoniolithon* spp., *Lithophyllum* spp., *Spongites fruticulosa*)

MC3.522 Association with *Peyssonnelia* spp.

MC3.523 Association with Laminariales

MC3.524 Facies with large and erect sponges (e.g. *Spongia lamella*, *Sarcotragus foetidus*, *Axinella* spp.)

MC3.525 Facies with Hydrozoa

MC3.526 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Paralcyonium spinulosum*)

MC3.527 Facies with Pennatulacea (e.g. *Veretillum cynomorium*)

MC3.528 Facies with Zoantharia (e.g. *Epizoanthus* spp.)

MC3.529 Facies with Ascidiacea

MC4.5 Circalittoral mixed sediment

MC4.51 Muddy detritic bottoms

MC4.511 Facies with Hydrozoa(e.g. *Lytocarpia myriophyllum*, *Nemertesia* spp.)

MC4.512 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Spinimuricea* spp.)

MC4.513 Facies with Pennatulacea (e.g. *Veretillum cynomorium*)

MC4.514 Facies with Polychaeta

MC4.515 Facies with Ophiuroidea (e.g. *Ophiothrix* spp.)

MC4.516 Facies with Ascidiacea

MC5.5 Circalittoral sand

MC6.5 Circalittoral mud sediment

MC6.51 Coastal terrigenous muds

MC6.511 Facies with Alcyonacea (e.g. *Alcyonium* spp.) and Holothuroidea (e.g. *Parastichopus* spp.)

MC6.512 Facies with Pennatulacea (e.g. *Pennatula* spp., *Virgularia mirabilis*)

MC6.513 Facies with Gastropoda (e.g. *Turritella* spp.)

OFFSHORE CIRCALITTORAL

MD1.5 Offshore circalittoral rock

MD1.51 Offshore circalittoral rock invertebrate-dominated

MD1.511 Facies with small sponges (sponge ground, e.g. *Haliconas*pp., *Phakellia* spp., *Poecillastra* spp.)

MD1.512 Facies with large and erect sponges (e.g. *Spongia lamella, Axinella* spp.)

MD1.513 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Callogorgia verticillata, Ellisella paraplexauroides, Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Swiftia pallida, Corallium rubrum*)

MD1.514 Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MD1.515 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madracis pharensis*)

MD1.516 Facies with Ceriantharia (e.g. *Cerianthus* spp.)

MD1.517 Facies with Zoantharia (e.g. *Savalia savaglia*)

MD1.518 Facies with Polychaeta

MD1.519 Facies with Bivalvia

MD1.51A Facies with Brachiopoda

MD1.51B Facies with Bryozoa (e.g. *Myriapora truncata, Pentapora fascialis*)

MD1.52 Offshore circalittoral rock invertebrate-dominated covered by sediments

See MD1.51 for examples of facies

MD1.53 Deep offshore circalittoral banks

MD1.531 Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MD1.532 Facies with Alcyonacea (e.g. *Nidalia* spp.)

MD1.533 Facies with Scleractinia (yellow corals forest, e.g. *Dendrophyllia* spp.)

MD2.5 Offshore circalittoral biogenic habitat

MD2.51 Offshore reefs

MD2.511 Facies with Vermetidae and/or Serpulidae

MD2.52 Thanatocoenosis of corals, or Brachiopoda, or Bivalvia (e.g. *Modiolus modiolus*)

See MD1.51 for examples of facies

MD3.5 Offshore circalittoral coarse sediment

MD3.51 Offshore circalittoral detritic bottoms

MD3.511 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

ME2.512 Facies with Brachiopoda

MD3.513 Facies with Polychaeta

MD3.514 Facies with Crinoidea (e.g. *Leptometra* spp.)

MD3.515 Facies with Ophiuroidea

MD3.516 Facies with Echinoidea

MD4.5 Offshore circalittoral mixed sediment

MD4.51 Offshore circalittoral detritic bottoms

See MD3.51 for examples of facies

MD5.5 Offshore circalittoral sand

MD5.51 Offshore circalittoral sand

See MD3.51 for examples of facies

MD6.5 Offshore circalittoral mud

MD6.51 Offshore terrigenous sticky muds

MD6.511 Facies with Pennatulacea (e.g. *Pennatula* spp., *Virgularia mirabilis*)

MD6.512 Facies with Polychaeta

MD6.513 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

MD6.514 Facies with Brachiopoda

MD6.515 Facies with Ceriantharia (e.g. *Cerianthus* spp., *Arachnanthus* spp.)

UPPER BATHYAL

ME1.5 Upper bathyal rock

ME1.51 Upper bathyal rock invertebrate-dominated

ME1.511 Facies with small sponges (sponge ground; e.g. *Farrea bowerbanki*, *Halicona* spp., *Podospongia loveni*, *Tretodictyum* spp.)

ME1.512 Facies with large and erect sponges (e.g. *Spongia lamella*, *Axinella* spp.)

ME1.513 Facies with Antipatharia (e.g. *Antipathes* spp., *Leiopathes glaberrima*, *Parantipathes larix*)

ME1.514 Facies with Alcyonacea (e.g. *Acanthogorgia* spp., *Callogorgia verticillata*, *Placogorgia* spp., *Swiftia pallida*, *Corallium rubrum*)

ME1.515 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*, *Desmophyllum pertusum*, *Madracis pharensis*)

ME1.516 Facies with Cirripeda (e.g. *Megabalanus* spp., *Pachylasma giganteum*)

ME1.517 Facies with Crinoidea (e.g. *Leptometra* spp.)

ME1.518 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

ME1.519 Facies with Brachiopoda

ME1.52 Caves and ducts in total darkness

ME2.5Upper bathyal biogenic habitat

ME2.51 Upper bathyal reefs

ME2.511 Facies with small sponges (sponge ground)

ME2.512 Facies with large and erect sponges (e.g. *Leiodermatium* spp.)

ME2.513 Facies with Scleractinia (e.g. *Madrepora oculata, Desmophyllum cristagalli*)

ME2.514 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

ME2.515 Facies with Serpulidae reefs (e.g. *Serpula vermicularis*)

ME2.516 Facies with Brachiopoda

ME2.52 Thanatocoenosis of corals, or Brachiopoda, or Bivalvia, or sponges

See ME1.51 for examples of facies

ME3.5 Upper bathyal coarse sediment

ME3.51 Upper bathyal coarse sediment

ME3.511 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Chironephthya mediterranea*, *Paralcyonium spinulosum, Paramuricea* spp., *Villogorgia bebrycoides*)

ME4.5 Upper bathyal mixed sediment

ME4.51 Upper bathyal mixed sediment

ME4.511 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

ME4.512 Facies with Brachiopoda

ME5.5 Upper bathyal sand

ME5.51Upper bathyal detritic sand

ME5.511 Facies with small sponges (sponge ground, e.g. *Rhizaxinella* spp.)

ME5.512 Facies with Pennatulacea (e.g. *Pennatula* spp., *Pteroeides griseum*)

ME5.513 Facies with Crinoidea (e.g. *Leptometra* spp.)

ME5.514 Facies with Echinoidea

ME5.515 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

ME5.516 Facies with Brachiopoda

ME5.517 Facies with Bryozoa

ME5.518 Facies with Scleractinia (e.g. *Caryophyllia cyathus*)

ME6.5 Upper bathyal muds

ME6.51 Upper bathyal muds

ME6.511 Facies with small sponges (sponge ground, e.g. *Pheronema* spp., *Thenea* spp.)

ME6.512 Facies with Pennatulacea (e.g. *Pennatula* spp., *Funiculina quadrangularis*)

ME6.513 Facies with Alcyonacea (e.g. *Isidella elongata*)

ME6.514 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*)

ME6.515 Facies with Crustacea Decapoda (e.g. *Aristeus antennatus*, *Nephrops norvegicus*)

ME6.516 Facies with Crinoidea (e.g. *Leptometra* spp.)

ME6.517 Facies with Echinoidea (e.g. *Brissopsis* spp.)

ME6.518 Facies with Bivalvia (e.g. *Neopycnodonte* spp.)

ME6.519 Facies with Brachiopoda

ME6.51A Facies with Ceriantharia (e.g. *Cerianthus* spp., *Arachnanthus* spp.)

ME6.51B Facies with Bryozoa (e.g. *Candidae* spp., *Kinetoskias* spp.)

ME6.51C Facies with giant Foraminifera (e.g. Astrorhizida)

LOWER BATHYAL

MF1.5 Lower bathyal rock

MF1.51 Lower bathyal rock

MF1.511 Facies with small sponges (e.g. *Stylocordyla* spp.)

MF1.512 Facies with Alcyonacea (e.g. *Dendrobrachia* spp.)

MF1.513 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*, *Desmophyllum pertusum*)

MF1.514 Facies with chemiosynthetic benthic species (e.g. Siboglinidae, *Lucinoma* spp.)

MF2.5 Lower bathyal biogenic habitat

MF2.51 Lower bathyal reefs

MF2.511Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*, *Desmophyllum pertusum*)

MF2.52 Thanatocoenosis of corals, or Brachiopoda, or Bivalvia, or sponges

See MF1.51 for examples of facies

MF6.5 Lower bathyal muds

MF6.51 Sandy muds

MF6.511 Facies with small sponges (e.g. *Thenea* spp.)

MF6.512 Facies with Alcyonacea (e.g. *Isidella elongata*)

MF6.513 Facies with Echinoidea (e.g. *Brissopsis* spp.)

MF6.514 Facies with Pennatulacea (e.g. *Pennatula* spp., *Funiculina quadrangularis*)

MF6.515 Facies with bioturbations

ABYSSAL

MG1.5 Abyssal rock

MG1.51 Abyssal rock

MG1.511 Facies with small sponges

MG1.512 Facies with Alcyonacea

MG1.513 Facies with Polychaeta

MG1.514 Facies with Crustacea (Amphipoda, Isopoda, Tanaidacea)

MG6.5 Abyssal muds

MG6.51 Abyssal muds

MG6.511 Facies with small sponges

MG6.512 Facies with Alcyonacea (e.g. *Isidella elongata*)

MG6.513 Facies with Polychaeta

MG6.514 Facies with Crustacea (Amphipoda, Isopoda, Tanaidacea)

MG6.515 Facies with bioturbations

There are some geomorphologic / hydrologic features not included in the above list because their presence is independent from the depth zone and the substrate type, but they must also be considered due to the role they play in the Mediterranean ecosystem[49]. They can hold a "complex of habitats" and geoforms that cannot be treated in isolation, and therefore, they do not fit inside other categories. Among them:

- Hydrothermal vents
- Cold seeps (sulfide, methane – e.g. pockmarks, mud volcanoes)
- Brine pools
- Freshwater resurgences
- Seamounts (including banks, hills, etc.)
- Submarine canyons
- Escarpments
- Boulders fields

[49] Action Plan for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea (Dark Habitats Action Plan)

Annex I: the revised marine section of the EUNIS habitat classification[50]

Table 1. Level 2 units of the marine component of the revised EUNIS habitats classification, including proposed level 2 codes

			Hard/firm		Soft			
			Rock*	Biogenic habitat**	Coarse	Mixed	Sand	Mud
Depth Zones	Phytal gradient/ hydrodynamic gradient	Littoral	MA1	MA2	MA3	MA4	MA5	MA6
		Infralittoral	MB1	MB2	MB3	MB4	MB5	MB6
		Circalittoral	MC1	MC2	MC3	MC4	MC5	MC6
	Aphytal/ hydodynamic gradient	Offshore circalittoral	MD1	MD2	MD3	MD4	MD5	MD6
		Upper bathyal	ME1	ME2	ME3	ME4	ME5	ME6
		Lower bathyal	MF1	MF2	MF3	MF4	MF5	MF6
		Abyssal	MG1	MG2	MG3	MG4	MG5	MG6

Table 2. Updated EUNIS habitat classification

Level 1: Marine habitats (code M)

Level 2: Depth zone

LITTORAL (code A)
INFRALITTORAL (code B)
CIRACLITTORAL (code C)
OFFSHORE CIRCALITTORAL (code D)
UPPER BATHYAL (code E)
LOWER BATHYAL (code F)
ABYSSAL (code G)

Substrate type

ROCK (including soft rock, marls, clays, artificial hard substrata) (code 1)
BIOGENIC HABITAT (code 2)
COARSE (code 3)
MIXED (code 4)
SAND (code 5)
MUD (code 6)

Level 3: Regions: Atlantic, Baltic, Black Sea, Artic and Mediterranean (the latter corresponding to the code 5).

[50]Evans D., Aish A., Boon A., Condé S., Connor D., Gelabert E., Michez N., Parry M., Richard D., Salvati E., Tunesi L. 2016. Revising the marine section of the EUNIS habitat classification. Report of a workshop held at the European Topic Centre on Biological Diversity, 12-13 May 2016. ETC/BD report to the EEA: 8 pp.

Annex VII

Draft Updated Reference List of Marine Habitat Types for the Selection of Sites to be included in the National Inventories of Natural Sites of Conservation Interest in the Mediterranean

Draft Updated Reference List of Marine Habitat Types for the for the Selection of Sites to be included in the National Inventories of Natural Sites of Conservation Interest in the Mediterranean

LITTORAL

MA1.5 Littoral rock

MA1.51 Supralittoral rock

MA1.51a Supralittoral euryhaline and eurythermal pools (enclave of mediolittoral)

MA1.51b Wracks of dead leaves of macrophytes

MA1.52 Mediolittoral caves

MA1.53 Upper mediolittoral rock

MA1.531 Association with encrusting Corallinales creating belts (e.g. *Lithophyllum bissoides*, *Neogoniolithon* spp.)

MA1.54 Lower mediolittoral rock

MA1.541 Association with encrusting Corallinales creating belts (e.g. *Lithophyllum bissoides*, *Neogoniolithon* spp.)

MA1.542 Association with Fucales

MA1.544 Facies with *Pollicipes pollicipes*

MA1.545 Facies with Vermetidae (*Dendropoma* spp.) (vermetid reefs)

MA1.54a Mediolittoral euryhaline and eurythermal pools (enclave of infralittoral)

MA2.5 Littoral biogenic habitat

MA2.51 Lower mediolittoral biogenic habitat

MA2.511 Association with encrusting Corallinales creating platforms

MA2.512 Facies with *Sabellaria* spp. (reefs of *Sabellaria*)

MA2.513 Facies with Vermetidae (*Dendropoma* spp.) (vermetid reefs)

MA2.51a Banks of dead leaves of macrophytes (*banquette*)

MA3.5 Littoral coarse sediment

MA3.51 Supralittoral coarse sediment

MA3.511 Association with macrophytes

MA3.51a Deposit of dead leaves of macrophytes

MA3.52 Mediolittoral coarse sediment

MA3.521 Association with indigenous marine angiosperms

MA3.52a Deposit of dead leaves of macrophytes

MA4.5 Littoral mixed sediment

MA4.51 Supralittoral mixed sediment

MA4.511 Association with macrophytes

MA4.51a Deposit of dead leaves of macrophytes

MA4.52 Mediolittoral mixed sediment

MA4.521 Association with indigenous marine angiosperms

MA4.52a Deposit of dead leaves of macrophytes

MA5.5 Littoral sand

MA5.51 Supralittoral sands

MA5.511 Association with macrophytes

MA5.51a Deposit of dead leaves of macrophytes

MA5.52 Mediolittoral sands

MA5.521 Association with indigenous marine angiosperms

MA5.52a Deposit of dead leaves of macrophytes

MA6.5 Littoral mud

MA6.51 Supralittoral mud

MA6.511 Association with macrophytes

MA6.52 Mediolittoral mud

MA6.52a Habitats of transitional waters (e.g. estuaries and lagoons)

MA6.521a Association with halophytes (*Salicornia* spp.) or marine angiosperms (e.g. *Zostera noltei*, *Ruppia maritima*)

INFRALITTORAL

MB1.5 Infralittoral rock

MB1.51 Algal-dominated infralittoral rock

MB1.51a Well illuminated infralittoral rock, exposed

MB1.511a Association with Fucales

MB1.513a Association with encrusting Corallinales creating belts (e.g. *Titanoderma trochanter*, *Tenarea tortuosa*)

MB1.514a Association with indigenous Mediterranean *Caulerpa* spp.

MB1.516a Facies with Scleractinia (e.g. *Cladocora caespitosa*)

MB1.51b Moderately illuminated infralittoral rock, exposed

MB1.512b Association with indigenous Mediterranean *Caulerpa* spp.

MB1.515b Facies with Scleractinia (e.g. *Astroides calycularis*)

MB1.51c Well illuminated infralittoral rock, sheltered

MB1.511c Association with Fucales

MB1.514c Association with indigenous Mediterranean *Caulerpa* spp.

MB1.516c Facies with Scleractinia (e.g. *Cladocora caespitosa*)

MB1.51d Moderately illuminated infralittoral rock, sheltered

MB1.512d Association with indigenous Mediterranean *Caulerpa* spp.

MB1.514d Facies with Alcyonacea (e.g. *Eunicella* spp.)

MB1.51e Lower infralittoral rock moderately illuminated

MB1.511e Association with Fucales

MB1.512e Association with Laminariales (kelp beds)

MB1.513e Association with indigenous Mediterranean *Caulerpa* spp.

MB1.515e Facies with Alcyonacea (e.g. *Eunicella* spp.)

MB1.516e Facies with Scleractinia (e.g. *Cladocora caespitosa*)

MB1.52 Invertebrate-dominated infralittoral rock

MB1.52a Moderately illuminated infralittoral rock, sheltered

MB1.521a Association with indigenous Mediterranean *Caulerpa* spp.

MB1.524a Facies with Scleractinia (e.g. *Astroides calycularis*, *Cladocora caespitosa*, *Polycyathus muellerae*, *Pourtalosmilia anthophyllites*)

MB1.525a Facies with Alcyonacea (e.g. *Eunicella* spp., *Paramuricea clavata*, *Corallium rubrum*)

MB1.53 Infralittoral rock affected by sediments

MB1.532 Facies with large and erect sponges (e.g. *Axinella polypoides*, *Axinella cannabina*)

MB1.533 Facies with Scleractinia(e.g. *Cladocora caespitosa*)

MB1.534 Facies with Alcyonacea (e.g. *Eunicella* spp., *Leptogorgia* spp.)

MB1.537 Facies with endolitic species (e.g. *Lithophaga lithophaga*, *Cliona* spp.)

MB1.54 Habitats of transitional waters (e.g. estuaries and lagoons)

MB1.541 Association with marine angiosperms or other halophytes

MB1.542 Association with Fucales

MB1.55 Coralligenous (enclave of circalittoral, see MC1.51)

MB1.56 Semi-dark caves and overhangs (see MC1.53)

MB2.5 Infralittoral biogenic habitat

MB2.51 Reefs in algal-dominated habitat

MB2.511 Facies with Vermetidae (*Dendropoma* spp.) (vermetid reefs)

MB2.52 Reefs on fine sand in very shallow waters

MB2.521 Facies with *Sabellaria* spp. (reefs of *Sabellaria*)

MB2.53 Reefs of *Cladocora caespitosa*

MB2.54 *Posidonia oceanica* meadows

MB2.541 *Posidonia oceanica* meadow on rock

MB2.542 *Posidonia oceanica* meadow on matte

MB2.543 *Posidonia oceanica* meadow on sand, coarse or mixed sediment

MB2.545 Natural monuments/Ecomorphoses of *Posidonia oceanica* (fringing reef, barrier reef, atolls)

MB2.546 Association of *Posidonia oceanica* with *Cymodocea nodosa* or *Caulerpa* spp.

MB2.547 Association of *Cymodocea nodosa* or *Caulerpa* spp. with dead matte of *Posidonia oceanica*

MB3.5 Infralittoral coarse sediment

MB3.51 Infralittoral coarse sediment mixed by waves

MB3.511 Association with maërl or rhodolithes (e.g. *Lithothamnion* spp., *Neogoniolithon* spp., *Lithophyllum* spp., *Spongites fruticulosa*)

MB3.52 Infralittoral coarse sediment under the influence of bottom currents

MB3.521 Association with maërl or rhodolithes (e.g. *Lithothamnion* spp., *Neogoniolithon* spp., *Lithophyllum* spp., *Spongites fruticulosa*)

MB5.5 Infralittoral sand

MB5.52 Well sorted fine sand

MB5.521 Association with indigenous marine angiosperms

MB5.53 Fine sand in sheltered waters

MB5.531 Association with indigenous marine angiosperms

MB5.533 Association with indigenous Mediterranean *Caulerpa* spp.

MB5.539 Facies of *Tritia neritea* and nematodes (in hydrothermal vents)

MB5.54 Habitats of transitional waters (e.g. estuaries and lagoons)

MB5.541 Association with marine angiosperms or other halophytes

MB5.542 Association with Fucales

MB6.5 Infralittoral mud sediment

MB6.51 Habitats of transitional waters (e.g. estuaries and lagoons)

MB6.511 Association with marine angiosperms or other halophytes

CIRCALITTORAL

MC1.5 Circalittoral rock

MC1.51 Coralligenous

MC1.51a Algal-dominated coralligenous

MC1.512a Association with Fucales or Laminariales

MC1.51b Invertebrate-dominated coralligenous

MC1.512b Facies with large and erect sponges (e.g. *Spongia lamella, Sarcotragus foetidus, Axinella* spp.)

MC1.514b Facies with Alcyonacea (e.g. *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Corallium rubrum*)

MC1.516b Facies with the Zoantharia *Savalia savaglia*

MC1.517b Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Leptopsammia pruvoti*, *Madracis pharensis*)

MC1.518b Facies with Vermetidae and/or Serpulidae

MC1.519b Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC1.51c Invertebrate-dominated coralligenous covered by sediment

See MC1.51b for examples of reference facies

MC1.52 Shelf edge rock

MC1.52a Coralligenous outcrops

MC1.523a Facies with Alcyonacea (e.g. *Alcyonium* spp., *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Corallium rubrum*)

MC1.524a Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MC1.525a Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madracis pharensis*)

MC1.526a Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC1.52b Coralligenous outcrops covered by sediment

See MC1.52a for examples of reference facies

MC1.52c Deep banks

MC1.521c Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MC1.522c Facies with Alcyonacea (e.g. *Nidalia studeri*)

MC1.523c Facies with Scleractinia (e.g. D*endrophyllia* spp.)

MC1.53 Semi-dark caves and overhangs

MC1.53a Walls and tunnels

MC1.531a Facies with sponges (e.g. *Axinella* spp., *Chondrosia reniformis*, *Petrosia ficiformis*)

MC1.533a Facies with Alcyonacea (e.g. *Eunicella* spp., *Paramuricea* spp., *Corallium rubrum*)

MC1.534a Facies with Scleractinia (e.g. *Leptopsammia pruvoti*, *Phyllangia mouchezii*)

MC1.536a Facies with Bryozoa (e.g. *Reteporella grimaldii*, *Pentapora fascialis*)

MC1.53b Ceilings

See MC1.53a for examples of reference facies

MC1.53c Detritic bottom

See MC3.51 for examples of reference associations and facies

MC1.53d Brackish water caves or caves subjected to freshwater runoff

MC1.531d Facies with *Heteroscleromorpha* spp. sponges

MC2.5 Circalittoralbiogenic habitat

MC2.51 Coralligenous platforms

MC2.512 Association with Fucales

MC2.515 Facies with large and erect sponges (e.g. *Spongia lamella, Sarcotragus foetidus, Axinella* spp.)

MC2.517 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Corallium rubrum*)

MC2.518 Facies with the Zoantharia *Savalia savaglia*

MC2.519 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madraci spharensis, Phyllangia mouchezii*)

MC2.51A Facies with Vermetidae and/or Serpulidae

MC2.51B Facies with Bryozoa (e.g. *Reteporella grimaldii, Pentapora fascialis*)

MC3.5 Circalittoral coarse sediment

MC3.51 Coastal detritic bottoms (without rhodoliths)

MC3.511 Association with Laminariales

MC3.512 Facies with large and erect sponges (e.g. *Spongia lamella, Sarcotragus foetidus, Axinella* spp.)

MC3.514 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Eunicella* spp., *Leptogorgia* spp.)

MC3.515 Facies with Pennatulacea (e.g. *Pennatula* spp., *Virgularia mirabilis*)

MC3.518 Facies with Bryozoa (e.g. *Turbicellepora incrassata, Frondipora verrucosa, Pentapora fascialis*)

MC3.519 Facies with Crinoidea (e.g. *Leptometra* spp.)

MC3.52 Coastal detritic bottoms with rhodoliths

MC3.521 Association with maërl (e.g. *Lithothamnion* spp., *Neogoniolithon* spp., *Lithophyllum* spp., *Spongites fruticulosa*)

MC3.522 Association with *Peyssonnelia* spp.

MC3.523 Association with Laminariales

MC3.524 Facies with large and erect sponges (e.g. *Spongia lamella, Sarcotragus foetidus, Axinella* spp.)

MC3.526 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Paralcyonium spinulosum*)

MC3.527 Facies with Pennatulacea (e.g. *Veretillum cynomorium*)

MC4.5 Circalittoral mixed sediment

MC4.51 Muddy detritic bottoms

MC4.512 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Spinimuricea* spp.)

MC4.513 Facies with Pennatulacea (e.g. *Veretillum cynomorium*)

MC6.5 Circalittoral mud sediment

MC6.51 Coastal terrigenous muds

MC6.511 Facies with Alcyonacea (e.g. *Alcyonium* spp.) and Holothuroidea (e.g. *Parastichopus* spp.)

MC6.512 Facies with Pennatulacea (e.g. *Pennatula* spp., *Virgularia mirabilis*)

OFFSHORE CIRCALITTORAL

MD1.5 Offshore circalittoral rock

MD1.51 Offshore circalittoral rock invertebrate-dominated

MD1.512 Facies with large and erect sponges (e.g. *Spongia lamella*, *Axinella* spp.)

MD1.513 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Callogorgia verticillata*, *Ellisella paraplexauroides*, *Eunicella* spp., *Leptogorgia* spp., *Paramuricea* spp., *Swiftia pallida*, *Corallium rubrum*)

MD1.514 Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MD1.515 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madracis pharensis*)

MD1.517 Facies with the Zoantharia *Savalia savaglia*

MD1.51B Facies with Bryozoa (e.g. *Myriapora truncata*, *Pentapora fascialis*)

MD1.52 Offshore circalittoral rock invertebrate-dominated covered by sediments

See MD1.51 for examples of reference facies

MD1.53 Deep offshore circalittoral banks

MD1.531 Facies with Antipatharia (e.g. *Antipathella subpinnata*)

MD1.532 Facies with Alcyonacea (e.g. *Nidalia* spp.)

MD1.533 Facies with Scleractinia (e.g. *Dendrophyllia* spp.)

MD2.5 Offshore circalittoral biogenic habitat

MD2.51 Offshore reefs

MD2.511 Facies with Vermetidae and/or Serpulidae

MD2.52 Thanatocoenosis of corals, or Brachiopoda, or Bivalvia (e.g. *Modiolus modiolus*)

See MD1.51 for examples of reference facies

MD3.5 Offshore circalittoral coarse sediment

MD3.51 Offshore circalittoral detritic bottoms

MD3.511 Facies with the Bivalvia *Neopycnodonte* spp.

MD3.514 Facies with Crinoidea (e.g. *Leptometra* spp.)

MD4.5 Offshore circalittoral mixed sediment

MD4.51 Offshore circalittoral detritic bottoms

See MD3.51 for examples of reference facies

MD5.5 Offshore circalittoral sand

MD5.51 Offshore circalittoral sand

See MD3.51 for examples of reference facies

MD6.5 Offshore circalittoral mud

MD6.51 Offshore terrigenous sticky muds

MD6.511 Facies with Pennatulacea (e.g. *Pennatula* spp., *Virgularia mirabilis*)

MD6.513 Facies with the Bivalvia *Neopycnodonte* spp.

UPPER BATHYAL

ME1.5 Upper bathyal rock

ME1.51 Upper bathyal rock invertebrate-dominated

ME1.512 Facies with large and erect sponges (e.g. *Spongia lamella, Axinella* spp.)

ME1.513 Facies with Antipatharia (e.g. *Antipathes* spp., *Leiopathes glaberrima*, *Parantipathes larix*)

ME1.514 Facies with Alcyonacea (e.g. *Acanthogorgia* spp., *Callogorgia verticillata, Placogorgia* spp., *Swiftia pallida, Corallium rubrum*)

ME1.515 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*, *Desmophyllum pertusum, Madracis pharensis*)

ME1.516 Facies with Cirripeda (e.g. *Megabalanus* spp., *Pachylasma giganteum*)

ME1.517 Facies with Crinoidea (e.g. *Leptometra* spp.)

ME1.518 Facies with the Bivalvia *Neopycnodonte* spp.

ME1.52 Caves and ducts in total darkness

ME2.5Upper bathyal biogenic habitat

ME2.51 Upper bathyal reefs

ME2.512 Facies with large and erect sponges (e.g. *Leiodermatium* spp.)

ME2.513 Facies with Scleractinia (e.g. *Madrepora oculata, Desmophyllum cristagalli*)

ME2.514 Facies with the Bivalvia *Neopycnodonte* spp.

ME2.515 Facies with Serpulidae reefs (e.g. *Serpula vermicularis*)

ME2.52 Thanatocoenosis of corals, or Brachiopoda, or Bivalvia, or sponges

See ME1.51 for examples of reference facies

ME3.5 Upper bathyal coarse sediment

ME3.51 Upper bathyal coarse sediment

ME3.511 Facies with Alcyonacea (e.g. *Alcyonium* spp., *Chironephthya mediterranea*, *Paralcyonium spinulosum*, *Paramuricea* spp., *Villogorgia bebrycoides*)

ME4.5 Upper bathyal mixed sediment

ME4.51 Upper bathyal mixed sediment

ME4.511 Facies with the Bivalvia *Neopycnodonte* spp.

ME5.5 Upper bathyal sand

ME5.51Upper bathyal detritic sand

ME5.512 Facies with Pennatulacea (e.g. *Pennatula* spp., *Pteroeides griseum*)

ME5.513 Facies with Crinoidea (e.g. *Leptometra* spp.)

ME5.515 Facies with the Bivalvia *Neopycnodonte* spp.

ME5.517 Facies with Bryozoa

ME5.518 Facies with Scleractinia (e.g. *Caryophyllia cyathus*)

ME6.5 Upper bathyal muds

ME6.51 Upper bathyal muds

ME6.512 Facies with Pennatulacea (e.g. *Pennatula* spp., *Funiculina quadrangularis*)

ME6.513 Facies with Alcyonacea (e.g. *Isidella elongata*)

ME6.514 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*)

ME6.516 Facies with Crinoidea (e.g. *Leptometra* spp.)

ME6.518 Facies with the Bivalvia *Neopycnodonte* spp.

ME6.51B Facies with Bryozoa (e.g. *Candidae* spp., *Kinetoskias* spp.)

ME6.51C Facies with giant Foraminifera (e.g. Astrorhizida)

LOWER BATHYAL

MF1.5 Lower bathyal rock

MF1.51 Lower bathyal rock

MF1.512 Facies with Alcyonacea (e.g. *Dendrobrachia* spp.)

MF1.513 Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*, *Desmophyllum pertusum*)

MF1.514 Facies with chemiosynthetic benthic species (e.g. Siboglinidae, *Lucinoma* spp.)

MF2.5 Lower bathyal biogenic habitat

MF2.51 Lower bathyal reefs

MF2.511Facies with Scleractinia (e.g. *Dendrophyllia* spp., *Madrepora oculata*, *Desmophyllum cristagalli*, *Desmophyllum pertusum*)

MF2.52 Thanatocoenosis of corals, or Brachiopoda, or Bivalvia, or sponges

See MF1.51 for examples of reference facies

MF6.5 Lower bathyal muds

MF6.51 Sandy muds

MF6.512 Facies with Alcyonacea (e.g. *Isidella elongata*)

MF6.514 Facies with Pennatulacea (e.g. *Pennatula* spp., *Funiculina quadrangularis*)

ABYSSAL

MG1.5 Abyssal rock

MG1.51 Abyssal rock

MG1.512 Facies with Alcyonacea

MG6.5 Abyssal mud

MG6.51 Abyssal mud

MG6.512 Facies with Alcyonacea (e.g. *Isidella elongata*)

There are some geomorphologic / hydrologic features not included in the above list because their presence is independent from the depth zone and the substrate type, but they must also be considered due to the role they play in the Mediterranean ecosystem[51]. They can hold a "complex of habitats" and geoforms that cannot be treated isolated, and therefore, they do not fit inside other categories. Among them:

- Hydrothermal vents
- Cold seeps (sulfide, methane – e.g. pockmarks, mud volcanoes)
- Brine pools
- Freshwater resurgences
- Seamounts (including banks, hills, etc.)
- Submarine canyons
- Escarpments
- Boulders fields

[51] Action Plan for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea (Dark Habitats Action Plan)

Annex I: the revised the marine section of the EUNIS habitat classification[52]

Table 1. Level 2 units of the marine component of the revised EUNIS habitats classification, including proposed level 2 codes

			Hard/firm		Soft			
			Rock*	Biogenic habitat**	Coarse	Mixed	Sand	Mud
Depth Zones	Phytal gradient/ hydrodynamic gradient	Littoral	MA1	MA2	MA3	MA4	MA5	MA6
		Infralittoral	MB1	MB2	MB3	MB4	MB5	MB6
		Circalittoral	MC1	MC2	MC3	MC4	MC5	MC6
	Aphytal/ hydodynamic gradient	Offshore circalittoral	MD1	MD2	MD3	MD4	MD5	MD6
		Upper bathyal	ME1	ME2	ME3	ME4	ME5	ME6
		Lower bathyal	MF1	MF2	MF3	MF4	MF5	MF6
		Abyssal	MG1	MG2	MG3	MG4	MG5	MG6

Table 2. Updated EUNIS habitat classification

Level 1: Marine habitats (code M)

Level 2: Depth zone

LITTORAL (code A)
INFRALITTORAL (code B)
CIRACLITTORAL (code C)
OFFSHORE CIRCALITTORAL (code D)
UPPER BATHYAL (code E)
LOWER BATHYAL (code F)
ABYSSAL (code G)

Substrate type

ROCK (including soft rock, marls, clays, artificial hard substrata) (code 1)
BIOGENIC HABITAT (code 2)
COARSE (code 3)
MIXED (code 4)
SAND (code 5)
MUD (code 6)

Level 3: Regions: Atlantic, Baltic, Black Sea, Artic and Mediterranean (the latter corresponding to the code 5).

[52]Evans D., Aish A., Boon A., Condé S., Connor D., Gelabert E., Michez N., Parry M., Richard D., Salvati E., Tunesi L. 2016. Revising the marine section of the EUNIS habitat classification. Report of a workshop held at the European Topic Centre on Biological Diversity, 12-13 May 2016. ETC/BD report to the EEA: 8 pp.

Annex II: criteria for the selection of the Reference List of Marine Habitat Type

The eight traits used for the selection are the following:

1. Fragility: degree of susceptibility of the habitat to degradation (i.e., maintaining its structure and functions) when faced to natural and anthropogenic disturbances;
2. Resilience^{-1}: inability to recover quickly from a disturbance. Usually it is related to life-history traits of component species that make recovery difficult (i.e., slow growth rates, late age of maturity, low or unpredictable recruitment, long-lived);
3. Uniqueness or rarity: degree of rarity, i.e. unusual or very infrequent, at the Mediterranean level;
4. Importance of the habitat for hosting rare, threatened, endangered or endemic species that occur only in discrete areas;
5. Species diversity: the number of species hosted in the habitat;
6. Structural complexity: degree of complexity of physical structures created by biotic and abiotic features;
7. Capacity of modifying the physical environment and the ecosystem processes (i.e., geomorphological traits, fluxes of matter and energy), with a particular relevance to the occurrence of bio-constructors;
8. Significance of the habitat for the survival, spawning/reproduction of species not necessarily typical for the habitat during all their life cycle, and other (ecosystem) services provided by the habitat.

The 3-levels of score have been used to score each habitat type, in relation to each trait and in relation to other habitats situated in the same bathymetric zone. The score 1 corresponds to a low level, the score 2 to a medium level, and the score 3 to a high level. All habitat types having a rating of 3 in “Uniqueness or Rarity” (i.e., those that are extremely rare) have been selected for the inclusion in the reference list regardless of their final rating. No water column habitats or habitats of anthropogenic origin have been considered for the inclusion in the reference list. When the main habitat-forming species is a non-indigenous species, it has not been selected for the references list whatever it is its final rating.

Inclusion of a habitat in the reference list depends on the final rating (i.e., the total score) adding the values of the eight traits altogether. The minimum score reached by a habitat can be 8 (score 1 to each of the eight traits), whilst the maximum score can be 24 (score 3 to each of the eight traits). Following an analysis on the frequency distribution of the total scores for all the habitats (up to the level 5 of the classification), two groups with a normal distribution have been clearly identified (Fig. 1).

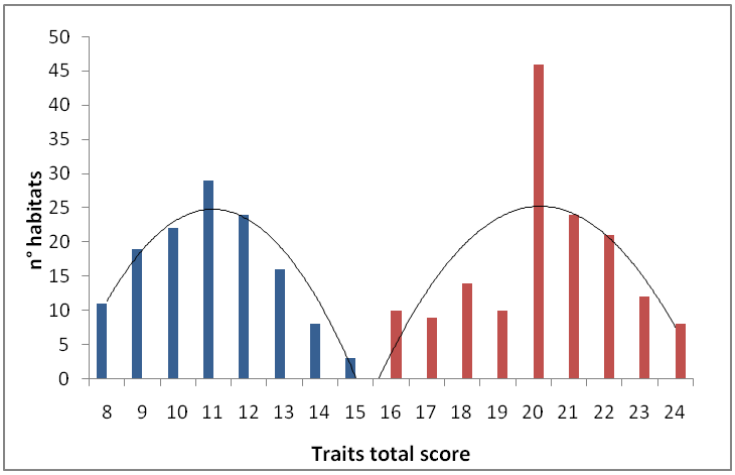

Figure 1. Number of habitats (up to the level 5 of the classification) belonging to each class of the traits total score. The model describing a normal distribution is also represented for both groups.

The two groups are separated by a threshold value of 16. All habitats reaching a total score in the eight traits equal or higher than 16, should be included in the updated reference list as priority habitats. In particular, the following two categories of habitats can be defined:

- Priority habitats: are habitats reaching a total score ≥ 16. For these habitats conservation and strict protection are absolutely mandatory;
- Least relevant habitats are habitats reaching a total score < 16. These habitats do not require special conservation or management measures and can thus be used, but always provided a sustainable use of them.

Draft Decision IG.24/8

[Road Map for [a proposal for] the [~~Possible~~] Designation of the Mediterranean Sea Area as an Emission Control Area for Sulphur Oxides pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention]

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the United Nations General Assembly in its resolution 66/288 of 27 July 2012,

Recalling also the United Nations General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling further the United Nations Environment Assembly resolution UNEP/EA.4/Res. 21 of 15 March 2019, entitled "Towards a pollution-free planet",

Having regard to the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (2002), in particular article 4 thereof, whereby the Parties shall take measures in conformity with international law to prevent the pollution of the Mediterranean Sea Area from ships in order to ensure the effective implementation in that Area of the relevant international conventions in their capacity as flag State, port State and coastal State, and their applicable legislation,

Recalling further the Regional Strategy for Prevention of and Response to Marine Pollution from Ships, adopted by the Contracting Parties at their 14th Meeting (COP 14) (Portoroz, Slovenia, 8-11 November 2005), which, under Specific Objective 13, aimed at examining the possibility of designating the Mediterranean Sea as a sulphur oxides (SO_x) Emission Control Area (ECA) under Annex VI to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, and as further amended by the Protocol of 1997 (MARPOL), hereinafter referred to as the proposed Mediterranean Emission Control Area (Med ECA),

Recalling further Decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021) adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), which, under Specific Objective 15, aims at examining the possibility of designating the proposed Mediterranean Emission Control Area (Med ECA) and effectively implementing the existing energy efficiency measures,

Acknowledging the role of the International Maritime Organization (IMO) and the importance of cooperating within the framework of this Organisation, in particular in promoting the adoption and the development of international rules and standards to prevent, reduce and control pollution of the marine environment from ships,

Having also regard to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, and as further amended by the Protocol of 1997 (MARPOL), in particular Annex VI thereof on regulations for the prevention of air pollution from ships, and regulation 14 thereof on sulphur oxides (SO_x) and particulate matter, as well as Appendix III thereto on criteria and procedures for designation of emission control areas (ECAs),

Recalling the mandate of REMPEC within the MAP-Barcelona Convention System and its relevance to the implementation of this Decision,

Conscious that international shipping must be regulated at the global level for any control regime to be effective and to maintain a level playing field for all ships,

Noting with concern the impacts of emissions of SO_x from ships on human health and the environment in the Mediterranean region and, *underlining* the importance of taking actions to deal with such an issue, including through [a proposal for] the [~~possible~~] designation of the proposed Mediterranean Emission Control Area (Med ECA),

Recognising the benefits of designating the whole of the Mediterranean Sea as a SO_x Emission Control Area (ECA),

Highlighting the importance of providing continued assistance for the ratification and effective implementation of MARPOL Annex VI to the Contracting Parties to the Barcelona Convention, which so request,

Stressing the need to complete the knowledge gathering and to carry out further studies [in particular socio-economic] in support of the [proposal for] the [~~possible~~] designation of the [~~proposed~~]Mediterranean Emission Control Area (Med ECA),

Noting that, as from 1 January 2020, in accordance with MARPOL Annex VI and relevant resolutions of the International Maritime Organization (IMO), the limit for sulphur in fuel oil used on board ships operating outside designated emission control areas (ECAs) will be reduced to 0.50% m/m from 3.5% m/m, which will bring about substantive influence on the fuel supply and other related businesses,

Emphasising the importance of designating the proposed Mediterranean Emission Control Area (Med ECA),

Having considered the report of the Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), held in Floriana, Malta, from 11 to 13 June 2019,

1. *Adopt* the road map [for [a proposal for] the [~~possible~~] designation of the Mediterranean Sea] [~~Area~~] [as a whole] as an emission control area for sulphur oxides pursuant to MARPOL Annex VI, within the framework of the Barcelona Convention, set out in the Annex to the present Decision;
2. [Request the Secretariat to provide the necessary technical and financial support to Contracting Parties and to address any needs identified with the studies before the designation of the proposed Mediterranean Emission Control Area (Med ECA)]
2. *[Agree* to extend the mandate of the Mediterranean Action Plan (MAP) SO_x Emission Control Area (ECA)(s) Technical Committee of Experts, until 30 April 2021, to oversee during the [2020-2021 biennium] [period 2020-2023] the completion of the following knowledge gathering and the preparations of the following further [in particular socio-economic] studies, including the development of their respective terms of reference, through correspondence coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), when examining the possibility of designating the proposed Mediterranean Emission Control Area (Med ECA):

(a) Knowledge gathering:

- synopsis of the assessment;
- quantification of the impacts associated with deposition of $PM_{2.5}$ and air toxics;

- additional detail of land-based emissions controls of SO_x and PM in the Mediterranean coastal States; and
- additional elements on the economic impacts on shipping engaged in international trade.

(b) Further studies:

- additional economic impact evaluation, more precisely:
  - analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean; and
  - analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties including on development for islands, insular and remote areas.
- additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies).]

3. [*Request* the Secretariat to update the initial draft submission to the International Maritime Organization (IMO) for [a proposal for] the [~~possible~~] designation of the Mediterranean Emission Control Area (Med ECA), under the guidance of the Mediterranean Action Plan (MAP) SO_x Emission Control Area (ECA)(s) Technical Committee of Experts referred to in paragraph 2. above in line with the agreed road map;]

4. *Call upon* the Contracting Parties to provide full support, both technically, in terms of expertise, and financially, in terms of voluntary contributions, where appropriate, to the further work of the Mediterranean Action Plan (MAP) SO_x Emission Control Area (ECA)(s) Technical Committee of Experts in order to ensure that the above-mentioned knowledge gathering is completed and the above-mentioned further studies are carried out in a coordinated, timely and effective manner;

5. *Encourage* the Contracting Parties to the Barcelona Convention to ratify and effectively implement MARPOL Annex VI, if they have not yet done so, as soon as possible;

6. *Underline* the need to ensure the necessary synergy in supporting these efforts, through the technical cooperation and capacity-building activities carried out by the International Maritime Organization (IMO), the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), the European Commission and the European Maritime Safety Agency, in the Mediterranean region; and

7. *Request also* the Secretariat to prepare an information document related to the adoption of the present Decision and submit it to the next session of the International Maritime Organization (IMO)’s Marine Environment Committee for its consideration.

[Annex

Road Map for [a proposal for] the [~~possible~~] Designation of the Mediterranean Sea Area as an Emission Control Area for Sulphur Oxides pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention

1 Introduction

This road map outlines the process towards [a proposal for] the [~~possible~~] designation of the Mediterranean Sea Area, as defined in Article 1 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean ("the Barcelona Convention"), as an emission control area (ECA) for sulphur oxides (SO_x) pursuant to Annex VI to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, and as further amended by the Protocol of 1997 (MARPOL), within the framework of the Barcelona Convention, hereinafter referred to as the proposed Med ECA, elaborating the goals, steps, timetable, including milestones and actions, which serve this purpose.

2 Goals

The goals of the process are two-fold:

1. to reach consensus amongst the Contracting Parties to the Barcelona Convention with a view to formulating a joint and coordinated proposal on the designation of the proposed Med ECA to the International Maritime Organization (IMO); and

2. (only if consensus is reached) to submit the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO in accordance with the rules and procedures established by the Organization, to have the proposal assessed and approved by the Organization that may consider, adopt and bring into force an amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, and to have the proposed Med ECA effectively entering into force within a reasonable and practical timeframe, as defined by the Contracting Parties to the Barcelona Convention.

3 Steps

<u>Main steps (2020-2021):</u>

- Continued assistance provided for the ratification and effective implementation of MARPOL Annex VI to the Contracting Parties to the Barcelona Convention, which so request.
- Completion of the necessary knowledge gathering[53];
- Carrying out of the further studies to more fully address the criteria and procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI[54];
- Updating of the initial draft submission to the IMO based on the completed knowledge gathering and the further studies carried out;
- Review of the outcome of the further studies by the SO_x ECA(s) Technical Committee of Experts;
- Review and validation of the draft IMO submission by the SO_x ECA(s) Technical Committee of Experts;
- Review, consideration and endorsement of a joint and coordinated proposal for the designation of the proposed Med ECA to the IMO, if any, by the 14th Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC);
- Approval of a draft COP Decision on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO, if any, by the Meeting of the MAP Focal Points;
- Adoption of the COP Decision on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO, if any, by the 22nd Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (COP 22).

[53] As referred to in paragraph 2(a) of the present Decision.
[54] As referred to in paragraph 2(b) of the present Decision.

Final steps (beyond 2021)[55]:

- Submission of the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO in accordance with the rules and procedures established by the Organization;
- Assessment of and, agreement to, the said proposal by the IMO's MEPC, if any;
- Consideration and approval of a draft amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA by the IMO's MEPC, if any, and request to the IMO Secretary-General to circulate it in accordance with article 16(2) of MARPOL, with a view to adoption at the next session of the IMO's MEPC;
- Circulation of the draft amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA by the IMO Secretary General to all Members of the Organization and all Parties at least six months prior to its consideration;
- Consideration and adoption of the draft amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA by the IMO's MEPC, if any;
- Determination of the date of bringing into force of the amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA by the IMO's MEPC, if any, in accordance with article 16(2)(f)(iii) of MARPOL;
- Deemed acceptance of the amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any;
- Bringing into force of the amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any; and
- Effective entry into force of the Med ECA, if any.

[55] Only if consensus is reached amongst the Contracting Parties to the Barcelona Convention on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO.

4 Timetable

Main steps (2020-2021):

- National actions

Milestones	Actions
2020-2021 biennium	• Continued assistance provided for the ratification and effective implementation of MARPOL Annex VI to the Contracting Parties to the Barcelona Convention, which so request.

- Regional actions

Milestones	Actions
April – December 2020	• Completion of the necessary knowledge gathering[56]; • Carrying out of the further studies to more fully address the criteria and procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI[57]; • Updating of the initial draft submission to the IMO based on the completed knowledge gathering and the further studies carried out; • Discussion within the SO_x ECA(s) Technical Committee of Experts that will be tasked to: o review the outcome of the further studies; and o review and validate the draft IMO submission.
by April 2021 (TBC)	• Submission of a Note by the Secretariat (REMPEC), including draft IMO submission, to the 14th Meeting of the Focal Points of REMPEC.
May 2021 (TBC) 14th Meeting of the Focal Points of REMPEC	• Review and consideration of the Note by the Secretariat (REMPEC), including draft IMO submission; • Discussion on: o whether or not to submit a proposal to IMO for the designation of the proposed Med ECA; o the most appropriate timing for such a submission, if any; and o the effective date of entry into force of the proposed Med ECA, if any. • Endorsement of a joint and coordinated proposal for the designation of the proposed Med ECA to the IMO, if any.
by July 2021 (TBC)	• Submission of a draft COP Decision on the joint

[56] as referred to in paragraph 2(a) of the present Decision.
[57] as referred to in paragraph 2(b) of the present Decision.

	and coordinated proposal for the designation of the proposed Med ECA to the IMO, to the Meeting of the MAP Focal Points. *(provided agreement was reached at the 14th Meeting of the Focal Points of REMPEC)*
September 2021 (TBC) Meeting of the MAP Focal Points	• Approval of the draft COP Decision on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO.
by October 2021 (TBC)	• Submission of draft COP Decision on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO, to COP 22. *(provided agreement was reached at the Meeting of the MAP Focal Points)*
December 2021 (TBC) 22nd Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (COP 22)	• Adoption of COP Decision on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO.

- Global actions

Milestones	**Actions**
27 December 2019 (TBC) *(13-week deadline for the submission of documents (including information documents) containing more than six pages of text (bulky documents) to the 75th session of the IMO's Marine Environment Protection Committee (MEPC 75))*	• Submission of an information document, prepared by REMPEC, related to the adoption of the COP Decision on the road map, to the IMO. *(provided agreement was reached at COP 21)*
30 March – 3 April 2020 (TBC) 75th session of the IMO's Marine Environment Protection Committee (MEPC 75)	• Presentation by REMPEC of the information document related to the adoption of the COP Decision on the road map.

Final steps (beyond 2021)[58]**:**

- Global actions

Milestones	**Actions**

[58] only if consensus is reached amongst the Contracting Parties to the Barcelona Convention on the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO.

by January 2022 (TBC) *(13-week deadline for the submission of documents (including information documents) containing more than six pages of text (bulky documents) to the 78th session of the IMO's Marine Environment Protection Committee (MEPC 78))*	• Submission of the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO (along with a proposed amendment to MARPOL Annex VI). *(provided agreement was reached at COP 22)*
April 2022 (TBC) 78th session of the IMO's Marine Environment Protection Committee (MEPC 78)	• Presentation of the joint and coordinated proposal for the designation of the proposed Med ECA to the IMO (along with a proposed amendment to MARPOL Annex VI); • Assessment of and, agreement to, the said proposal, if any; and • Consideration and approval of a draft amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any, and request to the IMO Secretary-General to circulate it in accordance with article 16(2) of MARPOL, with a view to adoption at the next session of the IMO's MEPC, if any.
by April 2022 (TBC) *(at least six months prior to its consideration)*	• Circulation of the draft amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA by the IMO Secretary General to all Members of the Organization and all Parties. *(provided agreement was reached at MEPC 78)*
October 2022 (TBC) 79th session of the IMO's Marine Environment Protection Committee (MEPC 79)	• Consideration and adoption of the draft amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any; and • Determination of the date of bringing into force of the amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any, in accordance with article 16(2)(f)(iii) of MARPOL.
not earlier than 1 September 2023 (TBC) *(in accordance with article 16(2)(f)(iii) of MARPOL: "period shall be not less than ten months")*	• Deemed acceptance of the amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any. *(provided agreement was reached at MEPC 79, and unless prior to the proposed date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendment)*

not earlier than 1 March 2024 (TBC) *(in accordance with article 16(2)(g)(ii) of MARPOL: "six months after its acceptance")*	• Bringing into force of the amendment to regulation 14 of MARPOL Annex VI related to the designation of the proposed Med ECA, if any.
TBC[59]	• Effective entry into force of the Med ECA, if any.

]

[59] To be determined by the Contracting Parties to the Barcelona Convention.

Draft Decision IG.24/9

Mediterranean Offshore Guidelines and Standards: (a) Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings; (b) Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling United Nations General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling also the United Nations Environment Assembly resolutions of 15 March 2019, UNEP/EA.4/Res.10, entitled "Innovation on biodiversity and land degradation", and UNEP/EA.4/Res. 21, entitled "Towards a pollution-free planet",

Having regard to the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (1994) (hereinafter Offshore Protocol), in particular Article 23 (1) thereof requesting that international rules, standards and recommended practices and procedures for achieving the aims of the Protocol shall be formulated and elaborated, Article 10 thereof requesting that common standards for the disposal of oil and oily mixtures from installations into the Protocol Area and for the use and disposal of drilling fluids and drill cuttings into the Protocol Area shall be formulated and adopted by the Parties, and Article 21 thereof requesting that for the protection of the areas defined in the Protocol concerning Mediterranean Specially Protected Areas and any other area established by a Party and in furtherance of the goals stated therein, special measures shall be taken by the Parties to prevent, abate, combat and control pollution arising from activities in these areas,

Having regard to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995), in particular Article 6 (e) thereof requesting that the required protection measures for Specially Protected Areas (SPAs) shall be taken by the Parties, in conformity with international law and taking into account the characteristics of each Specially Protected Area (SPA), including the regulation or prohibition of any activity involving the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil,

Recalling Decision IG.22/3, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the Mediterranean Offshore Action Plan in the Framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, in particular its Specific Objectives 7 and 8 providing for the development and adoption of regional offshore standards and guidelines,

1. *Recognizing* the need for, and benefits deriving from limiting and/or avoiding activities concerning exploration and/or exploitation of the resources as defined in the Offshore Protocol in Specially Protected Areas in the Mediterranean, and *bearing in mind* that neither under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995) nor the Offshore Protocol there is a general prohibition to conduct such activities,

Noting the increasing trends and projections of offshore oil and gas exploration and exploitation activities in the Mediterranean region,

Recalling the mandate of REMPEC within the MAP-Barcelona Convention System and its relevance to the implementation of this Decision;

Taking into account the potential impacts from offshore oil and gas exploration and exploitation activities on the marine and coastal environment, and the need to prevent, abate, combat and control pollution resulting from these activities,

Committed to implement the Sustainable Development Goal 14 (Life below Water) and specifically its targets 14.1 providing for the prevention and significant reduction of marine pollution of all kinds by 2025, and 14.2 providing for sustainable management and protection of marine and coastal ecosystems to avoid significant adverse impacts, by 2020,

Having considered the reports of the Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) (Malta, 11-13 June 2019), the Fourteenth Meeting of the Specially Protected Areas and Biodiversity (SPA/BD) Thematic Focal Points (Portorož, Slovenia, 18-21 June 2019), and the Second Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) Sub-Group on Environmental Impact (Athens, Greece, 27-28 June 2019),

1. *Adopt* the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings, set out in Annex I to the present decision;

2. *Adopt* the Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan, set out in Annex II to the present decision;

3. *Request* the Contracting Parties to make every effort for the effective implementation of the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings, taking into account the best available, environmentally effective and economically appropriate techniques and the internationally accepted standards, regarding the use, storage and discharge of harmful or noxious substances and materials;

4. *Request* the Contracting Parties to make every effort for the effective implementation of the Common Standards and Guidelines for Special Restrictions or Conditions for SPAs within the Framework of the Mediterranean Offshore Action Plan, bearing in mind that all appropriate measures shall be taken to prevent, abate, combat and control pollution resulting from offshore activities and if necessary, to prohibit offshore activities in Specially Protected Areas (SPAs);

5. *Urge* the Contracting Parties to control and timely report on the disposal of oil and oily mixtures and the use and disposal of drilling fluids and cuttings, using the online Barcelona Convention Reporting System (BCRS), in line with the reporting obligations under Article 26 of the Barcelona Convention and Article 30 of the Offshore Protocol;

6. 5.bis *Request* the Contracting Parties to make every effort to ensure effective implementation of the Guidelines, keeping in mind that they shall be without prejudice to stricter provisions and/or rules with respect to other existing or future national or international instruments or programmes;

7. *Urge* the Contracting Parties to report on the adoption of special measures to prevent, abate, combat and control pollution arising from offshore activities in Specially Protected Areas (SPAs), using the online Barcelona Convention Reporting System (BCRS) in line with the reporting obligations under Article 26 of the Barcelona Convention, Article 30 of the Offshore Protocol and Article 23 of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean;

8. *Invite* the Contracting Parties, the Secretariat, relevant international organizations and the industry to explore a collaborative approach to strengthen the financial and human resources of the Mediterranean Action Plan (MAP) System, with a view to establishing a sustainable and commensurate support to facilitate the implementation of the Offshore Protocol and the Mediterranean Offshore Action Plan; and

9. *Request* the Secretariat and relevant Mediterranean Action Plan (MAP) Components to support the Contracting Parties in the implementation of the Offshore Protocols and the Mediterranean Offshore Guidelines and Standards, including through technical meetings, sharing of best practices and strengthening of capacities, within available resources, to also ensure a regular review of the guidelines at a frequency not less than two years and their update, as appropriate;

10. *Request* the Secretariat to continue the work and finalize the Guidelines for the Conduct of Environmental Impact Assessment (EIA), mandated by the Offshore Action Plan (Specific Objective 8), taking into consideration additional proposals and suggestions to be provided by the Contracting Parties, for the consideration of the next OFOG meeting during the first year of the 2020-2021 biennium, for submission to the 22nd Meeting of the Contracting Parties (COP 22).

Annex I

Mediterranean Offshore Guidelines and Standards: Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings

List of Abbreviations / Acronyms

BEP	Best Environmental Practice
BTEX	Benzene, Tluene, Ethylbenzene and Xylene (orthoxylene, metaxylene and paraxylene)
CEFAS	The Centre for Environment, Fisheries and Aquaculture Science
FPSOs	Floating Production Storage and Offloading Facilities
FSUs	Floating Storage Units
GC-FID	Gas Chromatography and Flame Ionisation Detection
GC-MS	Gas Chromatography - Mass Spectrometry
IFC	International Finance Corporation
IMO	International Maritime Organisation
IOGP	International Association of Oil and Gas Producers
IR	Infra-red
NADF	Non-Aqueous Based Fluids
NORM	Naturally Occurring Radioactive Material
OCNS	Offshore Chemical Notification Scheme
OSPAR	Convention for the Protection of the Marine Environment of the North-east Atlantic
PAH	Polycyclic aromatic hydrocarbons
SPA	Specially Protected Areas
WBM	Water Based Drilling Fluids

1. Use and disposal of drilling fluids and cuttings

1.1. Introduction

1. This chapter of the document provides guidance on the use and disposal of drilling fluids and cuttings from offshore oil and gas installations in the Mediterranean Sea. This guidance has been derived from international best practices as outlined by organisations and institutions such as the Secretariat of the Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR), International Finance Corporation (IFC)/World Bank and the International Association of Oil and Gas Producers (IOGP), as well as from countries with mature oil and gas industry with well-developed regulatory frameworks, such the UK, Norway, the Netherlands and the US.

1.2. Legislative Background

2. All countries around the Mediterranean Sea have signed up to the Barcelona Convention. As such, the Barcelona Convention and its supporting Protocol on the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol), provide the overarching regional legal driver unpinning this guidance document.

3. Article 8 of the Offshore Protocol imposes a general obligation upon Operators to use the best available, environmentally effective and economically appropriate techniques. Operators should also observe internationally accepted standards regarding wastes, as well as for the use, storage and discharge of harmful or noxious substances and materials with a view to minimizing the risk of pollution. Articles 9 and 10 of the Protocol provide more specific requirements on the use and disposal of drilling fluids and cuttings.

4. This guidance document provides further definition/clarification to the general obligations outlined above.

1.3. Use and Disposal of Drilling Fluids and Cuttings

1.3.1 The Chemical Use Plan

5. A Chemical Use Plan shall be prepared for the use of all drilling fluids by the Operator in line with the Environmental Impact Assessment (EIA) for all offshore activities. The Chemical Use Plan must quantify and assess the environmental risk of each chemical additive that may potentially be used during the drilling, cementing and completion of the well. Subsequent well operations, including well intervention, workover, suspension and abandonment operations will be subject to similar requirements. The Chemical Use Plan should include all chemicals that will be onboard the drilling unit, comprising all operational as well as contingency chemicals. Only chemical additives that are approved for use by the Competent Authority may be used. In order to be approved by the Competent Authority all chemicals must be tested for toxicity, bioaccumulation and biodegradability. If the Competent Authority does not have a defined chemical authorisation system in place, the Offshore Chemical Notification Scheme (OCNS) chemical list used by the UK and the Netherlands should be used as a proxy. The Centre for Environment, Fisheries and Aquaculture Science (CEFAS) list of chemical additives is updated regularly and is available at: https://www.cefas.co.uk/cefas-data-hub/offshore-chemical-notification-scheme/.

6. The Chemical Use Plan shall be submitted to the Competent Authority for review and approval. Operations may only commence once the Competent Authority has issued a permit, specifying usage and discharge, and monitoring and reporting conditions.

1.3.2. Water Based Drilling Fluids

7. Water based drilling fluids (WBM) are the most commonly used drilling fluids. WBMs consist of water mixed with bentonite clay and barium sulphate (barite) to control mud density and thus, hydrostatic head. Other substances are added to gain the desired drilling properties (OGP, 2003[60]; IOGP, 2016[61]).

8. Effective solids control equipment shall be used to remove formation solids from the drilling fluid and to recover the used drilling fluid, so that it can be reused. Under specific circumstances, used WBM and associated drill cuttings may be disposed of by discharging into the sea. A permit from the Competent Authority must be obtained for the usage and discharge of WBM offshore and WBM cuttings, as described in section 1.3.1 above.

1.3.3. Non-Aqueous Based Fluids

9. Non-aqueous based fluids (NADF) are regularly used to drill the deeper sections of wells when using NADF is considered advantageous over drilling with WBM as it can provide faster drilling rates, increased stability in water-sensitive rock formations and is more effective for drilling deviated, deep, high temperature wells. NADFs comprise all non-water and non-water dispersible base fluids, including mineral and synthetic oil base fluids (OGP, 2003; IOGP, 2016).

10. The use of NADF of sufficiently low toxicity (i.e. with a total aromatic hydrocarbon content < 5% and PAH content < 0.35%) is permitted for use in the deeper well sections (i.e. from the 12¼″ section onwards). The use of diesel-based drilling fluids is prohibited.

11. The discharge of NADF to the sea is prohibited. Any unused or recovered NADF from the drilling operations shall be shipped back to shore, where it may either be reconditioned for re-use, or can be treated for appropriate disposal onshore. Alternatively, used NADF and NADF contaminated cuttings may be disposed of by re-injection into a suitable porous rock formation, if it can be proven this represents Best Environmental Practice (BEP) and if permitted to do so by the Competent Authority.

12. Drill cuttings contaminated with NADF may only be discharged offshore if they are (thermally) treated and contain less than 1% oil content by dry weight (i.e. less than 10 grams of oil per kg of dry cuttings). The offshore discharge point of the treated cuttings should be well below the surface of the water (i.e. at least 15 m below sea surface). The discharge of any drill cuttings contaminated with NADF in specially protected areas (SPA) is prohibited under all circumstances.

1.3.4. Discharge of Cuttings Contaminated with Reservoir Fluids

13. When drilling through reservoir sections of the well, cuttings from the payzone (oil-bearing formation) returned to the surface along with their associated drilling fluids may be contaminated with (small amounts of) liquid reservoir hydrocarbons (i.e. crude oil or condensate). Any cuttings

[60] OGP, 2003. Environmental aspects of the use and disposal of non-aqueous drilling fluids associated with offshore oil & gas operations. International Association of Oil & Gas Producers. Report No. 342, May 2003.
[61] IOGP, 2016. Environmental fate and effects of ocean discharge of drill cuttings and associated drilling fluids from offshore oil and gas operations. International Association of Oil and Gas Producers. Report No. 543, March 2016.

and/or WBM contaminated with reservoir fluids should be contained and sent back to shore for appropriate treatment and disposal. Alternatively, these cuttings may be re-injected into a suitable formation, if possible to do so or –if permitted by the Competent Authority, treated and cleaned to meet the environmental performance limits (see paragraph 12) so that they can be discharged to the sea. Permitted discharges should be monitored and subject to reporting to the Competent Authority.

2. Disposal of oil and oily mixtures

2.1. Introduction

14. This chapter of the document provides guidance on the disposal of oil and oily mixtures from offshore oil and gas installations in the Mediterranean Sea. This guidance has been derived from international best practices as outlined by organisations and institutions such as OSPAR, IFC/World Bank and IOGP, as well as from countries with mature oil and gas industry with well-developed regulatory frameworks, such the U.K., Norway, the Netherlands and the U.S.

15. Oil and oily mixtures are generated throughout various stages and processes onboard offshore oil and gas installations and will need to be managed and disposed of in a responsible manner. For example, drilling operations generating oil contaminated fluids include well clean-up, cementing, mud pit cleaning and operations where well bore fluids become contaminated with oil-based mud, crude oil or condensate. In addition, fluids from rig floor drains and other tank cleaning operations are also included. During the production phase, the main sources of oil and oily mixtures will be produced water, produced reservoir sands and scales, and machinery space drainage.

2.2. Legal Background

16. The Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (“the Barcelona Convention”) and its Protocols provide the overarching environmental legal framework in the Mediterranean Sea Region.

17. The 22 Contracting Parties to the Barcelona Convention are: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey, and the European Union.

18. The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (adopted in 1994), entered into force in 2011. The Protocol, known as “The Offshore Protocol”, sets out specific commitments for the Contracting Parties to “take appropriate measures to prevent, abate, combat and control pollution in the Protocol Area resulting from activities, inter alia by ensuring that the best available techniques, environmentally effective and economically appropriate, are used for this purpose”.

19. One of the commitments in the Offshore Protocol is for the Contracting Parties to formulate and adopt common standards for the disposal of oil and oily mixtures from installations into the Protocol Area.

20. In addition to the specific requirements for the Contracting Parties set out in the Offshore Protocol, MARPOL Annex I, provides the worldwide standard for oil content of machinery space drainage from ships, as well as for fixed or floating platforms including drilling rigs, floating production, storage and offloading facilities (FPSOs) used for the offshore production and storage

of oil, and floating storage units (FSUs) used for the offshore storage of produced oil. These fixed or floating platforms must comply with the same requirements applicable to ships having a gross tonnage of 400 or greater.

21. The Mediterranean Sea is designated as a “Special Area” under MARPOL Annex I and is therefore subject to more stringent requirements than those that apply outside Special Areas.

2.3. Produced Water Discharges

22. The term “produced water” is used for formation water that is produced along with the oil from the reservoir, as well as for water that is condensed during the production process. Produced water is separated from the produced hydrocarbon fraction onboard the offshore installation.

23. Where possible, produced water should be re-injected back into an appropriate reservoir. If re-injection is not possible, then the produced water may be discharged under the permitting and reporting conditions described below.

2.3.1. Discharge Limits

24. The discharge of produced water is allowed only if the oil content does not exceed 30 mg/l, as an average in any calendar month, while every effort should be made to minimize it to 15 mg/l, taking into account BAT, e.g. the EU Best Available Techniques Guidance Document on upstream hydrocarbon exploration and production, 2019. If stricter limits are set elsewhere in national laws of the Parties, then the stricter limits shall apply to that Party.

25. The dilution of treated or untreated produced water for the purpose of lowering the average concentration of oil or achieving compliance with the performance standard is prohibited. If produced water is mixed with other waters after the treatment process, the Operator must be able to demonstrate that the original concentration of the oil content in the produced water can be measured, and the quantity of oil discharged can be calculated.

26. Batch discharges of treated produced water are permitted. A batch discharge is an intermittent discharge where treatment of produced water to remove oil takes place between batches, for example settlement/slops tanks with capability for removal of oil or other pollutants the thresholds of which can be defined by each Contracting Party..

2.3.2. Sampling

27. The sampling strategy for dispersed oil in produced water depends on the volume of produced water discharged, and the type of installation. The frequency and timing of sampling should make sure that samples are representative of the effluent, taking into account operational aspects and logistics. For manned offshore installations which discharge continuously, the determination of the quantity of dispersed oil discharged should be based on the results of continuous monitoring or at least two (2) times a day. Samples should be taken at equal time intervals. The first sample should be taken within 4 hours of the start of the discharge, after which the minimum sample frequency shall be as detailed in the table, below. Where national legislation provides for more frequent monitoring, then the stricter requirements shall apply.

28. The sampling point must be immediately after the last item of treatment equipment in, or downstream of, a turbulent region, and in any case before any subsequent dilution.

Table 1. Oily Mixtures Discharged Per Discharge Point for Manned Installations

Type of Discharge	Discharge Amount Per Annum	Sample Frequency and Analysis
Dispersed oil	< 2000 kg	Once a week
	≥ 2000 kg	Every second day
BTEX	< 200 kg	Twice a year
	200 kg to 2000 kg	Once every quarter (i.e. 4 times per year)
	≥ 2000 kg	Once per week
BTEX = Benzene, toluene, ethylbenzene and xylene (orthoxylene, metaxylene and paraxylene)		

29. In addition to the dispersed oil content, produced water may also contain dissolved hydrocarbons (PAH and phenols), heavy metals, inorganic compounds from the formation (both dissolved salts and precipitates) and Naturally Occurring Radioactive Material (NORM). Therefore, the concentration of heavy metals and PAH compounds, BTEX, phenols, alkyl phenols and carboxylic acids in discharges should also be determined as part of the analysis of produced water.

30. These pollutants should be limited, including adding recommendation for standards or recommendation to use technology that can reduce polluting substances (BAT , e.g. the EU Best Available Techniques Guidance Document on upstream hydrocarbon exploration and production, 2019) to comply with the environmental limits applicable in each Contracting Party according to their national legislation.

2.3.3. Analysis of Dispersed Oil Content and BTEX

31. The dispersed oil content in produced water should be determined by means of gas chromatography and flame ionisation detection (GC-FID), as described in OSPAR Agreement 2005/15. This method is designed for produced water and other types of waste water discharged from gas, condensate and oil platforms and allows the determination of the dispersed oil content in concentrations above 0.1 mg/l.

32. The OSPAR produced water analysis reference method is a modified version of the ISO 9377-2 method. This method is to be used only for the determination of dispersed oil in produced water. This method is not to be used for the determination of oil in other discharges for oil on sand, drains discharges, etc. Details of this sample analysis method are published in: ‘Oil in Produced Water Analysis – Revised Guideline on Criteria for Alternative Methods Acceptance and General Guidelines on Sample Taking and Handling – OSPAR Agreement 2006-6’.

33. For certain instances, there may be scope to use a simpler analysis method offshore if that has been correlated against the OSPAR Reference Method in an onshore laboratory. Therefore, a suitable Infra-red (IR) analysis method (or other analysis methods) may be accepted as an ‘alternative’ analysis method, but only if it is correlated against the OSPAR Reference Method.

34. Additional guidance on alternative sampling methods can be found in a guidance document published by the UK Department for Business, Energy and Industry Strategy (BEIS) Methodology for the sampling and analysis of produced water and other hydrocarbon discharges (June 2018)

35. The ‘BTEX content’ should be determined by taking the sum of the levels of BTEX obtained by the application of the static headspace method described in ISO 11423-1, using gas chromatography - mass spectrometry (GC-MS) or another method that produces equivalent results. The amount of BTEX should be calculated on the basis of the quantity of water per year (m3) and the yearly flow-weighted average values of BTEX analysed in the produced water discharged into the sea.

2.4. Drainage System Discharges

36. Discharges from drainage systems (open/closed, hazardous/non-hazardous discharge) should be of a 40 mg/l monthly average oil concentration limit or maximum values - 30 mg/l Total Petroleum Hydrocarbon (TPH)/Total Oil&Grease (TOG) and 15 mg/l mineral oil. The thresholds of the discharge of other pollutants can be defined by each Contracting Party.

2.4.1. Machinery Space Drainage Discharges

37. Because the MARPOL Annex I standards for machinery space drainage (such as slops and bilges) are already implemented worldwide, no additional requirements are required for with regard to drainage of drilling rigs and platforms.

38. The following MARPOL requirements should be met:

- The drilling rig or platform must be equipped “as far as practicable” with the oil filtration equipment and the discharge of oil or oily mixtures from machinery drainage spaces is prohibited unless the oil content does not exceed 15 ppm;
- All facilities are required to keep a record of all operations involving oil or oily mixture discharges;
- Oil filtering equipment must be of an approved design by the Administration, must be provided with an alarm arrangement to indicate when the 15-ppm level cannot be maintained, and must ensure that any discharge of oily mixtures is automatically stopped when the oil content exceeds 15 ppm.

39. For further information, the Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships are contained in resolution MEPC.107(49). The IMO maintains a list of approved oil filtering equipment.

40. For new and future installations, sampling of the Open Drain System collected waste should be undertaken once a month.

2.5. Produced Sand and Scale Discharges

41. Annex V (A.2) of the Offshore Protocol states that all “Oily waste and sludges from separation processes shall be transported to shore”.

42. Therefore, any reservoir sand and production scales contaminated with oil (e.g. sludges or slurries removed from processing vessels) should be transported to shore for appropriate treatment and disposal.

2.6. Other Operational Discharges

43. Most discharges of oil will normally be routed to the production process, produced water treatment system, or to the drainage systems, and will be treated to minimise the discharge of oil.

Therefore, such discharges will be subject to the same discharge limits for produced water and drainage systems, as discussed in Sections 2.3 and 2.4 above. For example, displacement water (ballast water) from storage facilities for oil is subject to the same discharge requirements as produced water.

44. Notwithstanding the above, it is accepted that certain operations may result in a separate discharge of oil into the marine environment, for example during certain types of maintenance or sub-sea pipeline operations e.g. installation tie-in, commissioning and decommissioning operations. In all cases where such a discharge of oil is planned, the Operator must obtain a permit/consent from the Competent Authority. Each permit application should contain sufficient information to allow an assessment of the potential environmental impacts and to justify the proposed discharge.

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OSPAR Agreement 2017-03. *Guidelines for the Sampling and Analysis of Cuttings Piles.*

Annex II

Mediterranean Offshore Guidelines and Standards: Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan

List of Abbreviations / Acronyms

BWM Convention	Ballast Water Management Convention
EIA	Environmental Impact Assessment
IMO	International Maritime Organization
IPIECA	International Petroleum Industry Environmental Conservation Association
JNCC	Joint Nature Conservation Committee (UK government advisory body)
MARPOL	International Convention for the Prevention of Pollution from Ships
OSPAR	Convention for the Protection of the Marine Environment of the North-east Atlantic. (Oslo Paris Commission)
PAM	Passive acoustic monitoring
ROV	Remotely-operated vehicle
SPA	Specially Protected Areas
SPAMI	Specially Protected Area of Mediterranean Importance

1. Introduction

1. This present document provides guidelines for special restrictions or conditions to offshore activities for Specially Protected Areas (SPAs), as provided for in the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, with particular reference to the offshore oil and gas industry as an example of an exploration and exploitation industry relevant to the Offshore Protocol. They are drawn from a review of existing best practices and industry and statutory guidance that is already in place in countries with mature oil and gas industries and reflect a range of measures that have been implemented or recommended to mitigate for potential adverse effects of explorative and exploitative activities on valued habitats and species both in the Mediterranean and worldwide.

2. The guidelines cover the full range of development life cycle stages of offshore activities including the initial geophysical survey, exploratory drilling, field development and decommissioning and contribute to the harmonisation of working practices across Contracting Parties in accordance with Specific objectives, 3, 7 and 8 of the Mediterranean Offshore Action Plan in the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Decision IG.22/3). The following guidelines are provided for key aspects of the different development phases of offshore developments.

2. Geophysical Survey

2.1. Permitting

3. Underwater sound produced during geophysical surveys has the potential to disturb protected marine species including mammals, reptiles and fish resulting in physiological damage or alterations in behaviour. Therefore, where proposed, geophysical surveys should be permitted and approved by the relevant Competent Authority using the most up to date knowledge of the spatial and temporal distributions and life cycle stages of protected species within the proposed area of investigation so that sensitive locations and periods can be avoided.

4. Geophysical surveys should be undertaken during the least sensitive period, in terms of spawning, nesting and migration of protected species and as agreed with the Competent Authority prior to the commencement of the survey. Peak spawning, nesting and migration periods should be avoided.

5. Prior to the issue of permits for geophysical survey, survey contractors or project proponents should adequately demonstrate to the Competent Authority the need for the conduct of the proposed geophysical survey and the alternatives considered.

2.2. Conduct of the Geophysical Field Survey

6. IPIECA OGP Report 436 and Ballast Water Management Convention guidelines together with Strategic Priorities and Actions of the Mediterranean Strategy on Ship’s Ballast Water Management should be adhered to during marine geophysical surveys and the following measures should be adopted:

- Local vessels should be used for the conduct of the geophysical survey where possible. This includes the survey vessels used for the deployment of geophysical equipment as well as chase vessels which are used to protect seismic cables and other towed equipment;
- Vessels used during geophysical survey should be restricted to those which have documented non-native species capabilities, such as ballast water treatment and management systems, in accordance with the IMO's International Convention for the Control and Management of Ship's Ballast Water and Sediments;
- A review of marine species records for the presence of alien invasive species in ports that are to be used for the mobilisation and demobilisation of geophysical surveys should be undertaken prior to the commencement of the survey, the findings of which should be reported to the Competent Authority as part of the permit application;
- In light of species inventory data for mobilisation and demobilisation ports, the vessel non-native species capabilities, the vessel origin and the intended area of the activity, a risk assessment of the potential for the introduction and spread of alien invasive species due to the intended survey should be conducted and reported to the competent authorities prior to the commencement of the survey and as part of the permit application. Risk assessments should refer to relevant emerging research on the relationships between vessel traffic and invasive alien species;
- IPIECA guidelines on minimising the risk of introducing and spreading alien species should be adopted and vessels should adhere to the requirements of the BWM Convention, as appropriate. Removal of biofouling from vessel hulls, equipment, rigs, and plant should be conducted at the source of the biofouling and in a way that does not increase the risk of the further spread of non-native species. Where appropriate the Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines) (resolution MEPC.207(62)) shall be implemented.

7. Geophysical surveys should be conducted using the lowest sound intensities and over the smallest geographical area possible.

8. In the absence of national guidance, and for high seas areas beyond national jurisdictions, JNCC Seismic Survey Guidance for the mitigation of potential effects to marine mammals should be referred to, taking into account special local circumstances. Certified observers should conduct searches from a sufficiently high platform to monitor a mitigation zone of 500 m around the sound source for the presence of sensitive species for a minimum of 30 minutes in waters < 200 m deep or 60 minutes in waters > 200 m deep during each soft-start and prior to the noise emitting survey equipment operating at full energy. If marine mammals, cetaceans or turtles are detected within the mitigation zone during the pre-shooting search (visually or acoustically), the soft-start must be delayed until their passage, or the transit of the vessel, results in them being outside of the mitigation zone. There must be a minimum of a 20-minute delay from the time of the last detection within the mitigation zone and the commencement of the soft-start. Shooting may continue if a marine mammal is observed within the mitigation zone after shooting has commenced. Passive acoustic monitoring (PAM) equipment should be used by trained personnel to detect the presence of marine mammals during periods of darkness and poor visibility. Procedures for line turns should be agreed with the relevant Competent Authority, or as per 2017 JNCC advice. Documentation of the soft start must be presented to the Competent Authority during and after the survey as proof of the soft start being done.

9. Turtles have the potential to become entangled in tail buoys during field surveys causing physiological damage and mortality. Therefore, guards should be fitted to all tail buoys used during field surveys in areas likely to support turtles i.e. near known turtle nesting and feeding sites. Turtle entanglement preventing gear must be used by the survey vessel.

10. Vessels should comply with MARPOL guidelines for the control of oily discharges, recognising the extra levels of controls imposed under the IMO designation of the whole Mediterranean Sea as a Special Area.

3. Offshore Drilling Operations

3.1. Permitting

11. Activities within SPAs and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol should be subject to an Environmental Impact Assessment (EIA) as per Article 17 of the SPA/BD Protocol, and may only be undertaken in accordance with individually assigned permit conditions.

12. Concentrations of all chemicals and substances proposed to be discharged should be identified, quantified and risk assessed in a permit application, as referred to in the Guidelines for the conduct of EIA, prior to the commencement of offshore activities. The Competent Authority will review the permit application and only issue consent if no significant environmental effects will result from the planned activities, with particular consideration being given to the conservation objectives for which the SPA and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol are designated.

3.2. Siting

13. Wells and other seabed infrastructure should be sited in areas that cause the least damage to sensitive habitats and species, and in consideration of other potential seabed impacts, such as anchor positioning. If this is not practicable, then other alternatives shall be examined to minimise the risk of damage to sensitive habitats and species.

14. Wells and other seabed infrastructure should be sited in consideration of the potential interest features of specially protected areas that are likely to be designated in the future, for example proposed offshore SPAMIs, as far as is practicable.

3.3. Conduct of Drilling Activities

15. Exploratory drilling activities should be adopted or adapted for use in Mediterranean situations including the following measures:

- Use dynamic positioning rigs to avoid the use of mooring anchors in potential sensitive seabed areas;
- Pre-lay anchors prior to the arrival of the rig to achieve accuracy in positioning of anchors and chains and to avoid corals and environmentally sensitive habitats;
- Avoid grappling for pick-up of anchor chains and to employ ROV or pick up buoys for this purpose;

- Replace anchor chains in part by fibre (nylon) wire and make buoyant by attaching buoys to the fibre wire to avoid interference with sensitive seabed features;
- Use larger, heavier anchor or larger dimension anchor chain to reduce the chain length to reduce the footprint and add flexibility in anchor positioning.

16. Methods for monitoring drilling activities in specially protected areas and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, should be specific to the features for which the site is designated and draw upon existing standards where suitable (e.g. PERSGA/GEF, 2004). Monitoring programs should include methods for detecting previously unknown sensitive habitats that might be affected from the activity, for example side scan sonar and ROV surveys of sonar targets.

17. The Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings, presented in Annex I to the present document, provides guidance on the use and disposal of drilling fluids and cuttings and should be referred to when proposing offshore drilling activities. In particular, the environmental profile of drilling fluids and other chemical additives should be considered, and the least environmentally harmful alternatives should be chosen, where possible. The discharge of drill cuttings and non-aqueous (oil) based drilling fluids is prohibited in SPAs.

18. MARPOL guidance should be adhered to as a minimum standard regarding the control of wastes, oily discharges and ballast waters recognising the extra levels of controls imposed under the IMO designation of the whole Mediterranean Sea as a Special Area.

19. Dedicated spill response resources should be kept as close as possible (on the drilling rig and supporting vessels) and at a suitable onshore site if drilling occurs inside or close to a specially protected area, and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, in accordance with the requirements of the Offshore Protocol. Where appropriate, additional local resources should be considered to enhance oil spill resilience and contingency planning.

4. Field Development

4.1. Permitting

20. Discharge concentrations of all chemical additives proposed to be discharged should be identified, quantified and risk assessed in a permit application prior to the commencement of activities. The Competent Authority will review the permit application and only issue consent once satisfied no significant environmental effects will result from the planned activities, as referred to in the Guidelines for the Conduct of EIA.

21. Any permit application for activities inside or close to a special protection area will require a scientifically robust environmental assessment, in line with the Guidelines for the Conduct of EIA.

4.2. Offshore Activities

22. Contracting Parties should spatially or temporally restrict or prohibit discharges in sensitive areas or during important life cycle stages and should minimise flaring during critical bird migration periods.

23. The environmental profile of chemical additives should be considered and the least environmentally harmful alternatives should be chosen, where possible.

24. All discharges to sea shall be monitored and reported to the Competent Authority, in line with consent conditions.

25. Use of biologically relevant species is recommended for ecotoxicological and bioaccumulation studies. A list of key indicator species should be developed and agreed for specific habitat types and regions for the purposes of condition monitoring, as necessary.

26. Incorporation of site-specific environmental monitoring with regional programmes should be adopted, where appropriate, to allow for the interpretation of data within the wider context. Monitoring equipment should be appropriate to the habitat and species being monitored. Non-destructive sampling techniques, such as video and photography surveillance via remote or diver techniques is recommended in hard substrate areas, sea grass beds and areas where a high density of sensitive species occur.

27. Pipelines, cables, coastal intakes and outfalls, jetties, moorings and other seabed structures should not directly impact on biologically sensitive species and habitats. Sediment plumes arising from seabed construction works should be minimised as far as practicable. Minimum separation zones or the use of turbidity curtains should be used where relevant to protect key habitats and species from predicted adverse sediment impacts, as agreed with the Competent Authority. In cases where sedimentation due to dredging is suspected to reach a sensitive habitat, an Environmental Monitoring and Management Program (EMMP) needs to be established. The EMMP needs to include online monitoring of turbidity, with an ability to respond in the field when turbidity between the works and a sensitive habitat rises above ambient levels, so as to prevent the sedimentation cloud to reach the habitat.

28. Light emissions should be reduced as far as practicable in line with existing OSPAR Guidance (Guidelines to reduce the impact of offshore installations lighting on birds in the OSPAR maritime area (OSPAR Agreement, 2015-08)).

29. Dedicated spill response resources should be kept as close as possible (on the drilling rig and supporting vessels) and at a suitable onshore site if the development is within or close to a specially protected area and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, in accordance with the requirements of the Offshore Protocol. Where appropriate, additional local resources should be considered to enhance oil spill resilience and contingency planning.

5. Decommissioning

30. All platform structures should be removed from within the boundaries of specially protected areas unless there are over-riding and agreed reasons why these should remain in situ, in which case their suitability for conversion to a reef should be assessed.

31. All process fluids, fuel oils, produced solids and other chemicals and lubricating oils are to be drained or flushed from the decommissioned items and transported to shore for disposal.

32. Pipelines should be subject to a comparative assessment to determine the most suitable decommissioning options from those outlined in Article 20.2 of the Offshore Protocol.

33. If cuttings piles are present on the seabed , it should be assessed if it is environmentally safe toremain in situ or be removed on decommissioning, unless there are significant over-riding reasons for removal.

34. The use of mechanical cuttings tools should be favoured over the use of explosives. If explosives are used, their use should be fully justified and supported by an assessment of the potential impact on protected and sensitive species and which should form part of the EIA and licence application. JNCC Guidelines, or similar, should be used to mitigate effects on protected species.

35. Post-decommissioning environmental seabed surveys should be undertaken. The scope and number of repeat decommissioning environmental surveys should be risk-based and developed in consultation with the relevant Competent Authority.

36. Post-decommissioning debris search and removal surveys of the site should be conducted to ensure that no debris remains on the seabed. The surveys should cover an area of 500 m radius around the site of the decommissioned installation and 100 m either side of any decommissioned pipelines.

Draft Decision IG.24/10

Main elements for the development of six Regional Plans to Reduce/Prevent marine pollution from land-based sources, and for updating the Annexes to the Land-based-Sources, Hazardous Waste and Dumping Protocols to the Barcelona Convention

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012,

Recalling also United Nations General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling further the United Nations Environment Assembly resolution of 15 March 2019 UNEP/EA.4/Res.21, entitled "Towards a pollution-free planet",

Having regard to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (1996), in particular article 15 thereof on adoption of action plans, programmes and measures; the Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Seas and Aircraft or Incineration at Sea (1995); and the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (1996),

Recalling decision IG.21/7, adopted by the Contracting Parties at their 18th Meeting (COP 18) (Istanbul, Turkey, 3-6 December 2013) on the Regional Plan on Marine Litter Management,

Emphasizing the need to use a combined approach to build the Regional Plans' measures around sectors rather than individual pollutants, and the need for cross-cutting actions across the pollution dimension, including actions on climate change and economic instruments/cost benefit approaches, for an enhanced implementation of the Regional Plans,

Committed to further streamlining the national and regional priorities as outlined in the National Action Plans (NAPs) into the existing Regional Plans,

Taking note of important developments addressing pollution reduction and prevention within United Nations bodies, other international and regional intergovernmental organizations and multilateral environmental agreements,

Having considered the report of the MED POL Focal Points Meeting (Istanbul, Turkey, 29-31 May 2019),

1. *Endorse* the main elements and the timeline for the development of six Regional Plans to reduce/prevent marine pollution from land-based sources as set out in Annex I to the present Decision;

2. *Establish* Working Groups composed of experts designated by the Contracting Parties to develop the following, on the basis of the main elements described above, and report to the 22nd Meeting of the Contracting Parties (COP 22), on the basis of Terms of Reference and timeline prepared by the Secretariat and endorsed by the Bureau at its first meeting of the biennium 2020-2021:

a) To upgrade the Regional plan on the reduction of BOD_5 from urban wastewater in the framework of the implementation of article 15 of the Land-based Sources Protocol (Decision IG.19/7);

b) To develop a new Regional Plan for Sewage Sludge Management and its technical annexes; and,

c) To upgrade the Regional Plan on Marine Litter Management in the Mediterranean (Decision IG.21/7);

3. *Request* the Secretariat to launch the formal process for updating the annexes of the LBS and Dumping Protocols, for consideration at the 22nd Meeting of the Contracting Parties;

4. *Establish* Working Group[s] composed of experts designated by the Contracting Parties to review the annexes and make proposals for consideration of the 22nd Meeting of the Contracting Parties (COP 22), on the basis of Terms of Reference and timeline prepared by the Secretariat and endorsed by the Bureau at its first meeting of the biennium 2020-2021;

5. *Request* the Contracting Parties and Partners to contribute to this process through the timely nomination of experts with adequate competencies for the working groups by this decision.

ANNEX I

Proposed Draft Main Elements of the six pollution Reduction Regional Plans

Table of Contents

List of Abbreviations/Acronyms

BAT	Best Available Technique
BEP	Best Environmental Practice
BOD5	Biochemical Oxygen Demand
COP	Conference of the Parties
ELV	Emission Limit Value
GES	Good Environmental Status
LBS Protocol	Land-Based Sources Protocol
MAP	Mediterranean Action Plan
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
NAPs	National Action Plans
PoW	Programme of Work
SCP	Sustainable Consumption and Production
SPAMI	Special Protected Areas of Mediterranean Importance
WWTP	Wastewater Treatment Plant

1. Outline of the Elements of the six Regional Plans

1. Based on the approach already in place for the development of the 10 existing Regional Plans, the table of contents and provisions for the six Regional Plans may replicate the same outline, as follows:

a. Definition of terms
b. Scope and objectives of the Regional Plan
c. Proposed measures including:
    i. Regulatory measures (including where appropriate economic incentives):
    ii. Technical measures (including efficient use of resources and energy): and
    iii. Other type of measures (including monitoring, reporting and enforcement).
d. Timetable for implementation of measures
e. Support to implementation which may include:
    i. Technical and financial assistance;
    ii. Scientific cooperation and research;
    iii. Guidelines; and
    iv. Stakeholders participation.
f. Entry into force
g. Annexes including:
    i. Reporting templates
    ii. [1]; and
    iii. Other technical matters.

2. With regards to the geographical scope of the Regional Plans and taking into consideration that the legal basis for their development is the LBS Protocol (Art. 5 and 15), the geographical extent of the Regional Plans will apply to the area defined by Article 3 of the LBS Protocol, namely:

a. The Mediterranean Sea Area as defined in Article 1 of the Convention;
b. The hydrologic basin of the Mediterranean Sea Area;
c. Waters on the landward side of the baselines from which the breadth of the territorial sea is measured and extending, in the case of watercourses, up to the freshwater limit;
d. Brackish waters, coastal salt waters including marshes and coastal lagoons; and ground waters communicating with the Mediterranean Sea.

[1] The Meeting recommended to avoid double reporting while considering the strong linkages to the Barcelona Convention Reporting System and the NAP Follow-up Indicators/NBB

2. Possible Elements of the Regional Plan on Municipal Wastewater Treatment[2]

3. The existing Regional Plan on the Reduction of BOD5 from Urban Wastewater may be expanded in scope/ upgraded in view of integrating the newly identified measures related to municipal wastewater treatment needed to ensure the achievement and/or maintaining of GES and addressing additional pressures and new elements, such as multiple benefits approach and stricter standards.

4. The scope of the Regional Plan covers "collection, treatment, reuse and discharge of municipal wastewaters and the treatment, reuse and discharges of biodegradable industrial wastewater from certain industrial sectors."

5. The objective of the Regional Plan is to "protect the coastal and marine environment and health from the adverse effects of the above-mentioned waste water direct and or indirect discharges, in particular regarding adverse effects on the oxygen content of the coastal and marine environment and eutrophication phenomena as well as promote resource efficiency."

6. The upgraded Regional Plan should address priority substances identified in Annex I-C of the LBS Protocol (Categories of substances) with a particular focus on the list of priority substances, indicated in Annex I to the Decision IG. 21/3[3] adopted by COP 18 (Istanbul, Turkey, December 2013).

7. The proposed measures may include:
   a. Reuse treated municipal wastewater in agriculture (reclaiming nutrients as appropriate) or industry;
   b. Reuse/recycle treated wastewater to address regional water scarcity (e.g. aquifer recharge);
   c. Set appropriate quality standards for water reuse in agriculture irrigation, aquifer recharge or other uses;
   d. Apply BAT and BEP, including energy saving or renewable/ alternative energy sources in operating wastewater treatment plants (WWTP);
   e. Promote nature-based solutions (e.g. constructed wetlands) in small agglomerations as appropriate;
   f. Set Emission Limit Values (ELVs) for BOD, COD, TOC, TN, TP, pathogenic microorganisms as indicated in IMAP and other priority substances/emerging contaminants including microplastics, as appropriate, based on sensitivity and related EQS of the receiving environment, as need be;
   g. Set pre-treatment ELVs for industries to discharge their effluents to collection systems that can be treated in municipal wastewater treatment plants, particularly for small industries located in urban areas;
   h. Set timeframe(s) for implementation of technologies to reach ELVs (BOD, COD, TOC, TN, TP, pathogenic microorganisms as indicated in IMAP, and other priority substances/emerging contaminants, including microplastics, as appropriate; fully considering the need for developing respective sampling and analysis protocols with regards to emerging contaminants and other guidance documents.
   i. Ensure that reuse of wastewater from urban wastewater treatment plants is subject to prior regulations and/or specific authorization by competent authorities or appropriate bodies;
   j. Ensure that competent authorities or appropriate bodies monitor reclaimed water to verify compliance with these quality requirements taking into account the minimum frequencies included;

[2] Discussion is ongoing on the need to develop a separate regional plan addressing the wastewater treatment from industrial facilities

[3] The Meeting recommended to include this Annex to the Regional Plan.

k. Ensure that urban wastewater collection and treatment is subject to appropriate monitoring and reporting systems;
l. Ensure that the discharge of industrial wastewater into collecting systems and urban wastewater treatment plants are subject to prior regulations and/or specific authorizations by competent authorities or appropriate bodies.
m. Ensure that operators and competent authorities or appropriate bodies monitor and control discharges from municipal WWTP to verify compliance with ELV;
n. Set Environmental Impact Assessment procedures prior to issuing discharge permits considering specific biodiversity species and ecosystems;
o. Establish specific and periodic measures to manage the collection and treatment of urban wastewater in tourist destination cities.

8. Support to measures' implementation:
   a. Guidance and standards on the application of BAT and BEP in municipal wastewater treatment (including sewage sludge management) that support reduced cost of energy and water saving, specifically addressing:
      i. Energy performance.
      ii. Water consumption.
      iii. Wastewater treatment efficiencies.
      iv. Treatment efficiency of flue gas treatment.
   b. Technical guidance for water reuse, specifically addressing:
      i. Uses of reclaimed water.
      ii. Health and environment risk analysis for water reuse in agricultural irrigation and aquifer recharge.
      iii. Disinfection and filtration techniques.
      iv. Classes of reclaimed water quality and allowed agricultural use and irrigation method.
      v. Optimal treatment stages/technologies necessary to reuse wastewater.
      vi. Minimum quality requirements.
   c. Provision of support to Countries in technology transfer and related capacity building.

9. In preparation for the development of this Regional Plan, the following assessments may be undertaken:
   a. Assessment of level of collection and treatment of agglomerations of more than 2,000 inhabitants in the Mediterranean coastal zone as defined in line with the ICZM Protocol or using River Basin Management approach, including wastewater characterization;
   b. Assessment of the state of play of existing WWTP in agglomerations of more than 2,000 inhabitants in the Mediterranean coastal zone as defined in line with the ICZM Protocol or using River Basin Management approach.

3. Possible Elements of the Regional Plan on Sewage Sludge Management

1. The scope of the Regional Plan covers "management of sewage sludge from municipal wastewater treatment plants"

2. The objective of the Regional Plan is to "ensure maximum effective use of valuable substances and energy potential from sewage sludge, while preventing harmful effects on human health and the marine environment."

3. The proposed measures may include:
   a. Prioritize management alternatives for sewage sludge with a view to minimizing landfilling and limiting it only in cases where is the following options are not feasible:
      vii. Reuse/valorization of treated sludge as fertilizer
      viii. Energy recovery (incineration)
   b. Set ELVs for the use of sewage sludge as fertilizer and soil conditioner, as well other potential uses (e.g. concrete), including pathogenic microorganisms and microplastics pollution where appropriate.
   c. Ensure that sewage sludge is treated/stabilized before using in agriculture or as a source of energy.
   d. Ensure that maximum limit values for heavy metal concentration in sludge for use in agriculture or as a source of energy are met (further to specific standards)
   e. Provide for measures addressing the whole chain of the sludge treatment, including dewatering, digestion, stabilization, microbiological disinfection, and energy recovery, taking into account the necessary stages that need to be adopted in the WWTP in order to allow the reuse of the sludge;
   f. Provide for enforcement measures, i.e. control, inspection, sanctions;
   g. Set conditions for the temporary/permanent storage for sludge and measures to prohibit their discharge to the sea

4. Support to measures' implementation:
   a. Technical guidelines for sewage sludge use in agriculture:
      i. Characteristics of sewage sludge
      ii. Characteristics of soil
      iii. Sludge treatment
      iv. Sludge application
      v. Effects of sludge on soils and crops
      vi. Planting, grazing and harvesting constraints
      vii. Environmental protection
   b. Guidance and standards on the application of BAT and BEP on municipal wastewater treatment (including sewage sludge management) that support reduced cost of energy and water saving, specifically addressing: [4]
      i. Energy performance.
      ii. Water consumption.
      iii. Wastewater treatment efficiencies.
      iv. Treatment efficiency of flue gas treatment.

5. In preparation for the development of this Regional Plan, an assessment may be undertaken of the state of play of existing sludge treatment, reuse and disposal facilities in municipal wastewater treatment facilities around the Mediterranean.

[4] *Common guidance document recommended for use in the preparation of the Regional Plan for Municipal Wastewater Treatment Plants*

4. Possible Elements of the Regional Plan on the prevention and reduction of pollutant releases in the Mediterranean Sea from agriculture

1. The scope of the Regional Plan covers the agricultural sector in the coastal regions or hydrologic basins discharging pollutants into the Mediterranean Sea.

2. The objective of the Regional Plan is to "minimize water pollution caused or induced by the agricultural sector, and promote various aspects related to circular economy, resource efficiency and nature-based solutions."

3. The proposed measures may include:
    a. Minimize/ prevent agricultural runoff, which can include the following measures:
        i. Apply irrigation BAT (drip irrigation, humidity sensors);
        ii. Apply buffer zones and irrigation depending on cultivation patterns, land surface, geomorphology and climate (to minimize runoff impacts on water bodies). Transition to appropriate irrigation systems in economically irrigable areas, especially for sensitive areas and hotspots.
        iii. Identify waters which could be affected or have been affected by pollution (vulnerable zones) in accordance with set criteria.
        iv. Establish and implement action programmes in order to reduce water pollution from nitrogen compounds in vulnerable zones including:
            1. Periods when the land application of certain types of fertilizer is prohibited;
            2. The capacity of storage vessels for livestock manure;
            3. Limitation of the land application of fertilizers, consistent with good agricultural practice and taking into account the characteristics of the vulnerable zone concerned;
            4. Transition to appropriate irrigation systems in economically irrigable areas.

    b. Fertilizers management, which may include the following measures:
        i. Set standards on the use of fertilizers depending on type of plants, nitrogen needs, soil properties, quality and quantity of irrigation water, and climate conditions;
        ii. Set restrictions to the use of fertilizers near water bodies, or seasonal bans
        iii. Set requirements for proper storage of fertilizers (addressing distance from water bodies, packaging, waterproof storages, etc.);
        iv. Enforce the maintenance of records of purchases by farmers of fertilizers;
        v. Apply catch crops/ nitrogen fixing crops under specific conditions; and
        vi. Apply organic farming under specific conditions.

    c. Pesticides management, which may include the following measures:
        i. Provide training to farmers on pesticides labelling instructions and when/ how to apply pesticides in line with good agricultural practices (GAP);
            a) Relevant legislation regarding pesticides and their use;
            b) Risks of illegal plant protection products;
            c) The hazards and risks associated with pesticides;
            d) Integrated pest management strategies and techniques;
            e) Procedures for preparing pesticide application equipment for work and its maintenance;
            f) Safe working practices for storing, handling and mixing pesticides, and disposing of empty packaging;
            g) Record keeping of any use of pesticides;
            h) Special care in vulnerable zones;

i) Emergency action in case of accidental spillage.

ii. Provide for marketing and sale of pesticides to professional organizations (conditional to training/ certification);
iii. Restrict the use of pesticides during rainfall;
iv. Set targets and timetables for reduction of pesticides use;
v. Conduct regular inspection of farmers' equipment;
vi. Ban/restrict [5] the use of pesticides through aircrafts, with strictly regulated exemptions;
vii. Monitor drinking water sources, protected areas and public spaces close to agricultural areas where pesticides are applied;
viii. Apply integrated pest management.
ix. Ensure that appropriate monitoring programmes related to the above measures are established in line with criteria to be set for that purpose.

d. Manure management (livestock breeding), which may include the following measures:
   i. Apply adequate management techniques for cattle breeding, digestion and manure reuse;
   ii. Apply BAT for large farms including anaerobic digestion and bio-energy production, followed by separation of liquid and solid fractions;
   iii. Apply aerobic digestion for liquids, followed by evaporation lagoons or usage for soil improvement.
   iv. Take the necessary measures to provide that livestock breeding installations are operated in accordance with the Best Available Techniques (BAT), e.g. through permits for those livestock breeding installations exceeding certain threshold capacities.

4. BAT and BEP for the agriculture sector (farm and land management):
   a) BEP for product groups and farm types.
   b) Sustainable management: Land, energy, water and waste.
   c) Soil quality management.
   d) Nutrient management.
   e) Soil preparation and crop planning.
   f) Grass and grazing management.
   g) Animal husbandry.
   h) Manure management: anaerobic digestion and bio-energy production
   i) BAT and BEP for irrigation practices in arid regions.
   j) Crop protection products.
   k) Protected horticulture (greenhouses).

5. In preparation for the development of this Regional Plan, an assessment may be undertaken of the state of play of agricultural practices and discharged pollutants reaching the Mediterranean marine environment.

[5] Further assessment is required to decide during the negotiation process on this measure

5. Possible Elements of the Regional Plan on Aquaculture Management

1. The scope of the Regional Plan covers aquaculture activities in the Mediterranean.
2. The objective of the Regional Plan is to "minimize water pollution caused or induced by aquaculture sector."
3. The proposed measures may include:
    a. Minimization of impacts from onshore (including hatcheries) aquaculture, which may include the following measures:
        i. Alternative efficient feeding practices (this shall be based on a study in the field)
        ii. Provide for installation of settlement tanks (to collect suspended soils) and filters (drum filters); and
        iii. Optimize discharge systems, including:
            - Development of submarine pipeline systems.
            - Definition of appropriate sea depth.
            - Installment of diffusers at the end of the pipelines and pumps.
            - Improved abatement measures for the collection of oily residue.
        iv. Establish monitoring programmes based on local oceanographic conditions both in discharge areas and on the end of the settlement tank taking into account acceptable nutrients ELVs[6].
        v. Establish recirculating closed systems (allowing for cleaning and recycling of the same water).
        vi. Plant blue catch crops (e.g. mussels).
        vii. Reuse/recycle of water for irrigation purposes (possible treatment requirement).
        viii. Establish treatment of nutrients from effluents
        ix. Adopt all measures necessary to ensure that, before development consent is given, aquaculture projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to environmental impact assessment.
        x. Ensure that the competent authority grants a permit for aquaculture installations and takes the necessary measures to provide that installations are operated in accordance with the following principles:
            a) all the appropriate preventive measures are taken against pollution
            b) the best available techniques (BAT) are applied
            c) no significant pollution is caused affecting the maintenance or achievement of GES.

    b. Minimize impacts from offshore aquaculture, which may include the following measures:
        i. Establish criteria to be met in the selection of aquaculture site, including carrying capacity, appropriate species, and pollution baseline. and Environmental Impact Assessment (where applicable),
        ii. Apply Marine Spatial Planning for the identification of the appropriate zones for establishment of aquaculture plants;
        iii. Implement permitting schemes setting operational conditions;
        iv. Alternative efficient feeding practices (this shall be based on a study in the field)
        v. Control discharges through monitoring based on local oceanographic conditions
            a) Sediments: phosphorus, carbon and nitrogen content, redox potential

[6] The Meeting recommended taking into account the reporting mechanism: IMAP NBB, etc.

b) Water column: oxygen, nutrients (inorganic nitrogen and phosphorus, total nitrogen and phosphorus), dissolved and particulate organic matter, chlorophyll a, TRIX index, etc.

vi. Establish Multitrophic Aquaculture Systems;
vii. Control escapes for prevention of harmful aquatic organisms, including Invasive Alien Species and pathogens introduction;
viii. Use new environmentally friendly antifouling agents (TBT-free, preferably also copper free);
ix. Ensure regular movement of cages in aquaculture sites to avoid development of anoxic zones if needed; and
x. Promote alternative disposal/ re-use of offal.
xi. Ensure that appropriate monitoring programmes are established.

4. Guidance on BAT and BEP for the aquaculture sector (onshore and offshore).
   a. Benthic impacts and nutrients: efficient feeding practices, settlement tanks (to collect suspended soils) and filters (drum filters), regular movement of cages, optimization of discharge systems, blue catch crops (e.g. mussels);
   b. Water: recirculating closed systems and reuse/recycle of water for irrigation purposes in onshore aquaculture;
   c. Disease and parasites;
   d. Chemical discharges: use of environmentally benign antifouling agents;
   e. Escapees and prevention of Invasive Alien Species (IAS);
   f. Physical impacts, disturbance and predator control;
   g. Alternative disposal/ re-use of offal.

5. In preparation for the development of this Regional Plan, an assessment may be undertaken of the state of play of aquaculture practices in the Mediterranean and their impact on the marine environment. If decided to be undertaken, this assessment should build on existing work undertaken by the Contracting Parties and relevant Regional Organizations.

6. Possible Elements of the Regional Plan on Urban Storm Water Management

1. The scope of the Regional Plan covers “management of urban storm water in urban agglomerations in the coastal areas.”

2. The objective of the Regional Plan is to “minimize input of suspended solids, contaminants and marine litter into receiving waters due to storm water.”

3. The proposed measures may include:
   a) Develop storm water management plans, including risk management also including information on the location of land-based activities, e.g. industrial installations and civil infrastructures such as municipal wastewater treatment plants and landfills, potentially discharging contaminated run-off or wastewater to waterways so as to minimize their discharges and to protect the quality of ground and surface water including rivers, streams, wetlands, estuaries and the marine environment;
   b) Establish separate collection systems for run-off water under specific conditions;
   c) In case of combined collections system, install storm water treatment tanks which include decantation and filtering;
   d) Promote Sustainable Urban Drainage Systems (SUDS) such as green infrastructure for small medium cities, such as wetlands, retention ponds, recharge of aquifers, etc.;
   e) Incorporate management schemes of storm water run-off into the integrated coastal zone management (ICZM) plans;
   f) Set technical standards for drainage of storm water to outlets on the beach; and
   g) Ensure that storm water systems are kept clean and functioning correctly to prevent flooding during rain events.
4. Development of a Manual/Guidance on Stormwater Management including:
   a) Integrating Stormwater Management;
   b) Stormwater management plans;
   c) Recommended structural controls: storage, use, infiltration; and
   d) Recommended non-structural best management practices: maintenance, awareness.

5. In preparation for the development of this Regional Plan, various studies and assessments may be undertaken at national level to:
   a) Evaluate the locations of effluent points of storm water sewers along the coastline; and
   b) Prepare drainage features plans to illustrate the broad geographic pattern of key drainage features.

7. Possible Elements of the Regional Plan on Marine Litter (upgraded)

1. The ongoing evaluation of the status of implementation of the existing Regional Plan on Marine Litter Management in the Mediterranean (Decision IG.21/7), adopted by COP 18 (Istanbul, Turkey, 2013) is expected to provide substantive evidence that should be taken into account while defining the need for additional measures, as described above.

2. The main objectives of the Regional Plan are to:

a) Prevent and reduce to the minimum marine litter pollution in the Mediterranean and its impact on ecosystem services, habitats, species in particular the endangered species, public health and safety;
b) Enhance knowledge on marine litter;
c) Achieve that the management of marine litter in the Mediterranean is performed in accordance with accepted international standards and approaches as well as those of relevant regional organizations and as appropriate in harmony with programmes and measures applied in other seas; and
d) Facilitate and promote sustainable production and consumption patterns, in particular, circular economy models which consider the whole lifecycle of products, increase resource efficiency, facilitate recycling and avoid waste release into the environment.[7]

3. Principle related to the Sustainable Consumption and Production of the Regional Plan to consider the following:

> Sustainable Consumption and Production by virtue of which current unsustainable patterns of consumption and production must be transformed to sustainable ones that decouple human development from environmental degradation, **with particular attention to circular economy models.**[8]

4. The proposed measures may include:
a) Phase out single use plastic items most found in the Region;
b) Set targets for plastic recycling and other waste items to avoid ending-up as marine litter in the marine and coastal environment;
c) Introduce environmental taxes, e.g. plastic tax on virgin plastic, extended producer responsibility schemes, refund schemes;
d) Promote new technologies for the removal of marine litter from the marine and coastal environment in an environmentally sound way, particularly the retrieval, recycling and reuse of ghost gears;
e) Strengthen sanctions in case of non-compliance with the respective national regulations;
f) Include in the SPAMIs measures to combat marine litter and related monitoring; [9]
g) Reduce packaging;
h) Promote voluntary agreements with industry at national and regional levels in line with international practices and standards;
i) Strengthen measures related to SCP programmes to raise awareness and enhance education;
j) Introduce a concrete measure on microplastics reduction, e.g.
    i. Promote research and identification of the different sources of primary and secondary microplastics (industrial pellets and micro litter particles related to personal care products, fibers from clothing,).

[7] This proposal further strengthens circular economy dimension of the objectives of the Regional Plan
[8] This proposal strengthens the circular economy dimension at the level of the principles of the Regional Plan
[9] Any measure related to SPAMI management and monitoring should be consulted with and reviewed by the National Focal Points of SPA/RAC

ii. [Restrict/][10]Ban on microplastics addition to certain products, e.g. cosmetics and promoting the use by industries of environmentally friendly alternatives.
iii. Assess if primary and secondary microplastics are covered or not by legislation, and act, if appropriate, to influence the legal framework, or identify other necessary measures such as the promotion of voluntary commitment (e.g. Assess potential of certification schemes)

k) Set targets for plastic waste collection;
l) Encourage and promote the replacement of plastics in accordance with national waste management systems, i.e. taking into consideration availability of compositing facilities in the case of substituting with biodegradable plastics';
m) Investigate and promote with appropriate industries the use of Best Available Techniques (BAT) and Best Environmental Practice (BEP) to develop sustainable and cost-effective solutions to reduce and prevent sewage and storm water related waste and entering the marine environment, including micro particles as well as improving current management in waste water treatment plants.
n) Include measures addressing and accelerating safer material innovation and less toxic plastic additives, promoting industry collaboration and increasing access to information on chemical composition of plastic articles.
o) Explore methodologies to monitor and assess riverine inputs of marine litter in the Mediterranean and identify specific relevant measures upstream in order to minimize these inputs.
p) Consider the application of regulatory measures including incentives and circular economy approaches to combat/ the existing informal/illegal recycling networks around the basin and promote their transformation to formal/legal waste management schemes.

[10] Additional assessment is required to define the respective measure

Way forward

1. The process of development, negotiation and adoption may take two to three years for each of the six Regional Plans, although aggregated in terms of substance; and some may even require a specific thematic assessment prior to elaboration. In this respect, several approaches may be followed to set priorities in view of their timely and differentiated development and negotiations.

2. The time required for the implementation of the technical measures at national level is a crucial consideration and key factor taking into account that the implementation of some measures may require important investments and long processes for both public and private sectors.

3. Based on the conclusions of the present Regional Meeting of Experts, the Secretariat will continue the work to define and finalize the main elements of the technical measures and related timetable for their implementation. It is safe to anticipate an overall assessment, to the extent possible, of the potential impacts (GES and SDG targets related) of their implementation in a time frame extending between 2024 and 2030. This maybe an approach for setting priorities in terms of development and negotiation timing for each Regional Plan.

4. There are several existing Regional Guidelines related to the management of obsolete chemicals, hazardous waste and environmental management of industrial sectors already adopted by the Contracting Parties. A possible approach would be to start developing the Regional Plans that address issues not yet covered by the existing Guidelines already adopted by the Contracting Parties.

5. Another approach would be to start upgrading the existing Regional Plans with the new elements/measures and/or to transform, modify, and upgrade the provisions of the existing Regional Guidelines to fulfill the requirements of the relevant Regional Plans.

6. The Table below proposes possible scenarios regarding the time frame for the development, negotiation and adoption of the Regional Plans for a first preliminary exchange of views with the Contracting Parties:

Regional Plan	**2018-2019 COP 21**	**2020-2021 COP 22**	**2022-2023 COP 23**	**2024-2025 COP 24**
Municipal Wastewater Treatment	Develop the main elements of the Regional Plan. Mandate to upgrade the BOD Regional Plan.	Upgraded Regional Plan developed and submitted to COP 22.		
Sewage Sludge Management	Develop the main elements of the Regional Plan. Mandate to develop the new Regional Plan. Mandate to develop technical annexes (2020 - 2023).	Regional Plan developed and submitted to COP 22 (without technical annexes). Work ongoing to finalize the technical annexes.	Technical annexes of the Regional Plan finalized and submitted to COP 23.	
Agriculture Nutrients Management	Develop the main elements of the Regional Plan. Mandate to undertake an Overall Assessment.	Mandate to develop the Regional Plan/Guidelines.	Regional Plan/Guidelines developed and submitted to COP 23	

Regional Plan	2018-2019 COP 21	2020-2021 COP 22	2022-2023 COP 23	2024-2025 COP 24
Aquaculture Nutrients Management	Develop the main elements of the Regional Plan. Overall Assessment and mandate to develop technical standards for Aquaculture.	Mandate to develop the Regional Plan. Work ongoing on technical standards.	Regional Plan and its technical standards developed and submitted to COP 23.	
Urban Storm Water Management	Develop the main elements of the Regional Plan. Sharing of best practices ongoing. State of play report and exchange of best practices; capacity building activities.	Mandate to develop the Regional Plan.	Regional Plan developed and submitted to COP 23.	
Marine Litter (upgraded)	Preparations of relevant Guidelines as provided for in the existing Marine Litter Regional Plan ongoing. Mandate to upgrade the Marine Litter Regional Plan or to add technical annexes to incorporate the new elements.	Upgraded Marine Litter Regional Plan or technical annexes to the existing Regional Plan submitted to COP 22.		

Draft Decision IG.24/11

Guidelines: Adopt-a-Beach; Phase-out of Single Use Plastic Bags; Provision of Reception Facilities in Ports and the Delivery of Ship-Generated Wastes; Application of Charges at Reasonable Costs for the Use of Port Reception Facilities

The Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting

Recalling the United Nations General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling the United Nations Environment Assembly resolutions of 15 March 2019, UNEP/EA.4/Res.6 entitled "Marine plastic litter and microplastics", UNEP/EA.4/Res. 7 entitled "Environmental sound management of waste", UNEP/EA.4/RES.9 entitled "Addressing Single-use Plastic Products Pollution", and UNEP/EA.4/Res. 21, entitled "Towards a pollution-free planet",

Inspired by the international community's commitment expressed in the Ministerial Declaration of the United Nations Environment Assembly at its fourth session to address the damage to our ecosystems caused by the unsustainable use and disposal of plastic products, including by significantly reducing the manufacturing and use of single-use plastic products by 2030, and to work with the private sector to find affordable and environmentally friendly alternatives,

Having regard also to Decision BC-14/3 adopted by the Conference of the Parties to the Basel Convention at its 14th Meeting (Geneva, Switzerland, 29 April-10 May 2019), whereby it called upon the Parties to implement measures for preventing and minimizing the generation of plastic waste, improving its environmentally sound management, and controlling its transboundary movement; and for reducing the risk from hazardous constituents in plastic waste,

Noting the work of the Stockholm Convention on Persistent Organic Pollutants to eliminate or control the production or use of persistent organic pollutants in plastic products,

Recalling Decision IG.21/7, adopted by the Contracting Parties at their 18th Meeting (COP 18) (Istanbul, Turkey, 3-6 December 2013) on the Regional Plan on Marine Litter Management in the Mediterranean in the Framework of article 15 of the Land-based Sources Protocol,

Having regard also to the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (2002), in particular article 14 thereof on port reception facilities,

Recalling also decision IG.22/4, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016) on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021),

Recalling the mandates of MED POL, REMPEC and SCP/RAC within the MAP-Barcelona Convention System and their relevance to the implementation of this Decision,

Noting with concern that the high and rapidly increasing levels of marine litter, including plastic litter and microplastics, represents a serious environmental problem at both global and regional scale, negatively affecting marine biodiversity, ecosystems, animal well-being, societies, livelihoods, fisheries, maritime transport, recreation, tourism and economies,

Noting that plastic items may contain potentially hazardous substances, including additives such as plasticizers and flame retardants, and as such, may pose a risk to human health and the environment when discharged into marine ecosystems or when they become marine litter,

Acknowledging the adoption of the International Maritime Organization Resolution MEPC.310(73) of 26 October 2018, on the Action Plan to address marine plastic litter from ships, supported by the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) and the Protocol thereto,

Emphasising that it is essential to continue the regional efforts to prevent marine litter entering the Mediterranean Sea through land-based and sea-based activities, and that, in so doing, it is of key importance to increase coherence, coordination and synergies between existing mechanisms to enhance cooperation and governance with a view to better addressing the challenges posed by marine litter,

Having considered the conclusions of the 12th Meeting of the Focal Points of the Regional Activity Centre on Sustainable Consumption and Production held on 14-15 May 2019, the report of the Meeting of the Focal Points for the Programme for the Assessment and Control of Marine Pollution in the Mediterranean held on 29-31 May 2019, as well as the report of the 13th Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) held on 11-13 June 2019,

1. *Adopt* the "Guidelines for the Implementation of the Adopt-a-Beach Measures in the Mediterranean" in accordance with Article 10(d) of the Regional Plan on Marine Litter Management in the Mediterranean, set out in Annex I to the present decision;

2. *Adopt* the "Guidelines to Phase out Single Use Plastic Bags in the Mediterranean" in accordance with Article 9(2) of the Regional Plan on Marine Litter Management in the Mediterranean, set out in Annex II to the present decision;

3. *Adopt* the "Operational Guidelines on the Provision of Reception Facilities in Ports and the Delivery of Ship-Generated Wastes in the Mediterranean" in accordance with Articles 9(5) and 10(f) of the Regional Plan on Marine Litter Management in the Mediterranean, set out in Annex III to the present decision;

4. *Adopt* the "Guidance Document to Determine the Application of Charges at Reasonable Costs for the Use of Port Reception Facilities or, when Applicable, Application of the No-Special-Fee System, in the Mediterranean" in accordance with Articles 9(5) and 10(f) of the Regional Plan on Marine Litter Management in the Mediterranean, set out in Annex IV to the present decision;

5. *Urge* the Contracting Parties to take the necessary actions to implement the relevant measures provided for in the Regional Plan on Marine Litter Management in the Mediterranean in line with the timetables, using the above-mentioned guidelines, and sharing best practices and lessons learned in this process;

6. *Invite* all Contacting Parties to the Barcelona Convention to join and contribute to the Global Partnerships on Marine Litter led by the United Nations Environment Programme, the Basel Convention Partnership on Plastic Wastes and the relevant global initiatives to address marine litter;

7. *Request* the Secretariat, together with relevant Mediterranean Action Plan components, to facilitate the work of the Contracting Parties for the implementation of the Regional Plan on Marine Litter Management in the Mediterranean and its associated Guidelines and ensure, for this purpose, synergies and regular coordination with other regional organisations working on plastic waste and marine litter in the Mediterranean, with special emphasis on regional processes of adjacent marine regions such as the Black Sea Commission and OSPAR; and

8. *Request* the Secretariat to explore with the International Maritime Organization steps that could be taken within their respective mandates to establish synergies with a view to enhancing cooperation and coordination in implementing their respective plans or strategies on marine plastic litter from ships as well as other relevant plans or initiatives.

ANNEXES

Regional Marine Litter Guidelines

Annex I
Guidelines for the Implementation of the Adopt-a-Beach Measures in the Mediterranean

Table of Contents

List of Abbreviations / Acronyms

COP	Conference of the Parties
EU	European Union
IMAP	Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria
MAP	Mediterranean Action Plan
MED POL	Mediterranean Pollution Assessment and Control Programme
NGO	Non-Governmental Organizations
PET	Polyethylene Terephthalate
PoW	Programme of Work
UN	United Nations

1 INTRODUCTION

1. The Adopt-a-Beach measures comprise of actions related to beach clean-up, coupled with beach marine litter monitoring surveys implemented at national level. The overall scope of the Adopt-a-Beach measures is to help Mediterranean public communities to increase their stewardship concept on the Mediterranean coastline to keep it clean; to raise public awareness on the threat posed by marine litter; as well as to support the Mediterranean Countries to prepare and develop their national monitoring programmes for beach marine litter.

2 SCOPE OF THE ADOPT-A-BEACH MEASURES

2. The scope of the "Adopt-a-Beach" measures is to:

i. Keep beaches clean and marine litter-free in the Mediterranean;
ii. Raise public awareness on the problem of marine litter;
iii. Inform citizens about marine litter sources, how they are produced and propose ways to minimize them;
iv. Enhance public participation at country level, to national and international clean-up actions for the coastal environment around the Mediterranean;
v. Support the preparation and development of the national monitoring programmes for beach marine litter in the Mediterranean; and
vi. Collect valuable data and information to assess the quantities and stranding fluxes of marine litter found along the Mediterranean coastlines and contribute to achieve the region-wide reduction target of 20% on beach marine litter by 2024.[72]

3 IMPLEMENTATION PHASES OF THE ADOPT-A-BEACH MEASURES

3. Adopt-a-Beach measures can be divided into four implementation phases:
   a. Preparatory activities;
   b. Implementation activities;
   c. Reporting activities;
   d. Possible integration with current IMAP-based national monitoring programmes.[73]

3.1 Preparatory activities

4. Preparatory activities entail the following tasks:

a. Appointment of a "Beach Coordinator";
b. Selection of candidate beaches;
c. Defining beach marine litter units;
d. Engagement of local communities;
e. Organizing teams of collection volunteers;
f. Development of the awareness raising campaigns and training materials needed for the organization of outreach activities targeted to the local communities; and
g. Securing necessary material and equipment needed for the cleaning/ disposal activities.

[72] Decision IG.22/10: Implementing the Marine Litter Regional Plan in the Mediterranean, Annex III: Marine Litter Environmental Targets (Available in: English, French, Arabic, Spanish).

[73] Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria.

3.1.1 Tasks of the “Beach Coordinator”

5. The Beach Coordinator should be in charge of the execution of the different Adopt-a-Beach measures at local/ national level in a coordinated and consistent manner, and in synergy with the national monitoring programmes for beach marine litter. The Beach Coordinator should be responsible to report to national competent authorities and the timely execution of the required tasks. The Beach Coordinator may be a member of the community, being in charge of and responsible for, and having previous experience in the implementation of Adopt-a-Beach measures at local/national level. The Beach Coordinator may be appointed by the national authorities, or by the authorities being in charge for the implementation of the Adopt-a-Beach measures at local/national level.

6. The main tasks of the Beach Coordinator are to:

a. Engage, support, and coordinate the participation of the local communities, local authorities, NGOs, primary and secondary schools, civil society, volunteers etc.;
b. Assist in selecting the appropriate beaches for the implementation of the Adopt-a-beach measures based on the MED POL beach selection criteria;
c. Implement the adopt-a-beach methodology, proposed by MED POL under the present guidelines, in consultation with the national authorities;
d. Control the timely implementation of the Adopt-a-Beach measures based on the previously agreed work plan with the national authorities;
e. Train the volunteers, and corresponding teams, participating in the Adopt-a-Beach measures;
f. Ensure that all safety precautions are followed;
g. Develop a national photo guide for beach marine litter including the marine litter items most commonly found on beaches at national level (i.e. inclusion of a photograph and a brief description);
h. Oversee the awareness raising campaign, including the preparation and development of the campaigns’ main messages and material in consultation with the national authorities;
i. Consider whether it is appropriate (e.g. for beaches of particular concern or importance) to implement additional steps as detailed below:
    - Identification of beach needs and priorities;
    - Prepare and coordinate the development of information material about the conservation of the beach.
j. Develop an inventory of Adopt-a-Beach measures implemented at national level and ensure synergies and cooperation;
k. Submit progress reports and data (e.g. number of volunteers, amounts, types and composition of the collected marine litter, etc.) to national authorities; and
l. Monitor and evaluate the costs, benefits and governance of the Adopt-a-Beach measures in order to assess the success of each measure and share lessons learnt.

3.1.2 Selection of candidate beaches

7. Information on beach environmental conditions is required to identify needs and priorities of the beach to be selected for the Adopt-a-Beach measures. This includes weather and sea prevailing conditions; proximity to local rivers, discharges of waste water, harbours, fishing grounds, shipping lanes or any other source of beach marine litter.

8. Environmental conditions of the beach should be established through an assessment checklist that considers aspects such as existing waste disposal bins and containers, type of bins and containers (with or without lids), existing recycling containers, information signs on permitted and prohibited uses, etc.

9. A typical assessment checklist is presented below:

ASSESSMENT CHECKLIST ON BEACH CONDITIONS	
Name of the beach	
Date	
Are there waste disposal bins and containers on the beach? (Y/N)	
What type of bins and containers? (with or without lids)	
Are there recycling containers on the beach? (Y/N)	
What waste fractions they collect?	
Are there information signs on permitted uses of the beach? (Y/N)	
Are there information signs that prohibit something? (Y/N)	
What is prohibited?	
Are you missing something on the beach (signs, toilets, etc.)? (Y/N)	
What are you missing?	

10. Different types of beaches should be considered for selection for the implementation of the Adopt-a-Beach measures (urban beaches, rural beaches, remote beaches, beaches close to riverine areas, river mouths, harbours, etc.). This would allow to have a comprehensive overview on the exposure of the beaches to marine litter sources. Special attention should be drawn to the contribution of local river streams on beach marine litter generation. The diversity of the beach selection criteria, during the selection process is highly desirable to ensure that all possible different sources for beach marine litter, are well addressed in the collected data and information. The more diverse criteria are applied during the selection process of the beaches, as the higher is the number of selected beaches, the less is the discrepancy that will be observed in the generated data.

11. The Adopt-a-beach measures have a very good potential for integration with the national bathing waters monitoring programmes and Blue Flag Programmes. The implementation of relevant measures can be included as part of the relevant criteria for certification. To this extent, selection of the same beaches for the implementation of the Adopt-a-beach measures, with those beaches that have received certification; and thus, are monitored in the framework of the Blue Flag Programmes, provide a very good potential for integration.

12. Further to the selection of beach, the Beach Coordinator should complete the MED POL Beach ID Form included in Annex II of this Guideline. This form should be filled for each beach respectively. The MED POL Beach ID Form should be updated once a year or earlier if the team of volunteers notice important changes in the surrounding environment (e.g. new developments or new types of uses, etc.).

13. Adopt-a-Beach measures should be implemented in conjunction with the current IMAP-based national monitoring programme for beach marine litter. Accordingly, it should be ensured that beaches are selected under common criteria. These include:

- Year-round accessibility to volunteer teams and the local communities;
- Accessibility for ease marine litter removal; and
- Posing no threat to endangered or protected species and their habitats, such as sea turtles, sea birds or shore birds, marine mammals or sensitive beach vegetation. Hence, this would exclude protected areas depending on local management arrangements.

14. It is recommended that two (2) to four (4) beaches are selected at national level for each country when implementing Adopt-a-beach measures. Selection should be based on national coastal characteristics (e.g. length of the coastline, level of engagement of public communities, etc.). The beaches should be selected in synergy, and in coordination with those beaches identified for the official monitoring programmes for beach marine litter. If no official monitoring programme for beach marine litter is already in place at national level, then the beaches selected for the implementation of the Adopt-a-beach measures, based on the MED POL selection criteria, could be used at a later stage as the basis for development of the national monitoring programme for beach marine litter.

3.1.3 Defining beach units

15. For Adopt-a-beach, a beach marine litter unit consists of the whole beach. In case of long beaches, and depending on capacity of volunteer teams, the beach can be divided into several units or stretches for reporting purposes.

16. Within each selected beach, a 100-m stretch should be defined where the marine litter items will be recorded by dedicated teams of volunteers, based on the specific methodology presented hereunder. The selection of the 100-m stretch should be done in synergy, and in cooperation with the 100-m stretch selected for the needs of the national monitoring programme for beach marine litter, if already in place, to ensure that no duplication occurs.

3.1.4 Defining beach marine litter units

17. The unit to be used to assess the beach marine litter density is ‘number of items’ and should be expressed as counts of marine litter items per 100-m stretch (i.e. items/100 m stretch). National teams may wish to also express beach marine litter density in ‘number of items’ per surface area[74] (i.e. marine litter items/m^2); but this should only be done in addition to the counts of marine litter items per 100-m stretch. In addition, the main category types of litter items should be weighed.

18. For the whole beach, where the volunteers are active, more aggregated results (e.g. total weight (kg) per different categories (e.g. plastic, metal, etc.), total number of items, items per main categories) could supplement the data deriving from the 100-m stretch of the beach.

3.1.5 Engagement of local communities

19. Engagement of local communities should aim to sensibilize and engage to various kinds of civil society groups (e.g. local communities, local authorities, NGOs, schools etc.[75]) to participate in the Adopt-a-Beach measures, to inform general public about the positive impacts

[74] Based on the international experience, European (i.e. EU MSFD) and the experience from the other Regional Seas (e.g. OSPAR), the counts of marine litter items found on beaches, in items/100m stretch has proven to work quite well. The quantification of marine litter items found on beaches in items per surface areas may arise problems, especially for areas where low and high tides are present.

[75] The list is non-exhaustive. Various kinds of civil society groups are welcome to participate in the implementation of the Adopt-a-beach measures, further to obtaining the proper training.

of the measure in minimizing the stranded marine litter items along the coastlines. To this extent, no team should be excluded, having ensured in prior that a proper training of all the related communities and team members can be delivered.

3.1.6 Organizing teams of collection volunteers

20. Volunteers should be organized in teams to collect marine litter along the selected beach(es). Well-trained teams should be also assigned on the specific beach stretch (100 m), after having received special instructions from the Beach Coordinator. Volunteers should be organized in small teams, comprising of 5 to 6 persons each. According to the total number of volunteers and the corresponding number of teams, a beach grid should be established. Each team should be in charge for the collection of marine litter items on a specific cell of the beach grid.

21. Each team of volunteers should have a team leader who oversees marine litter collection, and to be in charge for the proper recording of the different marine litter items. The Beach Coordinator should control, coordinate and supervise the whole process.

3.1.7 Development of the awareness raising campaigns and training materials

22. When designing the awareness raising campaign, the campaign slogan could be “Adopt your Beach” in order to enhance ownership of the beach among the volunteers. The following key messages of the awareness raising campaign can be disseminated:

- Marine litter is a global environmental problem that can be solved if we act in a coordinated way;
- Marine litter is a problem that can be solved if everyone takes responsibility for their actions;
- Marine litter harms the environment, and it is in everyone’s interest to solve the problem;
- Marine litter harms marine organisms (with a particular focus on sea turtles);
- Importance of recycling and reducing the use of single-use plastic items (e.g. plastic bags, PET bottles, etc.) and the need to replace these items with reusable items.

23. The following awareness raising materials are recommended:

- Logo of Adopt-a-Beach measures to enhance their corporate image;
- Poster for exhibitions and dissemination activities;
- Leaflets including information about the Adopt-a-Beach measures and national/local facts and figures on marine litter, including the marine litter definition; and
- Flags of the Adopt-a-Beach measures to be used as an identifier for the selected beaches.

24. The official launch of the Adopt-a-Beach measures should be covered by the press (e.g. local journals and other mass media). Press releases should be pre-drafted to inform the general public about the implementation of the activities and related outcomes.

25. Enhanced communication and coordination of relevant activities and initiatives under implementation at national level are highly desirable. It is of great importance to have all relevant communities and stakeholders implementing Adopt-a-beach measures, sitting around the same table, discussing elements related to the approach and methodology for implementation of required activities (e.g. different types and lists of marine litter items, selected beaches, collecting and gathering all relevant information and data, etc.). The establishment of National Coordination Platforms and/or Networks has been proven to work

quite well (e.g. in France and Greece) to ensure enhanced communication and coordination at national level. The proposed Platforms and/or Networks are open-ended groups, established on a voluntary basis, aiming to include all relevant communities and stakeholders. Periodic meetings (e.g. two to four times per year), depending on available resources, participation and interest, are recommended.

3.1.8 Securing necessary material and equipment

26. Specific materials and equipment are necessary to conduct beach collections. This includes:

- Digital camera;
- Hand-held GPS unit;
- Extra batteries (ideally rechargeable batteries);
- 100-metre tape measure (fiberglass preferred);
- Flag markers/stakes;
- First aid kit (to include sunscreen, bug spray, drinking water);
- Protective gloves;
- Scissors/knife;
- Clipboard for each surveyor;
- Recording forms (printed on waterproof paper);
- Pencils;
- Rubbish bags;
- Rigid container and sealable lid to collect sharp items such as needles, etc.;
- Appropriate clothing;
- Scales (if possible to weigh your bags of collected litter);
- National photo guide to assist the volunteers with the identification and categorization of marine litter items. The photo guide should include the items commonly found on national beaches and their corresponding pictures and should be developed by the coordinator;
- Paint spray for large and/or heavy items.

3.2 Implementation activities

27. Implementation activities include three tasks:

a. Monitoring of marine litter;
b. Collection, recording and disposal of beach litter;
c. Safety and security precautions.

3.2.1 Monitoring of marine litter

28. Beach litter collection activity should be carried out on a regular basis preferably from the same groups of volunteers, on the same beaches and 100-m stretch, under the same standardized methodology which will give the opportunity to the national authority and to policy makers to compile, analyze and compare the obtained results.

29. Every effort should be made to implement monitoring procedures similar to those used for collection of data for IMAP-based national marine litter monitoring indicators. Accordingly, it is recommended that the Adopt-a-Beach measures are conducted on the selected beaches at least twice a year in spring and autumn and ideally four times in spring, summer, autumn and winter. Relevant local/national authorities should be notified for the schedule of these measures for proper coordination, if necessary.

3.2.2 Collection, recording and disposal of beach litter

30. Beach litter collection consists of collecting of all marine litter items found along the selected beaches and their disposal in beach waste bins or by means of the municipal waste collection containers, in an environmentally sound manner. The grouping of marine litter items, under same categories, while collecting marine litter items from the beaches may facilitate significantly the collection process, especially for the cases where recycling waste management schemes are in place from local or national authorities. The role of the local authorities during the collection and disposal process of the marine litter items is instrumental, and the Beach Coordinator should have made relevant arrangements in advance.

31. All marine litter items, of different sizes and types, found on the beaches should be collected and then removed from the beach by the assigned teams of volunteers. There is no upper size-limit for the collection of marine litter items found on the beaches. Special arrangements should be in place with the local authorities for the identified days during which the teams of volunteers are in the field in order to ensure the proper disposal of the collected marine litter. During these days, implementation of awareness raising campaigns from the local/national authorities, focusing on the total number and weight of collected marine litter, as well as on the main marine litter types and items, is strongly encouraged.

32. For big and heavy items, special arrangements with local waste management authorities should be made. For the selected beaches, and in particular for the 100-m stretch, items bigger than 0.5 cm should be sorted out by category type (plastic, paper, metal, glass, etc.), weighed and recorded in terms of total number of items, and total weight per each category. Items found in the 100 m stretch should be recorded on the MED POL Beach Survey Form[76], included under Annex III to the present report. Unknown marine litter items or items that are not included in the MED POL Beach Survey Form should be noted in the appropriate “other item” box. A short description of the item should then be included on the MED POL Beach Survey Form. If possible, digital photos of unknown items should be taken.

33. Larger items that cannot be removed safely by the volunteers should be left on the beach after having them marked (e.g. with a paint spray which meets environmentally friendly standards), so that they are not counted again in the next marine litter survey. Local authorities should be informed and should be responsible for their removal.

34. The collected marine litter items should be properly disposed following sound environmental disposal practices. Ideally, Adopt-a-Beach measures should use municipal waste management schemes, and therefore the collected marine litter should be disposed using municipal waste collection containers. If these do not exist, local municipalities should be informed for appropriate action, and alternatives should be explored.

35. Useful information can be also obtained with regards to beach marine litter typology, quantity, weight, seasonal variation, etc. This information should be recorded during the collection activities. This information can be used to propose ways and measures to prevent and minimize the generation and accumulation of marine litter on beaches in the future.

36. There are several examples in the Mediterranean where Adopt-a-Beach measures are combined with pilots implemented by scuba divers in shallow waters (i.e. up to approx. 20-meter depth). This approach should provide a good and integrated correlation between recorded

[76] The list of beach marine litter items has been updated based on the discussions and recommendations received during the Joint Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring and ENI SEIS II Assessment of Horizon 2020/National Action Plans of Waste Indicators (Podgorica, Montenegro, 4-5 April 2019).

marine litter items found on beaches and those observed in shallow waters. Such a correlation provides additional data and information on the sources (i.e. land-based and sea-based sources); the interlinkages between land and sea; as well as further strengthening and enhancing the participation of additional groups of civil society.

3.2.3 Safety and security precautions

37. Safety of volunteers should be always ensured. Any circumstances that may lead to unsafe situations for the volunteers (e.g. heavy wastes, strong winds, etc.) should be avoided. Since the Adopt-a-Beach measures are carried out in the field, there are a few inherent hazards. Caution should be used, and the general safety precautions presented below should be respected:

- Wear appropriate clothing. Be sure to wear close-toed shoes and gloves when handling marine litter as there may be sharp edges;
- If you come across a potentially hazardous material (e.g. oil or chemical drums, gas cans, propane tanks), contact competent authorities to report the item, providing as much information as possible. Do not touch the material or attempt to move it;
- Large, heavy objects should be left in place. Do not attempt to lift heavy marine litter items as they may have additional water weight and lifting them could result in injury. Inform local authorities;
- When in doubt, don’t pick it up! If unsure of an item, do not touch it. If the item is potentially hazardous, report it to the appropriate authorities;
- Do not conduct field operations in severe weather conditions;
- Be aware of your surroundings and be mindful of ‘trip and fall’ hazards;
- Carry a means of communication for emergencies, for example a cell phone.
- Always carry a first aid kit. The kit should include an emergency water supply and sunscreen, as well as bug spray;
- Understand the symptoms of heat stress and actions to treat it;
- Make sure to carry enough water;
- Let someone know where you are and when you expect to return;
- The volunteer team should be composed of at least two people.

3.3 Reporting activities

38. Reporting activities include two key tasks:

a. Developing a national database on Adopt-a-Beach measures;
b. Posters and publicity information materials on items found on the beach.

3.3.1 Developing a national database on Adopt-a-Beach measures

39. It is recommended to develop a national database on Adopt-a-Beach measures updated and hosted by the national competent authority for the protection of the marine and coastal environment, where all relevant data and information are collected. This is a task that should be coordinated at the national level, and the Beach Coordinator should encourage national authorities to develop and maintain this database.

40. Quality Assurance (QA) and Quality Control (QC) for the generated data, streamlined into relevant national databases, should be further strengthened. This is particularly important in order to meet the requirement for integrating the Adopt-a-Beach measures at a later stage when implementation of the measure is mature enough with the national IMAP-based monitoring programmes for beach marine litter. Well trained teams of volunteers, possessing good level of

knowledge on the applied methodology, reporting templates, list of marine litter items, related units, etc., are essential to meet the standards for QA and QC. Proper training of teams of volunteers and of relevant groups of civil society is one of the responsibilities of the "Beach Coordinator" and national competent authorities.

3.3.2 Posters and publicity information

41. Informative material about the conservation of the beach such us posters, panels or signs should be produced and placed at the beaches participating to the Adopt-a-Beach measures to inform the general public and also to disseminate the activities developed within these measures. These posters should be produced and developed in harmony with the surrounding environment.

42. Publicity material could also contain recommendations and advice to create a responsible behavior to beach users. Therefore, information material should be drafted according to the results of the beach needs and priorities identified and the data obtained during the beach litter collection activities, to draw attention to some frequent and abundant item for instance.

43. Main elements of the information materials may address:

- Explanation of the problem of marine litter (quantity, composition and effects) with the indication of some local and national data;
- Clarification of misinterpretations about what marine litter and relevant issues (e.g. cigarette butts are not made of paper, biodegradability and application of single-use plastics, etc.). Messages should be clear;
- Using trash bins; avoiding throwing away marine litter on beaches which adversely impact fish and other marine organisms;
- Avoid throwing away cigarette butts on beaches. Clarifying that cigarette butts are not made of paper; are not biodegradable; and persist in the marine and coastal environment for years to come, even if they are fragmented into smaller items;
- Avoiding abandoning glass bottles as they can break and cause injuries to other beach goers; and
- Picking up leftovers when consuming food items on the beach.

44. The participation of the volunteers in this process is key to enhance ownership. Editing and layout of the publicity material should be managed by the Beach Coordinator of the Adopt-a-Beach measures.

45. The Beach Coordinator should produce an assessment report containing data and results obtained above to inform local authorities about the abundance of marine litter on the selected beaches, its possible effect, as well as to provide recommendations on how to improve beach state in the future. In this sense, it is very important to include what are the most abundant items and when they are found to identify potential sources and to tackle appropriate prevention measures.

3.4 Possible integration of "Adopt-a-Beach" measures with the National Monitoring Programmes for Beach Marine Litter

46. When Adopt-a-Beach measures implementation has matured, and monitoring, collection and reporting is undertaken regularly and generating reliable data and information, national authorities may consider incorporating the selected beach(es) into the IMAP-based

national monitoring system, as appropriate. Monitoring procedures recommended under IMAP are included in Annex I to this guideline.

4 References

DeFishGear Project. Methodology for Monitoring Marine Litter on Beaches-Macro-Debris (>2.5cm).

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UN Environment/MAP (2016). Integrated Monitoring and Assessment Guidance (UNEP(DEPI)/MED IG.22/Inf.7).

Annex I

Integration of "Adopt-a-Beach" measures with the National Beach Management and IMAP related to Beach Marine Litter

Integration of "Adopt-a-Beach" measures with the National Monitoring Programmes for Beach Marine Litter

1. When Adopt-a-Beach measures are undertaken on a regular basis (2 times a year or even seasonally) in the selected beaches, a 100-m stretch of beach should be isolated to implement the official monitoring programme on beach marine litter. Such an arrangement should be priory agreed with the corresponding national authorities, being in charge and responsible for the implementation of the marine litter monitoring programme on beaches.

A. Selection of beaches to implement the national monitoring programmes

2. In the selected beaches, according to criteria stated in Section 2.2.1 with regards to typology of beaches to have a comprehensive view on exposure of the beaches to marine litter sources, the sites to be monitored should be selected randomly but taking into consideration following criteria:

- A minimum length of 100 m;
- Low to moderate slope (~1.5-4.5 º), which excludes very shallow tidal mudflat areas;
- Clear access to sea (not blocked by breakwaters or jetties);
- Accessible to survey teams all year round;
- Accessible for ease marine litter removal;
- Ideally not be subject to cleaning activities and corresponding communication should be done with the local authorities/local municipality. In case that they are subjected to marine litter collection activities the timing of non-survey related beach cleaning must be known such that marine litter flux rates (the amount of litter accumulation per unit time) can be determined.
- Posing no threat to endangered or protected species and their habitats, such as sea turtles, sea birds or shore birds, marine mammals or sensitive beach vegetation; in many cases this would exclude protected areas, but it depends on local management arrangements.

3. In each site selection, these criteria should be followed as closely as possible. However, when making the final selection of the beaches to be monitored the surveyors can use their expert judgment and experience related to the coastal area and marine litter situation in their respective country.

B. Sampling unit

4. A sampling unit is defined as a fixed section of a beach covering the whole area from the strandline to the back of the beach. The sampling unit should be one 100-metre stretch of beach, along the strandline and reaching to the back of the beach. For beaches having length of several kilometers, two stretches of 100 m, may be considered. The back of the beach needs to be explicitly identified using coastal features such as the presence of vegetation, dunes, cliff base, road, fence or other anthropogenic structures such as seawalls (either piled boulders or concrete structures).

5. The same sampling units should be monitored for all repeat surveys. In order to define the boundaries of each sampling unit, permanent reference points can be used, and coordinates should be obtained by GPS. In case of heavily littered beaches, 100-metre stretches may be too difficult to survey and therefore two (2) 50-metre stretches separated at least by a 50-metre stretch should be surveyed instead.

C. Frequency and timing of surveys

6. It is recommended that the Adopt-a-Beach measures are conducted in the selected beaches at least 2 times a year in spring and autumn and ideally 4 times in: Spring, Summer, Autumn and Winter. The proposed surveys periods are as follows:

- Winter: Mid-December–mid-January
- Spring: April
- Summer: Mid-June–mid-July
- Autumn: Mid-September–mid-October

7. Any circumstances that may lead to unsafe situations for the surveyors such as heavy winds, etc. should be avoided. The safety of the surveyors must always come first.

D. Pre-survey characterization of sites

8. Before any sampling begins, shoreline characterization should be completed for each 100 m site. The GPS coordinates of the sampling unit should be recorded. A site ID name should be created. The site's special features, including characterization of the type of substrate (sand, pebbles, etc.), beach topography, beach usage, distances from urban settlements, shipping lanes, river mouths, etc. should be recorded using the MED POL Beach ID Form, included under Annex II to the present report. Digital photographs should be taken to document the physical characteristics of the monitoring site.

E. Size limits and classes to be surveyed

9. There are no upper size-limits for marine litter items found on beaches. The lower size-limit is proposed at 0.5 cm. Smaller sized items like the caps, lids, cigarette butts and other similar items should be included in the quantification of beach marine litter. Such big items should only be noted in the monitoring sheets. It is recommended to check the entire beach for big or heavy items (or some major part if the length of the beach is very lengthy) and list all large items. Special arrangements with the local waste management authorities should be in place in order to remove those big items from the beaches in an environmentally sound way.

F. Collection and identification of litter

10. Items found in the sample unit should be classified by type and accordingly entered on the MED POL Beach Survey Form, included under Annex III to the present report. Data should be entered on the form while picking up the litter item.

1. Unknown litter or items that are not on the MED POL Beach Survey Form should be noted in the appropriate "other item box". A short description of the item should then be included on the MED POL Beach Survey Form. If possible, digital photos should be taken of unknown items.

11. For interpreting small pieces of litter in a harmonized way, this guidance should be followed:

- Pieces/fragments of marine litter items that are recognizable with a high level of confidence that are part of the same marine litter item (e.g. G3: shopping bags) should be registered as one item under the corresponding category (i.e. G3).
- Pieces of marine litter items that are not recognizable as a single marine litter item should be counted according to their material type (e.g. plastic, polystyrene pieces) and size (e.g. G75-G77).

12. During the survey, all litter items should be sorted by category type, weighed and then removed from the beach. Larger items that cannot be removed (safely) by the surveyors should be marked, for example with paint spray (which meets environmentally friendly standards) so that they are not counted again at the next survey.

13. The litter collected should be disposed of properly. Ideally, monitoring activities should use municipal waste management; therefore, marine litter collected should be disposed in the municipal selective collection containers. If these do not exist local municipalities should be informed for appropriate action.

G. Quantification of litter

14. The unit to be used to assess the marine litter density is 'number of items' and should be expressed as counts of marine litter items per 100 m (i.e. items / 100m). National teams may wish to also express counts of marine litter items per surface area[77] (i.e. marine litter items / m^2), but this should only be done in addition to the counts of marine litter items per 100 m stretch. In addition, the main category types of litter items should be weighed.

H. Materials and equipment

15. The following materials and equipment are necessary to run the beach surveys:

i. Digital camera;
ii. Hand-held GPS unit;
iii. Extra batteries (ideally rechargeable batteries);
iv. 100-metre tape measure (fiberglass preferred);
v. Flag markers/stakes;
vi. First aid kit (to include sunscreen, bug spray, drinking water);
vii. Protective gloves;
viii. Scissors/knife;
ix. Clipboard for each surveyor;
x. Recording forms (printed on waterproof paper);
xi. Pencils;
xii. Rubbish bags;
xiii. Rigid container and sealable lid to collect sharp items such as needles, etc.;
xiv. Appropriate clothing;
xv. Scales (if possible to weigh your bags of collected litter);
xvi. National photo guide to assist the volunteers with the identification and categorization of marine litter items. The photo guide should include the items commonly found on national beaches and their corresponding pictures and should be developed by the coordinator,
xvii. Paint spray for large and/or heavy items.

I. Safety and security precautions

16. Safety of surveyors should be ensured at all times. Since this work is carried out in the field, there are a few inherent hazards. Caution should be used, and the general safety guidelines presented below should be followed:

[77] Based on the international experience, European (i.e. EU MSFD) and the experience from the other Regional Seas (e.g. OSPAR), the counts of marine litter items found on beaches, in items/100m stretch has proven to work quite well. The quantification of marine litter items found on beaches in items per surface areas may arise problems, especially for areas where low and high tides are present.

- Surveyors should wear appropriate clothing. Be sure to wear close-toed shoes and gloves when handling marine litter as there may be sharp edges.
- If surveyors come across to potentially hazardous materials and/or items (e.g. oil or chemical drums, gas cans, propane tanks), the local authorities should be contacted by the Beach Coordinator in order to report the corresponding item/s. The hazardous materials and/or items should not be touched by the surveyors and no attempt to re/move it should be done.
- Large, heavy objects should be left in place. Do not attempt to lift heavy marine litter items as they may have additional water weight and lifting them could result in injury. Local authorities should be informed by the Beach Coordinator in the case of existence of such items.
- When in doubt, don't pick it up! If unsure of an item, do not touch it. If the item is potentially hazardous, the Beach Coordinator should report it to the appropriate authorities.
- Do not conduct field operations in severe weather conditions.
- Be aware of your surroundings and be mindful of 'trip and fall' hazards.
- Carry a means of communication for emergencies, for example a cell phone.
- Always carry a first aid kit. The kit should include an emergency water supply and sunscreen, as well as bug spray.
- Understand the symptoms of heat stress and actions to treat it.
- Make sure to carry enough water.
- Let someone know where you are and when you expect to return.
- The surveyor team should be composed of at least two people.

J. Additional considerations

17. The amount and type of litter found on beaches can be influenced by different circumstances. To ensure that data will be analyzed and interpreted properly these circumstances must be recorded. Indicative examples of such circumstances include: events that may lead to unusual types and/or amounts of litter (e.g. shipping container losses, overflows of sewage treatment systems, etc.); difficult weather conditions (e.g. heavy winds or rain, etc.); replenishment/nourishment of the beach; etc.

Annex II

MED POL Beach ID Form

MED POL Beach ID Form			
Country Name:			
Region:			
Municipality:			
Beach Name:			
Beach National ID:			
① Beach width (m) at mean low spring tide:		② Beach width (m) at mean high spring tide (m):	
③ Total length of beach (m):		④ Back of the beach: (e.g dunes)	
⑤ Latitude Start 100 m *(wgs84 – dd mm ss.ss)*		⑥ Latitude End 100 m *(wgs84 – dd mm ss.ss)*	
⑤ Longitude Start 100 m *(wgs84 – dd mm ss.ss)*		⑥ Longitude End 100 m *(wgs84 – dd mm ss.ss)*	
Prevailing currents off the beach:	N – S – E – W	Prevailing winds:	N – S – E – W
Beach Orientation?			N – S – E – W
Type of beach material (e.g. sand, pebbles, rocky), including % of coverage: *(e.g. sand 60%, pebbles 40%)*			
Slope of the Beach: *(e.g. slope 20%)*			
Are there any objects in the sea (e.g. a pier) that influence the currents?		Yes ☐	No ☐
If YES, specify: _____			
Major beach usage (local people, swimming and sunbathing, fishing, surfing, sailing, other etc.): 1. _____ , seasonal or whole year round: _____ 2. _____ , seasonal or whole year round: _____ 3. _____ , seasonal or whole year round: _____			
Access to the beach: Pedestrian: ☐ Vehicle: ☐ Boats: ☐			
Nearest town close to the beach in less than 5km distance: Location: N – S – E – W Distance to the beach: _____ km			
Nearest aquaculture site close to the beach in less than 5km distance: Name: _____ Distance to the beach: _____ km Population: _____ Location: N – S – E – W			
Is there any development behind the beach? No ☐ Yes ☐ Specify: _____			

Are there food and/or drink outlets on the beach? No ☐ Yes ☐
Distance from the survey area (m): _____

Present all year round: Yes ☐ No ☐
Specify month: _____

Position of food and/or drink outlet in relation to the survey area: N – S – E – W

Distance of the beach to the nearest shipping lane (km):

What is the estimated traffic density: *(number of ships/year):* _____

Is it used mainly by merchant ships, fishing vessels or all kinds: _____

Position of the shipping lane in relation to survey area: N – S – E – W

Is the beach located near a harbour, port or marina? Yes ☐ No ☐
Specify: _____

Distance from the beach to the nearest harbour, port or marina (km): _____

Name of the harbour, port or marina: _____

Is the harbour entrance facing the survey area? Yes ☐ No ☐

Position of harbour in relation to survey area: N – S – E – W

What is the main type of vessels using the harbour, port or marina?
(e.g. passenger ships, merchant/cargo ships, fishing vessels) _____

Size of harbour (number of ships): _____

Beach adjacent to river mouths or drains of water? Yes ☐ No ☐ N/A ☐

Name of the nearest river mouth or drain of water: _____

Distance between sampling area and nearest river mouth or water drain (km): _____

What is the position of the nearest river mouth in relation to survey area: N – S – E – W

Distance from the beach to the nearest discharge or discharges of waste water (km):

Position of discharge points in relation to survey area: N – S – E – W

Clean-up frequency of the beach?

All year round: Daily ☐ Weekly ☐ Monthly ☐ Other: _____

Seasonal, *please specify in months:* Daily ☐ Weekly ☐ Monthly ☐ Other: _____

What method is used: Manual ☐ Mechanical ☐

Who is responsible for the cleaning? _____

Additional comments and observations about this beach: _____

_____

_____

Please include:

1. A map of the beach
2. A map of the beach and of the local surroundings. When relevant please mark on this map the following:
   i) Nearest town ii) Food/drink outlets iii) Nearest shipping lane
   iv) Nearest harbour v) Nearest river mouth vi) Discharge or discharges of waste water
3. A regional map

Is this an amendment to an existing questionnaire: Yes ☐ No ☐

Date questionnaire is filled in: _____ / _____ / _____ (dd/mm/yyyy)

Name:

Phone number:

E-mail:

Annex III

MED POL Beach Survey Form

MED POL Beach Survey Form			
Country:			
Beach Name:			
Beach National ID:			
ID Survey:			
Date of survey *(dd/mm/yyyy)*:			
Previous conducted survey *(dd/mm/yyyy)*:			
Time of the sampling *(HH:MM:SS)*:			
Number of surveyors:			
Survey contact details:		Name: _____ Phone number: _____ Email address: _____	
Latitude Start 100 m *(wgs84 – dd mm ss.ss)*		Latitude End 100 m *(wgs84 – dd mm ss.ss)*	
Longitude Start 100 m *(wgs84 – dd mm ss.ss)*		Longitude End 100 m *(wgs84 – dd mm ss.ss)*	

Additional Information

Did you divert from the predetermined 100 m?

No ☐ Yes ☐

If YES, please specify new GPS coordinates: _____

Did any of the following weather conditions affect the data of the survey?

Wind ☐ Rain ☐ Sand storm ☐ Fog ☐ Snow ☐ Exceptionally high tide ☐

Exceptionally low tide ☐ Storm surge ☐

Did you find stranded or dead animals?

Yes ☐ No ☐ If YES how many: _____

Describe the animals, or note the species name if known: _____

Stranded animals: Dead ☐ Alive ☐

Is the animal entangled in litter? Yes ☐ No ☐ If YES,

specify marine litter item code: _____

Were there any circumstances that influenced the survey?

For example, tracks on the beach (cleaning or other), recent replenishment of the beach or other? Please specify:

_____

_____

Were there any unusual marine litter items and/or marine litter loads?

Please specify: _____

ID[78]	PLASTIC/POLYSTYRENE	N° Items	Weight
G1	4/6-pack yokes, six-pack rings		
G3	Shopping bags incl. pieces		
G4	Small plastic bags, e.g. freezer bags incl. pieces		
G5	The part that remains from rip-off plastic bags		
G7/G8	Drink bottles		
G9	Cleaner bottles & containers		
G10	Food containers incl. fast food containers		
G11	Beach use related cosmetic bottles and containers, e.g. Sunblocks		
G13	Other bottles, drums and containers		
G14	Engine oil bottles & containers <50 cm		
G15	Engine oil bottles & containers >50 cm		
G16	Jerry cans (square plastic containers with handle)		
G17	Injection gun containers (including nozzles)		
G18	Crates and containers / baskets (excluding fish boxes)		
G19	Vehicle parts (made of artificial polymer or fibre glass)		
G21/24	Plastic caps and lids (including rings from bottle caps/lids)		
G26	Cigarette lighters		
G27	Cigarette butts and filters		
G28	Pens and pen lids		
G29	Combs/hair brushes/sunglasses		
G30/31	Crisps packets/sweets wrappers/Lolly sticks		
G32	Toys and party poppers		
G33	Cups and cup lids		
G34	Cutlery, plates and trays		
G35	Straws and stirrers		
G36	Heavy duty sacks (e.g. fertiliser or animal feed sacks)		
G37	Mesh bags (e.g. vegetables, fruits and other products) excluding aquaculture mesh bags		
G40	Gloves (washing up)		
G41	Gloves (industrial/professional rubber gloves)		
G42	Crab/lobster pots and tops		
G43	Tags (fishing and industry)		
G44	Octopus pots		

[78] The allocated codes may be revised in the near future.

G45	Mesh bags (e.g. mussels nets, net sacks, oyster nets including pieces) and plastic stoppers from mussel lines		
G46	Oyster trays (round from oyster cultures)		
G47	Plastic sheeting from mussel culture (Tahitians)		
G49	Rope (diameter more than 1cm)		
G50	String and cord (diameter less than 1 cm)		
G53	Nets and pieces of net < 50 cm		
G54	Nets and pieces of net > 50 cm		
G56	Tangled nets/cord		
G57/58	Fish boxes		
G59	Fishing line/tangled and not tangled		
G60	Light sticks (tubes with fluid) incl. Packaging		
G62/63	Buoys (e.g. marking fishing gear, shipping routes, mooring boats etc.)		
G65	Buckets		
G66	Strapping bands		
G67	Sheets, industrial packaging, plastic sheeting (i.e. non-food packaging/transport packaging) excluding agriculture and greenhouse sheeting[79]		
G68	Fibre glass, items and fragments		
G69	Hard hats/Helmets		
G70	Shotgun cartridges		
G71	Shoes and/ sandals made of artificial polymeric material		
G73	Foam sponge items (i.e. matrices, sponge, etc.)		
G75	Plastic/polystyrene pieces 0 - 2.5 cm		
G76	Plastic/polystyrene pieces 2.5 cm > < 50 cm		
G77	Plastic/polystyrene pieces > 50 cm		
G91	Biomass holder from sewage treatment plants		
G124	Other plastic/polystyrene items (identifiable) including fragments		
	Please specify the items included in G124:		
		Total N° Items	**Total Weight**

[79] The MED POL Focal Points Meeting (Istanbul, Turkey, 29-31 May 2019) requested to consider defining separate categories for greenhouse for agriculture and greenhouse sheeting; polystyrene and irrigation pipes

ID	RUBBER	N° Items	Weight
G125	Balloons**, balloon ribbons, strings, plastic valves** and balloon sticks		
G127	Rubber boots		
G128	Tyres and belts		
G134	Other rubber pieces		
	Please specify the items included in G134		
		Total N° Items	**Total Weight**

ID	CLOTH	N° Items	Weight
G137	Clothing / rags (clothing, hats, towels)		
G138	Shoes and sandals (e.g. Leather, cloth)		
G141	Carpet & Furnishing		
G140	Sacking (hessian)		
G145	Other textiles (including pieces of cloths, rags, etc.)		
	Please specify the items included in G145		
		Total N° Items	**Total Weight**

ID	PAPER / CARDBOARD	N° Items	Weight
G147	Paper bags		
G148	Cardboard (boxes & fragments)		
G150	Cartons/Tetrapack Milk		
G151	Cartons/Tetrapack (non-milk)		
G152	Cigarette packets (including transparent covering of the cigarette packet)		
G153	Cups, food trays, food wrappers, drink containers		
G154	Newspapers & magazines		
G158	Other paper items (including non-recognizable fragments)		
	Please specify the items included in G158		
		Total N° Items	**Total Weight**

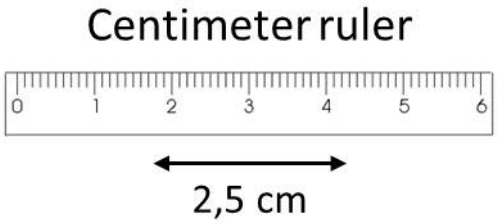
ID	PROCESSED / WORKED WOOD	Nº Items	Weight
G159	Corks		
G160/161	Pallets / Processed timber		
G162	Crates and containers / baskets (not fish boxes)		
G163	Crab/lobster pots		
G164	Fish boxes		
G165	Ice-cream sticks, chip forks, chopsticks, toothpicks		
G166	Paint brushes		
G171	Other wood < 50 cm		
	Please specify the items included in G171		
G172	Other wood > 50 cm		
	Please specify the items included in G172		
		Total Nº Items	**Total Weight**

ID	METAL	Nº Items	Weight
G174	Aerosol/Spray cans industry		
G175	Cans (beverage)		
G176	Cans (food)		
G177	Foil wrappers, aluminium foil		
G178	Bottle caps, lids & pull tabs		
G179	Disposable BBQ's		
G180	Appliances (refrigerators, washers, etc.)		
G182	Fishing related (weights, sinkers, lures, hooks)		
G184	Lobster/crab pots		
G186	Industrial scrap		
G187	Drums and barrels (e.g. oil, chemicals)		
G190	Paint tins		
G191	Wire, wire mesh, barbed wire		
G198	Other metal pieces < 50 cm		
	Please specify the items included in G198		
G199	Other metal pieces > 50 cm		
	Please specify the items included in G199		
		Total Nº Items	**Total Weight**

ID	GLASS	N° Items	Weight
G200	Bottles (including identifiable fragments)		
G202	Light bulbs		
G208a	Glass fragments >2.5cm		
G210a	Other glass items		
	Please specify the items included in G210a		
		Total N° Items	**Total Weight**

ID	CERAMICS	N° Items	Weight
G204	Construction material (brick, cement, pipes)		
G207	Octopus pots		
G208b	Ceramic fragments >2.5cm		
G210b	Other ceramics/pottery items		
	Please specify the items included in G210b		
	Please specify the items included in G158		
		Total N° Items	**Total Weight**

ID	SANITARY WASTE	N° Items	Weight
G95	Cotton bud sticks		
G96	Sanitary towels/panty liners/backing strips		
G97	Toilet fresheners		
G98	Diapers/nappies		
G133	Condoms (incl. packaging)		
G144	Tampons and tampon applicators		
	Other sanitary waste		
	Please specify the other sanitary items		
		Total N° Items	**Total Weight**



ID	MEDICAL WASTE	N° Items	Weight
G99	Syringes/needles		
G100	Medical/Pharmaceuticals containers/tubes		
G211	Other medical items (swabs, bandaging, adhesive plaster etc.)		
	Please specify the items included in G211		
		Total N° Items	**Total Weight**

ID	PARAFFIN/WAX PIECES	N° Items	Weight
G213	Paraffin/Wax		
		Total N° Items	**Total Weight**

Presence of industrial pellets?

YES ☐ NO ☐

Presence of oil tars?

YES ☐ NO ☐

Additional Comments: _____

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ANNEX II

Guidelines to Phase out Single-Use Plastic Bags in the Mediterranean

Table of Contents

List of Abbreviations / Acronyms and definitions

Bag-Use Profile	Proportion of bag types used at retail venues
EPR	Extended Producer responsibility
GES	Good Ecological Status
GHG	Green-house emissions
HDPE	High-density polyethylene
LCA	Life-cycle assessment
LDPE	Low-density polyethylene
PP	Polypropylene
SCP/RAC	Regional Activity Centre for Sustainable Consumption and Production
SUPB	Single-use plastic bags: high-density polyethylene (HDPE) bags designed to be used once. This is usually determined by the width or grammage. For the purpose of this report, the focus is on those that have handles, generally used as shopping carrier bags.

GUIDELINES TO PHASE OUT SINGLE-USE PLASTIC BAGS IN THE MEDITERRANEAN

1. INTRODUCTION

1.1. The scope

1. Single-use plastic bags (SUPB) rank among the most commonly found marine litter items in the Mediterranean Sea and coast.[80] The leakage of bags into the environment poses threats not only to biodiversity but also to society, with adverse impacts on economic development and public health. Single-use plastic bags have become an icon of plastic pollution and the fight against it; and thus around 60 countries have introduced policies to tackle them.[81]

2. The Regional Plan on Marine Litter Management in the Mediterranean,[82] adopted by the Contracting Parties to the Barcelona Convention in 2013, urges national authorities according to Article 9, among others, to take action to reduce SUPB through the "*Establishment of voluntary agreements with retailers and supermarkets to set an objective of reduction of plastic bags consumption as well as selling dry food or cleaning products in bulk and refill special and reusable containers*" and "*Fiscal and economic instruments to promote the reduction of plastic bag consumption.*" Action has already been taken in most of the countries of the Mediterranean (e.g. France, Spain, Italy, Greece, Croatia, Slovenia, Albania, Bosnia and Herzegovina, Morocco, Tunisia etc.), including the total ban of certain types of SUPB or certain applications of them.

3. With the ultimate objective of achieving the Good Ecological Status[83] (GES) of the Mediterranean Sea, the EU-funded Marine Litter MED Project[84] addresses the reduction of single-use plastic bags in Algeria, Egypt, Israel, Lebanon, Libya, Morocco and Tunisia, as one of the key common measures provided for in the Regional Plan on Marine Litter Management in the Mediterranean. Within this project, technical assistance has been provided to three countries (i.e. Tunisia, Egypt and Lebanon) to develop, where appropriate, the required legal and regulatory framework to halt marine litter from single-use plastic carrier bags by phasing out their consumption and production. The project also provided technical assistance to Morocco and Algeria regarding the introduction of Extended Producers Responsibility in the food and beverage packaging sector. Through the bilateral cooperation agreement between UN Environment/MAP and the Italian Ministry for Environment, Land and Sea Protection (IMELS), similar support is provided to Albania, Bosnia and Herzegovina and Montenegro.

4. These guidelines intend to provide a common understanding of the measures that can be considered in developing the most appropriate legal and regulatory framework to reduce the production and consumption of SUPB in the signatory countries of the Barcelona Convention. Notwithstanding, it is important to acknowledge the different baseline in each of the countries. The EU Member States have already taken action driven by the Directive 2015/720 on the reduction of the consumption of lightweight plastic carrier bags. Non-EU countries such as Bosnia and Herzegovina, Israel, Morocco, Tunisia and Turkey have enacted important regulatory, fiscal or voluntary measures, or are in the process of drafting. Other countries have not started the process yet but have expressed their intention and commitment to do so.

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[80] UNEP/MAP (2015). Marine Litter Assessment in the Mediterranean 2015. United Nations Environment Programme / Mediterranean Action Plan. ISBN No: 978-92-807-3564-2

[81] UN Environment (2018). The state of plastics. World Environment Day Outlook 2018. http://wedocs.unep.org/bitstream/handle/20.500.11822/25513/state_plastics_WED.pdf

[82] UNEP/MAP (2013). Regional Plan for the Marine Litter Management in the Mediterranean https://wedocs.unep.org/rest/bitstreams/8222/retrieve

[83] UN Environment/ Mediterranean Action Plan (2018). Ecosystem Approach. http://web.unep.org/unepmap/who-we-are/ecosystem-approach

[84] http://web.unep.org/unepmap/what-we-do/projects

5. The guidelines target policy-makers and provide them with a step-by-step approach for developing the most appropriate legal/policy/regulatory framework to halt marine litter from single-use plastic carrier bags by phasing out their consumption and production. They build and focus on three broad categories of policies that have been already put in place in different parts of the world,85 including:

- Voluntary agreements;
- Regulatory economic instruments; and
- Command and control instruments: bans.

6. While these guidelines focus on the full process of decision making, from absence of actions to reduce SUPB to a comprehensive programme to tackle them, they can also be used to complement and strengthen actions in countries where the process is on-going. In fact, experiences show loopholes and obstacles in different countries, and these guidelines intend to contribute in overcoming them.

1.2. The issue

7. Plastics are one of the main materials of the modern economy due to their multiple properties, applications and low cost. Their use has been growing exponentially since the 1950s, and is expected to double in the next 20 years.[86]

8. Plastic packaging, which includes plastic carrier bags, is the plastic's largest application, representing 26% of the total volume at global level.[7] It is estimated that roughly 5 trillion plastic carrier bags are consumed worldwide each year. That is almost 10 million plastic carrier bags per minute.[87] The main issue is that 95% of worldwide plastic packaging (including plastic bags) value is lost to the economy after a short first use. This poses adverse negative effects for people and nature.[7] Waste disposed in landfill or incinerated involves economic costs which burden tax payers. When plastic leaks into the environment, the main problem might be regarded as its main feature: durability; the long process to mineralize involves impact not only in the environment, but also socioeconomic effects such as the loss of aesthetic values which may be linked to economic activities. When it comes to the marine environment, the process to degrade is even longer. Plastics have been reported to negatively impact between 180 and 660 species of animals, including birds, fish, turtles, and marine mammals, with a portion of these plastics presumably comprised of plastic bags.[88] Marine animals may confuse bags for food leading to ingestion, blocked digestive tracts and eventual death. Plastic breaks down in smaller pieces in the oceans, down to micro- and nano-plastics. There is evidence that these particles are being consumed by marine organisms, with effects in terms of toxicology poorly known, especially with regards to impacts on human health.[89]

9. SUPBs are defined in the literature as high-density polyethylene (HDPE) bags designed to be used once. SUPBs rose to popularity for use in retail venues in the 1970s and

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[85] The main features and effectiveness of worldwide cases are discussed in detail in the document UNEP/MED WG.466 Inf.5 Background elements for the guidelines on phasing out single-use plastic bags: review of international experiences and alternative options.

[86] World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company (2016). The New Plastics Economy — Rethinking the future of plastics. http://www.ellenmacarthurfoundation.org/publications

[87] UN Environment (2018). The state of plastics. World Environment Day Outlook 2018. http://wedocs.unep.org/bitstream/handle/20.500.11822/25513/state_plastics_WED.pdf

[88] UNEP (2014). Plastic Debris in the World's Oceans. http://www.unep.org/regionalseas/marinelitter/publications/docs/plastic_ocean_report.pdf

[89] Gallo F. et al (2018). Marine litter plastics and microplastics and their toxic chemicals components: the need for urgent preventive measures. Environ Sci Eur. 2018; 30(1): 13. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5918521/

remain the most popular grocery bag choice around the world in the absence of regulatory measures to control them.[90]

10. Their product-to-waste flow, represented in the figure below, begins with the conversion of fossil fuels (but also a very low fraction from organic sources) into polymers used to manufacture all plastic. This follows a strictly linear economic model. The window of consumer use for SUPBs averages only 20 minutes[91] after which it can follow several paths. Once used, plastic bags may be collected as household waste and end up in landfill or incinerator. A proportion of SUPB are indeed recycled, but this fraction is very low due to low profitability (from 1% to 5%, according to various sources.[92, 93]). Often these bags are later reused as linen bags, and ultimately become household waste. When disposed in the environment, they can take between 400 and 1000 years to break down. Waste collection and management is particularly poorly organized in the beneficiary countries to the Marine Litter MED Project making plastic leakages even more important.

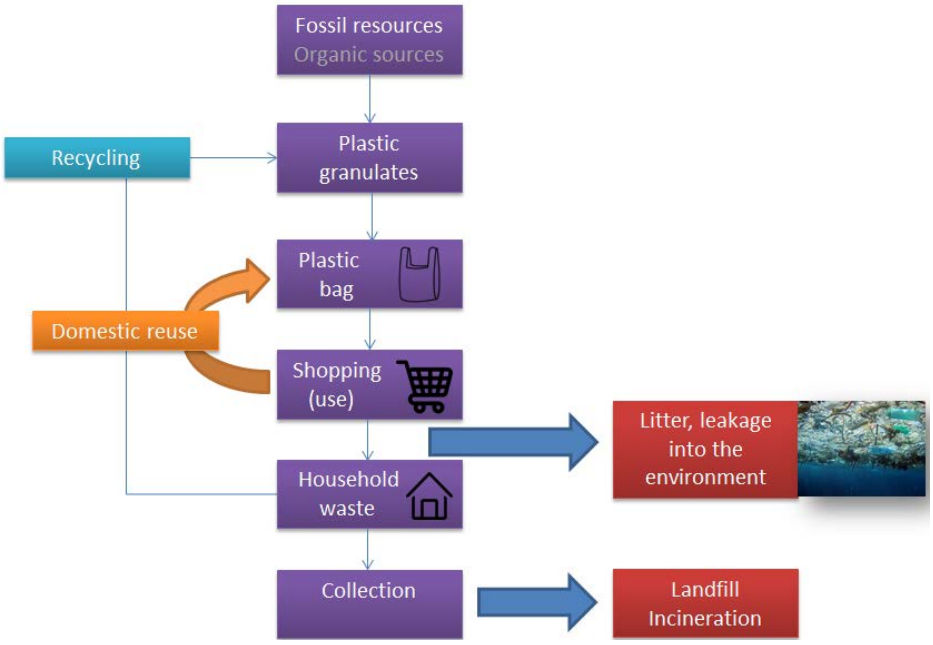

Figure 3. SUPB product-to-waste flow in MENA countries. Source: Own elaboration

2. OPTIONS FOR PHASING OUT THE USE AND PRODUCTION OF SINGLE-USE PLASTIC BAGS

11. This section briefly explains the main policy options to tackle SUPB, based on the review of international experience.[94] It is important to note that often policy options are implemented as a policy mix, or gradually implemented. A summary table is included at the end of this section to compare pros and cons of the different options.

[90] Green Cities California (2010). Master Environmental Assessment on Single-Use and Reusable Bags. ICF International. https://www.smgov.net/uploadedFiles/Departments/OSE/Task_Force_on_the_Environment/TFE_2010/03%2015%2010_Attachment%205_MEA.Single%20Use%20Bags.Ex.Summary.pdf

[91] Equinox Center (2013). Plastic Bag Bans: Analysis of Economic and Environmental Impacts. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

[92] Wate Management (n.d.). Bags by the Numbers http://www.wmnorthwest.com/guidelines/plasticvspaper.htm

[93] USEPA (2006). Municipal solid waste in the United States: facts and figures. http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/mswchar05.pdf

[94] The main features and effectiveness of worldwide cases are discussed in detail in the document UNEP/MED WG.466 Inf.5.

2.1 Voluntary agreements

12. In some cases, retailers have the lead in such initiatives, driven by internal factors (e.g., Corporate Social Responsibility (CRS) and branding purposes) and as a response to the threat by public authorities to introduce binding, i.e. non-voluntary, regulation. However, public bodies often promote such agreements or commitments through e.g. memorandums of understanding.

13. There are two main types of agreements to tackle SUPB:

a. Non-distribution of SUPB, and therefore other alternatives are made available (e.g. paper bags, multi-use bags), normally at a cost for the consumer.
b. Paying for distribution of SUPB, often along the possibility to purchase multi-use bags.

14. In both cases, the voluntary agreement acts as an economic disincentive on the consumer, resulting in a decrease of SUPB consumption.

2.2 Regulatory economic instruments

15. Government can enact legal instruments to put charges on SUPB at the distribution stage. Even small charges can have a strong signaling effect on consumers, creating incentives to switch towards other options. There are two main modalities of regulatory charges:

a. Those which become revenue for the supermarket. In this case, it is often up to the retailer to decide the amount levied on SUPB.
b. Those which become revenue for the public administration to reduce the negative externalities of SUPB. In this case, the charge is often called “tax” or “eco-tax”. Retailers must report periodically the revenues raised and pay to the tax administration.

16. Another type of economic instrument that can be applied to SUPB is subsidies. In this case, the government may opt for subsidizing e.g. multi-use bags, to support phasing out SUPB.

2.3 Command and control instruments: bans

17. Command-and-control or regulatory instruments have a direct influence on the behaviour of actors by imposing rules that limit or prescribe the actions of the target group. These instruments have a legal basis. Enforcement and control is a key element in the success of the instrument. Different bans are being used to tackle SUPB, including bans on certain types, applications and conditions. The legal instrument defines the concept of SUPB, often in terms of material, width and volume, and determines the provisions under which other plastic bags can be used. In some cases, it also levies the distribution of alternatives to SUPB.

2.4 Comparison of policy options

18. The following table, based on BIO Intelligence Service (2011),[95] summarizes the pros and cons of the different policy options.

Policy option	Pros	Cons
“Business as usual”	• No legal or administrative changes or costs	• Environmental, economic and social impacts associated with

[95] BIO Intelligence Service (2011). Assessment of impacts of options to reduce the use of single-use plastic carrier bags. Final report prepared for the European Commission – DG Environment http://ec.europa.eu/environment/waste/packaging/pdf/report_options.pdf

	associated with revising current legislation.	plastic carrier bag use would persist and/or worsen (e.g. accumulation of litter in the environment).
Voluntary commitment of a significant share of the retail sector not to provide SUPB or for free	• Some reduction in plastic carrier bag use at participating shops. • Minimal disruption for manufacturers and retailers. • More 'buy-in' from retailers. • Less administrative burden for governments as they would be less involved than for mandatory measures. • Progressive introduction of durable bags	• Not all shops would participate. • Under a voluntary agreement, it is unlikely that there would be a dedicated monitoring and enforcement body, nor sanctions to ensure participating retailers stick to the targets and commitments set out. • Consumers would need to pay SUPB or multi-use bags, which may result in certain opposition at early stage
Economic disincentive by charging consumers for the distribution of SUPB	• It has been proven a clear reduction in SUPB use when the charge is high enough, resulting in a behavioural change. • No major disruption for SUPB manufacturers • Public fund raising opportunity when the instrument is designed to channel the funds to public administrations (tax).	• In terms of consumer behaviour, mandatory consumer charges are a more direct lever than a voluntary agreement. • Consumers would need to pay SUPB or multi-use bags, which may result in certain opposition at early stage • When it's conceived as a tax, administrative burden on retail sector and public tax administration • Monitoring and enforcement required by public administration
Ban on single-use plastic carrier bags	• Provides high level of certainty in the mitigation of environmental impacts, especially litter. • Possible increase in revenue and jobs for some countries producers of alternative carrier bags.	• Monitoring and enforcement required by public administration • Loss of revenue and jobs connected with single use plastic carrier bags. • Loss of consumer choice. • Inconvenience for customers when alternatives are not sufficiently mature

3. ROADMAP FOR THE REDUCTION OF SINGLE-USE PLASTIC BAGS IN THE MEDITERRANEAN REGION: AN 8 STEP-BY-STEP APPROACH

19. Considering experiences in the Mediterranean region and beyond, sound solutions should be designed in a long-term time frame. A progressive, step-by-step approach should be adopted in order to ensure that:

a. Governmental mechanisms are in place to monitor the production and consumption of SUPB, in order to review and adapt if the targets are not met.
b. Economically/environmentally/technically sound alternatives are available, and the relevant standards and norms are in place to ensure the use and production of safer alternatives.
c. Relevant industry has time/incentives/access to technology to reconvert, without major jobs/revenues loss.
d. Incentives for the development of new technologies are in place for green entrepreneurs and businesses willing to put new alternatives on the market.
e. Consumers are aware of the impacts of their behaviour, and are incentivized to modify their consumption patterns.
f. The waste management system in the countries is adapted to accompanying the phase out process. First, it is important that collection/recycling rates improve, and unsound disposal is avoided. Later, the waste management system may need to adapt to the new alternatives introduced in the market, such as compostable bags (or other disposable and compostable items).

20. Different policy options may attain similar drastic reductions as proven by the experience of a great number of countries analyzed before the preparation of these guidelines. It is important to note that economic impact of reducing/banning SUPB does not seem to be crucial for any of the cases reviewed. On the contrary, some of them consider this as an opportunity to develop internal economic activity.

21. The approach to phase out SUPB in the Mediterranean region consists of the following 8 steps listed below. Countries that already implemented measures in this regard may find complementary and supportive actions:

a. Step 1: Assess the current situation of SUPB and raise awareness.
b. Step 2: Assess different policy options, namely voluntary agreements, economic. instruments and bans, given the national contexts.
c. Step 3: Promote and develop alternatives.
d. Step 4: Adoption and implementation of a policy option
e. Step 5: Incentives to industry
f. Step 6: Upgrade the waste management system
g. Step 7: Communication and participation
h. Step 8: Review and adapt

22. Details for each of the above-mentioned steps are hereunder presented.

3.1. Preliminary measures (Steps 1, 2 and 3)

23. Step 1: Assess the current situation of SUPB and raise awareness: The starting point should be a clear view of the SUPB product-to-waste chain in the country, particularly in terms of production, imports and consumption. In the absence of national data about the production of SUPB, a survey should be conducted through the chamber of industry and commerce, the association of plastic producers, or similar. Or, plastic producers should be approached directly, in case they are not too many. This survey will allow not only knowing the number and characteristics of SUPB being produced in the country, but also related revenues and jobs. At this point, it is very important to consider that in many countries the informal economy in plastic bags production may be high and this should be addressed in terms of impact of any adopted policy option. For example, an eventual ban may drive the sector to increased informality. Regarding imported SUPB, the customs administration should hold this data. Moreover, gaining knowledge on how plastic bags are used by the population is important, as well as their perception on the issue and the available alternatives. This type of

research could be coupled with awareness raising campaigns, which are a common element for all policy options to be thoroughly and extensively applied before and after the adoption of the measure. These elements may lead to set prevention quantitative targets and provide a baseline to monitor progress.

24. Step 2: Assess different policy options, namely voluntary agreements, economic instruments and bans, given the national contexts: In addition to economic and environmental aspects, the assessment should pay attention to the national capacity to enforce instruments such as bans and/or levies as well as on the impact on the low-income populations. Thus, socioeconomic and policy/institutional aspects should be analysed in order to know how an eventual measure would be implemented, and potential effects it may have on the administration, industry, retailers and population. Evidence-based studies, namely socio-economic assessments on the effect of the selected policy option in the national context, are also necessary to defeat opposition from the plastics industry. Further to the general comparison shown in section 2.4, a more accurate assessment is advised in terms of potential environmental and socioeconomic effects of the policy options according to the national contexts. To conduct this assessment, the first step consists in estimating the reduction of SUPB as a result of the implementation of a particular option (e.g. the EU set a reduction target of 80% of SUPB in five years). This may be estimated through international experiences review.[96] Secondly, the socioeconomic and environmental effects can be reviewed and compared through a series of indicators. The values of these indicators will depend on the particular context (e.g. baseline SUPB consumption and production, collection costs, etc.). The following indicators are suggested:[97]

- Environmental impact:
  - Weight/quantity of total plastic carrier bags (% reduction);
  - Weight/quantity of single-use plastic carrier bags (% reduction);
  - Oil (kt saved);
  - Emissions ($MtCO_{2eq}$ avoided).

- Economic indicators:
  - Costs reduction to retailers;
  - Revenues generated by a charge;
  - Net change to bag manufacturers;
  - Cost reduction for litter collection;
  - Cost reduction for waste management.

- Social indicators:
  - Net change in employment in bag manufacture sector;
  - Households expenditure in alternatives to SUPB.

Thus, the assessment would provide information on the potential effect of the reduction of SUPB for different stakeholders, including plastic manufacturers, retailers, citizens and administration. The calculation and comparison of these indicators may robustly inform policy makers for sound decisions.

25. Step 3: Promote and develop alternatives: Before any instrument is put in practice, there should be an assessment of the alternatives for SUPBs applications, in terms of national production capacity and needs, i.e. offer and demand. Indeed, these two aspects must go hand in hand and should be boosted equally for effective switch to alternatives. Furthermore, this may represent an economic opportunity for the countries since often an important share of

[96] See UNEP/MED WG.466 Inf.5 for more information

[97] In UNEP/MED WG.466 Inf.5there is an example of the values for the EU context.

plastic bags is imported. A controversial issue may be the type of alternatives that should be promoted in response to the reduction/ban of SUPB.[98] There is not a one-fits-all solution. A good approach may be to use a Life Cycle Analysis (LCA) approach to compare the different options. A general conclusion for LCA of alternatives to SUPB, including paper, woven polypropylene, compostable bags, is that it strongly depends on how many times the bags are reused. Furthermore, a limitation of LCA is to account for the economic cost of the leakage of plastic bags into the environment due to the difficulty to establish such costs. Bearing this in mind, the more potential for reuse of a particular option, the least impact it may have. Hence, the notion of reusability must be key when putting forward alternatives to SUPB. Furthermore, it should be considered that different options will respond to particular uses of SUPB, in a way that a certain alternative does not exclude any other.

26. Citizens may be reluctant to switch to alternatives for different reasons, mainly due to habits and higher prices. For this, it is needed a continuous communication on the benefits of using alternatives to SUPB and negative effects of the latter. At the start of implementing policy measures, alternatives may be subsidised with funds originated by ecotaxes to boost change.

27. Plastic bags with a minimum thickness (e.g. 50 microns) may be considered reusable bags, and thus alternatives to SUPB. In order to avoid legal bypass or promote options that are not safer for the environment, it is of utmost importance to set norms and labels for these alternatives, which guarantee minimum requirements for such bags.

28. Finally, the promotion of a particular alternative should consider the end-of-life phase in order to prevent harmful options to develop. This is particularly important for compostable bags, which are often referred as biodegradable bags and considered as one of the main alternatives to SUPB. However, important considerations should be made. On the one hand, irrespective of the material, these bags are single-use which implies impacts in terms of production.

29. As for final disposal, these bags are designed to biodegrade under industrial composting conditions, and thus a waste management system where organic waste is separated and treated is needed. In the absence of this system, compostable bags will have the same fate as conventional bags, therefore they will not solve the problem of plastic leakage into the marine environment nor in land. Currently, there is not any plastic material, whether it is made from fossil resources or bio-based, that allows for biodegradation in the natural environment within a reasonable period of time. In addition, due to their low thickness, these bags have a short life span, meaning that they easily fragment in smaller pieces, which in turn may exacerbate the problem of removal and contribute to the generation of microplastics.

30. In case the bio-waste management system is in place, the legal framework should require that these bags to be in conformity with biodegradable standards (e.g. EN 13432) to avoid false claims on biodegradability. In order to check the compliance with standards and norms, countries should ensure that appropriate human and technical resources are available to test biodegradable plastics. Capacity building and exchange could be promoted across countries.

31. In any case, it seems necessary to build governmental and citizens' capacity and understanding in relation to the notions of biodegradability, since there are clear misconception and misunderstandings in many of the countries. Annex V includes clear explanation of the most relevant concepts.

[98] See UNEP/MED WG.466 Inf.5 for more information

32. Finally, clear information for the population on the final disposal of these bags is needed since compostable bags might be perceived as an environmental harmless option; thus misleading behaviour and resulting in increased littering. In addition, the mix of compostable with conventional plastic may lead to problems in mechanical plastics recycling.

3.2. Adoption and implementation of a policy option (step 4)

33. After these preliminary steps, the policy option could be adopted and implemented, in consultation with the main concerned stakeholders. It should be noted that initiatives at a national level play an important role, including pilot projects which later on could be scaled up. As explained in Chapter 2, there are three main categories of options but the selected one may be a combination of them or a progression from “soft” to “hard” policy.

34. **Promote voluntary agreements with retailers:** There are two main options within these agreements: (i) to stop free distribution of bags (regardless of their thickness or even the material) and (ii) to stop distributing SUPB. For this, the government authority can take the lead and count on associations of retailers as main counterparts. Other stakeholders should be invited to negotiation meetings such as plastic bag producers and consumers’ organizations. The voluntary agreement should include additional actions such as awareness raising campaigns targeting customers or adaptation of the retail premises to accommodate alternatives to SUPBs (e.g. making available a safe space for shopping trolleys or letting customers shop with their own bags and other containers). A master template for such agreements is provided in Annex I.

35. Voluntary agreement may be applied to ultra-thin plastic bags, which are often out of the scope of compulsory charges, so the supermarkets can commit to take action against them, either by charging them or promoting alternatives.

36. However, in countries where the vast majority of the groceries sector is concentrated in small shops, additional measures are advised to reach that consumption model. In any case, voluntary agreements seem to be a convenient way to start reducing consumption, raising consumers’ awareness to persuade them to start switching to SUPBs alternatives and without major disruption for businesses.

37. **Implement regulatory economic instruments:** There are two main approaches for adopting legally backed economic instruments.

38. The first option consists of imposing compulsory charges to SUPB. It represents a legal enforcement of the voluntary agreement, meaning that the funds raised by this charge are kept by the retail sector. The government authority may decide on setting certain requirements for the retail sector, including:

- The types of plastic which are charged, generally defined by material and thickness;
- The bags that are exempted of the scope of the charge, e.g. ultralight plastic bags for weighting bulk products;
- Whether the retailers have flexibility in terms of price per plastic bag, or a minimum or fixed price is set for all retailers;
- To clearly indicate the price of the bag in the customers’ bill; and
- To report on the amounts of bags being sold.

39. A master template for this kind of regulatory economic instrument is included in Annex II to the present document.

40. The second option, referred as a tax or ecotax, entails setting-up a tax recovery system where retailers are obliged to report on the number of plastic bags being sold and the associated revenues raised. These revenues may be allocated to the general budget of the government or to a new or existing environmental fund, which could fund waste prevention, collection and recycling, which in turn would create jobs. The funds could be also allocated to the adaptation of SUPB industry. For this, collaboration with the administration in charge of finance is essential to assess the feasibility of such instrument and agree on an implementation roadmap. The whole process should be transparent to both retailers and consumers, conveying the "polluter pays" principle and message.

41. When implementing this tax, the government may consider the following elements:

- The physical or legal person that is subject to report and pay the fee;
- The types of plastic bags which are charged, generally defined by material and thickness;
- The amount to be levied per plastic bag;
- To clearly indicate the price of the bag in the customers' bill;
- The tax collector entity;
- How to proceed with the report and payment, including templates and calendar;
- The inspection procedure; and
- The sanctions resulting from non-compliance.

42. In both cases, it is important to find out how much consumers are willing to pay, so the charge is big enough to change behaviour while considering the community's buyer power. Another positive aspect of these instruments is that industry can progressively adapt, even get support through collected tax, and may not be so reluctant to this policy option being taken.

43. Another important element is to properly target all plastic bags considered as single-use, including those used for delivery service, in order to overcome possible by-passes. An option may be to charge all type of (plastic) bags to avoid overconsumption of non-charged ones.

44. However, a limitation of this option may be the application of the charge in contexts where small shops and even informal sector are notable, in a way that it may jeopardize implementation in larger commerce establishments.

45. A master template for this kind of regulatory economic instrument is included in Annex III.

46. Adopt a ban: There are several types of bans on the production and consumption of SUPB. When deciding on the specific approach, a key aspect to bear in mind is the type of alternatives being put forward (see Step 3). A wise approach, taken by many countries, is to promote reusable bags, regardless of the material, as well as permitting plastic bags for specific uses (e.g. waste collection, agriculture, industry, etc.). In the context where there is a bio-waste management system in place, compostable bags may be permitted as well.

47. In order to clearly determine which bags are permitted or not, the legal instrument must include the following information:

- Definition of single-use plastic bag, in terms of material, and minimum thickness/grammage and volume. This type of bag is then the target of the ban. Plastic bags that are above a certain

thickness/grammage threshold will be considered as multi-use or reusable bags and thus permitted.

- Exceptions to the ban, which may include:
  - certain applications such as industrial bags;
  - ultra-thin bags used to weight products in bulk; and
  - compostable bags.
- Labelling of the bags that are permitted in the country, often referred to adopted norms.
- System of penalties.

48. In addition, the legal texts often include the following information:

- The need to inform public authorities on the number of bags being sold. In some cases, registries of producers are established.
- Need to include bio-source content for permitted compostable bags.

49. The legal text might consider addressing the exceptions in the longer term, thus having different implementation periods. This might be the case for ultra-thin bags, which may be required to be compostable in the long term or just phased-out. In order to monitor and check the conformity with the law, the legal instrument may require the exceptions to the ban to have specific labelling, often according to standard and norms. This is particularly important for compostable bags, often required to be in conformity with EN 13432 or equivalent. For the other permitted bags, it may be needed to develop norms in case they do not exist yet. This allows for setting a clear a state of play and avoiding false claims. In any case, inspection authorities will need the means for verification.

50. In addition, there is the possibility to combine the ban with an economic disincentive to avoid overconsumption of some alternatives (e.g. paper and compostable bags). In terms of enforcement, it is necessary to adopt inter-institutional arrangements for the control and surveillance of ban implementation. A key aspect is to control the illegal production and import of plastic bags, which may represent an important burden on the public administration. In some cases, the control of the import of the raw material by a special procedure may be needed to fight against illegal manufacturing within the country.

48. A master template to develop a tailored made ban according to national context is included in Annex IV to the present document.

3.3. Accompanying measures (steps 5, 6, 7 and 8)

49. Step 5: Incentives to industry**:** This is especially important in the case of ban, but also in the case of charges, in order to bring the industry on-board. Eco-taxes could provide the funds for these incentives. Opportunities and guidance should be given to switch SUPBs producers to durable plastic applications or other product materials. Once the priorities have been set to promote certain alternatives to SUPB, options for upgrading their production capacity include: tax rebates, research and development funds, technology incubation, public-private partnerships, support to projects that recycle disposable items and turn waste into an alternative to SUPB, and reduction/abolishment of taxes on the import of material used to make alternatives.

50. In the case of bans, it might be needed to financially support the adaptation of SUPB producers to other options or businesses. For this, a plan should be elaborated, identifying the type of businesses that could benefit from public funds. The potential public grant to a specific company may be based on the contribution of SUPB to its annual turnover. Once the

businesses are identified, they could be invited to request funds by submitting an adaptation plan, which may be evaluated by experts. Alternatively, public aid could provide expertise for these companies so they are advised on best ways to adapt.

51. In the case of important presence of informal economy in the plastic bags industry, this informal sector should also be supported in phasing-out SUPB. A public funded programme could be established to offer other income sources such as grouping in cooperatives and training on the production of alternatives.

52. Step 6: Upgrade the waste management system**:** Eco-taxes are of great support in raising funds to enhance collection, recycling and final waste treatment, which are key to avoid plastic bags ending up as marine litter. Even if SUPB are eradicated, it should be considered that reusable bags are often made out of plastic (polypropylene, nylon, etc.), and thus their collection and recycling should be promoted to avoid improper disposal. In any case, further collaboration between producers and recyclers should be boosted to ensure higher recycling rates. This might be supported by including these bags within packaging EPR scheme in the country, if they exist, or to promote the adoption of such EPR schemes.

53. At a later stage, if compostable bags are regarded as a preferred alternative, the system should evolve to collect and treat bio-waste separately. Given the high organic waste proportion in many countries in the region, pilot projects on domestic and industrial composting could be implemented to assess the feasibility to extend the system to the entire country. This should be regarded as a necessary condition before legally promoting composting bags.

54. Step 7: Communication and participation**:** The policies to phase out the production and use of SUPB have proven to be a very sensitive issue. In fact, they play an important role in our daily life. For this reason, it is important to actively communicate and engage citizens and stakeholders in any policy being made at this regard. This communication could be based in the positive effects of switching towards reusable bags in terms of money savings on a short-term, compared to continuous SUPB purchase, rather than on general messages on the negative effects of plastic bags.

55. Step 8: Review and adapt**:** All policy measures should include a monitoring system to know how the production and consumption of bags and other options evolve over time. For example, plastic bags producers may be required to report in a given time period about the production and destination of their products. These provisions are often part of the policy instruments and are described above. Based on this, if the objectives are not met, a review should be made to improve implementation or adopt additional measures.

Annex I

**MASTER TEMPLATE FOR
VOLUNTARY AGREEMENTS IN THE RETAIL SECTOR**

Note:
This Annex presents a master template to elaborate a voluntary agreement for the reduction of single-use plastic bags in the retail sector. Each chapter of the text of the agreement is explained in italics, and some specific wording is proposed. Text in brackets may be customized according to parties' needs.
Two real examples, corresponding to Tunisia and Spain (region of Catalonia) can be consulted here: *https://arc.fastfolder.net/index.php/s/FPV2NyNauHC9J3x*

Voluntary agreement for the reduction of plastic bags [in the retail sector]

The agreement might be with parties other than the retail sector, such as producers and civil society organizations

[Date]

It might be placed at the end, as appropriate

BETWEEN

Identification of each of the signatory parties, as well as the legal representative, and including information such as address, identification number, and other details as appropriate. Often, the first party is a public authority as a promoter of the agreement. The other parties may be associations of private entities (e.g. retail associations, commerce associations, etc.)

[Party 1]
[Party 2]
[…]
Whereas:

Ascertainment on the issue of plastic bags according to the national context and roles of the signatories. It should particularly contain information on the production and use of plastic bags in the country, as well as any relevant initiative that have addressed this issue and consultation meetings prior to the agreement. A number of statements are provided herewith as examples.

- Plastics are one of the main materials of the modern economy due to their multiple properties, applications and low cost. Their use has been growing exponentially since the 50s and it is expected to double in the next 20 years.
- Single-use plastic bags have become an icon of plastic pollution and linear economy approach. The leakage of bags into the environment poses threats not only to biodiversity but also to the society, by hampering economic development and affecting public health.
- Single-use plastic bags rank among the most commonly found marine litter items in the Mediterranean Sea. The Regional Plan on Marine Litter Management in the Mediterranean, adopted by all the Contracting Parties to the Barcelona Convention in 2013, urges national authorities, among others, to take action to reduce single-use plastic bags.
- According to the study [xxx] the consumption in [xxx] is estimated in [xxx] bags/person/year.
- [Party 1] implements the [name of a policy framework/instrument that may address plastic bags waste, such as national waste plans].
- […]

Have adopted the following

AGREEMENT:

Chapter 1. Subject matter

The target of the agreement should be clearly identified. It should include the objectives of the agreement, reduction target and timing. The following wording is proposed as a basis. In the case that the agreement seeks to remove all single-use plastic bags from the supermarkets, an alternative wording is proposed

The following Agreement aims at establishing a cooperation framework among the signatories with the ultimate goal of correcting the excessive and unnecessary use of single-use plastic bags, defined as those which wall thickness is below [50-40] microns. The focus is on those that have handles, generally used as shopping carrier bags.
[The Agreement seeks to achieve a reduction of single-use plastic bags of [xx]% by 20[xx], respect to baseline situation in the year 20[xx].]
[The Agreement seeks to achieve the eradicate the distribution of single-use plastic bags in supermarkets as for [date].]

Chapter 2. Commitments by the signatories

This section identifies specific tasks for each of the signatories. It can reflect the commitments by the promoter (public authority) and the other signatories (often private organisations). A number of commitments are suggested as example.

The [name of the public authority] commits to:

- Prepare and implement a communication plan to disseminate the objectives and actions of the Agreement.
- Provide technical, institutional and communication support to the actions taken by the signatories of the agreement for the reduction of single-use plastic bags.
- To authorize the businesses/associations signatories of the agreement to use the logo of the [name of the public authority] to implement a campaign on the reduction of single-use plastic bags.
- Participate in the Steering Committee of the Agreement to follow up the results and propose new actions.

The signatory parties commit to:

- Promoting their associates to become members of the Agreement.
- Actively participate at the Steering Committee of the Agreement, informing the public authorities on the results achieved by the member entities.
- Participate in the design of measures and the indicators to implement them.
- Promote that their associates study the opportunities to reduce the number of single-use plastic bags and assess the feasibility of alternative measures.
- Member associates select a programme of measures to reduce the use of single-use plastic bags according to the characteristics of the commerce. The Appendix I provides examples of possible actions that might the taken by the associate members.
- Use the logo of the [name of the public authority] in the campaign to reduce single-use plastic bags, with prior conformity of the [name of the public authority] of the communication materials.

Chapter 3. Mechanisms to become member of the Agreement

The Agreement may be open to other stakeholders to become members, thus engaging more parties than the signatories.

The companies, individually or collectively under an association, may join the Agreement during its validity.
They will have to address the form presented in Appendix II to the [name of the public authority], including information on concrete actions to reduce single-use plastic bags.
The [name of the public authority] will inform the Steering Committee of the Agreement on the new members and the proposed measures will be evaluated within this committee.

Chapter 4. Validity

It may be stated a time horizon to achieve the expected result, or it might be left open until the achievement of the results. Both wordings are included as example.

[The validity of this Agreement will be of [x] years after the date of signature, and it is extendable by agreement of the signatories.]

[The agreement is valid until the achievement of the expected results or until the signatories decide otherwise.]

Chapter 5. Follow up and assessment

The means to follow up the implementation and results of the agreement may be established in this chapter, including the intervening parties and calendar. A steering committee may be established for this purpose. The following wording is suggested as example.

A Steering Committee is established to follow up and assess the achievements of the Agreement. It is composed of [one or more representatives] [the delegates] of the signatory parties.

The Steering Committee will meet at least [x] times per year with the following objectives:

- Proposal and follow up of the actions and measures to achieve the objectives of the Agreement.
- Definition of the indicators that allow for determining the achievement of the results of the Agreement.
- Evaluation and communication of the results obtained by the measures, safeguarding confidentiality of the businesses members.
- Inform on the new members joining the Agreement.

Final provisions for the adoption of the Agreement. The following wording is proposed.

And as proof of conformity, all parties formalize the Agreement in the place and date aforementioned.

[signature and identification of Party 1] [signature and identification of Party 2]

[signature and identification of Party x] […]

Appendix I. Examples of actions to implement to achieve the objectives of the Agreement

The appendix may stablish the rationale of the different measures that could be implemented as well as specific actions that may facilitate the adoption by the members of the agreement. Wording is proposed as it follows.

The following measures have the following rationale:

- Orientation of the choices towards more sound systems from the environmental, economic and social perspective.
- The respect to consumers' choice, regardless of the promotion of environmental public awareness.
- Incentivize the economic sector that offers bags or other means to adjust its offer to a new social demand, avoiding unique options that reduce the choice and the research of other solutions.
- Each of the measure should have associated indicators in terms of prevention and reuse that allow for assessing the achieved results.

Proposal of measures:

- Awareness campaigns for the reuse and recycling of plastic bags.
- Making space available to promote the use of shopping trolleys.
- Mechanisms to control and limit distributed bags.
- Include in the offer reusable freezer bags.
- Stop the delivery of single-use plastic bags
- Include in the offer reusable bags of different materials (tissue, paper or plastic) and capacity.
- Include in the offer reusable cardboard boxes
- Allow customers to enter the establishment with their own bags and other means.
- Use economic instruments by charging a fee on single-use plastic bags or offering discounts to customers that opt for reusable options.

Appendix II. Commitment to become a member of the Plastic Bag Agreement

The following form is proposed to invite stakeholders to become members of the Agreement and implement specific actions. The following wording is proposed.

[place] [date]
Mr/Mrs _____, acting as representative of the company/association _____ with address _____ in _____.

STATES:

- The voluntary commitment of the company/association _____ to become member of the Agreement established by [Party 1], Party [2], […] and […] to reduce single-use plastic bags.
- To be aware and acceptance of the objectives, rights and duties resulting from the aforementioned agreement.
- In order to attain the objectives of the Agreement, the company/association _____ commits to implement in the commercial premises the following actions[99]:
    - […]
    - […]
    - […]

And as proof of commitment, this document is signed in the place and date aforementioned.

[Signature of the representative]

[99] See examples in Appendix I

Annex II

**MASTER TEMPLATE
FOR REGULATORY ECONOMIC INSTRUMENT:
COMPULSORY CHARGES ON PLASTIC BAGS**

ANNEX II. MASTER TEMPLATE FOR REGULATORY ECONOMIC INSTRUMENT: COMPULSORY CHARGES ON PLASTIC BAGS

Note:
This Annex presents a master template to elaborate a regulatory economic instrument to impose compulsory charges on the distribution of single-use plastic bags. There might be two approaches to pass this economic instrument:

- *to embed/add this provision within a larger or existing legal instrument, such as a framework waste law; or*
- *to enact a specific legal instrument*

Each chapter of the text of the legal instrument is explained in italics, and some specific wording is proposed. Text in brackets may be customized according to instrument promoter's needs.
Two real examples, corresponding to Spain (State scope) and Spain (region of Catalonia scope) can be consulted here: https://arc.fastfolder.net/index.php/s/FPV2NyNauHC9J3x

FOREWORD

This section may contain information regarding the motivation and background for enacting/adding the provisions detailed hereinafter, as well as the process of consultation and approval. This will fully depend on each national context.

Article 1. Objective

This article may state the aim of the legal instrument. Generally, the objective of reducing the consumption of plastic bags should be addressed. The following wording is provided as example.

This [name of the legal instrument] aims at adopting measures to reduce the consumption of plastic bags in order to prevent and reduce the negative impacts that related plastic waste pose on the environment, economy and society.

Article 2. Scope of application

This article may determine the geographical and administration area where the provisions are applied. The following wording is proposed.

This [name of the legal instrument] concerns all plastic bags being put in the market in the territory of [name of the country].

Article 3. Definitions

Further to other definitions contained in previous legal instruments, this article may clearly identify the bags that are subject to the provisions of the legal instrument, as well as those that are exempted. Definitions are provided for the main types of bags, others should be included as appropriate. As for the definition of single-use and ultra-light plastic bags, based on international experience, it is recommended to use a threshold of 40-50 microns and 15-20 microns respectively.

[Reference to any existing legal instruments containing relevant definitions for the scope of this legal instrument]

a) “plastic”: generic term used in the case of polymeric material that may contain other substances to improve performance or reduce costs;
b) “plastic bags”: bags, with or without handles, made out of plastic, that are provided to consumers in goods and products selling points;
c) “single-use plastic bags”: light plastic bags, considered as those having a wall thickness below [xx] microns;
d) “cashier bags”: bags that are provided, paid or free of charge, at the cashier selling points as means to carryout grocery products;
e) “ultra-light plastic bags”: plastic bags which wall thickness is below [xx] microns, which are necessary for hygiene reasons, or which are provided as primary packaging for bulk products such as fruits, vegetables, meat, poultry or fish, among others, when the use supports the prevention of food waste;
f) “oxo-degradable plastic bags”: bags made out of conventional plastic materials with artificial additives that fragment into small pieces.
g) “compostable plastic bags”: bags made out of plastic capable to decompose in aerobic environments that are maintained under specific controlled temperature and humidity conditions.

Article 4. Measures to reduce plastic bags

This section may include the specific measures to avoid free distribution of plastic bags as well as the starting implementation date. Different phases and different actions (e.g. bans, which are not addressed in this template) may be considered to target the aforementioned types of plastic bags, as well as the exceptions. An example is provided which should be adapted to the national policy strategy.

As from [date]:

a. It is forbidden the free distribution of plastic bags at the selling points of goods and products, [with the exception of ultra-light plastic bags][with the exception of compostable bags] […].
b. [The merchants must charge [xx national currency] for each plastic bag provided to customers.] [The merchants must charge a fee for each plastic bag provided to customers of at least [xx national currency].] [The merchants must charge a fee for each plastic bag provided to customers]
c. Merchants will inform the consumers on the price of the plastic bags, exposing it in a visible place.
d. Merchants will include the plastic bag and price in the bill as a separate grocery product.

Article 5. Labeling of plastic bags

In the event compostable bags are exempted from the fee, a specific labelling should be needed for those bags, often referring to a national or international norm. For other bags, whether they are paid or free of charge, additional labelling conditions may be set. The following wording provides examples.

1. Compostable bags must include the label that indicates that it can be composted according to the norm [xxxxx] and that they can be disposed in specific bio-waste containers.
2. Plastic bags must include the label that indicates that they can be recycled and that they can be disposed in specific containers.

Article 6. Sanctions

The type of incompliance and related sanction may be specified, or referred to an existing legal document.

Annex III

**MASTER TEMPLATE FOR
REGULATORY ECONOMIC INSTRUMENT: TAX**

Note:
This Annex presents a master template to elaborate a regulatory economic instrument to enact a tax (often referred as eco-tax) on the distribution of plastic bags at the point of sale.
Each chapter of the text of the legal instrument is explained in italics, and some specific wording is proposed. Text in brackets may be customized according to instrument promoter's needs.
Two real examples, corresponding to Ireland and Bosnia and Herzegovina:
https://arc.fastfolder.net/index.php/s/FPV2NyNauHC9J3x

FOREWORD

This section may contain information regarding the motivation and background for enacting/adding the provisions detailed hereinafter, as well as the process of consultation and approval. This will fully depend on each national context.

Article 1. Objective

This article may state the aim of the legal instrument. Generally, the objective of reducing the consumption of plastic bags should be addressed. The following wording is provided as example.

This [name of the legal instrument] aims at adopting measures to reduce the consumption of plastic bags in order to prevent and reduce the negative impacts that related plastic waste pose on the environment, economy and society.

Article 2. Definitions

Further to other definitions contained in previous legal instruments, this article may clearly identify the bags that are subject to the tax, as well as those that are exempted. Definitions are provided for the main types of bags, others should be included as appropriate. Wording may be slightly changed to accommodate the specificities on which the tax will apply. As for the definition of single-use and ultra-light plastic bags, based on international experience, it is recommended to use a threshold of 40-50 microns and 15-20 microns respectively.

[Reference to any existing legal instruments containing relevant definitions for the scope of this legal instrument]

a) "plastic": generic term used in the case of polymeric material that may contain other substances to improve performance or reduce costs;
b) "plastic bags": bags, with or without handles, made out of plastic, that are provided to consumers in goods and products at points of sale;
c) "single-use plastic bags": light plastic bags, considered as those having a wall thickness below [xx] microns;
d) "reusable plastic bags": plastic bags made to be used more than once, considered as those have a wall thickness above [xx] microns;
e) "cashier bags": bags that are provided, paid or free of charge, at the cashier selling points as means to carryout grocery products;
f) "ultra-light plastic bags": plastic bags which wall thickness is below [xx] microns, which are necessary for hygiene reasons, or which are provided as primary packaging for bulk products such as fruits, vegetables, meat, poultry or fish, among others, when the use supports the prevention of food waste;
g) "oxo-degradable bags": bags made out of conventional plastic materials with artificial additives that fragment into small pieces.

h) “compostable plastic bags”: bags made out of plastic capable to decompose in aerobic environments that are maintained under specific controlled temperature and humidity conditions.

Article 3. Scope of application

This article may determine the geographical and administration area where the provisions are applied. It may establish the starting date to implement the tax, as well as on which items and who is liable for paying it. As for reusable bags, even if they are not levied, they might be charged to avoid overconsumption. The following wording is proposed.

1. This [name of the legal instrument] concerns single-use plastic bags distributed at points of sale in the territory of [name of the country].
2. As for [date] there shall be charged in respect of the supply to customers, at the point of sale to them of goods or products to be placed in single-use plastic bags in or at any shop, supermarket, service station or other sales outlet.
3. An accountable person shall be accountable for and liable to pay the levy.
4. The amount of the charge shall be [xx national currency] for each plastic bag.
5. The following classes of plastic bags are excepted from the tax:
    a. [Ultra-light plastic bags]
    b. [Reusable plastic bags sold to customers for a sum of not less than [xx national currency].
6. Where single-use plastic bags are charged by an accountable person, it should be itemised on any invoice, receipt or docket issued to the customer.

Article 3. Collection of the tax

This article may determine who and to whom the tax should be paid, including the time period and reporting format.

1. The [administration of finance] […] shall be the collection authority to whom the tax shall be payable.
2. The tax should be paid [time period] per year, according to the number of plastic bags commercialised by the accountable person.
3. The tax payer should submit a proof of payment along with the report as per Article 4, [number] days following the end of an accounting period.

Article 4. Registry and reports

This section may include how the entities subject to the tax should keep record of the plastic bags being sold and how this should be reported to the tax collection authority.

1. The accountable person shall keep record for the quantities of plastic bags purchased, the consumption of plastic bags and the state of the stock for those subject to the tax, as well as submitted reports and proofs of payments.
2. The accountable person shall keep record of those plastic bags being used that are not subject to the tax.
3. The accountable person will submit to the [collection authority] a report detailing the number of commercialised plastic bags, by using the form in Appendix I, and proof of payment.

Article 5. Inspection and sanctions

The type of incompliance and related sanction may be specified, or referred to an existing legal document. The non-submission of reports and proofs of payments shall be considered as non-compliance and shall imply monetary sanctions.

1. The supervision for the implementation of the [name of the legal instrument] is [name of the inspection authority].
2. The non-compliance by the accountable person of the reporting and payment provisions shall be sanctioned with [national currency].

Appendix I. Report of commercialised bags

Time period	Number of bags purchased subject to the tax	Number of bags commercialised subject to the tax	Tax levied per unit	Total tax revenue	Number of bags purchased not subject to the tax	Number of bags commercialised not subject to the tax
1st semester 20xx	xxxx	xxxxxx	xx	xxxxxx	xxxx	xxxxxx
2nd semester 20xx	xxxx	xxxxxx	xx	xxxxxx	xxxx	xxxxxx
…		…	…	…		…

Annex IV
MASTER TEMPLATE FOR COMMAND AND CONTROL INSTRUMENTS: BAN

Note:

This Annex presents a master template to elaborate a legal instrument to ban single-use plastic bags. Despite existing different approaches, for this template the ban includes manufacturing, import, distribution and use.

Each chapter of the text of the legal instrument is explained in italics, and some specific wording is proposed. Text in brackets may be customized according to instrument promoter's needs.
Four real examples, corresponding to Spain, France, Morocco and USA (State of California) can be consulted here: https://arc.fastfolder.net/index.php/s/FPV2NyNauHC9J3x

FOREWORD

This section may contain information regarding the motivation and background for enacting/adding the provisions detailed hereinafter, as well as the process of consultation and approval. This will fully depend on each national context.

Article 1. Objective

This article may state the aim of the legal instrument.

This [name of the legal instrument] determines de types of plastic bags that are permitted in the territory of [name of the country], including the [manufacturing], [import], [distribution] and [use].

Article 2. Definitions

Further to other definitions contained in previous legal instruments, this article may clearly identify the bags that are subject to the provisions of the legal instrument, as well as those that are exempted. Definitions are provided for the main types of bags, others should be included as appropriate. As for the definition of single-use and ultra-light plastic bags, based on international experience, it is recommended to use a threshold of 40-50 microns and 15-20 microns respectively.

a) "plastic": generic term used in the case of polymeric material that may contain other substances to improve performance or reduce costs;
b) "plastic bags": bags, with or without handles, made out of plastic, that are provided to consumers in goods and products selling points;
c) "single-use plastic bags": light plastic bags, considered as those having a wall thickness below [xx] microns;
d) "cashier bags": bags that are provided, paid or free of charge, at the cashier selling points as means to carryout grocery products;
e) "ultra-light plastic bags": plastic bags which wall thickness is below [xx] microns, which are necessary for hygiene reasons, or which are provided as primary packaging for bulk products such as fruits, vegetables, meat, poultry or fish, among others, when the use supports the prevention of food waste;
f) "oxo-degradable bags": bags made out of conventional plastic materials with artificial additives that fragment into small pieces.
g) "compostable plastic bags": bags made out of plastic capable to decompose in aerobic environments that are maintained under specific controlled temperature and humidity conditions.

Article 3. Measures

This section shall contain the provisions to ban specific types of plastic bags. Different phases and different actions may be considered to target the aforementioned types of plastic bags, as well as the exceptions. An example is provided which should be adapted to the national policy strategy.

1. As from [date]:
   a. [Single-use plastic bags to manufacturing, import, distribution and use is forbidden, [with the exception of compostable bags.] [It is forbidden to distribute single-use plastic bags to customers at the points of sale, [with the exception of compostable bags].]
   b. [It is forbidden to distribute oxo-degradable plastic bags to customers at the points of sale.]
   c. [Other types of bags distributed at the point of sale must have a minimum charge of [national currency.]

2. As from [date]:
   a. [The distribution of ultra-light plastic bags is forbidden, unless they are compostable.]
   b. [Re-usable bags must have a minimum [xx]% of recycled material.]

Article 4. Labelling

In the event compostable bags are exempted from the fee, a specific labelling should be needed for those bags, often referring to a national or international norm. For other bags, whether they are paid or free of charge, additional labelling conditions may be set. Additional provisions may be set for permitted bags. The following wording provides examples.

1. Permitted bags shall include the name of the manufacturer/importer, as well as manufacturing date.
2. The material, dimensions, volume and thickness.
3. Compostable bags must include the label that indicates that it can be composted according to the norm [xxxxx] and that they can be disposed in specific bio-waste containers.
4. Permitted plastic bags must include the label that indicates that they can be recycled and that they can be disposed in specific containers.
5. Re-usable bags must indicate the % of recycled content.

Article 6. Sanctions

The type of incompliance and related sanction may be specified, or referred to an existing legal document.

Annex V

TERMINOLOGY

Plastic: Material consisting of any of a wide range of synthetic or semi-synthetic organic compounds that are malleable and so can be molded into solid objects. Plastics are typically organic polymers of high molecular mass and often contain other substances. They are usually synthetic, most commonly derived from petrochemicals, however, an array of variants are made from renewable materials such as polylactic acid from corn or cellulosics from cotton linters.

Bio-plastic: The term bio-plastic is a term used rather loosely. It has been often described as comprising both biodegradable plastics and bio-based plastics, which may or may not be biodegradable. To avoid confusion it is suggested that the description "bio-plastic" is qualified to indicate the precise source or properties on the polymer concerned.

Bio-based plastics: Bio-based plastics are derived from biomass such as organic waste material or crops grown specifically for the purpose. Some polymers made from biomass sources, such as maize, may be non-biodegradable.

Common definitions regarding the biodegradation of polymers

Degradation: The partial or complete breakdown of a polymer as a result of e.g. UV radiation, oxygen attack, biological attack. This implies alteration of the properties, such as discolouration, surface cracking, and fragmentation.

Biodegradation: Biological process of organic matter, which is completely or partially converted to water, CO_2/methane, energy and new biomass by microorganisms (bacteria and fungi). The conditions under which "biodegradable" polymers will actually biodegrade vary widely. For example, a single-use plastic shopping bag marked 'biodegradable' may require the conditions that commonly occur only in an industrial composter (e.g. 50°C) to breakdown completely into its constituent components of water, carbon dioxide, methane, on a reasonable or practical timescale.

Mineralisation: In the context of polymer degradation, it refers to the complete breakdown of a polymer as a result of the combined abiotic and microbial activity, into CO_2, water, methane, hydrogen, ammonia and other simple inorganic compounds.

Biodegradable: Capable of being biodegraded.

Compostable: Capable of being biodegraded at elevated temperatures in soil under specified conditions and time scales, usually only encountered in an industrial composter (standards apply).

Oxo-degradable: Conventional polymers, such as polyethylene, which have had a metal compound added to act as a catalyst, or pro-oxidant, to increase the rate of initial oxidation and fragmentation. They are sometimes referred to as oxy-biodegradable or oxo-degradable. Initial degradation may result in the production of many small fragments (i.e. microplastics), but the eventual fate of these is poorly understood. As with all forms of degradation the rate and degree of fragmentation and utilisation by microorganisms will be dependent on the surrounding environment. There appears to be no convincing published evidence that oxo-degradable plastics do mineralize completely in the environment, except under industrial composting conditions.

EN 13432: European compostability standard for biodegradable packaging designed for treatment in industrial composting facilities and anaerobic digestion, requiring that at least 90% of the organic matter is converted into CO_2 within 6 months, and that no more than 30% of the residue is retained by a 2mm mesh sieve after 3 months composting. Standard EN 14995 describes the same requirements and tests, however it applies not only to packaging but plastics in general. The same holds for ISO 18606 "Packaging and the environment – Organic Recycling" and ISO 17088 "Specifications for compostable plastics".

ANNEX III

Operational Guidelines on the Provision of Reception Facilities in Ports and the Delivery of Ship-Generated Wastes in the Mediterranean

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List of Abbreviations / Acronyms

EU	European Union
IMO	International Maritime Organization
MAP	Mediterranean Action Plan
MARPOL	International Convention for the Prevention of Pollution from Ships
PoW	Programme of Work
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
UN	United Nations

1 INTRODUCTION

1.1 Background

1. The 18th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean ("the Barcelona Convention") and its Protocols, which was held in Istanbul, Turkey from 3 to 6 December 2013, adopted Decision IG.21/7 related to the Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities (LBS Protocol) to the Barcelona Convention, hereinafter referred to as the Marine Litter Regional Plan (UNEP(DEPI)/MED IG.21/9).

2. According to Article 9(5) of the Marine Litter Regional Plan, in conformity with the objectives and principles thereof, the Contracting Parties to the Barcelona Convention shall, in accordance with Article 14 of the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea ("the 2002 Prevention and Emergency Protocol") to the Barcelona Convention, take the necessary steps to provide ships using their ports with updated information relevant to the obligation arising from Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL) and from their legislation applicable in the field.

3. Furthermore, according to Article 14 of the Marine Litter Regional Plan, the MAP-Barcelona Convention Secretariat in cooperation with relevant international and regional organisations, shall prepare specific guidelines taking into account where appropriate existing guidelines, to support and facilitate the implementation of measures provided for in articles 9 and 10 thereof. Subject to availability of external funds these guidelines shall be published in different Mediterranean region languages.

4. The 19th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols, which was convened in Athens, Greece from 9 to 12 February 2016, adopted Decision IG.22/4 related to the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021) (UNEP(DEPI)/MED IG.22/28).

5. The Regional Strategy (2016-2021), which aims at assisting the Contracting Parties to the Barcelona Convention to implement the 2002 Prevention and Emergency Protocol, addresses the issue of marine litter in Specific Objectives 5 (Provision of reception facilities in ports), 6 (Delivery of ship-generated wastes) and 9 (To reduce the pollution generated by pleasure craft activities). It also addresses the related issue of illicit ship pollution discharges in Specific Objectives 7 (Improved follow-up of pollution events as well as monitoring and surveillance of illicit discharges) and 8 (To improve the level of enforcement and the prosecution of discharge offenders). Therefore, reducing (illegal) discharges of ship generated waste features among the priority areas of work of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) established within the framework of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, with a view to coordinating the activities of the Mediterranean coastal States related to the implementation of the 2002 Prevention and Emergency Protocol.

6. The UNEP/MAP Programme of Work (PoW) 2018-2019 adopted by the 20th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols, which was held in Tirana, Albania, from 17 to 20 December 2017, includes several activities addressing marine litter, including the implementation of the EU-funded "Marine Litter-MED" Project that is aimed at supporting the Contracting Parties to the Barcelona Convention from Southern Mediterranean/European Neighbourhood to implement the Marine Litter Regional Plan.

7. The EU-funded “Marine Litter-MED” Project has specific outputs on the development of a set of technical guidelines within the framework of Article 14 of the Marine Litter Regional Plan and one of its components, which is coordinated by REMPEC, focuses on measures related to the better management of marine litter from sea-based sources in ports and marinas in the Mediterranean, in particular the application of charges at reasonable costs for the use of port reception facilities or, when applicable, application of No-Special-Fee System, as well as the provision of reception facilities and the delivery of ship-generated wastes in ports and marinas in the Mediterranean.

8. In this context, REMPEC prepared the present document entitled “Operational Guidelines on the provision of reception facilities in ports and the delivery of ship-generated wastes in the Mediterranean, hereinafter referred to as “the Operational Guidelines”.

1.2 Goal and scope of the Operational Guidelines

9. The Operational Guidelines look in detail at issues related to the provision of Port Reception Facilities (PRF), including the type and capacity for the different types of MARPOL wastes in the different types of ports, and the operational procedures related to the use of the PRF and the delivery of ship-generated waste. The Operational Guidelines focus on the practical steps that can help to achieve the provision of adequate PRF in ports and marinas in the Mediterranean Sea, from the point of view of the port authority.

10. It should be noted that also other wastes and residues from ships, such as ballast water sediments and residues from anti-fouling systems, can be relevant when assessing the need for PRF. However, as these types of wastes do not fall within the scope of MARPOL, wastes and residues regulated by the Ballast Water Management Convention, the Anti-Fouling Systems Convention and the London Protocol/London Convention are not covered in the present document.

1.3 Marine litter from sea-based sources

11. Marine litter in the oceans exerts numerous harmful effects on marine life and biodiversity, as well as negative impacts on human health. In addition, marine litter negatively impacts on activities such as tourism, fisheries and shipping, and material that has the potential to be brought back into the economy by means of reuse or recycling is lost once littered. There are several different categories of marine litter, with plastics being the most challenging due to its low degradability and likelihood to enter the human food chain.

12. Litter enters the marine environment through various means and from numerous different origins, including land-based and sea-based sources. The main land-based sources of marine litter include municipal landfills, riverine transport of waste from landfills and urban areas or other sources along rivers and other waterways, discharge of untreated municipal sewage, industrial facilities and tourism, particularly recreational visitors to the coast/beach.

13. The primary ocean-based sources of marine litter are merchant shipping, ferries and cruise liners, fishing vessels, particularly with respect to lost or abandoned fishing gear, military fleets and research vessels, pleasure craft, offshore oil and gas platforms, and aquaculture farms.

14. It is frequently cited that globally 80% of marine debris originates from land-based sources, and 20% from ocean-based sources, however the origins of this ratio are unclear (NOAA, 2009). Besides, the importance of these sources in terms of their contribution to the marine litter problem varies significantly regionally and locally depending on the scale of these activities in the area, as well

as the policies regulating them. This means that there is significant variation in the amounts and types of debris arising from these sources regionally and locally, and indeed, seasonally[100].

15. The assessment of the trends in marine litter levels and its sources is crucial for identifying and adopting targeted measures for the different sources. In this respect, the monitoring actions in regional sea conventions, such as the OSPAR Convention, the Helsinki Convention and the Barcelona Convention, are very valuable. Monitoring is applied on uniform marine litter indicators and methods (like beach monitoring and fulmar and/or turtle stomach monitoring), which provide information on the trends in marine litter accumulation and effectiveness of measures. Furthermore, proper source identification is a key element in the monitoring programmes.

16. Although land-based sources are dominant in generating marine litter, sea-based sources actively contribute to the problem. Recent studies have shown that, although the majority of marine litter originates from land-based sources, a significant part comes from sea-based sources. This is notwithstanding the fact that garbage from ships, as listed in Annex V of MARPOL, is subject to strict rules and may not be discharged into the sea, with only few exceptions (e.g. food waste and non-harmful to the marine environment (HME) cargo residues). There is a strict ban on discharges of any plastic into the sea. Furthermore, Annex V requires that the loss of fishing gear is reported to the vessel's flag State and to the coastal State in whose waters the loss occurred.

17. Studies have indicated that in EU-waters sea-based activities, in particular shipping (e.g. lost containers) including fishing and yachting, but also offshore activities, are relevant sources of marine litter as they are responsible for an estimated EU average of 32% and values up to 50% for some sea basins[101]. Recent studies have also indicated that among the sea-based contributors to the problem of marine litter, the fishing sector features quite dominantly, with the recreational sector also taking a significant share[102]. And although garbage delivered in ports has increased since the introduction of Directive 2000/59/EC, a significant delivery gap remains, estimated between 60,000 and 300,000 tons, i.e. 7% to 34% of the total to be delivered annually.

18. In some areas, such as in certain parts of the Pacific and the North Sea**,** sea-based sources even prevail over land-based sources. Mismanaged garbage, and old and derelict fishing gear, are among the most prevalent items of (plastic) marine litter from ships.

2 REGULATORY FRAMEWORKS RELATED TO PORT RECEPTION FACILITIES

2.1 Introduction

19. As maritime and international shipping in general is a global industry, the majority of the legal and policy frameworks regarding maritime safety, pollution prevention and marine environmental protection are developed and maintained by international and intergovernmental bodies, such as the various UN agencies. However, as the origin of both the land- and sea-based legal and policy frameworks often differ from each other, also the resulting frameworks for the management of wastes that are generated onboard ships, on one hand, and requirements regarding the collection, delivery and processing of wastes generated in land-based facilities, on the other hand, also differ. In many cases, they may not even be compatible.

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[100] Unger A., Harrison N., 2016, "*Fisheries as a source of marine debris on beaches in the United Kingdom*", Marine Pollution Bulletin

[101] European Commission (DG ENV) study "to support the development of measures to combat a range of marine litter resources" (Eunomia, 2016).

[102] http://www.fishingforlitter.org.uk/assets/file/Report%20FFL%202011%20-%2014.pdf; Marine Pollution Bulletin 2016 Unger et al. (2016); UNEP OSPAR (2009); Marine Litter Distribution and Density in European Seas (2014); Eunomia (2016), p.95, 30% estimate share for the fishing sector, and 19% for the recreational sector; the balance of sea-based sources is provided by the merchant sector; Arcadis (2012) has estimated a share of 65% share for the fishing sector alone

20. The legal and policy framework for the collection, the transport and management of wastes from ships often finds its origin in regulations that mainly focus on the collection, transport and disposal, including storage, of wastes generated at land-based sources. It is therefore more land-oriented and may not always be compatible with the legal and policy framework for operations at sea.

21. For maritime shipping the International Maritime Organization (IMO), as specialized agency of the United Nations, is the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create an international regulatory framework for the shipping industry that is fair and effective, and universally adopted and implemented. It is therefore not a surprise that the majority of international rules and regulations regarding the environmental performance of shipping, including the onboard management of ship-generated wastes and the protection of the marine environment through the prevention of pollution by ships, originates from the IMO. Other international and regional regulatory and policy initiatives have been developed by the Basel Convention and the European Union.

22. The following table provides a visual overview of the legal framework regarding the management of ship-generated wastes and other ship-related residues at the international and regional level, in order to give an indication of the different conventions and the scope of their application.

Table 1: Overview of the legal framework at the international and regional level regarding the management of ship-generated wastes and residues

On board ships	At the sea-land interface	At land-based facilities
• United Nations Convention on the Law of the Sea (UNCLOS) • MARPOL Convention • Ballast Water Management Convention • Anti-Fouling Systems Convention • London Protocol and Convention	• MARPOL Convention • Basel Convention • Directive (EU) 2019/883	• Basel Convention • EU Waste Framework Directive 2008/98/EC

2.2 International regulatory framework

2.2.1 MARPOL Convention

23. The International Convention for the Prevention of Pollution from Ships (1973 as modified by the 1978 and 1997 Protocols), hereinafter referred to as “MARPOL”, is one of the most important international conventions regulating the marine environment. It was developed by the IMO aiming to preserve the marine environment by fully eliminating pollution by operational discharges of oil and other harmful substances from ships, and to minimize accidental spillage of such substances.

24. Together with its six annexes covering pollution by oil, chemicals, harmful substances in packaged form, sewage, garbage and airborne emissions, MARPOL works as a whole: the articles mainly deal with jurisdiction, powers of enforcement and inspection, while more detailed anti-pollution regulations are contained in the annexes.

25. In general MARPOL contains provisions in order to regulate the availability of adequate Port Reception Facilities (PRF), which types of ship-generated wastes can (and as a consequence also which cannot) be legally discharged into the sea, onboard waste management, and enforcement and inspections. The MARPOL requirements regarding the availability of adequate PRF are contained in the following regulations:

- Regulation 38 of Annex I
- Regulation 18 of Annex II
- Regulations 12 and 13 (passenger ships in special areas) of Annex IV
- Regulation 8 of Annex V
- Regulation 17 of Annex VI

26. In addition to MARPOL (including its Annexes), the IMO has adopted several guidelines related to the management of ship-generated wastes, providing additional tools to all stakeholders (private and public) in order to provide good practices. These practices can be used by governments when establishing stricter national or regional requirements, but also by port authorities when organizing the collection of waste from ships.

27. Guidelines related to the management of MARPOL Annex V are:

- 2017 Guidelines for the implementation of MARPOL Annex V (Resolution MEPC.295(71))
- 2018 Consolidated guidance for port reception facility providers and users (MEPC.1/Circ.834/Rev.1)
- 2012 Guidelines for the development of Garbage Management Plans (Resolution MEPC.220(63))
- 2012 Guidelines for the development of a regional reception facilities plan (Resolution MEPC.221(63))
- 2000 Guidelines for ensuring the adequacy of port waste reception facilities (Resolution MEPC.83(44)
- 2016 IMO Manual “Port Reception Facilities – How To Do It”

2.2.2 IMO Special Areas

28. The possibility to legally discharge waste at sea is an element that can influence the delivery of ship’s waste to PRF. Although MARPOL regulations have become stricter over the years, it is still allowed to – under specific conditions – discharge certain waste types at sea. These discharge criteria are included in the following regulations:

- MARPOL Annex I: Regulations 15 and 34
- MARPOL Annex II: Regulation 13
- MARPOL Annex IV: Regulation 11
- MARPOL Annex V: Regulations 4 and 6

29. Due to specific oceanographic, ecological and traffic characteristics of some sea areas, MARPOL defines certain sea areas as “Special Areas”, in which the application of stricter measures for the protection of sea pollution is required. Under MARPOL, these special areas are provided with a higher level of protection than other areas of the sea.

30. It should be noted that the Mediterranean Sea is designated as a special area under MARPOL Annexes I and V. An up-to-date list of all the IMO Special Areas can be found on the IMO website (http://www.imo.org – click on Marine Environment, then Special Areas).

31. As the discharge criteria for ship-generated wastes are stricter in Special Areas, ships sailing in those areas might not meet these criteria and therefore be required to deliver their wastes to a PRF. States and port authorities should therefore take into consideration the importance of compliance in these special areas.

32. It should be noted that, outside special areas, MARPOL Annex V cargo residues that are not considered harmful to the marine environment (non-HME) can, under certain conditions, be legally

discharged at sea. However, as the Mediterranean Sea is a special area under MARPOL Annex V, non-HME cargo residues (also contained in wash water) can only be discharged at sea if:

a. both the port of departure and the next port of destination are within the special area and the ship will not transit outside the special area between these ports (regulation 6.1.2.2 of MARPOL Annex V); and
b. if no adequate reception facilities are available at those ports (regulation 6.1.2.3 of MARPOL Annex V).

33. In order to protect the marine environment, it is therefore important that the governments of countries bordering the Mediterranean Sea ensure the availability of adequate PRF for the collection of MARPOL Annex V cargo residues, and notify the existence of these facilities in the IMO Global Integrated Shipping Information System database (GISIS, see also section 2.2.3).

Table 2: Summary of restrictions to the discharge of garbage into the sea under regulation 4, 5, and 6 of MARPOL Annex V and chapter 5 of part II-A of the Polar Code (source: IMO)

<table>
<tr><th rowspan="2">Garbage type[1]</th><th colspan="2">All ships except platforms[4]</th><th rowspan="2">Regulation 5
Offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platforms[4]</th></tr>
<tr><th>Regulation 4
Outside special areas
(Distances are from the nearest land)</th><th>Regulation 6
Within special areas
(Distances are from nearest land or nearest ice-shelf)</th></tr>
<tr><td>Food waste comminuted or ground[2]</td><td>≥3 nm, en route and as far as practicable</td><td>≥12 nm, en route and as far as practicable[3]</td><td>Discharge permitted</td></tr>
<tr><td>Food waste not comminuted or ground</td><td>≥12 nm, en route and as far as practicable</td><td rowspan="2">Discharge prohibited</td><td>Discharge prohibited</td></tr>
<tr><td>Cargo residues[5, 6] not contained in wash water</td><td rowspan="2">≥ 12 nm, en route and as far as practicable</td><td rowspan="2">Discharge prohibited</td></tr>
<tr><td>Cargo residues[5, 6] contained in wash water</td><td>≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2 and paragraph 5.2.1.5 of part II-A of the Polar Code)</td></tr>
<tr><td>Cleaning agents and additives[6] contained in cargo hold wash water</td><td rowspan="2">Discharge permitted</td><td>≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2 and paragraph 5.2.1.5 of part II-A of the Polar Code)</td><td rowspan="2">Discharge prohibited</td></tr>
<tr><td>Cleaning agents and additives[6] in deck and external surfaces</td><td>Discharge permitted</td></tr>
</table>

Garbage type[1]	**All ships except platforms**[4]		**Regulation 5 Offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platforms**[4]
	Regulation 4 Outside special areas (Distances are from the nearest land)	**Regulation 6 Within special areas** (Distances are from nearest land or nearest ice-shelf)	
wash water			
Animal Carcasses (should be split or otherwise treated to ensure the carcasses will sink immediately)	Must be en route and as far from the nearest land as possible. Should be >100 nm and maximum water depth	Discharge prohibited	Discharge prohibited
All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass, metal, bottles, crockery and similar refuse	Discharge prohibited	Discharge prohibited	Discharge prohibited

1 When garbage is mixed with or contaminated by other harmful substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

2 Comminuted or ground food wastes must be able to pass through a screen with mesh no larger than 25 mm.

3 The discharge of introduced avian products in the Antarctic area is not permitted unless incinerated, autoclaved or otherwise treated to be made sterile.

[4] Offshore platforms located 12 nm from nearest land and associated ships include all fixed or floating platforms engaged in exploration or exploitation or associated processing of seabed mineral resources, and all ships alongside or within 500 m of such platforms.

[5] Cargo residues means only those cargo residues that cannot be recovered using commonly available methods for unloading.

[6] These substances must not be harmful to the marine environment.

2.2.3 IMO's Global Integrated Shipping Information System (GISIS)

34. In order to facilitate the dissemination of information and promote public access to sets of data collection by the IMO Secretariat, the IMO has developed an internet-based database on information for shipping: the Global Integrated Shipping Information System[103] (GISIS). This database contains both information open to the general public and a member's area section with more specific information only accessible to registered IMO users.

35. The GISIS Port Reception Facility Database (PRFD) provides data on facilities for the reception of all categories of ship-generated waste. While the public is allowed free access (following a simple initial registration) to all the information on a view-only basis, only the respective party States can update data for reception facilities via a login password. The database aims at improving the rate of reporting alleged inadequacies of reception facilities so that the problem can be tackled more effectively.

36. Parties to MARPOL are also required to communicate the information on available PRF's in their ports into the PRFD.

2.3 Regional regulatory framework: Directive (EU) 2019/883 on port reception facilities for the delivery of waste from ships

2.3.1 Introduction

37. In 2000 the European Union adopted a specific regulatory tool addressing the issue of preventing pollution of the marine environment by waste from ships. The purpose of Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues is to reduce the discharges of ship-generated waste and cargo residues into the sea, especially illegal discharges, from ships using ports in the European Union, by improving the availability and use of port reception facilities for ship-generated waste and cargo residues, thereby enhancing the protection of the marine environment. Although the purpose of Directive 2000/59/EC is similar to the main goal of MARPOL, there are some differences regarding their key requirements (see overview in table 3). A new PRF Directive (EU) 2019/883 was adopted on 9th April 2019, which repeals Directive 2000/59/EC and puts in place some important regulatory changes.

38. The Directive (EU) 2019/883 applies to all ships (including fishing vessels and recreational craft but with the exception of any warship, naval auxiliary or other ship owned or operated by a State and used on government non-commercial service only), irrespective of their flag, calling at, or operating within, a port of an EU Member State, and to all ports of the EU Member States normally visited by these ships.

2.3.2 Key elements

39. Key requirements of Directive (EU) 2019/883 include:

a) An obligation for the EU Member States to ensure the availability of PRF adequate to meet the needs of ships normally visiting the port, without causing undue delay. In order to allow the

[103] https://gisis.imo.org/Public/Default.aspx

management of waste from ships in an environmentally sound manner and facilitate reuse and recycling, EU Member States are to ensure the separate collection of waste from ships, taking into account the waste categories defined in MARPOL;

b) Ports have to develop and implement a Waste Reception and Handling Plan (WRHP), following consultation with all relevant parties, in particular the port users. These plans shall be evaluated and approved by the competent authority in the EU Member State;
c) The master of a ship has to complete a waste notification form and forward it in due time (at least 24 hours prior to arrival), informing the port of call about the ship's intentions regarding the delivery of ship-generated waste and cargo residues;
d) Upon delivery the PRF-operator or the port authority is to issue a waste delivery receipt, the information of which needs to be electronically reported by the master of the ship;
e) A mandatory delivery for all ship-generated waste. However, there is a possibility for the vessel not to deliver waste if it has sufficient dedicated waste storage capacity till the next port of delivery;
f) The implementation of a cost recovery system applying the “polluter pays” principle through the application of a waste fee, providing an incentive to ships not to discharge ship-generated waste at sea. For ship’s garbage (MARPOL Annex V-waste, other than cargo residues) a 100% indirect fee system is required. In order to provide for a maximum incentive for the delivery of garbage, no direct fee shall be charged for such waste, in order to ensure a right of delivery without any additional charges based on the volume of waste delivered. The only exception is when the volume of waste delivered exceeds the maximum dedicated storage capacity, which is mentioned in the advance notification form: in that case an additional direct fee can be charged in order to ensure that the costs related to receiving this exceptional amount of waste do not cause a disproportionate burden on a port’s cost recovery system;
g) The establishment of an enforcement scheme, by which EU Member States ensure that any ship may be subject to inspection. Each EU Member State is to carry out inspections of ships calling in its ports corresponding to at least 15% of the total number of individual ships calling its ports annually. A risk-based approach is to be applied for inspections, based on information from the advance waste notification and waste receipt which are electronically reported and exchanged.

40. The Directive (EU) 2019/883 also provides guidance on what is to be considered an “adequate” port reception facility:

> “To achieve adequacy, the reception facilities shall be capable of receiving the types and quantities of ship-generated waste and cargo residues from ships normally using that port, taking into account the operational needs of the users of the port, the size and the geographical location of the port, the type of ships calling at that port and the exemptions provided for under Article 9.”

41. The Directive (EU) 2019/883 also contains five annexes:

a) Annex 1 provides an overview of elements to be addressed in the port’s Waste Reception and Handling Plan;
b) Annex 2 provides a standard format for the advance waste notification form for waste delivery to port reception facilities;
c) Annex 3 provides a standard format for the waste delivery receipt;
d) Annex 4 provides an overview of categories of costs and net revenues related to the operation and administration of port reception facilities
e) Annex 5 provides a format for an exemption certificate pursuant to Article 9 (exemption for frequent callers).

Table 3: Overview of the main differences regarding PRF requirements between MARPOL and Directive (EU) 2019/883:

	MARPOL	Directive (EU) 2019/883
Definitions:	Although both MARPOL and Directive (EU) 2019/883 contain several definitions of wastes and residues there are no commonly used definitions, which sometimes leads towards different understanding.	
Provision of adequate PRF:	Required by MARPOL	Required by Directive (EU) 2019/883
Ensure separate collection	No requirements in MARPOL	Required by Directive (EU) 2019/883
Downstream processing and treatment:	No requirements in MARPOL	Treatment, recycling, energy recovery or disposal to be carried out in accordance with EU waste legislation
Port waste plans:	Not required by MARPOL, although encouraged by IMO guidelines[104]	To be developed and implemented for each port. Required content of the plan is set out in Annex 1 of Directive (EU) 2019/883
Mandatory delivery of ship's waste:	Not required by MARPOL, except for certain types of cargo residues and washing waters (MARPOL Annex II)	Mandatory delivery of all waste carried on board, except in case of sufficient dedicated storage capacity
Advance waste notification:	Not required by MARPOL, although encouraged by IMO guidelines[4]	Required by Directive (EU) 2019/883, incl. the use of standardised format (Annex 2)
Waste Delivery Receipt:	Not required by MARPOL, although encouraged by IMO guidelines[105]	Required by Directive (EU) 2019/883, incl. the use of standardized format (Annex 3)
Cost recovery systems:	Not required by MARPOL, although encouraged by IMO guidelines[106]	Required by Directive (EU) 2019/883: cost for PRF, incl. collection and treatment, is to be paid by a fee from ships. Cost recovery system is to provide incentive not to discharge at sea. In order to increase transparency, the fee is to be calculated based on the costs and revenues listed in Annex 4.
Exemptions for frequent callers:	Not provided by MARPOL	Provided by Directive (EU) 2019/883 for ships engaged in scheduled traffic with frequent and regular port calls, that have an arrangement to ensure the delivery of the waste and payment of the fees in a port along the ship's route (incl. the use of a standardized exemption certificate in Annex 5)

Table 4: Overview of the main amendments made in Directive (EU) 2019/883 (comparing with Directive 2000/59/EC).

Article	Subject	Amendment
2	Definitions	• "waste from ships": means all waste, including cargo residues, which is generated during the service of a ship or during loading, unloading and cleaning operations and falls under the scope of Annexes I, II, IV, V and VI to MARPOL and passively fished waste.

[104] Consolidated guidance for PRF providers and users (MEPC.1/Circ.834/Rev.1).
[105] 2017 guidelines for the implementation of MARPOL Annex V (MEPC.295(71)).
[106] 2017 guidelines for the implementation of MARPOL Annex V (MEPC.295(71)).

Article	Subject	Amendment
		• "passively fished waste" means waste collected in nets during fishing operations • "recreational craft" means a ship of any type, with a hull length of 2,5 metres or more, regardless of the means of propulsion, intended for sports or leisure purposes, and not engaged in trade
3	Scope	The Directive (EU) 2019/883 shall apply to: (a) all ships, irrespective of their flag, calling at, or operating within, a port of an EU Member State, with the exception of ships engaged in port related services[107], any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on a government non-commercial basis; (b) all ports of the EU Member States normally visited by ships falling under the scope of point (a). EU Member States may decide to exclude the requirements related to advance waste notification, delivery of ship's waste and cost recovery systems at anchorage areas. This article also includes derogations for land locked EU Member States.
4	Provision of PRF	EU Member States shall ensure the availability of adequate port reception facilities, taking into account the needs of the port users. PRF are to ensure separate collection of ship's waste in order to facilitate reuse and recycling. In order to facilitate this process, PRF may collect the separate waste fractions in accordance with waste categories defined in MARPOL and its guidelines.
5	Waste reception and handling plans (WRHP)	• Appropriate WRHP's are to be in place and implemented for each port • The WRHP's are te be developed following ongoing consultations with the relevant parties, including in particular with port users or their representatives, and where appropriate local competent authorities, port reception facilities operators, and organisations implementing extended producer responsibility obligations and representatives of civil society. • Those consultations should be held both during the initial drafting of the plans and after their adoption, in particular when significant changes have taken place.
6	Notification	Waste information shall be reported electronically in the EU's information, monitoring and enforcement system[108]
7	Delivery of waste from ships	The master of a ship calling an EU port shall, before leaving the port, deliver all its waste carried on board to a port reception facility in accordance with the relevant discharge norms laid down in the MARPOL Convention. This requirement shall not apply in small ports with unmanned facilities or that are remotely located (provided that the EU Member State where such ports are located has notified these ports electronically).

[107] As defined in Regulation (EU) 2017/352

[108] SafeSeaNet

Article	Subject	Amendment
		Upon delivery, the PRF operator or the port authority where the waste was delivered shall complete a Waste Delivery Receipt (in Annex 3) and issue and provide it, without undue delay, to the ship. The operator, agent or master of a ship[109] shall before departure, or as soon as this has been received, electronically report the information from the waste receipt in the EU's information, monitoring and enforcement system. In order to ensure uniform conditions for the implementation of the exception based on sufficient dedicated storage capacity, implementing powers shall be conferred on the Commission to define the methods to be used for the calculation of the sufficient dedicated storage capacity on board. If it cannot be established based on the available information, including information electronically available in the EU's information, monitoring and enforcement system or in GISIS, that adequate facilities are available in the next port of call, or this port is unknown, the EU Member State shall require the ship to deliver, before departure, all waste that cannot be adequately received and handled at the next port of call.
8	Cost recovery systems	EU Member States shall ensure that the costs of operating port reception facilities for the reception and treatment of waste from ships, other than cargo residues, are covered through the collection of a fee from ships. These costs include the elements listed in Annex 4 (categories of costs and net revenues related to the operation and administration of PRF, incl. direct costs, indirect costs and net revenues) The cost recovery systems shall provide no incentive for ships to discharge their waste at sea. To this end, the EU Member States shall apply the following principles in the design and operation of the cost recovery systems in ports: (a) ships shall pay an indirect fee, irrespective of delivery of waste to a port reception facility; (b) the indirect fee shall cover the indirect administrative costs, as well as a significant part of the direct operational costs, as determined in Annex 4. The significant part of the direct operational costs shall represent at least 30 % of the total direct costs for actual delivery of the waste during the previous year. Costs related to expected traffic volume for the coming year can also be taken into account; (c) in order to provide for a maximum incentive for the delivery of waste as defined in Annex V to the MARPOL Convention other than cargo residues, no direct fee shall be charged for this waste, in order to ensure a right of delivery without any additional charges based on volume of waste delivered, except when this volume of waste delivered exceeds the maximum dedicated

[109] Falling within the scope of Directive 2002/59/EC

Article	Subject	Amendment
		storage capacity as mentioned in the form set out in Annex 2 to Directive (EU) 2019/883. Passively fished waste shall be covered by this regime, including the right of delivery; (d) in order to avoid that the costs of collection and treatment of passively fished waste are borne exclusively by port users, EU Member States shall cover, where appropriate, those costs from the revenues generated by alternative financing systems, including waste management schemes and European, national or regional funding available; (e) in order to encourage the delivery of residues from tank washing containing high-viscosity persistent floating substances, EU Member States may provide for appropriate financial incentives for their delivery; (f) the indirect fee shall not include the waste from exhaust gas cleaning systems, the costs of which shall be covered on the basis of the types and quantities of waste delivered; The part of the costs which is not covered by the fee referred to in subparagraph (b), if any, shall be covered on the basis of the types and quantities of waste actually delivered by the ship The fees may be differentiated on the following basis: - the category, type and size of the ship; - the provision of services to ships outside normal operating hours in the port; or - the hazardous nature of the waste. The fees shall be reduced on the following basis: - the type of trade the ship is engaged in, in particular when a ship is engaged in short sea shipping trade; or - the ship's design, equipment and operation which demonstrate that the ship produces reduced quantities of waste, and manages its waste in a sustainable and environmentally sound manner.
9	Exemptions	EU Member States may decide to exempt a ship calling their ports from the advance waste notification (art. 6), the mandatory waste delivery (art. 7) and the payment of the waste fee (art. 8), when the ship meets certain requirements related to the frequency and regularity of the port calls, the arrangement to ensure the delivery of the waste and the payment of a waste fee in a port along the ship’s route.
10	Inspections	EU Member States shall ensure that any ship may be subject to an inspection in order to verify that it complies with the requirements of Directive (EU) 2019/883.
12	Inspection commitments	EU Member States shall carry out inspections of ships calling in their ports corresponding to at least 15% of the total number of individual ships calling in the EU Member State annually. The total number of individual ships calling in an EU Member State shall be calculated as the average number of individual ships over the three previous years, as reported through the information, monitoring and enforcement system.

Article	Subject	Amendment
		EU Member States shall comply with the number of inspections by selecting ships on the basis of an EU risk-based targeting mechanism, facilitated by electronic reporting and exchange of information from the advance waste notification and the waste receipt.

3 PLANNING AND PROVISION OF PORT RECEPTION FACILITIES

3.1 Introduction

42. In order to ensure the provision of adequate and cost-efficient port waste management infrastructure, be it for the collection, storage and/or treatment of the ship-generated waste, several planning and information assessment steps are to be considered. Although the planning of waste management infrastructure seems especially logic and useful in large and industrialized ports, it is however an equally important step to be applied for smaller ports, fishing ports and marinas.

43. The key elements to be addressed are:

- Planning of port waste infrastructure;
- Collection of data and information;
- Assessing the information; and
- Decisions regarding the type of PRF.

44. As the collection and treatment of ship-generated waste is preferably embedded in an ambitious and well-developed wider waste management strategy aiming at an environmentally sound waste management linked to a sustainable and circular economy, it is therefore crucial that also this aspect is thoroughly assessed.

3.2 Planning port waste management infrastructure, including the integration of ship-generated waste in a wider waste management strategy

3.2.1 Planning port waste management infrastructure

45. The proper planning of a cost-efficient waste management infrastructure is of crucial importance in order to facilitate the needs of the ships calling the port. In addition, this waste management infrastructure is preferably embedded in a strategy aiming at environmental sound waste management and linked to a sustainable and circular economy.

46. When planning waste management infrastructure in a port area in general or PRF for ship's waste specifically, it should be kept in mind that, due to an extensive set of variable characteristics, ports can be very different:

- Geographical location, incl. the impact of Special Areas (implying stricter discharge criteria at sea) and/or seasonal influences (such as increased tourism);
- Size of the port;
- Types of traffic (commercial, fishing, recreational, navy, offshore support, etc.);
- Types of cargo being handled in the port;
- Number of ships calling the port;
- Size of the ships calling the port;
- Port structure and governance;
- Presence of industrial clusters in the port;
- Existing capacity for waste collection, storage and treatment; and
- Presence of densely populated areas in the port or in the immediate vicinity.

47. Also the specific ship-related elements influencing the delivery of ship-generated wastes are to be taken into account. As indicated by the EMSA study on "the management of ship-generated waste

types on-board ships[110]" ships can opt to treat waste on board and – when complying with the criteria – legally discharge the effluent at sea. Common examples are:

- The treatment of bilge water in an OWS and the subsequent discharge of the separated oil to a PRF and the water to the sea;
- Sewage is treated in different ways and if well treated can be disposed at sea;
- Food waste can be comminuted, shredded or passed through a grinder and afterwards disposed at sea or being collected in bins and delivered to PRF; and
- Wash water containing certain types of cargo residues are often discharged at sea.

48. It is therefore clear that the need for adequate PRF, including the downstream waste disposal facilities, is primarily determined by the port users' needs. And as their needs will be very different in differing ports, the provision of adequate PRF and the waste disposal options requires good planning and design.

49. Ports cannot provide adequate PRF for users without an accurate assessment of their needs. As a consequence, the development of a port waste assessment procedure or management plan is vital. Ships are customers of the port and meeting the needs of the ship while they are in port is simple "customer care".

50. It is generally agreed that port waste management planning is intended to identify common elements which all ports should consider when planning waste management infrastructure, regardless of the size and type of the port or the types of wastes received. Key elements during the planning phase are:

- Collection of data and information;
- Assessing these data; and
- Decisions regarding the type of port reception facility.

51. Each of these steps is explained more in detail in the following sections.

3.2.1.1 Collection of data and information

52. An essential first step in the planning phase of PRF is the collection of reliable data and information about the existing situation in the port, supplemented with an overview of the applicable regulatory framework. Key data and information to be collected should include:

- *Data/information regarding the port:*
    - Geographical characteristics;
    - Waterborne traffic;
    - Terminals and cargo flows;
    - Industrial clusters in the port;
    - Forecasts regarding the expected traffic in the near and mid-term future;
    - Safety requirements (e.g. LNG-terminals);

- *Ship-related data/information:*
    - Number and types of ships calling the port (commercial/non-commercial, chemical/oil tankers, passengers, fishing, recreational, etc.);
    - Forecast for the near and mid-term future;
    - Safety requirements (e.g. LNG);

- *Data/information regarding the types and quantities of ship-generated waste:*

[110] The management of ship-generated waste types on-board ships, 2017, CE Delft & CHEW, EMSA/OP/02/2016

  - An overview of the types and quantities of ship-generated wastes and residues currently received;
  - Estimates of the types and quantities of ship-generated wastes and residues that are expected to be delivered in the near and mid-term future, taking into account possible changes of traffic;
  - Waste streams in the port that are being generated through other activities (land-based industry, stevedoring and cargo handling, etc.);

- *Data/information regarding the waste handling:*
  - The options for disposal including temporary storage and (pre-)treatment for ship-generated wastes and residues that are already available in the port area and its vicinity;
  - The possible need for additional waste storage, pre-treatment and disposal capacity and infrastructure;

- *Applicable regulatory framework:*
  - Overview of the applicable legal requirements (national and local) regarding waste management in general and ship-generated waste specifically;
  - Overview of the key elements of the overarching waste management strategy.

53. According to the IMO 2017 "Guidelines for the implementation of MARPOL Annex V (resolution MEPC.295(71))" ship, port and terminal operators should consider the following when determining quantities and types of garbage on a per ship basis:

- Types of garbage normally generated;
- Ship type and design;
- Ship operating route;
- Number of persons on board;
- Duration of voyage;
- Time spent in areas where discharge into the sea is prohibited or restricted; and
- Time spent in port.

54. Although there might be differences depending on the way ports are being organized (private/public), the data and information on port characteristics will most likely be available at the port authority or the competent governmental administration responsible for ports. Also, the data regarding the types of ships, traffic and cargo turnover should be available there.

55. Data regarding the types and quantities of ship-generated waste might also be available at the port authority, although not every port authority registers it.

56. In case an advance notification scheme for ship-generated waste is being applied in the port, the information about the types and volumes of wastes intended to be delivered by the ship to the PRF should be available at the stakeholder receiving the advance notification form from the ship (in many cases it is the agent forwarding the information to the harbour master's office). In some ports, for logistical reasons, the providers of PRF may require advance notification from the ship of its intention to use the facilities[111]. Providing advance notification to the reception facility of the type and quantity of MARPOL wastes on board and the type and quantity intended to be delivered will greatly assist the PRF operator in receiving the waste while minimizing any delay to the vessel's normal port operation. A generally recommended practice is to provide the information at least 24 hours' notice, although specific requirements may vary.

[111] Further information on this requirement is provided in section 4 of the Guidelines for ensuring the adequacy of port waste reception facilities (resolution MEPC.83(44)).

57. If a ship visits a port on a regular basis, a standing arrangement with the PRF may prove to be most efficient. Although in EU ports the mandatory notification format provided by Directive (EU) 2019/883 is required, outside the EU shipmasters are recommended to use the standardized IMO Advance Notification Form[112]. Port authorities, agents and facility operators are urged to accept the standardized format; however, some operators may require an alternate form.

58. In many cases also existing PRF and waste collectors should be a reliable source of information, not only on amounts and types of wastes that are already being collected[113] but also regarding the existing infrastructure for collection, transport and disposal. Especially when a system with waste delivery receipts is being applied in the port, reliable data on delivered volumes and types of ship-generated wastes and residues should be available.

59. In case these data and information are not directly available, also the usage of questionnaires might be considered. However, a thorough consultation of stakeholders is in either case very much recommended.

3.2.1.2 Assessing the information

60. The goals of the assessment should be to firstly reveal shortcomings in existing practices, and secondly to suggest improvements. Also, the assessment should look into possible changes in the port's infrastructure (such as new terminals), operations (such as increased traffic) and management (such as introduction of new financial schemes).

61. Some of the key elements that should be addressed when assessing the information are:

Possible change:	**Possible impact:**	**Possible response:**
More ships calling (increased traffic)	More ships delivering waste	Additional collection and disposal capacity required
Other types of ships calling (new traffic)	Other types of waste being delivered	New types of receptacles required
Expansion of the port: new terminals in operation	More ships delivering waste, and other types of cargo residues and wash waters being delivered	Additional and specific types of receptacles/means of collection required
Introduction of financial schemes incentivising delivery (e.g. fee systems)	More ships delivering (more) waste	Additional collection and disposal capacity required

62. Other issues that are to be taken into consideration are:

- The expected investment and operational costs related to the new collection and treatment facilities;
- Means of transport (e.g. trucks, railway or ships) that may have to be commissioned and licensed;
- Agreements may be needed on who transports the waste;
- In case of a regional strategy, the international agreements that need to be prepared (such as the implications of transboundary movements of waste).

[112] Annex 2 of IMO Circular MEPC.1/Circ.834/Rev.1.
[113] As in most cases the PRF will use a register to note incoming and outgoing waste streams.

3.2.1.3 Decisions regarding the type of PRF

63. After the assessment of the data and information a decision will have to be taken whether additional and/or other types of PRF are needed in order to establish or maintain the necessary adequacy level, and whether additional waste management operations (such as storage and treatment) are required.

64. Choices will need to be made regarding, but not limited to:

- The type of port reception facilities required, including the necessary capacity for collection of ship-generated wastes and residues;
- Who will invest in and operate the reception facility as well as the downstream waste treatment infrastructure.

65. It should also be noted that the provision of additional PRF and/or waste processing and treatment infrastructure are preferably embedded in and complementary with an overarching waste management strategy, as mentioned in section 3.1.2 of the present document.

66. The selection of the type of reception facility that will be operated in the port is of key importance. While the disposal facilities for the ship-generated waste will always be located on shore, the equipment for the collection can either be mobile or shore-based at a strategic point. Options are to choose between different types of mobile and fixed port reception facilities, although in large ports both can be applied. Especially in case of fixed facilities, the choice of location for these facilities will be crucial. In that case a site selection assessment should be included.

67. Mobile PRF have the advantage that in general the investment cost is less than for fixed facilities, and that they can be put in operation rather quick and flexible. Possible disadvantages can be their interference with other operations, such as loading/unloading of cargo, and a restricted or prohibited access for mobile facilities on jetties, such as those where oil products, liquefied gases, noxious liquid substances or packaged dangerous goods are being handled.

68. Fixed facilities on the other hand have the advantage that they might be able to collect more types of wastes (as they can be designed and equipped in a way that all ship-generated wastes can be collected), that they can have a larger capacity for collection and storage, and that they can combine the collection, incl. storage and treatment, of different waste types, also from land-based facilities. A substantial disadvantage is the higher investment cost for these facilities, and the fact that they are to be located at a strategic location that is easily accessible for ships.

69. More information about the types of PRF is provided in chapter 4 of the present document.

3.2.2 Development of integrated ship-generated waste management strategy

70. The development of a waste management strategy is a powerful tool to establish a coherent system of integrated waste management practices and facilities. A proper waste management strategy leads to an efficient and effective operating waste management system easing the transition towards a circular economy, and therefore it should facilitate the development of regulations, procedures and infrastructure that lead towards the environmentally sound management of both hazardous and non-hazardous wastes. It describes the objectives and goals, and it outlines the practical issues such as collection, transport and disposal, including storage.

71. Key stakeholders such as governments and local authorities, waste generators, waste collectors and transporters, dealers, brokers, waste disposal facilities and non-governmental organizations, all have a crucial role to play.

72. When developing a waste management strategy for ship-generated waste delivered in ports, it might be useful to consider the following elements:

- *Administrative, legislative and policy measures:*
    - Choose the optimal level to implement the different legislative and administrative measures;
    - Specific schemes for licensing and permitting for the collection and disposal of ship-generated wastes and residues;
    - Apply a ship's waste fee systems in order to incentivize a maximum delivery of ship-generated wastes and residues to port reception facilities, in order to get as much waste as possible from ship to shore and thus avoiding discharges at sea;
    - Incentivize the delivery of segregated waste streams rather than mixtures of wastes, as the recovery of segregated waste is usually much easier;
    - Embedding the management of ship-generated wastes in a general waste strategy, facilitating the circular economy;

- *Technology and facilities required:*
    - Provision of adequate port reception facilities, in order to meet the port users' needs and facilitate a smooth delivery from the ship without causing undue delay;
    - Introduce modern technology to be implemented by the waste management industry, in order to minimize the impact of waste management towards the environment, avoiding emissions to land, water and air;

- *Processes and coordination mechanisms:*
    - Stakeholder involvement both from the industry side as from competent authorities, in order to facilitate communication and exchange of information and practices;
    - Cooperation between ports;
    - Install a modern data and information system monitoring the delivery and management of the delivered ship-generated wastes and residues, such as web-based systems providing direct access to all stakeholders and enforcing authorities.

73. Some of these elements are described more in detail below:

3.2.2.1 Waste prevention and minimization:

74. As a priority, waste prevention and minimization are key elements of a waste management strategy. Unnecessary waste generation burdens on waste transport and disposal facilities, and should be avoided. Of course, it is not always possible to efficiently incentivize waste prevention and minimization on board ships by applying land-based regulations. Some ports therefore have implemented voluntary (financial) incentive schemes, such as a reduction of port fees or the (partial) reimbursement of waste fees for ships that have installed technology or apply management schemes that lead to reduced amounts of on-board generated waste.

3.2.2.2 Addressing both ship- and land-generated waste:

75. A basic principle when developing a waste management strategy for ship-generated wastes and residues that are being delivered to reception facilities in a port or terminal, is that these ship-generated wastes should not be seen separate from land-based wastes: after all, ship-generated waste systems within a port do not exist in isolation from the rest of the port operations, services and infrastructure, and becomes a part of the total waste stream of a port, once received on shore. As both ship-generated wastes and land-generated wastes in the port are to be managed in an environmentally sound manner, it is obvious that a proper waste management strategy should address the management of both ship-generated wastes and land-generated wastes, either from a domestic or industrial origin.

76. Especially in smaller ports such as local ports, fishing ports and marinas, the volumes of ship-generated wastes delivered to PRF might not be sufficient enough in order to develop a cost-efficient waste management. Still, when combining the ship-generated wastes with similar wastes generated by land-based industrial activities and municipal wastes, volumes might be sufficient enough in order to establish not only an economically viable business opportunity, but also facilitate environmentally sound waste management.

3.2.2.3 Cooperation between ports:

77. Increased cooperation between ports might also be a valuable and economically viable option. In this case the strategy would be that all ship-generated wastes can be received in all of the participating ports, but then subsequently are being transported to central disposal facilities. Such a strategy can be more cost-efficient and effective than the provision of disposal facilities in each of the participating ports.

78. An inter-port strategy may be applicable at a regional level, where ports in neighbouring countries cooperate, or on a subnational level, where ports in one country cooperate. In particular if ports are located in remote areas or in case of a cluster of small ports (e.g. located on several small islands), inter-port cooperation in the field of reception and treatment might be worthwhile to consider.

79. It can be noted that the IMO has already developed a specific framework and guidance for addressing the adequacy of port reception facilities on a regional and inter-port level:

- *2012 Resolution MEPC.216(63): Regional arrangements for port reception facilities under MARPOL Annexes I, II, IV and V;*
- *2012 Resolution MEPC.217(63): Regional arrangements for port reception facilities under MARPOL Annex VI (and Certification of marine diesel engines fitted with Selective Catalytic Reduction systems under the NOx Technical Code 2008);*
- *2012 Resolution MEPC.221(63): Guidelines for the development of a regional reception facilities plan.*

3.2.2.4 Circular economy:

80. Another important element is that an integrated approach to waste management incorporating the entire life cycle of waste, from the moment of generation until its disposal, may save considerable future expenses (the so-called “cradle-to-grave approach”). As ship-generated as well as land-generated wastes contain valuable materials, they might be recovered as a resource material for other industrial activities. Final disposal of these wastes would be an inefficient use of resources, and recovery options should be explored (the so-called “cradle-to-cradle approach”).

4 TYPES OF PORT RECEPTION FACILITIES

4.1 Introduction to the types of PRF

81. When arranging the provision of reception facilities for each Annex of MARPOL, it is clear that port authorities and terminal operators should be aware of the needs of the ships calling their premises. Although ports should identify the ships’ needs on a more individual basis, in general almost every port will need reception facilities for garbage (MARPOL Annex V). Other ports (bunkering ports, major traffic ports, oil terminals and refineries that load oil in bulk) will also need reception facilities for oily residues. Depending on the ports’ characteristics, some ports will also need PRF for specific types of ship-generated wastes (e.g. fishing nets) and residues (e.g. wash waters containing Noxious Liquid Substances).

82. While the disposal facilities for ship-generated waste will be located on shore, the collection facilities can either be mobile or shore-based at a fixed point. Options are to choose between different

types of mobile and fixed port reception facilities, although in large ports both can be applied. Especially in the case of fixed facilities, the choice of location will be crucial. In that case a site selection assessment is to be included.

83. According to the IMO "Guidelines for ensuring the adequacy of port reception facilities" (resolution MEPC.83(44)) waste reception facilities should be available in all ports where there is a need for ships to deliver wastes ashore. They should be easily accessible and be equipped to deal with the various waste streams and quantities that users deliver. Reception facilities must be able to deal with the range of wastes that is likely to arise from ships using the port. Where appropriate – depending on the type of traffic – the PRF should be capable of handling wastes resorting under one or more of the MARPOL Annexes I, II, IV, V and/or VI, although it is also possible to provide PRF for specific types of wastes only (e.g. liquid hazardous wastes such as wash waters containing certain chemicals).

84. It is necessary for ports to provide adequate reception facilities to cater for each type of waste delivered by the ships using their port, being both cargo residues and wastes generated through the normal operation of the ship. Following a consultation process (as also described in section 5.5 of the present document) the port will be in a better position to tailor the facilities it will need to provide in order to meet individual circumstances according to the port's normal traffic.

85. For various waste streams, where appropriate, port authorities may prefer ship operators or their agents to make their own arrangements with waste contractors. However, the port authority must retain responsibility for ensuring that the reception facilities provided are sufficient for the amounts and types of ship-generates wastes and residues received. The port authority can do this by exercising general oversight as part of its waste management plan.

86. Some authorities impose specific requirements regarding quarantine waste (such as food and catering waste) from international modes of transport. Therefore, this type of ship-generated waste may require separate receptacles, which should be clearly marked and sufficiently secured to prevent birds and animals from entering. The location of facilities for quarantine waste should not present an increased health risk to the people living in the vicinity of the site, nor during its transportation, treatment and final disposal. In addition, ports should ensure that specific national requirements relating to quarantine wastes are properly notified and communicated to the ship owners and operators, and their agents.

87. It can be noted that also the ISO International Standard 16304 relating to the "Arrangement and management of port reception facilities[114]" provides guidance regarding the selection of types of port reception facilities.

4.2 Mobile port reception facilities

4.2.1 Floating reception facilities

88. When choosing for floating reception facilities for ship-generates waste, barges (either being towed or self-propelled) provide several advantages. As barges used for collecting liquid ship-generated wastes and cargo residues in most cases have limited draught requirements, they will present little difficulties in terms of adequate water depths. In some cases, barges can also be used for the simultaneous collection of both solid and liquid ship-generated wastes. A disadvantage of a combined collection, however, could be that on board of a tanker barge there might not be sufficient free space to provide for a segregated collection of the solid ship-generated waste (e.g. by using several skips on deck) in the case the ship wants to land segregated waste streams.

[114] The ISO Standard 16304 is available on the ISO website (www.iso.org).

89. Also, sufficient calm weather berthing space and suitable docking facilities must be made available for the delivery of the wastes and residues that are being collected. Port reception facility barges can often use berthing facilities, which were built for other purposes. In ports where berths have become obsolete due to increased ship size, the old berths may be converted into docking port reception facilities for barges.

90. When using floating reception facilities, the ship-generated waste is off-loaded directly from the delivering ships to a collecting barge. For the collection of garbage, care should be taken that nets or other means of coverage are used to prevent garbage from ending up into the water. In case of collecting oily wastes, adequate spill remediation equipment is to be available on board.

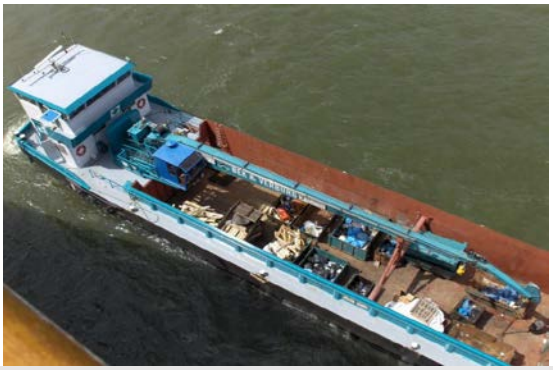
91. When the ship-generated wastes and cargo residues are being collected by a barge or other floating collection device (e.g. a towed pontoon), the waste at some point needs to be off-loaded to shore to be hauled to a storage and/or disposal facility. Some provisions must be made for off-loading the waste barge either in the port at which the wastes and residues are being collected, at the disposal site (if it is accessible to the barge), or at another port if the wastes and residues are being transported by water to another port.

92. Some examples of floating reception facilities:

Barge collecting liquid oily waste
(Photo credits: MAC² Antwerp, Belgium)

Barge for the collection of garbage
(Photo credits: Martens Cleaning, Vlissingen NL)

Barge collecting garbage only
(Photo credits: Vlamo, Antwerp, Belgium)



Barge collecting segregated garbage
(Photo credits: Bek & Verburg, Rotterdam, NL)

4.2.2 Vehicles, trucks and skips

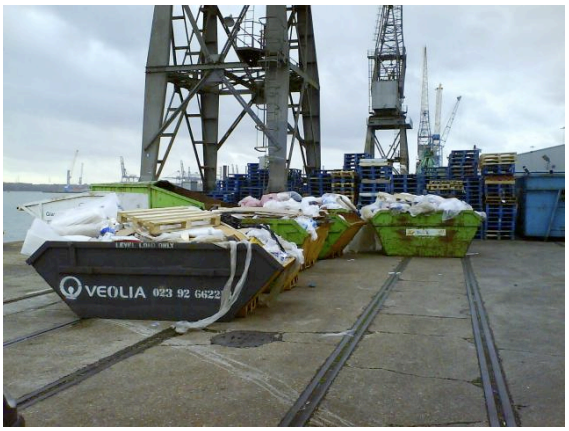
93. When land vehicles are used for the reception of ship-generated waste, a high flexibility can be achieved not only regarding the place of collection of the wastes, but sometimes it can also be combined with a shorter service waiting time as compared to barges. However, while vehicles share to a large extent the same advantages as floating PRF, there are certain aspects that need to be observed: the loading capacity of vehicles is usually smaller than the capacity of barges, and terrain and road surfacing in the port might not always be suitable for a safe and swift transport.

94. Trucks or other vehicles that are used to collect solid ship-generated waste (such as garbage) by off-loading directly from ships, require easy access to get close to the ships, which requires a good road system within the port area and terminals. Good logistics will be required to coordinate the waste collection. As with collecting barges, care should be taken during off-loading for garbage not being blown into the water. In the case of the collection of segregated waste streams it might also be necessary to order more than one vehicle, in order to prevent the residues getting mixed (e.g. hazardous with non-hazardous solid waste).

95. It can be noted that also receptacles such as skips and containers can easily be transported to a berthing area where ships intend to deliver solid wastes (e.g. garbage). An advantage is that in those cases a truck can transport the receptacle to the berthing place in the port, leave it there for the period of time the ship needs for delivering the waste, and return afterwards for collection when the receptacles are filled with the garbage. However, in that case a good communication between the ship and the port reception facility is necessary in order to prevent that the receptacles being used have sufficient collection capacity and are adequate (e.g. in case of delivery of food waste) for the ship's use.

96. Some examples of vehicles and skips being used as reception facilities:

Tank truck collecting oily waste
(Photo credits: Kayak Maritime Services, Antwerp, Belgium)



Receptacles for garbage from ships
(Photo credits: Veolia)

4.3 Fixed port reception facilities

97. An alternative for the mobile collection of ship-generated waste is to have one or more centrally located fixed shore-based waste reception facilities, or fixed collection points with containers or skips. For smaller ports this might be a suitable option, especially when the collection is organized on a strategic place in the port (e.g. a lock providing the main access to the port).

98. A specific advantage of a fixed PRF is that its operations can be extended and combined with waste (pre-)treatment. For large ports the main disadvantage of a fixed reception facility is that in order to deliver wastes and residues, a ship might have to shift berths if the reception of the ship-generated waste is located at a fixed place somewhere else in the port. Shifting berths is a very time-consuming and expensive operation, which may lead to undue delay or ships not being keen to use the PRF. If PRF are located in a less suitable place, delays, congestion and an increased risk of accidents and collisions will result. Appropriate sites for fixed garbage receptacles therefore include wharves adjacent to moorages, access points to docks, fuel stations and boat launching ramps.

99. Depending on the size of the port, stationary receptacles can be placed either in one central location or at multiple sites within the port area. The space required depends on the number and type of receptacles to be placed together, and on the types and volumes of ship-generated waste to be collected at a single site. For example, some countries have strict requirements regarding the collection

and disposal of international catering waste, often referred to as quarantine waste. In these cases, waste contractors have to provide separate bins in order to collect the ship-generated waste concerned.

100. In smaller ports such as fishing ports and marinas, limited types of fixed reception facilities can be applied, in cases when:

a) Only limited amounts of ship-generated wastes will be delivered in those ports; and
b) Although they can be specific (e.g. fishing nets, synthetic fishing gear, etc.), also limited types of ship-generated waste (mainly household wastes and garbage) will be delivered.

101. In marinas it is not always necessary to provide large and differentiated reception facilities. As in these ports the main type of ship-generated waste delivered will be garbage and household waste, general receptacles designed for the collection of the most common fractions of household waste will be sufficient. However, depending on the size of the port (e.g. facilitating large motor yachts) and the number and type of the ships calling, it might be useful to equip the facility with a pumping station for the collection of bilge water (oily water mixture, mainly consisting of water) and/or waste from chemical toilets.

102. For reception of oily residues and other liquid ship-generated wastes such as sewage, the construction of pipelines to each berth might be a feasible option, especially if the reception is combined with a tank cleaning facility, e.g. at an oil terminal.

103. If receptacles are placed at a designated site for the collection of ship-generated wastes and cargo residues, they can be placed in a compound or environmental shelter, which is used to physically and visually shield the containers, to discourage use by non-port users, and to prevent the ship-generated wastes from blowing away.

104. Some examples of fixed PRF:

Fixed reception and treatment facility
(Photo credits: MAC^2 Antwerp, Belgium)

Receptacles for collecting ship-generated waste at a designated and covered area
(Photo credits: Peter Van den dries)

Containers for garbage, strategically located at an entrance lock in the port
(Photo credits: Peter Van den dries)

5 COLLECTION AND STORAGE OF SHIP-GENERATED WASTES

105. The effectiveness of ships to comply with the MARPOL discharge requirements, especially within Special Areas, largely depends upon the availability of adequate PRF. Hence, the provision of adequate reception facilities at ports and terminals for the reception of ship-generated wastes and cargo residues is essential. As final treatment facilities, incl. facilities for recycling and disposal, not necessarily have to be located within the port area, also storage infrastructure is to be developed.

106. When designing and developing adequate PRF for ship-generated wastes, criteria are in general based on the required collection capacity (the amount that can be received from a ship, without causing undue delay) and the further disposal and storage capacity for these waste streams (choice of disposal options). When specifically looking at the requirements for temporary storage in order to ensure an environmentally sound waste management, it should be noted that also the need for segregated storage of certain waste streams is to be taken into consideration, in order to facilitate the recovery of wastes. Especially when certain MARPOL Annex V wastes and residues already have been segregated on board the ship, the port reception facility should be able to receive and store the different waste streams separately. This facilitates the disposal of the wastes according to the waste management hierarchy. Appropriate and designated storage capacity and equipment is therefore indispensable. Also for hazardous wastes some general requirements for appropriate collection and storage should be taken into account, such as:

- Receptacles used for the storage of hazardous wastes are to be made of material that is compatible with the waste (e.g. for corrosive wastes polyethylene containers are better than metal drums);
- Containers must be leak proof;
- For specific hazardous wastes secondary containment might be necessary;
- Receptacles should be properly labelled;
- Incompatible hazardous wastes are to be kept separate; and
- Receptacles for hazardous wastes should be kept closed and out of the weather.

107. As the alternatives for the collection, storage and transportation of ship-generated waste largely depend on the type (and amount) of the waste, the options for collection and storage presented in this section will use the categorization applied in the different MARPOL Annexes.

5.1 Options for the collection and storage of MARPOL Annex I wastes

108. Liquid oily wastes generated on board ships are in general mixtures of oil, water and sediments. The exact composition between these components can differ significantly, depending on

the place where the oily mixture is generated on board the ship, such as oily bilge water, oil residues (sludge), oily tank washings (slops), dirty ballast water, or scale and sludge from tank cleaning.

109. Oily residues consist mainly of oil that might be contaminated with water, whereas oily tank washings, bilge water and dirty ballast water consist mainly of water contaminated with a limited amount of oil. For collection purposes sludge is in general considered to be a separate category, because of its higher solids content, the fact that in some cases sludge is not easily pumpable, and contains a considerable amount of oil (50-75 %).

110. As after collection liquid oily waste will be only temporarily stored on the barge, it might not be advisable to use on-board oil/water separators. After proper chemical analysis, separation of oily-water mixtures is preferably performed in land-based waste treatment facilities. In addition, barges usually do not have sufficient space for installation of a separation unit. Furthermore, in many ports the effluent discharge from a barge into the dock water might be prohibited due to local water quality regulations.

111. On shore collection can be done using tank trucks or at a central fixed collection facility. In these cases, storage tanks with pumping facilities for the oily residues will be needed, to which the ships, collection barges or collection vehicles (depending on which system is used for collection) can discharge their (collected) oily residues.

5.2 Options for the collection and storage of MARPOL Annex II wastes

112. Depending on the categorization of the MARPOL Annex II noxious liquid substances in one of the sub-categories X, Y, Z or “other”, tank cleaning is to be carried out. And as certain cargo residues and washing waters from cargo holds contain substances that are not allowed to be discharged at sea, they therefore need to be delivered to a PRF suitable for the collection and temporary storage in port of substantial amounts of wash waters.

113. Tanks for chemical cargoes are usually cleaned using hot or cold water in which cleaning additives might be added. Some noxious liquids cannot be cleaned with water only, and specific cleaning agents are required for proper tank cleaning. The main concern for a PRF collecting MARPOL Annex II residues is that the received cargo residues in wash water can contain a wide variety of noxious liquid substances, each with their own special chemical characteristics and toxicity. Therefore, also temporary storage facilities will have to be capable to deal with a large variety of residues.

114. MARPOL Annex II wash water containing residues to be categorized as noxious liquid substances usually result from mandatory prewashes and commercial tank cleaning activities and therefore the option exists to combine tank cleaning facilities with PRF. As the volumes of these wash waters in most cases will be substantial, the collection will require efficient pumping devices and relatively large storage tanks. Both barges and trucks certified for the carriage of dangerous goods can be used, but also fixed PRF that can combine the collection of wash waters containing noxious liquid substances with the cleaning activity itself.

115. Still, as it is common for chemical tankers to wash their own tanks leading to situations that ships calling a port already have large amounts of washing water on board which they might want to deliver to a reception facility, pumping devices and storage tanks might be required at a central place in the port. As the amount of this type of waste may be substantial and the variety of the possible residues big, it is advisable to consult with the relevant cargo handling companies in order to get a good insight of the amounts and types of washing waters to expect

116. As these wash waters containing noxious liquid substance are in many cases to be considered to be hazardous according to land-based waste catalogues, their handling requires strict safety measures. The most important safety aspect for the reception of MARPOL Annex II wastes is to see to

it that they are not mixed, as this may create risky situations for both the environment and human health.

5.3 Options for the collection and storage of MARPOL Annex IV wastes

117. Sewage from ships consists of so-called “black water” (sewage from toilets and urinals) and grey water (generated from activities such as laundry, dishwashing and bathing). In most cases black and grey water are mixed. In some cases, sewage also includes mixtures with oil and other substances. It should be noted that also residues from on board sewage treatment systems, such as sewage sludge and bio-residues fall within the scope of MARPOL Annex IV.

118. For the collection of sewage its significant volumes that can be delivered to a PRF are to be taken into account. As trucks have limited capacity, their use may lead to an unnecessary delay for the delivering ship.

119. Reception of sewage can be organized either by temporary storage in tanks, or by pumping the sewage directly into the municipal sewage system or a sewage treatment facility. Regulation 10 of MARPOL Annex IV provides specified standard dimensions of flanges for sewage discharge connections to enable pipes of port reception facilities to be connected with the ships' discharge pipeline.

120. In passenger/cruise ports it might be an efficient option to provide the possibility to pump the ship’s sewage directly into the municipal sewer system. Especially where ships always call at the same terminal (such as passenger or cruise terminals), the cost for building the piping system might be reasonable.

5.4 Options for the collection and storage of MARPOL Annex V wastes

121. When establishing a system of environmentally sound management of ship-generated wastes it is not only required to provide PRF that are adequate to meet the needs of the ships, but it is also of key importance that during the collection and storage phase the recycling or final disposal is being facilitated. Therefore, equipment used for the storage of the ship-generated garbage should be suitable for the separate storage of the main waste types that are being delivered.

122. According to the IMO 2017 “Guidelines for the implementation of MARPOL Annex V” (resolution MEPC.295(71)), it is recommended that the following garbage types are to be kept separate on board of ships:

- Non-recyclable plastics and plastics mixed with non-plastic garbage;
- Rags;
- Recyclable material:
    - cooking oil;
    - glass;
    - aluminium cans;
    - paper, cardboard, corrugated board;
    - wood;
    - metal;
    - plastics (including styrofoam or other similar plastic material);
- E-waste generated on board (e.g. electronic cards, gadgets, instruments, equipment, computers, printer cartridges, etc.); and
- Garbage that might present a hazard to the ship or crew (e.g. oily rags, light bulbs, acids, chemicals, batteries, etc.).

123. Equipment for handling ship-generated garbage in a port should basically facilitate the collection, temporary storage and subsequent transport of the segregated types of ship-generated garbage delivered by the ship. A large variety of containers and bins can be used for collecting ship-generated garbage, but basically the applied receptacles need to be safe, functional and easy to use.

124. When evaluating the different options for selecting receptacles for the collection and storage of MARPOL Annex V wastes, the following elements need to be considered:

a) Capacity of the receptacles should at any time match the demand by the users, not only in terms of their individual size and capacity, but also the number of receptacles that is required;
b) Ship types influence the required capacity, e.g.:
    a. cruise ships generate more garbage than commercial ships;
    b. fishing vessels need specific collection and storage capacity for fishing nets;
    c. in marinas seasonal fluctuations might have an impact on the delivery of garbage;
c) When selecting the differing types of garbage to be collected and stored separately, the increased interest and value in the recycling of wastes as a potential source of raw materials should be considered;
d) In case more stringent standards are applicable for specific types of wastes (e.g. food or medical waste) the reception facilities might need to meet specific standards (e.g. sealed and/or leak proof containers). Especially for medical waste specific containers are to be used in order to ensure hygienic and safe handling;
e) For hazardous wastes specific types of receptacles are to be applied, ensuring that compatible material is used for the receptacles, that they are leak proof, etc.;
f) Receptacles should be constructed of durable materials and equipped with lids to control vermin, to prevent litter spreading on the quayside and to prevent offensive odours;
g) In order to reduce the volume of the garbage to be transported, compactors or baling equipment may be used, leading to cost savings. However, the use of compactors should not impede the reuse or recycling possibilities.

125. Hazardous wastes are not to be mixed with non-hazardous waste, and are to be handled in accordance with the appropriate procedures and requirements (e.g. a signature should be kept for the records). Another specific consideration when selecting the type of receptacle is the compatibility of the receptacle, in terms of unloaded weight, maximum load and size, with the available means of transport and other handling equipment such as forklifts and cranes.

5.5 Options for the collection and storage of MARPOL Annex VI wastes

126. MARPOL Annex VI regulates the impact of air pollution from ships. Regarding the issue of PRF, there are two relevant types of wastes and residues classified under MARPOL Annex VI, being Ozone-Depleting Substances (ODS) contained in certain equipment, such as refrigeration, air conditioning and fire extinguishing equipment, and residues from systems used for exhaust gas cleaning.

127. Although MARPOL Annex VI entered into force in 2005, including the requirement for the provision of reception facilities in ports for ozone-depleting substances (and equipment containing them) and residues from exhaust gas cleaning systems, not much information is available yet on the amounts and characteristics of MARPOL Annex VI residues to be expected, nor on collection practices.

128. Depending on the type of scrubbers, the generated wastes and residues are different:

a) Scrubbers in open loop use sea water for the cleaning of the ship’s exhaust emissions. The scrubber water that contains sulphur, soot and various metals ends up into the sea, so in principle there is no delivery to a PRF;

b) Scrubbers in closed loop use fresh water stored on board and an agent for cleaning the exhaust. There is then an extra step that treats the first scrubber water stream. Sludge containing the soot and metals is generated, which needs to be delivered to a PRF, as it is not allowed to incinerate scrubber sludge on board. Still, a yellowish water containing sulphur is discharged into the water;
c) There are also so-called hybrid scrubbers, which can be used in either open or closed loop. The residues generated are similar to these generated by open and closed loop scrubbers, depending on the mode the system is being operated in;
d) Dry scrubbers generate a gypsum-like residue. As these types of scrubbers are currently not generally being used, not much information about the residues is available.

129. Not much information is currently available on the volumes of wastes that are generated by different types of scrubbers. However, some producers report that the amount of sludge generated is approximately 0,1 to 0,4 kg/MWh, while others indicate a sludge generation of 0,2 kg/MWh from a seawater scrubber.

130. It can be noted that the storage of equipment containing ODS from ships is very similar with practices on land. As these types of wastes are to be considered as hazardous wastes, also their storage should meet the appropriate requirements. Receptacles should be watertight and sheltered, in order to avoid drainage of possible contaminants to water and/or soil.

131. Disposable equipment on board containing ODS, such as broken refrigerators and expired fire-extinguishers, can be collected and stored in different ways. The most appropriate way of temporary storage of these wastes is under a shelter on an impervious floor. In addition, the period of storage should be kept as short as possible, especially when the equipment is broken and when there is a substantial risk of leakage of ODS into the atmosphere. Although the temporary storage can be inside the port area, the treatment in most cases will not. This again depends on the port area and its degree of industrialization. The disposal of the equipment will take place in highly specialized treatment plants by trained personnel.

5.6 Options for the collection and storage of passively fished waste

132. During their fishing operations fishermen are often confronted with waste that is collected in their nets (passively fished waste). Therefore, some international NGO’s have developed the scheme known as “Fishing for Litter”. The idea behind it is quite simple: instead of throwing the waste back into sea, the fishermen are encouraged to collect it on-board and deliver it free of charge to a PRF when returning to port. By doing so they reduce the amount of marine litter in our seas by physically removing it. In addition, it also highlights the importance of good waste management amongst the fishing fleet.

133. Fishing for Litter measures have been included in several Regional Action Plans (RAP) on Marine Litter, for example the RAP’s adopted by the Barcelona Convention (UNEP/MAP) for the Mediterranean Sea, by the OSPAR Commission for the North-East Atlantic, and by the Helsinki Commission (HELCOM) for the Baltic Sea. It should be noted that, within the scope of the Marine Litter Regional Action Plan in the Mediterranean, Fishing For Litter Guidelines have been adopted (decision IG.22/10).

134. Also Directive (EU) 2019/883 has included requirements related to the management of passively fished waste:

- “passively fished waste” has been included in the definition of “waste from ships”;
- as EU Member States are required to ensure the provision of adequate PRF capable of providing the service of receiving the “waste from ships”, this also includes the provision of PRF for passively fished waste;

- for garbage the Directive (EU) 2019/883 includes, after payment of the waste fee, a right of delivery without any additional charges based on the volume of waste delivered[115]: this is also the case for passively fished waste. However, in order to avoid that the costs of collection and treatment of passively fished waste are born exclusively by port users, EU Member States shall cover, where appropriate, those costs from the revenues generated by alternative financing systems, including by waste management schemes (e.g. EPR) and by EU, national or regional funding available.

135. Several countries have already implemented this measure, and have set up schemes for the reception of passively fished waste. Also in the Mediterranean Sea fishermen are involved in cleaning the sea. A good example is the Fishing For Litter scheme deployed in the countries surrounding the Adriatic where, between 2014 and 2016, 124 vessels located in 15 ports between Italy, Slovenia, Croatia, Montenegro and Greece removed 122 tons of waste, mainly plastic, from the sea (this project was linked to the implementation of pilot projects for Fishing for Litter of the DeFishGear European project[116]).

136. In cooperation with regional and/or national stakeholders, participating vessels are given hardwearing bags to collect marine litter that is caught in their nets during their normal fishing activities. Filled bags are deposited in participating ports on the quayside where they are moved by port staff to a dedicated skip or bin for disposal. Operational or galley waste generated on board, and hence the responsibility of the vessel, continues to go through established port waste management systems.

Big bag used for the on-board collection of passively fished waste in UK
(Photo credit: KIMO)

Big bag used for the on-board collection of passively fished waste in NL
(Photo credit: KIMO)

137. Reception facilities are being provided in fishing ports where the fishermen can deliver their passively fished waste. As the passively fished waste is in general quite similar to ship-generated garbage, also the PRF for this type of waste is similar.

[115] Except where the volume of waste delivered exceeds the ships' maximum dedicated storage capacity.

[116] "Fishing for Litter in the Adriatic-Ionian macroregion (Mediterranean Sea): Strengths, weaknesses, opportunities and threats", Ronchi et al, 2018.

Collection of passively fished waste in port
(Photo credit: KIMO)

Reception container for passively fished waste
(Photo credit: KIMO)

138. It can be noted that in order to avoid that the costs for the provision of the PRF (incl. the treatment of the passively fished waste) are to be fully borne by the fishermen, leading to a disincentive for fishermen to participate in such schemes, several governments apply alternative financing systems or funding, including national and/or international funding. Therefore, in general it are also the national coordinating bodies responsible for the Fishing For Litter schemes that provide the bags free of charge to the fishermen, and cover all costs for collection and treatment of the passively fished waste.

6 ENSURING THE ADEQUACY OF DIFFERENT TYPES OF PRF

6.1 The “adequacy” issue

139. Both the Annexes I, II, IV, V and VI of MARPOL and Directive (EU) 2019/883 require the provision of adequate PRF, which are to meet the needs of ships normally visiting the port without causing undue delay. When implementing this requirement, some governments opt to shift the responsibility to provide these adequate PRF to local authorities such as municipalities or port authorities, or to private stakeholders (e.g. terminal operators). In addition, the interpretation of “adequacy” is left to the port State and the port’s users (being the ships visiting the ports).

140. As the competent authority, which can resort under either a maritime, port or environmental department, should ensure that the requirements regarding “adequacy” are brought into practice, it must consequently be made clear, both for the enforcing authority as for the stakeholder that is required to provide the PRF, how “adequacy” is to be defined. However, determination of adequacy has been proven quite difficult.

6.1.1 “Adequacy” guidance according to the IMO:

141. In order to give guidance regarding the determination of adequacy, also the IMO has adopted several guidelines:

a) In the “Guidelines for ensuring the adequacy of port waste reception facilities” (resolution MEPC.83(44)) “adequate” is being described as: *"To achieve adequacy the port should have regard to the operational needs of users and provide reception facilities for the types and quantities of wastes from ships normally visiting the port."*

b) In addition, “adequate facilities” are being described as those which:
- mariners use;
- fully meet the need of ships regularly using them;
- do not provide mariners with a disincentive to use them; and
- contribute to the improvement of the marine environment.

c) Furthermore, the provided PRF must “meet the needs of the ships normally using the port” and “allow for the ultimate disposal of ship-generated wastes and residues to take place in an environmentally appropriate way”.

d) According to the “2017 Guidelines for the implementation of MARPOL Annex V” (resolution MEPC.295(71)) the methodology for determining the adequacy of a reception facility should be based on the number and types of ships that will call at the port, the waste management requirements of each type of ship as well as the size and location of a port. Emphasis should also be placed on calculating the quantities of garbage, including recyclable material, which is not discharged into the sea, in accordance with the provisions of MARPOL Annex V. Due to differences in port reception procedures and additional treatment among ports, PRF may require the separation on board of:

- Food wastes (e.g. animal derived products and by-products because of risk of animal diseases);
- Cooking oil (animal derived products and by-products because of risk of animal diseases);
- Plastics;
- Domestic waste, operational waste and recyclable or reusable material;
- Special items like medical waste, outdated pyrotechnics and fumigation remnants;
- Animal wastes, including used bedding from the transport of live animals (due to risk of disease) but excluding drainage from spaces containing living animals;

- Cargo residues; and
- E-waste such as electronic cards, gadgets, equipment, computers, printer cartridges, etc.

142. When ship operators, ports and terminals assess the expected quantities and types of ship-generated wastes on a per ship basis, the following issues should be considered:

- Types of garbage normally generated;
- Ship type and design;
- Type of main fuel used by the ship (as cleaner fuel such as diesel/gasoline generates less sludge);
- The ship's speed (as fuel consumption can indicate sludge production);
- The ship's operating route;
- Number of persons on board (both crew and passengers);
- Duration of the voyage;
- Time spent in areas where discharge into the sea is prohibited or restricted; and
- Time spent in port.

143. As a minimum, the capacity of reception facilities at cargo unloading, loading, and repair ports and terminals should be capable of receiving those residues and mixtures which are normally handled within that port and which ships intend to deliver to port reception facilities. All ports, including marinas and fishing ports regardless of their size, need to provide adequate facilities to receive garbage and oil residues from engines, etc. Larger ports, with more and various types of ships calling, will need to provide more extensive reception capacity (e.g. for cargo residues, bilge water, quarantine waste, etc.).

144. The receiving capacity should be at least appropriate in time and availability to respond to the continuing needs of the ships normally using the port. Arrangements needed to facilitate the discharge of residues, mixtures and all types of ship-generated wastes without causing undue delay to ships, such as prior notification of types and quantities of wastes and residues expected to be delivered, piping or equipment required for discharge etc. are to be made timely between the ship and the PRF.

145. When assessing the adequacy of reception facilities, the competent (port) authorities should also consider the technological challenges related to the management and discharge of ship-generated wastes. When doing so, it is recommended that relevant international standards be considered as it helps ensuring that the management of the ship-generated wastes and residues is environmentally sound.

146. When selecting the most appropriate type of reception facility for a particular port, attention should be given to alternative methods available: mobile facilities, such as trucks, can enhance a cost-efficient way of collecting ship-generated wastes. Or even floating facilities, such as barges, might be considered more effective, in particular where access by road is not practicable.

147. It should also be noted that due to additional treatment processes, especially when the principles of environmentally sound management are being applied, PRF might promote or (financially) incentivize the on-board separation of:

- Non-recyclable plastics and plastics mixed with non-plastic garbage;
- Rags;
- Recyclable wastes:
    - Cooking oil;
    - Glass;
    - Aluminium cans;
    - Paper, cardboard, corrugated board;
    - Wood;

    - Metal;
    - Plastics (including styrofoam or other similar plastic material)
- E-wastes such as electronic cards, equipment, computers, printer cartridges, etc.
- Garbage that might present a hazard to the ship or crew (e.g. oily rags, light bulbs, acids, chemicals, batteries, etc.);

148. Undue delay may arise when the time spent in port for the delivery of residues, mixtures or wastes goes beyond the normal turnaround time of the ship in that port, unless the delay is caused by fault of the ship, its master, its owner or his authorized representatives, specific safety requirements in place or the normal port procedures. In order to provide maximum flexibility for the ship to deliver wastes while avoiding undue delay, in major ports the availability of reception facilities on a 24/7 basis might be considered.

6.1.2 "Adequacy" guidance according to the EU:

149. In Article 4 of Directive (EU) 2019/883 it is stated that PRF are to be adequate "to meet the need of the ships normally using the port without causing undue delay to ships". Furthermore, the same article additionally requires that:

- the PRF have the capacity to receive the types and quantities of waste from ships normally using that port, taking into account:
    - the operational needs of the port users;
    - the size and geographical location of that port;
    - the type of ships calling at that port; and
    - the exemptions provided under art. 9
- the formalities and practical arrangements relating to the use of the PRF are simple and expeditious to avoid undue delay to ships;
- the fees charged for delivery do not create a disincentive for ships to use the PRF; and
- the PRF allow for the management of the waste from ships in an environmentally sound manner[117].

150. The adequacy relates to operational conditions on the one side, i.e. to meet the needs of ships normally visiting the ports and not to create obstacles to ships using the PRF, as well as the environmental management of the PRF.

151. As regards the necessary operational conditions, the European Commission underlines that the mere provision of PRF does not necessarily mean these facilities are adequate. Poor location, complicated procedures, restricted availability and unreasonably high costs for the service provided are all factors which may deter the use of reception facilities. For a PRF to be considered adequate, the facility should be available during a ship's visit to the port, be conveniently located and easy to use, cater for all types of waste streams usually entering the port and not cost so much as to present a disincentive to users. At the same time, the European Commission emphasizes that both the size and geographical location of the port may limit what can technically and reasonably be provided in terms of reception and handling of the waste.

152. The PRF must allow for the ultimate disposal of ship-generated waste to take place in an environmentally appropriate way. According to Directive (EU) 2019/883, the EU Member States shall ensure separate collection to facilitate reuse and recycling of waste from ships in ports. In order to facilitate this process, PRF may collect the separate waste fractions in accordance with the waste categories defined in MARPOL, taking into account the guidelines thereof. In this respect it should be mentioned that, although not required by MARPOL, more and more ship operators segregate their waste onboard: the subsequent separate collection of these wastes by PRF should not only be

[117] in accordance with Directive 2008/98/EC and other relevant EU and national waste law.

considered as an appropriate service towards the ship, but will definitely facilitate reuse and recycling operations.

153. A key element to ensure the adequacy of PRF is the development, implementation and re-assessment of the port's waste reception and handling plan, based on the consultation of all relevant parties. For practical and organizational reasons, this plan can be jointly developed by neighbouring ports in the same geographical region, with the appropriate involvement of each port and provided that the need for and availability of PRF are specified for each port.

6.2 Options for cooperation on a regional/sub-regional/national/sub-national level

154. When ships can deliver their wastes and washing waters containing cargo residues only in a few ports in a region, this will either mean that these ports carry the burden for the whole region (i.e. receiving ship-generated waste that should have been delivered to a PRF in other ports) or (even more likely) that ships are more inclined to discharge their waste illegally. If the area is designated as a Special Area, a lack of adequate PRF even has greater implications.

155. It is fair to acknowledge that some of the requirements on providing adequate reception facilities can raise concerns, in particular for Small Island Developing States (SIDS). In that respect, reference can be made to regulation 8.3 of MARPOL Annex V, which provides that Small Island Developing States may satisfy the requirements of reception facilities through regional arrangements when, because of those States' unique circumstances, such arrangements are the only practical means to satisfy these requirements.

156. For the implementation of regional arrangements, the IMO has developed the 2012 "Guidelines for the development of a Regional Reception Facilities Plan (resolution MEPC.221(63)' to provide guidance for the development of a Regional Reception Facilities Plan (RRFP), to assist governments and port authorities in specific geographic regions of the world with the appropriate and effective implementation requirements of MARPOL.

7 PROCEDURES RELATED TO THE OPERATION OF PORT RECEPTION FACILITIES

7.1 Tools for information management and monitoring

157. Even though the provision of adequate PRF, the development of waste management plans and installing coordinated waste delivery procedures are important prerequisites in order to facilitate the reception and environmentally sound management of ship-generated wastes, information management and monitoring mechanisms are even so indispensable.

158. Modern information and data management in combination with proper monitoring can help to facilitate efficient collection and treatment of ship-generated waste. However, this is not always easy to accomplish, particularly when some of the key stakeholders operate at sea. Still, a substantial set of documents, data and information regarding ship-generated wastes is available during the process from generation to delivery, such as:

- Waste notification by ships;
- Waste delivery receipts;
- Recording waste levels delivered in port;
- Information in Oil Record Book, Garbage Record Book and Cargo Record Book; and
- Licenses granted to the involved stakeholders.

159. Furthermore, the application of the information and data in an automated ICT system will facilitate the information management and monitoring, will allow cross-referencing, and reduce bureaucracy.

7.1.1 Advance notification schemes

160. Ports may need to comply with varying local requirements for specialized handling of certain types of ship-generated wastes. Therefore, ship operators should check with local agents, port authorities, harbour masters or PRF providers for port-specific requirements prior to arrival in order to plan for and accommodate any special handling requirements for that particular port, including additional segregation that may need to take place on board well in advance of arrival. This information should be incorporated into the company's environmental management plan and should be taken into consideration in voyage planning. In many ports, either for logistical or policy reasons, the port authority and/or PRF providers requires an advance notification from the ship indicating its intention to use the reception facilities.

161. Providing advance notification to the PRF of the type and quantity of ship-generated wastes on board and the type and quantity intended to be delivered, will also greatly assist the PRF operator in receiving the waste while minimizing any delay to the ship's normal port operations. A general recommended practice is to provide at least 24 hours' notice, although specific requirements may vary by port or PRF.

162. Many port authorities require shipmasters to use the standardized Advance Notification Form as developed by the IMO in the appendix 2 of the “Consolidated guidance for port reception facility providers and users” (MEPC.1/Circ.834/Rev.1)). Other port authorities, agents and facility operators are urged to accept the standardized format, although in some other cases they require an alternate form.

163. It can be noted that in EU ports Directive (EU) 2019/883 already requires the mandatory use of the advance notification format in its Annex 2. The use of this advance notification form, which is in line with the format of the revised MARPOL Annex V and the IMO Circular MEPC.1/Circ.834/Rev.1, strengthens the implementation and enforcement of Directive (EU) 2019/883 by requiring the provision on the format of accurate information on the types and quantities of wastes actually delivered.

164. The advance waste notification can be sent by the ship or its port representative to the port authority or directly to the PRF. If a ship visits a port on a regular basis, a standing arrangement with the port reception facility may prove to be most efficient.

7.1.2 Waste Delivery Receipt

165. Following delivery of its ship-generated waste, the master of a ship should request a Waste Delivery Receipt to document the type and quantity of MARPOL wastes actually received by the facility. The IMO has standardized the format of this document to facilitate its use and application and in order to provide uniformity of records throughout the world (Appendix 3 of the Consolidated Guidance in MEPC.1/Circ.834/Rev.1). The ships’ master or responsible officer and the receiver both sign the document, and a copy is made available as proof of the legal discharge.

166. In EU ports Directive (EU) 2019/883 requires the use of the waste delivery receipt: upon delivery, the PRF operator or the authority of the port where the waste was delivered is to complete truly and accurately the form provided in the Annex 3 (waste delivery receipt) to Directive (EU) 2019/883, and issue and provide it, without undue delay, to the master of the ship. Furthermore, the information in the waste delivery receipt needs to be electronically reported to SafeSeaNet by the operator, agent or master of the ship.

167. Corresponding records, receipts or certificates of the delivery are also to be kept, for a minimum of two years, in the appropriate Garbage Record Book, the Oil Record Book (part I for all ship types and part II for oil tankers), or the Cargo Record Book for chemical tankers.

168. Systematic usage of the waste delivery receipt can also be a useful tool for a port authority to follow the waste from delivery to final disposal.

7.1.3 Reporting of alleged inadequacies of PRF

169. In cases when ships want to deliver their ship-generated waste and/or cargo residues in port but they cannot because of absence or possible non-adequacy of the available reception facility, the ship's master can use the format for reporting alleged inadequacies of PRF that is provided by Appendix 1 of the IMO Circular MEPC.1/Circ.834/Rev.1.

170. Flag States are requested to distribute this format to ships and urge masters to use this format to report alleged inadequacies of PRF to the maritime administration of the flag State and, if possible, to the authorities of the port State. It is the obligation of the flag State to notify IMO and to inform the Parties concerned of any case where facilities are alleged to be inadequate. Port States should ensure the provision of proper arrangements to consider and respond appropriately and effectively to reports of alleged inadequacies, informing IMO and the reporting flag State of the outcome of their investigation.

171. Also, the PRF database in GISIS contains information regarding reported alleged inadequacies.

7.1.4 Licensing as a tool for monitoring wastes

172. Licenses are used by authorities to allow an activity that otherwise might be forbidden. It may require proving a capability but may also serve to keep the authorities informed on a type of activity, and to give them the opportunity to set conditions and limitations. Licensing is one of the principal tools by which authorities can exercise regulatory controls of the reception, storage, treatment and disposal of wastes.

173. Especially when installing procedures to ensure the delivery of ship-generated wastes, it is necessary to track these wastes from delivery by the ship to the moment of collection at the PRF. Even proof of final disposal can be established by applying a system of notification and tracking documents.

174. These documents, that are to accompany the waste transport, should contain particulars regarding the type and quantity of the waste in question, the means of transport and details regarding the producer, carrier and PRF. In this way the waste routing becomes transparent both for the competent authorities and for the companies involved, as these documents link (e.g. through a tracking system) the different activities.

175. Several port authorities have adopted a tracking system to document the delivery, collection and transport of ship-generated wastes. The documents accompany the waste shipments and provide a record of movement from the producer of the waste through each intermediate stakeholder. Every time the waste changes hands, the responsible person(s) sign(s) the allocated document.

7.1.5 Port waste information and monitoring systems

176. Combining differing types of data and information from different sources is not always a straightforward task and requires the use of modern IT information and data warehousing technology. As the usage of web-based applications nowadays is not extremely expensive, an internet-based data and information management system can already provide a lot of advantages when implementing monitoring tools in order to establish or move towards an environmentally sound management of ship-

generated wastes. In addition, most ports already have an individual port communication system based on internet communication, to which additional tools for the monitoring of ship-generated wastes can be added relatively easily.

177. Installing a proper port information and data management system for ship-generated wastes will not only provide a comprehensive overview and deliver reliable statistics during the different steps in the process of ship-generated waste – from collection over treatment to final disposal – that can easily be monitored and audited, but it will also facilitate efficient and effective enforcement.

178. Therefore, it is recommended that port authorities develop an ICT-supported data management system including procedures that can handle the following issues:

- Waste notification by ships;
- Recording waste levels delivered in port;
- Information in Oil Record Book, Garbage Record Book and Cargo Record Book;
- Waste delivery receipts;
- Exemption certificates (in order to allow the monitoring of the arrangements for waste delivery)
- Evaluation and calculation of annual waste statistics;
- Waste fee system (when applicable); and
- Facilitating enforcement (e.g. risk-based targeting).

179. A proper monitoring and information system for ship-generated wastes can be developed on the port level and be operated and managed by the port authority, or on a national level, combining the data that is being provided by the individual ports. It is also preferable that all stakeholders involved, both private (such as private PRF and ship agents) and public (such as enforcing authorities) have direct access to the system in order to facilitate a swift transfer of reliable data (real time information), to reduce bureaucracy (no paperwork) and to increase transparency. Not every stakeholder should be granted access to the whole system, but only to the fields that are relevant for that particular stakeholder.

7.2 Waste delivery procedures: incentivizing the delivery of segregated waste

180. Procedures for collecting and storing garbage generated on board should be based on the consideration of: what is permitted and what is not permitted to be discharged into the sea while *en route*; and whether a particular garbage type can be discharged to PRF for recycling or reuse. Still, in order to reduce or avoid the need for extra sorting after the garbage has been delivered to a PRF and to facilitate reuse and recycling, it is preferable that the waste is directly segregated on board according to the recommendations of the IMO 2017 “Guidelines for the implementation of MARPOL Annex V” (resolution MEPC.295(71)), which recommends that garbage is being segregated (also see paragraph 120).

181. As this is only a recommendation and not a MARPOL-requirement, ships can still decide to deliver mixtures of wastes and residues. However, taking into account the principles of environmentally sound waste management, the PRF must allow for the ultimate disposal of ship-generated waste to take place in an environmentally appropriate way.

182. In EU this principle has been included in Directive (EU) 2019/883: EU Member States shall ensure separate collection to facilitate reuse and recycling of waste from ships in ports. In order to facilitate this process, PRF may collect the separate waste fractions in accordance with the waste categories defined in MARPOL, taking into account the guidelines thereof.

183. Sometimes the shipping industry indicates that even when ship-generated garbage is being segregated on board according to the recommendations of the IMO guidelines, PRF still collect all wastes in one receptacle and thus mixing everything again. An option therefore could be to address this issue in port regulations in a way that segregated ship-generated wastes that are delivered to a PRF

are in principle to be accepted that way by the PRF and are to be kept segregated for further processing, in order to maximize their potential for recycling.

184. Some port authorities and terminal operators decided to incentivize the delivery of certain types of segregated ship-generated wastes. A certain practice that already is being applied in several ports is to grant ships that deliver segregated wastes a reduction on the port dues and/or waste fee. The Directive (EU) 2019/883 includes a mandatory “green ship” rebate scheme for the cases where it can be demonstrated that the ship’s design, equipment and operation results in the production of reduced quantities of waste, and the ship manages its waste in a sustainable and environmentally sound manner.

7.3 Downstream waste management

185. MARPOL as such does not contain any specific requirements for the downstream management of ship-generated wastes and cargo residues received in a port, as it only requires for the provision of adequate PRF and the proper reception of the ship-generated wastes.

186. Still, once the ship-generated wastes and cargo residues are offloaded from a ship, they must be managed in an environmentally sound manner in accordance with the provisions of the national waste management regulatory framework, and – when applicable – the provisions of the overarching waste strategy. Also, on the international level, the Basel Convention and the EU Waste Framework Directive contain specific requirements regarding the recycling, treatment and final disposal of wastes. And according to the IMO “Guidelines for ensuring the adequacy of port waste reception facilities” (resolution MEPC.83(44)) the PRF must “allow for the ultimate disposal of ship-generated wastes and residues to take place in an environmentally appropriate way”.

187. Although port authorities are in general not directly involved with the provision and operation downstream waste management infrastructure, the availability of adequate treatment options (e.g. recycling, incineration, landfill) in the vicinity of the port area can be an important advantage when establishing infrastructure for the reception of ship-generated waste and cargo residues, as this might have an impact on both the capacity and costs for the collection.

188. As in principle there is no big difference between the treatment of ship-generated wastes and wastes originating from land-based operations, it is also recommended that ship-generated wastes should not be seen separate from land-based wastes: after all, ship-generated waste systems within a port do not exist in isolation from the rest of the port operations, services and infrastructure, and becomes a part of the total waste stream of a port, once received on shore.

189. Especially in smaller ports such as local ports, fishing ports and marinas, the volumes of ship-generated wastes delivered to PRF might not be sufficient enough in order to develop a cost-efficient waste management. Still, when combining the ship-generated wastes with similar wastes generated by land-based industrial activities and municipal wastes, volumes might be sufficient enough in order to establish not only an economically viable business opportunity, but also facilitate environmentally sound waste management.

7.4 Port waste management plans

190. Although the development of port waste management plans (PWMP) falls outside the scope of MARPOL, it is generally acknowledged that an up-to-date PWMP, when established in consultation with all relevant parties, will not only improve the adequacy of PRF but also provide a detailed coordinated compendium of all processes related to the delivery of ship-generated wastes and residues.

191. A PWMP should preferably be a public and legally binding document, that not only can be used as a compilation of all applicable relevant requirements related to the management of ship-generated wastes, but also as a guidance manual for port users and other stakeholders. The PWMP

should – when applicable – also consider the requirements and goals of the national waste management strategy, translating the goals regarding the environmental sound management of waste into practical processes and procedures, and the port waste strategy.

192. The PWMP should be developed by the port authority, in close consultation with all port users such as ship owners, ship agents, waste collectors, possible port-based disposal facilities, and relevant competent authorities such as port State control, environmental agencies and maritime authorities. However, in some cases it might be useful that also independently managed areas in the ports, such as fishing ports, oil terminals and chemical plants, draft their own plans and are responsible for managing their services on reception of wastes and residues from ships as part of their operations.

193. When drafting a PWMP, and specifically when assessing the adequacy of existing PRF and analysing the need for additional reception capacity, it is important that this assessment is done based on reliable and detailed information on types and quantities of ship-generated wastes. The plan should also consider the characteristics of the port, and of its users.

194. The PWMP should include all relevant information on, but not limited to, the following key elements:

- An overview of the relevant applicable legislation on waste management, including the responsibilities under national waste laws of the relevant parties involved in the port;
- A list of existing port reception facilities, including location, type (fixed/mobile), capacity and the types of wastes they collect;
- An assessment of the need for additional port reception facilities, taking into account possible changes in traffic in the upcoming years;
- An overview of type and quantities of ship-generated waste received and handled;
- A description of the procedures for the reception and collection of ship-generated waste;
- A description of the charging system (when applicable);
- Procedures for how to report and take action on alleged inadequacies of reception facilities;
- Procedures on notification and reporting of ship-generated waste;
- Procedures for consultations with local stakeholders; and
- Enforcement measures.

195. Ports within a region may also choose to develop a common PWMP and to apply a similar waste collection and cost recovery system. If the reception facilities also serve more than one port, care should be taken that these mobile port reception facilities may be able to serve the ships without undue delay in all ports involved.

196. It should be noted that Directive (EU) 2019/883 makes the development of the PWMP mandatory and contains in its Annex 1 the detailed requirements for the development and content of these PWMP. According to Directive (EU) 2019/883 these PWMP can, when required for reasons of efficiency, be developed in a regional context with the appropriate involvement of each port, provided that the need for, and availability of, reception facilities are specified for each individual port. EU Member States must evaluate and approve the waste reception and handling plan, monitor its implementation and ensure its re-approval at least every five years and after significant changes in the operation of the port.

197. It should be noted that, according to Article 5.2 of Directive (EU) 2019/883, EU ports are required to communicate information from the PWMP related to the availability of PRF to all port users, being:

- Location of PRF applicable to each berth and, where relevant, their opening hours;
- List of waste from ships normally managed by the port;
- List of contact points, the PRF operators and the services offered;
- Description of procedures for delivery of the waste;

- Description of the cost recovery system, including waste management schemes and funds as referred to in Annex 4, where applicable.

198. This can be done through flyers or publication on the port's website. For EU ports this information is also to be reported electronically into SafeSeaNet and kept up-to-date.

7.5 Consultation of stakeholders

199. The large variety of issues that need to be addressed in order to establish an environmentally sound management of ship-generated wastes, the many different stakeholders from both the private and public sectors that are involved at different levels and the diverse technological, financial and legal input that needs to provide, all require a thorough coordination process at different levels and at varying moments in time. Good alignment of port and ship requirements is important in order to enable a fast and a safe disposal procedure for ship-generated wastes, and to avoid undue delay.

200. This will also help in determining the appropriate levels of service for each waste stream, actual and potential, and identify ways to improve service and reduce disruptions. Furthermore, consultation with governing bodies and local authorities is required to ensure that compliance with local and national legislation or regulations is achieved and maintained.

201. Also, during the development of a proper PWMP the consultation of stakeholders is an essential element. When determining the appropriate level of service for the management of ship-generated wastes, it is important to thoroughly consult all port users to assess their needs with respect to the provision of PRF. Extensive consultation will also identify ways to improve practices.

202. Article 5.1 of Directive (EU) 2019/883 contains specific requirements related to the organization of the different consultations related to the Waste Reception and Handling Plan (WRHP), and the stakeholders that should take part in it: EU Member States are to ensure that an appropriate WRHP has been implemented for each port following ongoing consultations with the relevant parties, including in particular with port users or their representatives, and, where appropriate, local competent authorities, PRF operators, organizations implementing extended producer responsibility obligations and representatives of civil society. Such consultations are to be held both during the initial drafting of the WRHP and after its adoption, in particular when significant changes have taken place in the operations of the port.

203. The methodology for consultation can differ and may depend on the size and type of the port, the way local stakeholders are organized through associations, and take into account the port's institutional framework (private or public port). Consultation can be done in the form of informative meetings, using workshops, or through an official consultation procedure where the draft plan is made public and every interested party can submit their comments within a certain timeframe.

204. To guard that the stakeholders' consultation process is ensured and transparent, it can be useful that the procedures for public consultation of PWMP are implemented in national and/or local environmental and port regulations.

8 GUIDANCE RELATED TO THE PROVISION OF PRF IN THE MEDITERRANEAN

8.1 Impact of the Mediterranean Sea being a Special Area for MARPOL Annex I and MARPOL Annex V

205. As already indicated in section 2.2.2 of the present document, the IMO has identified and designated several seas as so-called "Special Areas". When a particular sea area is designated as a Special Area for one or more Annexes of MARPOL, the discharge requirements for ships in that area

are more stringent than outside Special Areas. Ships sailing in those areas might not meet these discharge criteria, and are therefore required to deliver their waste to a PRF.

206. This also means that the governments of countries bordering a Special Area have a special responsibility to ensure the provision of adequate reception facilities in all ports that receive ship-generated wastes and cargo residues. The Special Area status cannot come into effect until there are adequate PRF in ports bordering that area. States and port authorities should therefore take into consideration the importance of compliance in these special areas.

207. It should be noted that the Mediterranean Sea is designated as a special area under MARPOL Annexes I (oily residues) and V. The discharge of certain wash waters and cargo residues contained in MARPOL Annex V is subject to the controls specified within Regulations 4 and 6 of that Annex. In essence the discharge of MARPOL Annex V cargo residues contained in wash water is governed by the following criteria:

a) No discharge of cargo residues should occur less than 12 nautical miles from the nearest land, or the nearest ice shelf.
b) No discharge of cargo residues should occur within the six MARPOL defined “Special Areas” (the Mediterranean, the “Gulfs” area, the wider Caribbean including the Gulf of Mexico, the Baltic Sea, the North Sea and the Antarctic). The discharge of cargo residues contained in wash water is only permitted if both the destination and departure ports are within the Special Area and the ship will not transit outside the Special Area between these ports, and only provided that no adequate PRF exist. In such instances discharge of non-recoverable, non-HME (harmful to the marine environment) cargo residues in hold wash water should take place as far out to sea as is practicable and, in any event, no less than 12 nautical miles from the nearest land or the nearest ice shelf.
c) No discharge of any cargo residues specified as HME. Hold wash water should be discharged to a suitable reception facility.

208. Specific attention should be given to the impact of the revised MARPOL Annex V on the provision of PRF for HME-cargo residues: as mentioned in point b) of the above paragraph, it is still possible to legally discharge HME-cargo residues, even in special areas such as the Mediterranean Sea, when there are no PRF in both the destination and departure ports and the ship will not transit outside the Special Area between these ports. In order to achieve maximum protection of the marine environment, it is therefore important that all countries bordering the Mediterranean Sea ensure the provision of adequate PRF for the collection of these HME-cargo residues in their ports.

8.2 Who is to provide the PRF?

209. Both in MARPOL and Directive (EU) 2019/883 the requirement of ensuring the provision of adequate PRF is with the MARPOL-Party or EU Member State. This leaves the Party or EU Member State with a certain degree of flexibility in order to decide which body is responsible for providing the PRF, from a legal as well as a practical perspective. As both the MARPOL and Directive (EU) 2019/883 are to be implemented in national law, there is a possibility to add additional legal requirements, and/or clarify certain issues more in detail.

210. In EU ports the legal responsibility to provide the provision of PRF is with the EU Member State, but many have delegated it to sub-national or local authorities. For major ports this can be the port authority, although through the approval of the port waste management plans (in which the provision of PRF should be clearly addressed) also the relevant ministries (e.g. the competent environmental departments) are still involved. For smaller ports this can be the municipality or port administrator.

211. In several cases the port authorities do not provide the PRF themselves, but they prefer to appoint a private waste contractor. Especially in ports where there is a substantial volume of ship-

generated waste being delivered, this often provides a business case for private operations and port authorities will not have to invest in PRF infrastructure themselves. In smaller ports such as small fishing ports and marinas, the PRF can be provided by implementing the reception of the ship-generated waste in the municipal waste collection system.

8.3 Key elements regarding the provision of PRF

212. As already mentioned in section 3 of the present document, ports can differ substantially regarding size, type and amount of traffic, availability of industrial clusters, geographical location (incl. the impact of IMO Special Areas), types of cargo being handled in the port, existing capacity for waste collection, storage and treatment, etc. As a consequence, also the requirements regarding the provision of adequate PRF can differ.

213. Still, there are several key elements that can be identified when considering the provision of PRF. To summarize, the following considerations are important when selecting a PRF, either as a fixed or mobile PRF and/or pre-treatment or temporary storage site:

- Regarding the general operation of the PRF:

    - Other port operations, such as cargo loading/unloading or bunkering, should not be hindered;
    - The risks for ship-generated wastes and cargo residues eventually to end up in the water should be minimized;
    - Necessary equipment to clean or prevent spills from contaminating the whole port area should be easily available at the facility;
    - Fixed PRF or fixed places where ship-generated waste can be delivered should be built at strategically chosen places, that are easily accessible both for the ships and for port personnel and vehicles;
    - The PRF sites should have sufficient lighting, to allow for and encourage ship-generated waste collection 24 hours a day;
    - Reception areas need to be clearly marked and easily located, especially when waste streams are to be collected in a segregated way;
    - Reception areas must be secure to prevent abuse or misuse and to ensure the safety of seafarers and port personnel using them;
    - The impact of the collection and/or temporary storage of the ship-generated waste on the surrounding community should be minimized, especially with respect to noise, odour and outer appearance;
    - The facilities must comply with national, local and other applicable legislation on the collection and processing of ship-generated wastes and cargo residues;

- Regarding ensuring adequacy:

    - The operational needs of the users of the port are to be considered;
    - Facilities should be capable of receiving the types and quantities of wastes from ships normally visiting the port;
    - Adequate facilities are those which:
        - mariners use;
        - fully meet the need of ships regularly using them;
        - do not provide mariners with a disincentive to use them;
        - contribute to the improvement of the marine environment
    - Allow for the ultimate disposal of ship-generated wastes and residues to take place in an environmentally appropriate way.

8.4 Guidance related to the provision of PRF in merchant seaports, cruise/passenger ports, fishing ports and marinas

214. In this section some additional guidance is given regarding the provision of PRF in specific types of ports, including examples of PRF that have turned out to be very efficient. Distinction is being made between merchant seaports, passenger/cruise ports, fishing ports and marinas.

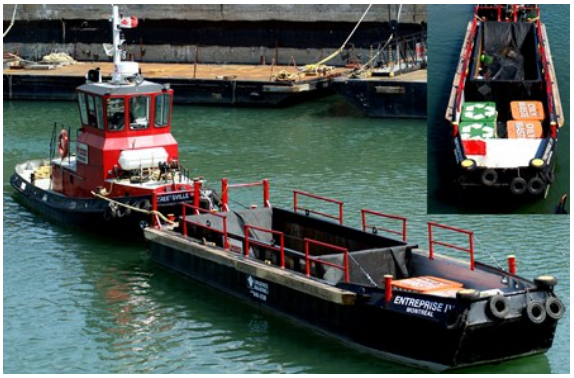
8.4.1 Merchant seaports

215. Due to the generally larger volumes of ship-generated wastes and cargo residues (either contained in wash waters or not) delivered, in merchant seaports in general a larger variety of PRF can be provided and operated. Both mobile (trucks as well as barges) and fixed facilities can be cost efficient.

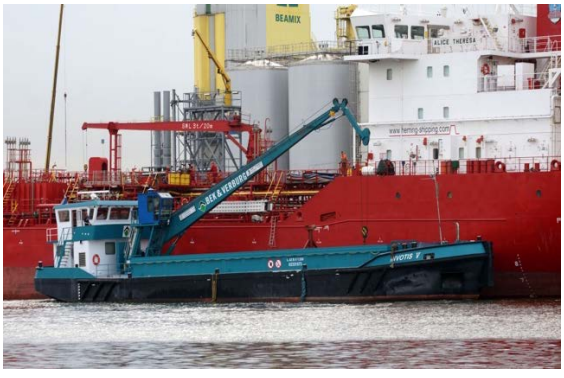
216. Still, when providing fixed facilities, the choice of location is to be well chosen as ships might need to shift berths which is not only a time-consuming and expensive operation, but this may also lead to undue delay or ships not being keen to use the PRF. Appropriate sites for fixed garbage receptacles therefore include wharves adjacent to moorages, access points to docks, fuel stations and boat launching ramps.

217. For reception of oily residues and other liquid ship-generated wastes such as sewage, the construction of pipelines to each berth might be a feasible option, especially if the reception is combined with a tank cleaning facility, e.g. at an oil terminal.

218. If receptacles are placed at a designated site for the collection of ship-generated wastes and cargo residues, they can be placed in a compound or environmental shelter, which is used to physically and visually shield the containers, to discourage use by non-port users, and to prevent the ship-generated wastes from blowing away.



Collecting barge in port of Montréal (Canada)
(Photo credits: port de Montréal)



Collecting barge in port of Rotterdam (NL)
(Photo credits: port of Rotterdam)

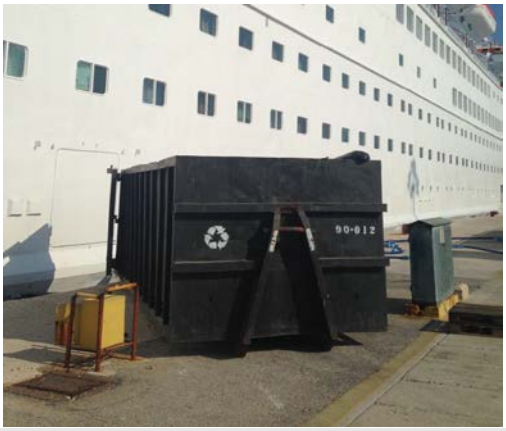
219. In order to provide maximum flexibility for the ship to deliver wastes while avoiding undue delay, in major ports the availability of reception facilities on a 24/7 basis might be considered.

Mobile collection in port of Piraeus (Greece)
(Photo credits: Antipollution)

Fixed PRF in port of Antwerp (Belgium)
(Photo credits: MAC[2])

8.4.2 Passenger/cruise ports

220. In passenger/cruise ports in general the same type of PRF can be applied as in merchant seaports, although seasonal traffic and increased tourism can have a substantial impact on the volumes of ship-generated waste delivered.



Container for garbage from a cruise ship
(Photo credits: Peter Van den dries)

Tank truck collecting liquid waste from a cruise ship
(Photo credits: Peter Van den dries)

221. In passenger ports, where the same vessels often call on a frequent and regular basis, specific facilities can be provided in order to facilitate the swift collection of liquid wastes, such as sewage, using standardized pipe connections.

Sewage collection in Trelleborg port (Sweden)
(Photo credits: Clean Baltic Sea Shipping)

Sewage collection in port of Helsinki (Finland)
(Photo credits: Clean Baltic Sea Shipping)

8.4.3 Fishing ports

222. In smaller ports such as fishing ports and marinas, although the use of mobile collection facilities can be efficient, limited types of fixed reception facilities can be applied, in cases when:

- Only limited amounts of ship-generated wastes will be delivered in those ports; and
- Although they can be specific (e.g. fishing nets, synthetic fishing gear, etc.), also limited types of ship-generated waste (mainly household wastes and garbage) will be delivered.

223. Due to the limited types of ship-generated wastes that are being delivered by fishing vessels, in general fishing ports can focus on the collection of MARPOL Annex I (bilge water and waste oil) and MARPOL Annex V (garbage, including fishing gear). As a consequence, the collection of waste from fishing vessels can be organized relatively easily using tanker trucks (for the bilge water) and containers and skips (for the garbage and fishing gear).

Receptacles for garbage in Tromsø (Norway)
(Photo credits: Peter Van den dries)

Receptacles for garbage in Sicily (Italy)
(Photo credits: Peter Van den dries)

Receptacles for garbage in Ostend (Belgium)
(Photo credits: Peter Van den dries)

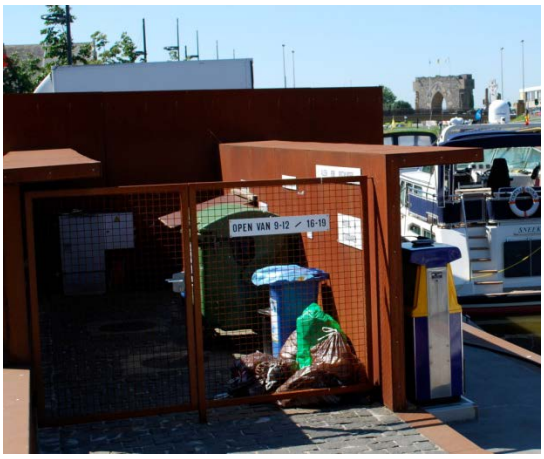
Receptacles for garbage in a Dutch port
(Photo credits: unknown)

8.4.4 Marinas

224. In marinas it is not always necessary to provide large and differentiated reception facilities. By far the largest volume of ship-generated waste to be delivered to a PRF in a marina will be garbage, mainly of a domestic type. As in these ports the main type of ship-generated waste delivered will be garbage and household waste, general receptacles designed for the collection of the most common fractions of household waste will be sufficient. Plastic, paper and cardboard wrapping materials, steel,

tin and aluminum food and drink cans, glass and plastic bottles, etc. will all need to be accepted by a marina's PRF.

Receptacle for oil in Marseille marina (France)
(Photo credits: Peter Van den dries)



Combined reception facility for bilge water and garbage in a marina in Belgium
(Photo credits: Peter Van den dries)

225. Depending on the size of the port (e.g. facilitating large motor yachts) and the number and type of the ships calling, it might be useful to equip the facility with a pumping station for the collection of bilge water (oily water mixture, mainly consisting of water) and/or waste from chemical toilets.

Receptacles for garbage in Nieuwpoort marina (Belgium)
(Photo credits: Peter Van den dries)

Receptacles for garbage in Marina di Ragusa (Italy)
(Photo credits: Peter Van den dries)

ANNEX IV

Guidance Document to Determine the Application of Charges at Reasonable Costs for the Use of Port Reception Facilities or, when Applicable, Application of the No-Special-Fee System, in the Mediterranean

Table of Content

List of Abbreviations/Acronyms

EU	European Union
IMO	International Maritime Organization
MAP	Mediterranean Action Plan
MARPOL	International Convention for the Prevention of Pollution from Ships
PoW	Programme of Work
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
UN	United Nations

1 INTRODUCTION

1.1 Background

1. The 18th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean ("the Barcelona Convention") and its Protocols, which was held in Istanbul, Turkey from 3 to 6 December 2013, adopted Decision IG.21/7 related to the Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities (LBS Protocol) to the Barcelona Convention, hereinafter referred to as the Marine Litter Regional Plan (UNEP(DEPI)/MED IG.21/9).

2. According to Article 9(5) of the Marine Litter Regional Plan, in conformity with the objectives and principles thereof, the Contracting Parties to the Barcelona Convention shall, in accordance with Article 14 of the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea ("the 2002 Prevention and Emergency Protocol") to the Barcelona Convention, explore and implement to the extent possible by 2017, ways and means to charge reasonable cost for the use of Port Reception Facilities (PRF) or when applicable, apply No-Special-Fee System.

3. Moreover, according to Article 10(f) of the Marine Litter Regional Plan, the Contracting Parties to the Barcelona Convention undertake to explore and implement to the extent possible the following measures by the year 2019, […], (f) Charge reasonable costs for the use of port reception facilities or, when applicable apply No-Special-Fee system, in consultation with competent international and regional organisations, when using port reception facilities for implementing the measures provided for in Article 10.

4. Furthermore, according to Article 14 of the Marine Litter Regional Plan, the MAP-Barcelona Convention Secretariat in cooperation with relevant international and regional organisations, shall prepare specific guidelines taking into account where appropriate existing guidelines, to support and facilitate the implementation of measures provided for in articles 9 and 10 thereof. Subject to availability of external funds these guidelines shall be published in different Mediterranean region languages.

5. The 19th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols, which was convened in Athens, Greece from 9 to 12 February 2016, adopted Decision IG.22/4 related to the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021) (UNEP(DEPI)/MED IG.22/28).

6. The Regional Strategy (2016-2021), which aims at assisting the Contracting Parties to the Barcelona Convention to implement the 2002 Prevention and Emergency Protocol, addresses the issue of marine litter in Specific Objectives 5 (Provision of reception facilities in ports), 6 (Delivery of ship-generated wastes) and 9 (To reduce the pollution generated by pleasure craft activities). It also addresses the related issue of illicit ship pollution discharges in Specific Objectives 7 (Improved follow-up of pollution events as well as monitoring and surveillance of illicit discharges) and 8 (To improve the level of enforcement and the prosecution of discharge offenders). Therefore, reducing (illegal) discharges of ship generated waste features among the priority areas of work of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) established within the framework of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, with a view to coordinating the activities of the Mediterranean coastal States related to the implementation of the 2002 Prevention and Emergency Protocol.

7. The UNEP/MAP Programme of Work (PoW) 2018-2019 adopted by the 20th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols, which was held in Tirana, Albania, from 17 to 20 December 2017, includes several activities addressing marine litter, including the implementation of the EU-funded "Marine Litter-MED" Project that is aimed at supporting the Contracting Parties to the Barcelona Convention from Southern Mediterranean / European Neighbourhood to implement the Marine Litter Regional Plan.

8. The EU-funded "Marine Litter-MED" Project has specific outputs on the development of a set of technical guidelines within the framework of Article 14 of the Marine Litter Regional Plan and one of its components, which is coordinated by REMPEC, focuses on measures related to the better management of marine litter from sea-based sources in ports and marinas in the Mediterranean, in particular the application of charges at reasonable costs for the use of port reception facilities or, when applicable, application of No-Special-Fee System, as well as the provision of reception facilities and the delivery of ship-generated wastes in ports and marinas in the Mediterranean.

9. In this context, REMPEC prepared the present document entitled "Guidance Document to determine the application of charges at reasonable costs for the use of port reception facilities or, when applicable, application of the No-Special-Fee system, in the Mediterranean", hereinafter referred to as "the Guidance Document".

1.2 Goal and scope of the Guidance Document

10. The Guidance Document looks in detail at the charging elements for the use of PRF in the different fee systems, including the No-Special-Fee (NSF) system. The different elements that influence the cost for providing and operating PRF are identified, and how they can be implemented in a fee system embracing the "polluter pays" principle without entailing excessive costs for the users of ports and marinas in the Mediterranean is being assessed.

11. It should be noted that also other wastes and residues from ships, such as ballast water sediments and residues from anti-fouling systems, can be relevant when assessing the application of cost recovery systems for the use of PRF. However, as these types of wastes do not fall within the scope of MARPOL, wastes and residues regulated by the Ballast Water Management Convention, the Anti-Fouling Systems Convention and the London Protocol/London Convention are not covered in the present document.

1.3 Marine litter from sea-based sources

12. Marine litter in the oceans exerts numerous harmful effects on marine life and biodiversity, as well as negative impacts on human health. In addition, marine litter negatively impacts on activities such as tourism, fisheries and shipping, and material that has the potential to be brought back into the economy by means of reuse or recycling is lost once littered. There are several different categories of marine litter, with plastics being the most challenging due to its low degradability and likelihood to enter the human food chain.

13. Litter enters the marine environment through various means and from numerous different origins, including land-based and sea-based sources. The main land-based sources of marine litter include municipal landfills, riverine transport of waste from landfills and urban areas or other sources along rivers and other waterways, discharge of untreated municipal sewage, industrial facilities and tourism, particularly recreational visitors to the coast/beach.

14. The primary ocean-based sources of marine litter are merchant shipping, ferries and cruise liners, fishing vessels, particularly with respect to lost or abandoned fishing gear, military fleets and research vessels, pleasure craft, offshore oil and gas platforms, and aquaculture farms.

15. It is frequently cited that globally 80% of marine debris originates from land-based sources, and 20% from ocean-based sources, however the origins of this ratio are unclear (NOAA, 2009). Besides, the importance of these sources in terms of their contribution to the marine litter problem varies significantly regionally and locally depending on the scale of these activities in the area, as well as the policies regulating them. This means that there is significant variation in the amounts and types of debris arising from these sources regionally and locally, and indeed, seasonally[118].

16. The assessment of the trends in marine litter levels and its sources is crucial for identifying and adopting targeted measures for the different sources. In this respect, the monitoring actions in regional sea conventions, such as the OSPAR Convention, the Helsinki Convention and the Barcelona Convention, are very valuable. Monitoring is applied on uniform marine litter indicators and methods (like beach monitoring and fulmar and/or turtle stomach monitoring), which provide information on the trends in marine litter accumulation and effectiveness of measures. Furthermore, proper source identification is a key element in the monitoring programmes.

17. Although land-based sources are dominant in generating marine litter, sea-based sources actively contribute to the problem. Recent studies have shown that, although the majority of marine litter originates from land-based sources, a significant part comes from sea-based sources. This is notwithstanding the fact that garbage from ships, as listed in Annex V of MARPOL, is subject to strict rules and may not be discharged into the sea, with only few exceptions (e.g. food waste and non-harmful to the marine environment (HME) cargo residues). There is a strict ban on discharges of any plastic into the sea. Furthermore, Annex V requires that the loss of fishing gear is reported to the vessel's flag State and to the coastal State in whose waters the loss occurred.

18. Studies have indicated that in EU-waters sea-based activities, in particular shipping (e.g. lost containers) including fishing and yachting, but also offshore activities, are relevant sources of marine litter as they are responsible for an estimated EU average of 32% and values up to 50% for some sea basins[119]. Recent studies have also indicated that among the sea-based contributors to the problem of marine litter, the fishing sector features quite dominantly, with the recreational sector also taking a significant share[120]. And although garbage delivered in ports has increased since the introduction of Directive 2000/59/EC, a significant delivery gap remains, estimated between 60,000 and 300,000 tons, i.e. 7% to 34% of the total to be delivered annually.

19. In some areas, such as in certain parts of the Pacific and the North Sea**,** sea-based sources even prevail over land-based sources. Mismanaged garbage, and old and derelict fishing gear, are among the most prevalent items of (plastic) marine litter from ships.

2 Regulatory frameworks related to COST RECOVERY SYSTEMS

2.1 International regulatory framework: the MARPOL Convention

20. The International Convention for the Prevention of Pollution from Ships (1973 as modified by the 1978 and 1997 Protocols), MARPOL, is one of the most important international conventions regulating the marine environment. It was developed by the International Maritime Organization

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[118] Unger A., Harrison N., 2016, "*Fisheries as a source of marine debris on beaches in the United Kingdom*", Marine Pollution Bulletin

[119] European Commission (DG ENV) study "to support the development of measures to combat a range of marine litter resources" (Eunomia, 2016)

[120] http://www.fishingforlitter.org.uk/assets/file/Report%20FFL%202011%20-%2014.pdf ; Marine Pollution Bulletin 2016 Unger et al. (2016); UNEP OSPAR (2009); Marine Litter Distribution and Density in European Seas (2014); Eunomia (2016), p.95, 30% estimate share for the fishing sector, and 19% for the recreational sector; the balance of sea-based sources is provided by the merchant sector; Arcadis (2012) has estimated a share of 65% share for the fishing sector alone

(IMO) aiming to preserve the marine environment by fully eliminating pollution by operational discharges of oil and other harmful substances from ships, and to minimize accidental spillage of such substances.

21. Together with its six annexes covering pollution by oil, chemicals, harmful substances in packaged form, sewage, garbage and airborne emissions, MARPOL works as a whole: the articles mainly deal with jurisdiction, powers of enforcement and inspection, while more detailed anti-pollution regulations are contained in the annexes.

22. MARPOL contains provisions in order to regulate the availability of adequate Port Reception Facilities (PRF), which types of wastes/residues can (and as a consequence also which cannot) be legally discharged into the sea, onboard waste management, and enforcement and inspections.

23. MARPOL does not contain any explicit requirements to install cost recovery systems. However, reference is being made in section 6.3 of the 2017 “Guidelines for the implementation of MARPOL Annex V” (Resolution MEPC.295(71)) provides references to the use of compliance incentive systems:

> “The augmentation of port reception facilities to serve ship traffic without undue delay or inconvenience may call for capital investment from port and terminal operators as well as the garbage management companies serving those ports. Governments are encouraged to evaluate means within their authority to lessen this impact, thereby helping to ensure that garbage delivered to port is actually received and disposed of properly at reasonable cost or without charging special fees to individual ships. Such means could include, but are not limited to:
>
> .1 Tax incentives
> .2 Loan guarantees;
> .3 Public ship business preference;
> .4 Special funds to assist in problem situations such as remote ports with no land-based garbage management system in which to deliver ships' garbage;
> .5 Government subsidies; and
> .6 Special funds to help defray the cost of a bounty programme for lost, abandoned or discarded fishing gear or other persistent garbage. The programme would make appropriate payments to persons who retrieve such fishing gear, or other persistent garbage other than their own, from marine waters under the jurisdiction of Government.”

24. Although the “tax incentives” as mentioned in section 6.3 of the guidelines are not explicitly implicating the use of cost recovery systems implementing the “polluter pays” principle, the section does encourage governments to explore the use of systems helping to ensure that garbage delivered to port is actually received and disposed of properly. In addition, the reference to the “reasonable cost or without charging special fees to individual ships” could be interpreted as an encouragement to distribute the cost for the provision and/or the use of PRF over all ships calling the port, e.g. by applying a no-special fee system. Still, the current text leaves substantial room for interpretation.

2.2 Regional regulatory frameworks

2.2.1 Regional Plan for the Marine Litter Management in the Mediterranean

25. In 2013 the Regional Plan for the Marine Litter Management in the Mediterranean was adopted. The main objectives of the Regional Plan are to:

a) Prevent and reduce to the minimum marine litter pollution in the Mediterranean and its impact on ecosystem services, habitats, species in particular the endangered species public health and safety;

b) Remove to the extent possible already existent marine litter;
c) Enhance knowledge on marine litter; and
d) Achieve that the management of marine litter in the Mediterranean is performed in accordance with accepted international standards and approaches as well as those of relevant regional organizations and as appropriate in harmony with programmes and measures applied in other seas.

26. Several measures were included to address marine litter from sea-based sources, including marine litter from sea-based sources.

27. In its Article 9.5 the plan refers to the fact that the Contracting Parties shall, in conformity with the objectives and principles of the Regional Plan:

"*In accordance with Article 14 of the Prevention and Emergency Protocol explore and implement to the extent possible by 2017, ways and means to charge reasonable cost for the use of port reception facilities or when applicable, apply No-Special-Fee system. The Contracting Parties shall also take the necessary steps to provide ships using their ports with updated information relevant to the obligation arising from Annex V of MARPOL Convention5 and from their legislation applicable in the field.*"

28. Also, in its Article 10.(f) the Contracting Parties agreed to assess the possibility to:

"*charge reasonable costs for the use of port reception facilities or, when applicable apply No-Special-Fee system, in consultation with competent international and regional organizations, when using port reception facilities for implementing the measures provided for in Article 10.*"

2.2.2 Directive (EU) 2019/883 on port reception facilities for the delivery of waste from ships.

2.2.2.1 Introduction:

29. A way to promote the use of PRF and achieve a maximal delivery of wastes from ship to shore could be through the application of the "polluter pays[121]" principle. In addition to ensuring the availability of adequate PRF, applying the "polluter pays" principle to ship's waste can be facilitated by requiring ships to contribute significantly to the costs for the reception and management of ship's waste. This contribution can be collected by installing a specific cost recovery system using a fee from the ships calling the port, irrespective whether they make use of the reception facilities or not. This fee should cover the costs for the collection, transport and disposal of the ship's wastes.

30. In 2000 the European Union adopted a specific regulatory tool addressing the issue of preventing pollution of the marine environment by waste from ships. The purpose of Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues is to reduce the discharges of ship-generated waste and cargo residues into the sea, especially illegal discharges, from ships using ports in the European Union, by improving the availability and use of port reception facilities for ship-generated waste and cargo residues, thereby enhancing the protection of the marine environment.

31. However, Directive 2000/59/EC left substantial room for interpretation by the individual EU Member States: as a Directive is a legal act of the European Union which requires EU Member States to achieve a particular result without dictating the means of

[121] The "polluter pays" principle is enacted to make the party responsible for producing pollution responsible for paying for the damage done to the natural environment.

achieving that result[122], Directives leave EU Member States often with a certain amount of leeway as to the exact rules to be adopted. This was also the case for some of the key elements of Directive 2000/59/EC, including elements[123] that are related the cost recovery systems. Therefore A new Directive (EU) 2019/883 was adopted on 9th of April 2019, which repeals Directive 2000/59/EC, and puts into place important regulatory changes.

2.2.2.2 Key elements of Directive (EU) 2019/883:

32. The Directive (EU) 2019/883 applies to all ships (including fishing vessels and recreational craft but with the exception of any warship, naval auxiliary or other ship owned or operated by a State and used on government non-commercial service only), irrespective of their flag, calling at, or operating within, a port of an EU Member State, and to all ports of the EU Member States normally visited by these ships.

33. Key requirements of Directive (EU) 2019/883 include:

a) An obligation for the EU Member States to ensure the availability of PRF adequate to meet the needs of ships normally visiting the port, without causing undue delay;
b) Ports have to develop and implement a Waste Reception and Handling Plan (WRHP), following consultation with all relevant parties, in particular the port users. These plans shall be evaluated and approved by the competent authority in the Member State;
c) The master of a ship has to complete a waste notification form and forward it in due time (at least 24 hours prior to arrival), informing the port of call about the ship's intentions regarding the delivery of ship-generated waste and cargo residues;
d) Upon delivery the PRF-operator or the port authority is to issue a waste delivery receipt, the information of which needs to be electronically reported by the master of the ship;
e) A mandatory delivery for all ship-generated waste. However, there is a possibility for the vessel not to deliver waste if it has sufficient dedicated waste storage capacity till the next port of delivery;
f) The implementation of a cost recovery system applying the “polluter pays” principle through the application of a waste fee, providing an incentive to ships not to discharge ship-generated waste at sea; and
g) The establishment of an enforcement scheme, by which EU Member States ensure that any ship may be subject to inspection. A risk-based approach is to be applied for inspections, based on information from the advance waste notification and waste receipt which are electronically reported and exchanged.

2.2.2.3 Cost recovery systems in Directive (EU) 2019/883:

34. In order to address the ambiguity of Directive 2000/59/EC towards some of the key elements related to cost recovery systems, and to achieve a higher level of harmonization, the Directive (EU) 2019/883 provides additional clarification regarding cost recovery systems, such as:

- fishing vessels and recreational craft are no longer being exempt from the indirect fee system;
- elements that determine the “cost” of a PRF, such as the operational and administrative costs but also the net revenues from EPR[124]-schemes and national/regional funding. Further information regarding cost elements are provided in Annex 4 to Directive (EU) 2019/883;

[122] Differing from Regulations, which are self-executing and do not require any implementing measures

[123] Study to support the development of measures to combat a range of marine litter sources, Eunomia report for European Commission (DG ENV), 2016

[124] Extended Producer Responsibility

- more transparency in relation between the indirect fee and costs;
- more harmonized calculation method of significant contribution;
- indirect fee element to apply also to sewage (MARPOL Annex IV) and oily waste (MARPOL Annex I, other than cargo residues);
- mandatory application of the 100% indirect fee for garbage, including fishing gear and passively fished waste;
- the costs for the collection and treatment of passively fished waste shall be covered, where appropriate, by revenues generated by alternative financing systems, including waste management schemes and EU, national or regional funding;
- the criteria regarding the “green ship” concept are to be further defined through an implementing act.

35. The Directive (EU) 2019/883 requires the provision of a cost recovery system through its Article 8:

> *1. Member States shall ensure that the costs of operating port reception facilities for the reception and treatment of waste from ships, other than cargo residues, are covered through the collection of a fee from ships. Those costs include the elements listed in Annex 4.*
>
> *2. The cost recovery systems shall provide no incentive for ships to discharge their waste at sea. To this end, the Member States shall apply all of the following principles in the design and operation of the cost recovery systems:*
> *(a) ships shall pay an indirect fee, irrespective of delivery of waste to a port reception facility;*
> *(b) the indirect fee shall cover:*
> *(i) the indirect administrative costs;*
> *(ii) a significant part of the direct operational costs, as determined in Annex 4, which shall represent at least 30 % of the total direct costs for actual delivery of the waste during the previous year, with the possibility of also taking into account costs related to the traffic volume expected for the coming year;*
> *(c) in order to provide for a maximum incentive for the delivery of MARPOL Annex V waste other than cargo residues, no direct fee shall be charged for such waste, in order to ensure a right of delivery without any additional charges based on the volume of waste delivered, except where the volume of waste delivered exceeds the maximum dedicated storage capacity mentioned in the form set out in Annex 2 to this Directive; passively fished waste shall be covered by this regime, including the right of delivery;*
> *(d) in order to avoid that the costs of collection and treatment of passively fished waste are borne exclusively by port users, Member States shall cover, where appropriate, those costs from the revenues generated by alternative financing systems, including by waste management schemes and by Union, national or regional funding available;*
> *(e) in order to encourage the delivery of residues from tank washing containing high-viscosity persistent floating substances, Member States may provide for appropriate financial incentives for their delivery;*
> *(f) the indirect fee shall not include the waste from exhaust gas cleaning systems, the costs of which shall be covered on the basis of the types and quantities of waste delivered.*
>
> *3. The part of the costs which is not covered by the indirect fee, if any, shall be covered on the basis of the types and quantities of waste actually delivered by the ship.*

4. The fees may be differentiated on the following basis:
(a) the category, type and size of the ship;
(b) the provision of services to ships outside normal operating hours in the port; or
(c) the hazardous nature of the waste.

5. The fees shall be reduced on the following basis:
(a) the type of trade the ship is engaged in, in particular when a ship is engaged in short sea shipping trade;
(b) the ship's design, equipment and operation demonstrate that the ship produces reduced quantities of waste and manages its waste in a sustainable and environmentally sound manner.

By … [12 months after the date of entry into force of this Directive], the Commission shall adopt implementing acts to define the criteria for determining that a ship meets the requirements stated in point (b) of the first subparagraph in relation to the ship's on-board waste management. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 20(2).

6. In order to ensure that the fees are fair, transparent, easily identifiable, non-discriminatory, and that they reflect the costs of the facilities and services made available, and, where appropriate, used, the amount of the fees and the basis on which they have been calculated shall be made available in an official language of the Member State where the port is located and, where relevant, in a language that is internationally used to the port users in the waste reception and handling plan.

7. Member States shall ensure that monitoring data on the volume and quantity of passively fished waste are collected and shall report such monitoring data to the Commission. The Commission shall, on the basis of those monitoring data, publish a report by 31 December 2022 and every two years thereafter.

The Commission shall adopt implementing acts to define monitoring data methodologies and the format for reporting. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 20(2).

36. It should be noted that Directive (EU) 2019/883 does not make a distinction between the types of ships, and fully incorporates requirements regarding cost recovery systems for merchant ships, passenger/cruise ships, fishing vessels as well as recreational craft.

37. Another important element is that for ship’s garbage (MARPOL Annex V-waste, other than cargo residues) a 100% indirect fee system is required. In order to provide for a maximum incentive for the delivery of garbage, no direct fee shall be charged for such waste, in order to ensure a right of delivery without any additional charges based on the volume of waste delivered. The only exception is when the volume of waste delivered exceeds the maximum dedicated storage capacity, which is mentioned in the advance notification form: in that case an additional direct fee can be charged in order to ensure that the costs related to receiving this exceptional amount of waste do not cause a disproportionate burden on a port’s cost recovery system.

38. It should also be noted that cost recovery systems are not required to cover the collection and treatment of cargo residues. According to Article 8.1 of Directive (EU) 2019/883, which excludes cargo residues from the requirements of cost recovery systems, the cost for delivery of cargo residues

is to be paid directly by the user of the reception facility. Also for waste from exhaust gas cleaning systems (MARPOL Annex VI) a direct fee is to be applied.

39. As Directive (EU) 2019/883 applies to ports within the EU only, today all EU ports have cost recovery systems for ship's wastes in place. However, also several ports outside the EU have established such cost recovery systems.

3. TYPES OF COST RECOVERY SYSTEMS

3.1 Introduction to cost recovery systems for ship-generated waste

40. It is fair to state that, due to the lack of strict prescriptive regulations in both MARPOL (as explained in paragraph 18) and Directive 2000/59/EC (as explained in paragraph 28), varying interpretations regarding cost recovery systems resulted in a large variety of cost recovery systems in place in EU ports.

41. Several studies and analyses have looked at the issue of cost recovery systems for waste from ships. In 2010 the European Maritime Safety Agency (EMSA)[125] performed a Horizontal Assessment on PRF in EU ports. The assessment was based upon the reports of visits to 22 EU Member States made by EMSA in the period 2007 – 2010, to gauge the implementation of Directive 2000/59/EC, including the availability of cost recovery systems. The assessment indicated that there was a difference in implementation and application of cost recovery systems between (and sometimes within) EU Member States. The systems could be categorized in three major groups:

- **No special fee systems (NSF)**: these charge ships a waste handling fee, irrespective of their use of facilities;
- **Administrative waste fee/contribution systems (ADM)**: these charge ships a fee, which is partly based on the amount of waste, delivered, and an additional fixed fee, which is refundable on delivery of waste; and
- **Direct fee only systems**: charge port users based on the volumes of waste discharged, without an additional standard fee.

42. Within these three categories there is a wide variety of specific models used by individual ports and/or EU Member States. To add to the complexity, on top of the variety of cost recovery systems, ports and/or EU Member States sometimes have different cost recovery systems in place for different types of waste.

43. Other studies further built on this categorization of cost recovery systems:

- The 2012 EMSA study on the delivery of ship-generated waste and cargo residues to port reception facilities in EU ports, Ramboll (EMSA/OP/06/2011);
- The 2015 "Ex-post evaluation of Directive 2000/59/EC on PRF" developed by Panteia/PwC for the European Commission (DG MOVE), within the framework of the EC's Regulatory Fitness and Performance programme (REFIT) for the revision of the Directive 2000/59/EC;
- The 2017 Impact Assessment, accompanying the Proposal for a Directive of the European Parliament and of the Council on port reception facilities for the delivery of waste from ships, repealing Directive 2000/59/EC and amending Directive 2009/16/EC and Directive 2010/65/EU (Ecorys/COWI), SWD(2018) 21 final.

44. Therefore, also in this overview the three categories of cost recovery systems mentioned in the EMSA Horizontal Assessment will be maintained.

[125] EMSA is the EU Agency that provides technical assistance and support to the European Commission and EU Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security (www.emsa.europa.eu).

45. It should be noted that also the 2016 “study to support the development of measures to combat a range of marine litter sources” (Eunomia, report for the European Commission DG ENV) in principle used these same categories, but added a few more varieties:

- Direct fees;
- Indirect fees (and reverse fee systems);
- Partial indirect fees;
- Deposit refund systems;
- Penalties; and
- Voucher systems.

46. The three main categories are presented below and explained more in detail, based on the analysis done in the ex-post evaluation of Directive 2000/59/EC (Panteia/PwC, 2015).

3.2 No-special-fee systems (NSF)

47. Among cost recovery systems without special fees (no-special fee) in place in European ports, several do not provide limits to the amounts of waste landed (referred to as 100% NSF). In this system, no fee is charged in addition to the common waste handling fee, which the port authority charges to all ships. This handling fee does not depend on the quantity of the delivered waste, and is also charged if a vessel does not use the port reception facilities at all. The fee is normally based on ship size and sometimes also on ship type, and the waste handling fee can be included in the port dues or charged separately.

48. There are also ports applying a variety of this no special fee system, where they accept waste up to a certain (reasonable) amount (referred to as NSF with reasonable amounts), meaning that a specified amount of waste is covered by the common waste handling fee charged to all ships. All quantities of waste that are considered “excessive” are charged separately, and may be charged by either the port authority or by waste operating companies. The amounts covered by the common waste fee are defined by the port authority. Any additional waste is charged separately, based on the volume of delivered quantities.

49. In order to provide for a maximal incentive for the delivery of garbage, it should be noted that according to Directive (EU) 2019/883 volume limitations are no longer allowed for the delivery of garbage. The only exception allowed is where the volume of the garbage delivered exceeds the maximum dedicated storage capacity mentioned in the advance waste notification form (Annex 2 of the Directive (EU) 2019/883).

50. Many EU ports have implemented a variation of the NSF system. In most cases, this system can apply to both MARPOL Annex I (oil) and Annex V (garbage). In a few cases sewage is included as well. Some ports have implemented a cost recovery system in which a no special fee is only charged for garbage (referred to as the “garbage-only” NSF system). In these cases, the indirect fee covers all garbage reception costs, while all other costs are charged based on the volumes of waste delivered.

3.3 Administrative waste fee/contribution systems (ADM)

51. Administrative waste contribution systems generally consist of two separate parts, being the common administrative fee and a fee that is directly related to the volumes of waste delivered.

52. One variation of this system is an administrative waste fee deposit (referred to as ADM/deposit system). In this system a significant part of the costs of PRF is covered by a fee from ships.

53. An important difference in how the ADM/deposit system can be found in EU Member State ports is whether or not ships get a refund of their deposit after discharging waste at a port reception facility. In some ports, a non-refundable administrative waste fee is charged to ships. However, in several cases, ships receive a full or partial refund if they discharge waste. In this system, all ships pay a waste fee to the port authority. All waste reception costs are directly charged by waste operators, and are based on the volumes of waste discharged. Subsequently, a refund can be reclaimed from the port authority when evidence can be submitted of the waste handling transaction in the port.

54. It should be noted that for EU ports Directive (EU) 2019/883 requires that this indirect fee is to cover the indirect administrative costs plus a significant part of the direct operational costs (30% of total direct costs for the actual delivery of the waste during the previous year).

55. Another cost recovery system type including an administrative fee that is applied in EU ports is the ADM/opposite fee system. In this case, all ships are charged a penalty fee unless they can submit proof of having discharged waste in that or another EU port.

3.4 Direct fee only systems

56. In addition to NSF and ADM cost recovery systems, one additional model was found. This system covers all waste reception costs with a fee that is directly related to the amounts of waste landed only, so there are no charges if the user delivers no waste. By only charging vessels that deliver waste, fully based on the volume of waste delivered, these systems do not provide incentives to discharge waste in ports, and therefore are not in line with Directive (EU) 2019/883, which requires that such incentives are in place.

57. According to Directive (EU) 2019/883 direct fee systems can only be applied for cargo residues, washing waters and scrubber wastes (MARPOL Annex VI).

4. APPLICATION OF COST RECOVERY SYSTEMS IN PORTS AND MARINAS

4.1 Overview of the application of cost recovery systems in EU merchant seaports

58. In 2015 the ex-post evaluation (Panteia/PwC) analysed the application of the type of cost recovery systems (CRS) in EU ports, also considering that ports often use different CRS for different types of waste. Overall the evaluation indicated that most ports either apply an NSF or an ADM system, with the NSF system being more commonly used than ADM systems.

59. Within the ports using the NSF system, most of them were inclined to set maximum limits to the amount of waste covered by the fixed fee, and use a “reasonable amount” more often than the 100% system (unlimited use). Especially for garbage ports often use indirect systems, either through NSF or some form of ADM system. For oily waste (MARPOL Annex I) and particularly sewage (MARPOL Annex IV), more often a direct fee is charged related to the amount of waste delivered.

60. When divided by geographical region, it became clear that especially EU Member States in the Baltic Sea area have adopted NSF systems. The ADM system is mostly found in continental North Sea ports, while fees in direct relation to volumes of waste discharged are found in the Mediterranean region and the Atlantic Ocean region for some types of waste (including the North Sea particularly for sewage).

61. To address the issue of pollution of the marine environment by ship-generated waste, some regions have developed specific strategies, including binding measures. An example of such a regional approach is the Helsinki Commission for the Baltic Sea (HELCOM), which approved the Strategy for Port Reception Facilities for Ship-generated Wastes and Associated Issues, also known as the Baltic Strategy. This strategy comprises a set of measures and regulations aiming to ensure ships' compliance with global and regional discharge regulations, and to eliminate illegal discharges into the sea of all wastes from all ships. In 2007 HELCOM approved its Recommendation 28/1 on the “Application of the no-special-fee system to ship-generated wastes in the Baltic Sea”. As a result, all ports in the Baltic apply the NSF.

62. In the 2018 “Study based on a literature review on existing best practices in the Mediterranean as well as other European regional seas for the application of charges at reasonable costs and of the No-Special-Fee system for the use of port reception facilities” (REMPEC) a limited internet survey has been performed to look at the application of CRS in the following merchant seaports:

Port	Type of CRS
Antwerp	ADM with partial reimbursement
Lisbon	ADM
Gdansk	NSF for reasonable amounts
Patras	NSF
Marseille	ADM opposite fee system

4.2 Application of cost recovery systems in cruise/passenger ports

63. The 2015 ex-post evaluation (Panteia/PwC) did not make a distinction between merchant seaports and cruise/passenger ports.

64. In the 2018 “Study based on a literature review on existing best practices in the Mediterranean as well as other European regional seas for the application of charges at reasonable costs and of the No-Special-Fee system for the use of port reception facilities” (REMPEC) a limited internet survey has been performed to look at the application of CRS in the following cruise/passenger ports:

Port	Type of CRS
Barcelona	100% NSF
Dubrovnik	NSF for garbage, direct charge for other wastes
Kusadasi	NSF for reasonable amounts
Skagen	NSF for reasonable amounts
Stockholm	100% NSF

4.3 Application of cost recovery systems in fishing ports

65. For EU ports it can be noted that in Directive 2000/59/EC fishing vessels were exempt from the principles set out in the article 8 on cost recovery systems. In effect this meant that there was no obligation to charge these vessels a separate standard waste fee, and contribution to the cost of PRF could be fully incorporated in the port dues. In Directive (EU) 2019/883 also fishing vessels are to meet all requirements related to cost recovery systems, including the 100% indirect fee for the delivery of garbage (incl. fishing gear).

66. In the 2018 “Study based on a literature review on existing best practices in the Mediterranean as well as other European regional seas for the application of charges at reasonable costs and of the No-Special-Fee system for the use of port reception facilities” (REMPEC), it was found that for fishing ports only limited information regarding CRS was available on the internet. A reason for this could be that, differing from the collection of waste from merchant ships and other vessels operating internationally, in many cases fishing vessels have a “home port” (or at least a limited number of ports they visit in order to market the fish) to which they return to after their fishing activities. As a consequence, this allows a more direct communication (in the native language) regarding regulations and waste collection schemes in the home port, and there might not be a real need for port authorities and fishing communities to make waste fees and tariffs publicly available on their website. Still, some information regarding CRS could be found for the following fishing ports:

Port	Type of CRS
Den Helder	NSF for oily waste and small hazardous wastes
Gamla Höfnin (Reykjavik)	NSF
Peterhead	NSF
Zeebrugge	100% NSF for garbage

4.4 Application of cost recovery systems in marinas

67. For EU ports it should be noted that in Directive 2000/59/EC recreational craft were exempt from the principles set out in the article 8 on cost recovery systems. In effect this meant that there was no obligation to charge these vessels a separate standard waste fee, and contribution to the cost of PRF could be fully incorporated in the port dues. In Directive (EU) 2019/883 also recreational craft are to meet all requirements related to cost recovery systems, including the 100% indirect fee for the delivery of garbage.

68. Under the old PRF regime recreational craft were excluded from the indirect fee system. As a consequence, the majority of marinas assessed in the 2018 “Study based on a literature review on existing best practices in the Mediterranean as well as other European regional seas for the application of charges at reasonable costs and of the No-Special-Fee system for the use of port reception facilities” (REMPEC) indicated on their website that “garbage/waste delivery is included” (or similar language). Also in 4 of the 5 marinas that were subject of the internet survey, a NSF was applied.

5. ELEMENTS DETERMINING THE "COST" OF PRF

5.1 The "cost" of PRF

69. There are several cost elements associated with the provision and operation of PRF, as the total cost of a PRF is not only linked to the cost for the collection from the wastes from the ship, but also depends on the cost for recycling, treatment and final disposal. In addition, there is also a cost for personnel, administration, etc.

70. In compliance with Article 8.1 of Directive (EU) 2019/883, where the costs of PRF are to be covered by a fee from ships, EU port authorities or port administrators (can be municipalities, yacht clubs, etc.) transfer these costs in differing ways to the port users by applying CRS. To this end, according to Article 8.2 of Directive (EU) 2019/883, all ships shall pay an indirect fee, irrespective of delivery of waste to a PRF.

71. When taking a closer look at the cost elements, each CRS tends to segregate costs into:

a) Direct costs, which are the operational costs arising from the actual delivery (collection, treatment and final disposal) of the ship-generated wastes, including infrastructural costs (investments). The direct costs can originate from the waste operators or the port authority, depending on the local PRF arrangements; and
b) Indirect costs, which relate to the administrative costs of the port arising from the management of information such as the advance waste notification, the development of the waste reception and handling plan (including consultation, communication, licensing waste contractors, tendering procedures etc.) and the cost recovery system itself (invoicing, reimbursements for waste operators, financial follow-up).

72. Furthermore, the costs of PRF are also influenced by possible revenues from selling the treated ship-generated waste, and/or recycling or reuse.

73. These terms were used nor defined in Directive 2000/59/EC, leading to different interpretations of what is the "cost of PRF". Therefore, it is acknowledged that by identifying the different cost elements as administrative indirect costs and operational direct costs, it would facilitate clarifying the CRS and make them more transparent for port users. The relation between fees and costs has been further clarified in the Annex 4 of Directive (EU) 2019/883.

74. It should also be noted that the term "indirect costs" should not be confused with the term "indirect fee" which refers to the waste fee that provides a financial incentive for a vessel to deliver its ship-generated waste and which has to be paid by all vessels visiting an EU port irrespective of the use of the PRF (significant contribution). The indirect fee covers both the indirect costs, as well as a significant part of the direct operational costs.

75. In EU there are clear differences how ports organize and provide PRF services. Some ports provide all PRF services for ship-generated waste under their own control (normally waste contractors selected through public tender procedure) as some ports own the PRF infrastructure, while others provide all PRF service through waste contractors in an open market system. It is clear that cost elements depend on the manner in which the PRF are operated and the degree of the port authorities' involvement (e.g. in some small ports not all indirect administrative costs will be taken into account in CRS). Furthermore, the costs are not the same in all ports, as direct costs in one port may be considered as indirect in other ports (temporary storage, loading/unloading etc.).

76. As a regulatory framework for CRS currently only exists in the EU, also the practices and experiences with CRS and cost elements of PRF are very much based on expertise available in the EU. The following sections provide an overview of the different cost elements that have been identified

during the Impact Assessment supporting the revision of Directive 2000/59/EC, and which have been included in Annex 4 of Directive (EU) 2019/883.

77. The combination of these direct and indirect cost elements together with the net revenues will result in the net total cost for the collection, storage, treatment and final disposal of the ship-generated wastes and/or cargo residues.

5.1.1 Direct costs

78. Direct costs are operational costs that arise from the actual delivery of waste from ships, including:

- The provision of PRF infrastructure, including skips, containers, tanks, processing tools, barges, trucks, waste reception, treatment installations;
- Concessions due to site leasing, if applicable, or for leasing the equipment necessary for the operation of PRF;
- The actual operation of the PRF: collection of the wastes from the ship, transport of waste from the PRF for final treatment, maintenance and cleaning of PRF, costs for staff, including overtime, provision of electricity, waste analysis and insurance;
- Pre-treatment of the ship-generated waste: preparing for re-use, recycling or disposal of the waste, including separate collection and/or additional segregation of the waste;
- Costs for administration: invoicing, issuing of waste receipts to the ship, reporting, etc.

79. Direct costs can be influenced by the availability of existing waste treatment infrastructure: ports that are in the vicinity of large industrial clusters may have better access to land-based waste treatment facilities (e.g. incineration plants and/or landfill sites), which may entail lower costs for the treatment of ship-generated waste because of larger volumes can be handled, and reduced transport costs.

5.1.2 Indirect costs

80. Indirect costs are administrative costs that arise from the management of the collection system for ship-generated waste in the port, including:

- Development and approval of the port’s waste reception and handling plan, including all (financial) audits of the plan and its implementation;
- Updating the port’s waste reception and handling plan, including labour costs and consultancy fees, where applicable;
- Organizing the consultation procedures for the (re-)evaluation of the port’s waste reception and handling plan;
- Management of the advance waste notification and cost recovery systems, including the application of reduced fees for "green ships", the provision of ICT-systems at port level, statistical analysis and associated labour costs;
- Organisation of public procurement procedures for the provision of PRF, as well as the issuing of the necessary authorisations for the provision of PRF;
- Communication of information to port users through the distribution of flyers, putting up signs and posters in the port, or publication of the information on the port's website, and electronic reporting of the information as required in Article 5 of Directive (EU) 2019/883 (information that is to be made available to all port users);
- Management of waste management schemes: extended producer responsibility (EPR) schemes, recycling and application for and implementing of national/regional funds; and
- Other administrative costs: monitoring exemptions and electronic reporting of this information as required in Article 9 of Directive (EU) 2019/883 (exemptions for ships that frequently and regularly call a port and have arranged for the delivery of the ship-generated waste).

5.2 Revenues

81. Revenues are net proceeds from waste management schemes and national/regional funding available, including the following revenue elements:

- Net financial benefits provided by extended producer responsibility (EPR) schemes;
- Other net revenues from waste management such as recycling schemes;
- Funding under the European Maritime and Fisheries Fund (EMFF); and
- Other funding or subsidies available to ports for waste management and fisheries.

82. Net revenues not only depend on the availability of a market for the use of recycled waste or secondary materials (which can be stimulated and supported by a regulatory framework facilitating the circular economy), but also on the application of EPR schemes and national/international funding.

5.3 The “reasonable cost” aspect

83. According to Article 10(f) of the Marine Litter Regional Plan for the Mediterranean Sea, the Contracting Parties to the Barcelona Convention undertake to explore and implement to the extent possible the measures to charge “*reasonable costs*” for the use of PRF or, when applicable apply a No-Special-Fee system.

84. The wording “reasonable cost” is also being used in IMO guidelines:

a) In section 6.3 of the IMO 2017 “Guidelines for the implementation of MARPOL Annex V” (resolution MEPC.295(71)): “Governments are encouraged to evaluate means within their authority to lessen this impact, thereby helping to ensure that garbage delivered to port is actually received and disposed of properly at *reasonable cost* or without charging special fees to individual ships”;
b) In section 5.2 of the IMO 2000 “Guidelines for ensuring the adequacy of Port Waste Reception Facilities” (resolution MEPC.83(44) it is mentioned that “the mere provision of facilities, which are then not fully utilized, does not necessarily mean they are adequate. Poor location, complicated procedures, restricted availability and *unreasonably* high cost for the service provided, are all factors which may deter the use of reception facilities.”

85. The Marine Litter Regional Plan for the Mediterranean Sea nor the IMO MARPOL Annex V implementation guidelines further provide additional guidance on what is to be understood under this “reasonable cost”.

86. “Reasonable cost” as such is a very subjective term as there are many angles to it, for example:

a) It depends on the point of view: a cost that can be perceived as very “reasonable” for a port authority or a PRF, may be experienced as “unreasonable” for the ship owner, the ship operator or the agent;
b) Differing practices in the waste management industry may have an impact: e.g. implementation of higher standards for the recycling or treatment of certain types of waste can lead to higher costs, which on its turn may change the perception of what is “reasonable” or not. In some countries higher waste management standards may be the rule, leading to higher costs for the delivery of ship-generated waste in port. This may be perceived as “unreasonable” compared with lower standards in other ports/countries;
c) The number of ships calling and consequently also the amount of waste delivered can have an impact on the perception of “reasonable cost”, even within the same port: in some countries port terminals are also required to perform as a PRF for the ships calling the terminal. A terminal/PRF with a limited number of ships calling (that as a consequence deliver less waste)

may have the same indirect (and partly also direct) costs as a terminal/PRF with many ships delivering. If a similar cost for the collection and treatment of ship-generated waste is to be covered by a waste fee from a limited number of ships, this waste fee will be higher which can be perceived as unreasonable.

87. As a consequence, it is impossible to put an absolute figure to "reasonable cost", not in terms of money nor in terms of X% of the total cost for a ship to call a port.

88. There are however a few important elements for further consideration:

a) As the cost for the delivery of the ship-generated waste to a PRF in general is only a fraction of the total cost for a ship (incl. pilots, tugboats, loading/unloading, port dues, etc.) a division of the cost for PRF over all the ships calling the port/terminal, irrespective whether they use the PRF or not (i.e. application of a fee system with an indirect fee, irrespective of delivery of waste to a PRF, such as required by Directive (EU) 2019/883), will only have a limited impact on the total cost for the ship. Dividing the total cost for PRF in a port over all port users, will reduce the cost for the individual ship and will reduce the perception of "unreasonable";
b) In order to avoid discussions and misunderstandings on what is perceived as a "reasonable cost" or not, a key element is transparency. There are cases where the ship operator or agent does not have a good understanding of what is included in the payment of the waste fee: they are required to pay the fee, but then have no information regarding the consequences, e.g. they are not aware that payment of the fee gives them the right to deliver a certain amount of ship-generated waste without extra charges (NSF system), or they do not know that there is a full or partial reimbursement for the cost when they deliver their waste to a PRF. Also, if there are other (direct) charges, this should be made transparent and well communicated. It can be noted that in its Article 8.6 the Directive (EU) 2019/883 explicitly refers to the transparency issue, and that the fees and the basis on which they have been calculated on is to be made available to the port users;
c) Maximum transparency regarding how the collected waste is treated is important: a higher treatment level (e.g. better recycling) may lead to a higher cost but which may be fully acceptable by the shipowner or operator, and might therefore not necessarily not to be perceived as "unreasonable";
d) The collection and treatment of certain types of waste, e.g. hazardous wastes, can entail higher costs, and can therefore lead to higher waste fees. This should also be properly communicated to the port users;
e) For specific types of traffic, such as Short Sea Shipping (SSS) or cruise vessels, a differentiated fee can be taken into consideration, where the specificities of the traffic can be fully addressed:
    - in case of SSS the ship makes relatively shorter voyages with frequent port calls, so in principle there should be plenty of opportunities to deliver the ship's waste to a PRF. It is therefore acceptable that the ship carries small amounts of waste, and as a consequence is not requested to pay a "full" waste fee;
    - cruise vessels generate large amounts of garbage leading to higher costs for collection and treatment, which can be reflected in the waste fee;
f) In case of "green ships" (where the ships' design, equipment and operation demonstrate that the ship produces reduced quantities of waste and manages its waste in a sustainable and environmentally sound manner) ports may install a rebate scheme.

6. RECOMMENDATIONS FOR THE APPLICATION OF COST RECOVERY SYSTEMS IN PORTS AND MARINAS IN THE MEDITERRANEAN

89. Based on the elements addressed and the conclusions of the studies, analyses and assessments that have been the subject of the 2018 "Study based on a literature review on existing best practices in the Mediterranean as well as other European regional seas for the application of charges at reasonable costs and of the No-Special-Fee system for the use of port reception facilities" (REMPEC), taking into

account the good practices of fee systems in ports that are available on the internet and considering the requirements of Directive (EU) 2019/883, some recommendations on cost recovery systems can be distilled. These recommendations are presented below per port type and MARPOL waste type.

90. For EU ports the following requirements of Directive (EU) 2019/883 are to be put forward:
- Application of an indirect fee system for garbage (MARPOL Annex V, other than cargo residues), either 100% or for reasonable amounts;
- For other wastes types that are being delivered by the ships normally calling the port: application of an indirect fee, irrespective of actual use of the PRF, that covers all indirect administrative costs plus a significant part of the direct operational costs (as determined in Annex 4 of Directive (EU) 2019/883), which shall represent at least 30% of the total direct costs for actual delivery of the waste during the previous year;
- Maximum transparency regarding the right to deliver or reimbursement;
- Maximum transparency regarding the downstream waste treatment.

For non-EU ports these elements can be put forward as general recommendations.

91. Still, it should be borne in mind that incentivizing the delivery of waste from ships to a PRF consists of a combination of different elements, such as:

- Availability and accessibility of the PRF;
- Adequacy of the PRF, including price and service level;
- Size of the port;
- Types of traffic, including seasonal traffic;
- Volumes of waste normally delivered by the ships;
- Downstream waste management and recycling options.

92. Therefore, it is possible that, beside the following recommendations, also other types of cost recovery systems might be both effective and cost-efficient in a port. It can also be noted that adequate enforcement schemes will contribute positively to the use of PRF.

6.1 Recommendations for cost recovery systems in merchant seaports

6.1.1 MARPOL Annex I wastes

93. <u>Considering the specificities of MARPOL Annex I wastes:</u>

a) Liquid oily wastes such as sludge and oily bilge water can be stored onboard relatively easy in designated holding tanks. As the storage capacity of these tanks can be quite large, ships can sail long distances before the holding tanks are full and delivery to a PRF is necessary.
b) When the ship is equipped with bilge water separation technology such as an oil-water separator (OWS), which can reduce the quantity of bilge water by 65–85%, the time for delivery to a PRF can even be prolonged.
c) Delivery of liquid oily wastes is a complex operation requiring designated equipment (tanks and piping) and extensive pumping capacity. As the delivery of oily bilge water and/or sludge therefore can take some time, ship operators will not be keen on delivering small amounts in every single port of call, but only:
    a. When the remaining storage tanks' capacity is limited in order to cover the amount of oily waste that will be generated during the following voyage; or
    b. When state-of-the-art service levels for collection can be provided by a PRF in a specific port.
d) Shipping companies appear to optimize their waste delivery in order to reduce the cost of waste management. According to information from PRF operators oily waste, which sometimes has a commercial value, is typically kept on board in order to be delivered to a PRF

in a port where market conditions are most favorable (relating to oil prices, demand for oily waste, etc.). Such conditions may be found within but possibly also outside the EU.

e) Cargo residues in general remain the property of the cargo owner after unloading the cargo to the terminal, as they often have an economic value. For this reason, the cargo residues in most cases are not included in the cost recovery systems and the application of an indirect fee. Charges for the delivery of cargo residues are being paid directly by the user of the PRF, as specified in the contractual arrangements between the parties involved or in other local arrangements.

94. Considering the outcome of the assessments of cost recovery systems:

a) It has been noted that consistently increasing levels of oily waste are delivered to ADM/deposit fee systems. This indicated that in ports with these systems, a similar number of vessels deliver on average more MARPOL Annex I waste than before.
b) Other cost recovery systems did not show a similar rising trend.

Recommendation:

- For ship-generated oily waste (bilge water, sludge, waste oil): application of an ADM system, containing a fixed indirect fee supplemented with a refundable (deposit) part or penalty (in case of no delivery)
- For MARPOL Annex I cargo residues and washing waters: in general, the delivery of cargo residues and washing waters is charged directly, linked to the amount of waste delivered

6.1.2 MARPOL Annex II wastes

95. Considering the specificities of MARPOL Annex II waste:

a) In general cargo residues remain the property of the cargo owner after unloading the cargo to the terminal, as they often have an economic value. For this reason, cargo residues in most cases are not included in cost recovery systems and the application of an indirect fee.
b) The charges for the delivery of cargo residues are being paid directly by the user of the PRF, as specified in the contractual arrangements between the parties involved or in other local arrangements.
c) Cargo residues also include the remnants of noxious liquid cargo after cleaning operations to which the discharge norms of MARPOL apply, and which under certain conditions, as set out in the MARPOL Annexes, do not need to be delivered in port to avoid unnecessary operational costs for ships and congestion in ports.
d) In principle only, bulk (dry and liquid) ships can generate cargo residues or washing water containing cargo residues. Therefore, it does not seem fair to apply an indirect fee system for this type of waste and distribute the cost for collection and treatment over all port users (also the ones that do not generate cargo residues).

96. Considering the outcome of the assessments of cost recovery systems:

- Indirect fee systems including cargo residues have only been applied in very few and specific cases (e.g. in smaller ports with only a few dedicated terminals);
- It can be noted that, according to Directive (EU) 2019/883, EU Member States may encourage the delivery of residues from tank washings containing high-viscosity persistent floating substances by providing appropriate financial incentives.

Recommendation: application of a direct fee system, linked to the amounts of waste delivered to the PRF

6.1.3 MARPOL Annex IV wastes

97. Considering the specificities of MARPOL Annex IV waste:

a) Most merchant ships have sewage holding tanks. The size of these tank covers the necessary capacity for the retention of all sewage generated during the operation of the ship, and the number of persons onboard. Depending on the storage capacity of these tanks, it might not always be necessary for the ship to deliver sewage to a PRF.
b) Some ships are equipped with type approved sewage treatment plants. In those cases ships are only required to deliver the generated effluent when the ship is in port (where ships are often prohibited to discharge), as while it is on the route all sewage (when it is well treated) can be continuously legally discharged at sea. Therefore, not every ship delivers sewage to a PRF, and yearly volumes of sewage delivered to PRF in a port can be rather low.

98. Considering the outcome of the assessments of cost recovery systems:

a) Ports with a NSF/unlimited system received comparatively higher amounts of sewage than ports with other cost recovery systems.
b) It was concluded that the type of cost recovery system is not the key factor influencing the level of delivery of sewage, but that it is more related to the regional circumstances (such as e.g. the efforts of HELCOM in the Baltic Sea, which is a special area under MARPOL Annex IV).

Recommendation:	Depending of the normal and expected traffic in the port (amounts of sewage normally delivered), application of a NSF system with unlimited or reasonable amounts.

6.1.4 MARPOL Annex V wastes

6.1.4.1 Garbage (MARPOL Annex V other than cargo residues)

99. Considering the specificities of MARPOL Annex V waste:

a) The generation of garbage is inseparably linked with the amount of people onboard a ship. And as every ship has crew and/or passengers on board, every ship generates garbage.
b) After a while garbage, especially when contaminated with galley waste and food packaging, can be quite smelly. As it is not allowed to discharge any garbage at sea (except for food waste, under specific conditions), for hygienic reasons the ship's crew in general is not keen on keeping the garbage onboard the ship and, especially after long travels, are therefore happy to deliver their garbage when calling a port.
c) Garbage from ships is relatively similar to municipal waste, which is generated in every city and port. Therefore, means for collection (garbage trucks, skips, waste containers) of this type of waste are relatively inexpensive (especially when compared with specific chemical wastes) and easily available.
d) Although appendix II to MARPOL Annex V provides different categories[126] of garbage to be grouped in the Garbage Record Book, it does not require onboard segregation of these waste types. In addition, MARPOL Annex V does not contain a requirement to segregate hazardous garbage from non-hazardous garbage. As a consequence, the cost for collection and treatment of mixed garbage is not only determined by the volume of the garbage delivered, but also by the amount of hazardous wastes (as the cost for handling and treatment of this type of waste is significantly higher).

[126] Plastics (category A), Food wastes (B), Domestic wastes (C), Cooking oil (D), Incinerator ashes (E), Operational wastes (F), Animal carcasses (G), Fishing gear (H) and E-waste (I)

100. Considering the outcome of the assessments of cost recovery systems:

a) It was found that lower amounts of waste are delivered to ports that charge in relation to the volumes of waste delivered, when compared with ports with indirect fee systems in place.
b) Whereas these levels were relatively low until 2008, in recent years a clear rising trend has been observed in ports with NSF systems. This finding is in line with how a NSF cost recovery system provides incentives to deliver in the port.
c) Directive (EU) 2019/883 contains the requirement to implement a 100% indirect cost recovery system for MARPOL Annex V wastes, other than cargo residues. This 100% indirect fee will ensure a right of delivery without any additional charges based on volume of waste delivered, except when this volume of waste delivered exceeds the maximum dedicated storage capacity as mentioned in the form set out in Annex 2[127] to Directive (EU) 2019/883.
d) Although it is generally perceived that the 100% NSF system, apart from being transparent and relatively simple to manage, has the advantage to provide a significant incentive not to discharge garbage at sea, it is sometimes also mentioned[128] that this system does not provide a clear incentive for ships to reduce waste generation on board. This can be addressed by introducing:
    a. For non-EU ports: limited volumes included in the NSF (reasonable amounts); or
    b. Reduced waste fees for ships generating less amounts of waste

Recommendation:
- for EU ports: 100% NSF system
- for non-EU ports: 100% NSF system, or NSF for reasonable amounts

6.1.4.2 MARPOL Annex V cargo residues

101. Considering the specificities of MARPOL Annex V cargo residues:

a) Cargo residues often remain the property of the cargo owner after unloading the cargo to the terminal. Therefore, in most cases cargo residues are not included in cost recovery systems and the application of an indirect fee.
b) The charges for the delivery of cargo residues are being paid directly by the user of the PRF, as specified in the contractual arrangements between the parties involved or in other local arrangements.
c) Outside special areas MARPOL Annex V cargo residues that are not considered harmful to the marine environment (non-HME) can, under certain conditions, be legally discharged at sea. However, as the Mediterranean Sea is a special area under MARPOL Annex V, non-HME cargo residues (also contained in wash water) can only be discharged at sea if:
    a. both the port of departure and the next port of destination are within the special area and the ship will not transit outside the special area between these ports (regulation 6.1.2.2 of MARPOL Annex V); and
    b. if no adequate reception facilities are available at those ports (regulation 6.1.2.3 of MARPOL Annex V).
d) As according to MARPOL Annex V non-HME cargo residues (also contained in wash water after cleaning operations) are not needed to be delivered in port, in order to avoid unnecessary operational costs for ships and congestion in ports.
e) In principle only, bulk (dry and liquid) ships can generate cargo residues or washing water containing cargo residues. Therefore, it does not seem fair to apply an indirect fee system for

[127] Standard format of the advance notification form for waste delivery to port reception facilities

[128] Mr. Jordi Vila (Barcelona Port Authority) in his presentation on the NSF in the port of Barcelona, given during a meeting of the PRF sub-group of the European Sustainable Shipping Forum (ESSF), 30/09/2015 in Brussels

this type of waste and distribute the cost for collection and treatment over all port users (also the ones that do not generate cargo residues).

102. Considering the outcome of the assessments of cost recovery systems:

- Indirect fee systems including cargo residues have only been applied in very few and specific cases (e.g. in smaller ports with only a few dedicated terminals).

Recommendation:	application of a direct fee system, linked to the amounts of waste delivered to the PRF

6.1.5 MARPOL Annex VI wastes

103. Considering the specificities of MARPOL Annex VI:

a) MARPOL Annex VI includes waste from exhaust gas cleaning systems (scrubber sludge) and ozone depleting substances (ODS). As ODS are mainly handled through repair yards, they are not being included in fee systems.
b) As MARPOL Annex VI does not require the use of scrubbers, not every ship generates it. And although it is expected that there will be a growth of this type of waste in the future, scrubber sludge is currently generated in limited volumes only, due to the fact that the number of ships with onboard scrubbers is still relatively small.

104. Considering the outcome of the assessments of cost recovery systems:

- Only in very few cases fee systems are being applied for scrubber waste. Due to the limited volumes of scrubber waste generated, in most of these cases direct fee systems were applied.

Recommendation:	application of a direct fee system, linked to the amounts of waste delivered to the PRF

6.2 Cruise/passenger ports

6.2.1 MARPOL Annex I wastes

105. Considering the specificities of MARPOL Annex I wastes:

a) Liquid oily wastes such as sludge and oily bilge water can be stored onboard relatively easy in designated holding tanks. As the storage capacity of these tanks can be quite large, ships can sail long distances before the holding tanks are full and delivery to a PRF is necessary.
b) When the ship is equipped with bilge water separation technology such as an oil-water separator (OWS), which can reduce the quantity of bilge water by 65–85%, the time for delivery to a PRF can even be prolonged.
c) Delivery of liquid oily wastes is a complex operation requiring designated equipment (tanks and piping) and extensive pumping capacity. As the delivery of oily bilge water and/or sludge therefore can take some time, ship operators will not be keen on delivering small amounts in every single port of call, but only:
    a. when the remaining storage tanks' capacity is limited in order to cover the amount of oily waste that will be generated during the following voyage; or
    b. when state-of-the-art service levels for collection can be provided by a PRF in a specific port.
d) Shipping companies appear to optimize their waste delivery in order to reduce the cost of waste management. According to information from PRF operators oily waste, which sometimes has a commercial value, is typically kept on board in order to be delivered to a PRF

in a port where market conditions are most favourable (relating to oil prices, demand for oily waste, etc.). Such conditions may be found within but possibly also outside the EU.

e) Cruise/passenger ports are heavily affected by seasonal traffic (many ships in high season), which also impacts volumes of waste delivered.

106. Considering the outcome of the assessments of cost recovery systems:

a) It has been noted that consistently increasing levels of oily waste are delivered to ADM/deposit fee systems. This indicated that in ports with these systems, a similar number of vessels deliver on average more MARPOL Annex I waste than before.
b) Other cost recovery systems did not show a similar rising trend.

Recommendation: For ship-generated oily waste (bilge water, sludge, waste oil): application of an ADM system, containing a fixed indirect fee supplemented with a refundable (deposit) part or penalty (in case of no delivery). As cruise/passenger ports are heavily affected by seasonal traffic (many ships in high season), also NSF can be applied during these periods.

6.2.2 MARPOL Annex II wastes

107. Not applicable to cruise/passenger ships.

6.2.3 MARPOL Annex IV wastes

108. Considering the specificities of MARPOL Annex IV waste:

a) Most cruise ships have sewage holding tanks. The size of these tank covers the necessary capacity for the retention of all sewage generated during the operation of the ship, and the number of persons onboard. Depending on the storage capacity of these tanks, it might not always be necessary for the ship to deliver sewage to a PRF.
b) Most cruise ships are equipped with type approved sewage treatment plants. In those cases, ships are only required to deliver the generated effluent when the ship is in port (where ships are often prohibited to discharge), as while it is on the route all sewage treatment effluent can be continuously legally discharged at sea. Therefore, not every ship delivers sewage to a PRF, and yearly volumes of sewage delivered to PRF in a port can be rather low.
c) Cruise/passenger ports are heavily affected by seasonal traffic (many ships in high season), which also impacts volumes of sewage delivered.

109. Considering the outcome of the assessments of cost recovery systems:

a) Ports with a NSF system received comparatively higher amounts of sewage than ports with other cost recovery systems.
b) It was concluded that the type of cost recovery system is not the key factor influencing the level of delivery of sewage, but that it is more related to the regional circumstances (such as e.g. the efforts of HELCOM in the Baltic Sea, which is a special area under MARPOL Annex IV).

Recommendation: Depending of the normal and expected (high season) cruise and passenger traffic in the port, application of a NSF system

6.2.4 MARPOL Annex V wastes

110. Considering the specificities of MARPOL Annex V waste:

a) The generation of garbage is inseparably linked with the amount of people onboard a ship. And cruise/passenger ships per definition have large crew and passengers on board, every cruise/passenger ship generates substantial amounts of garbage.
b) As it is not allowed to discharge any garbage at sea (except for food waste, under specific conditions), for hygienic reasons the ship's crew in general is not keen on keeping the garbage onboard the ship and, especially after long travels, are therefore happy to deliver their garbage to a PRF.
c) Garbage from ships is relatively similar to municipal waste, which is generated in every city and port. Therefore, means for collection (garbage trucks, skips, waste containers) of this type of waste are relatively inexpensive (especially when compared with specific chemical wastes) and easily available.
d) Although appendix II to MARPOL Annex V provides different categories[129] of garbage to be grouped in the Garbage Record Book, it does not require onboard segregation of these waste types. In addition, MARPOL Annex V does not contain a requirement to segregate hazardous garbage from non-hazardous garbage. As a consequence, the cost for collection and treatment of mixed garbage is not only determined by the volume of the garbage delivered, but also by the amount of hazardous wastes (as the cost for handling and treatment of this type of waste is significantly higher).
e) Cruise ship operators often maintain high environmental standards and implement some of the most advanced waste management schemes in the maritime industry, including the segregation of several hazardous and non-hazardous waste streams.

111. Considering the outcome of the assessments of cost recovery systems:

a) It was found that lower amounts of waste are delivered to ports that charge in relation to the volumes of waste delivered, when compared with ports with indirect fee systems in place.
b) Whereas these levels were relatively low until 2008, in recent years a clear rising trend has been observed in ports with NSF systems. This finding is in line with how a NSF cost recovery system provides incentives to deliver in the port.
c) Directive (EU) 2019/883 contains the requirement to implement a 100% indirect cost recovery system for MARPOL Annex V other than cargo residues. This 100% indirect fee will ensure a right of delivery without any additional charges based on volume of waste delivered, except when this volume of waste delivered exceeds the maximum dedicated storage capacity as mentioned in the form set out in Annex 2[130] to Directive (EU) 2019/883.
d) Although it is generally perceived that the 100% NSF system, apart from being transparent and relatively simple to manage, has the advantage to provide a significant incentive not to discharge garbage at sea, it is sometimes also mentioned[131] that this system does not provide a clear incentive for ships to reduce waste generation on board. This can be addressed by introducing:
e)
    a. for non-EU ports: limited volumes included in the NSF (reasonable amounts); or
    b. reduced waste fees for ships generating less amounts of waste

Recommendation:
- for EU ports: 100% NSF system
- for non-EU ports: 100% NSF system, or NSF system with reasonable amounts

6.2.5 MARPOL Annex VI wastes

[129] Plastics (category A), Food wastes (B), Domestic wastes (C), Cooking oil (D), Incinerator ashes (E), Operational wastes (F), Animal carcasses (G), Fishing gear (H) and E-waste (I)
[130] Standard format of the advance notification form for waste delivery to port reception facilities
[131] Mr. Jordi Vila (Barcelona Port Authority) in his presentation on the NSF in the port of Barcelona, given during a meeting of the PRF sub-group of the European Sustainable Shipping Forum (ESSF), 30/09/2015 in Brussels

112. Considering the specificities of MARPOL Annex VI:

a) MARPOL Annex VI includes waste from exhaust gas cleaning systems (scrubbers sludge) and ozone depleting substances (ODS). As ODS are mainly handled through repair yards, they are not being included in fee systems.
b) As MARPOL Annex VI does not require the use of scrubbers, not every ship generates it. And although it is expected that there will be a growth of this type of waste in the future, scrubber sludge is currently generated in limited volumes only, due to the fact that the number of ships with onboard scrubbers is still relatively small.

113. Considering the outcome of the assessments of cost recovery systems:

- Only in very few cases fee systems are being applied for scrubber waste. Due to the limited volumes of scrubber waste generated, in most of these cases direct fee systems were applied.

Recommendation: application of a direct fee system, linked to the amount of waste delivered to the PRF

6.3 Fishing ports

6.3.1 MARPOL Annex I wastes

114. Considering the specificities of MARPOL Annex I wastes:

a) As fishing vessels most likely use lighter fuels such as diesel, these types of ships do not generate sludge.
b) Liquid oily wastes such as oily bilge water can be stored onboard in designated holding tanks. Delivery to a PRF will depend on the storage capacity of these tanks.
c) When the ship is equipped with bilge water separation technology such as an oil-water separator (OWS), which can reduce the quantity of bilge water by 65–85%, the time for delivery to a PRF can even be prolonged.

115. Considering the outcome of the assessments of cost recovery systems:

a) It has been noted that consistently increasing levels of oily waste are delivered to ADM/deposit fee systems. This indicated that in ports with these systems, a similar number of vessels deliver on average more MARPOL Annex I waste than before.
b) However, some of the practices related to cost recovery systems in fishing ports also include NSF systems for oily waste. This will depend on whether the fishing port more or less always the same ships has calling with which a specific agreement can be arranged, or it is often visited by other ships.

Recommendation:

- For fishing ports generally visited by the same ships and with which a specific agreement can be arranged: NSF
- Visitors to the port:
    - for EU ports: ADM system
    - for non- EU ports: ADM or direct fee system, linked to the amount of waste delivered

6.3.2 MARPOL Annex II wastes

116. Not applicable to fishing vessels.

6.3.3 MARPOL Annex IV wastes

117. Considering the specificities of MARPOL Annex IV waste:

When fishing vessels are equipped with sewage holding tanks, delivery of sewage to a PRF depends on the size of these tanks in combination with the length of the journey.

118. Considering the outcome of the assessments of cost recovery systems:

a) Ports with a NSF system received comparatively higher amounts of sewage than ports with other cost recovery systems.
b) It was concluded that the type of cost recovery system is not the key factor influencing the level of delivery of sewage, but that it is more related to the regional circumstances (such as e.g. the efforts of HELCOM in the Baltic Sea, which is a special area under MARPOL Annex IV).
c) None of the practices on cost recovery systems assessed during the internet survey included a NSF for sewage.

Recommendation:
- for EU ports: ADM system
- for non-EU ports: ADM or direct fee system, linked to the amount of waste delivered

6.3.4 MARPOL Annex V wastes

119. Considering the specificities of MARPOL Annex V waste:

a) The generation of garbage is inseparably linked with the amount of people onboard a ship. And as every ship has crew and/or passengers on board, every ship generates garbage.
b) After a while garbage, especially when contaminated with galley waste and food packaging, can be quite smelly. As it is not allowed to discharge any garbage at sea (except for food waste, under specific conditions), for hygienic reasons the ship's crew in general is not keen on keeping the garbage onboard the ship and, especially after long travels, are therefore happy to deliver their garbage when calling a port.
c) Garbage from ships is relatively similar to municipal waste, which is generated in every city and port. Therefore, means for collection (garbage trucks, skips, waste containers) of this type of waste are relatively inexpensive (especially when compared with specific chemical wastes) and easily available.
d) Although appendix II to MARPOL Annex V provides different categories[132] of garbage to be grouped in the Garbage Record Book, it does not require onboard segregation of these waste types. In addition, MARPOL Annex V does not contain a requirement to segregate hazardous garbage from non-hazardous garbage. As a consequence, the cost for collection and treatment of mixed garbage is not only determined by the volume of the garbage delivered, but also by the amount of hazardous wastes (as the cost for handling and treatment of this type of waste is significantly higher).
e) In some regions schemes have been set up to collect "passively fished waste" (waste that has been collected in nets during fishing operations). As this type of waste is in principle similar to garbage, it can be collected in ports.

[132] Plastics (category A), Food wastes (B), Domestic wastes (C), Cooking oil (D), Incinerator ashes (E), Operational wastes (F), Animal carcasses (G), Fishing gear (H) and E-waste (I)

120. Considering the outcome of the assessments of cost recovery systems:

a) It was found that lower amounts of waste are delivered to ports that charge in relation to the volumes of waste delivered, when compared with ports with indirect fee systems in place. In recent years a clear rising trend has been observed in ports with NSF systems. This finding is in line with how a NSF cost recovery system provides incentives to deliver in the port.
b) Directive (EU) 2019/883 contains the requirement to implement a 100% indirect cost recovery system for MARPOL Annex V other than cargo residues.
c) Although it is generally perceived that the 100% NSF system, apart from being transparent and relatively simple to manage, has the advantage to provide a significant incentive not to discharge garbage at sea, it is sometimes also mentioned[133] that this system does not provide a clear incentive for ships to reduce waste generation on board. This can be addressed by introducing:
    a. for non-EU ports: limited volumes included in the NSF (reasonable amounts); or
    b. reduced waste fees for ships generating less amounts of waste
d) In some regions schemes have been set up to collect "passively fished waste" (waste that has been collected in nets during fishing operations). As this type of waste is in principle similar to garbage, it can be collected in ports. However, it is not recommended that the cost for collection and treatment of this type of waste is to be covered by a fee from the fishing vessels, in order not create a disincentive for fishing port communities to participate in delivery schemes for passively fished waste. In most cases the cost for the collection and treatment of passively fished waste was covered by national or sub-national financing schemes (subsidies).

Recommendation:
- For EU-ports: 100% NSF system, including for fishing gear
- For non-EU ports: 100% NSF system or NSF for reasonable amounts, including fishing gear
- Can be arranged at national or sub-national level
- Cost for collection and treatment of passively fished waste may be covered by alternative financing/subsidies on a national or sub-national level

6.3.5 MARPOL Annex VI wastes

121. Not applicable to fishing vessels.

6.4 Marinas

6.4.1 MARPOL Annex I wastes

122. Considering the specificities of MARPOL Annex I wastes:

a) As yachts use lighter fuels such as diesel, these types of ships do not generate sludge. Also bilge water is generated in limited amounts, depending on the size of the ship.
b) Liquid oily wastes such as oily bilge water can be stored onboard in tanks. Delivery to a PRF will depend on the storage capacity of these tanks.

123. Considering the outcome of the assessments of cost recovery systems:

[133] Mr. Jordi Vila (Barcelona Port Authority) in his presentation on the NSF in the port of Barcelona, given during a meeting of the PRF sub-group of the European Sustainable Shipping Forum (ESSF), 30/09/2015 in Brussels

a) It has been noted that consistently increasing levels of oily waste are delivered to ADM/deposit fee systems. This indicated that in ports with these systems, a similar number of vessels deliver on average more MARPOL Annex I waste than before.
b) However, some of the practices related to cost recovery systems in marinas also include NSF systems for oily wastes.

Recommendation:
- For club members and/or seasonal visitors of the marina: 100% NSF system, or NSF for reasonable amounts
- Daily visitors:
  - for EU ports: ADM system
  - for non-EU ports: ADM or direct fee system, linked to the amount of waste delivered

6.4.2 MARPOL Annex II wastes

124. Not applicable to recreational vessels.

6.4.3 MARPOL Annex IV wastes

125. Considering the specificities of MARPOL Annex IV waste:

- Delivery of sewage to a PRF depends on the size of the holding tanks in combination with the length of the journey.

126. Considering the outcome of the assessments of cost recovery systems:

a) Although it was concluded that ports with a NSF system received comparatively higher amounts of sewage than ports with other cost recovery systems, the assessments on cost recovery systems mainly focused on merchant seaports, not at marinas.
b) However, some of the practices related to cost recovery systems in marinas also included NSF systems for sewage.

Recommendation:
- For club members and/or seasonal visitors of the marina: 100% NSF system, or NSF with limited amounts
- Daily visitors:
  - for EU ports: ADM system
  - for non-EU ports: ADM or direct fee system, linked to the amount of waste delivered

6.4.4 MARPOL Annex V wastes

127. Considering the specificities of MARPOL Annex V waste:

a) The generation of garbage is inseparably linked with the amount of people onboard a ship. And as every ship has crew and/or passengers on board, every ship generates garbage.
b) Garbage from ships is relatively similar to municipal waste, which is generated in every city and port. Therefore, means for collection (garbage trucks, skips, waste containers) of this type of waste are relatively inexpensive (especially when compared with specific chemical wastes) and easily available.

128. Considering the outcome of the assessments of cost recovery systems:

a) Although it was concluded that ports with a NSF system received comparatively higher amounts of garbage than ports with other cost recovery systems, the assessments on cost recovery systems mainly focused on merchant seaports, not at marinas.
b) However, all marinas assessed within the framework of this study applied NSF systems for garbage.

Recommendation:
- For EU ports: 100% NSF system
- For non-EU ports:
  - 100% NSF system, or NSF for reasonable amounts
  - Daily visitors: ADM or direct fee system, linked to the amount of waste delivered

6.4.5 MARPOL Annex VI wastes

129. Not applicable to recreational vessels.

6.5 Overview of recommendations

Port/waste type	Recommended cost recovery system
Merchant seaports	
MARPOL Annex I wastes	• For ship-generated oily waste (bilge water, sludge, waste oil): application of an ADM system, containing a fixed indirect fee supplemented with a refundable (deposit) part or penalty (in case of no delivery) • For MARPOL Annex I cargo residues and washing waters: in general, the delivery of cargo residues and washing waters is charged directly, linked to the amounts of waste delivered
MARPOL Annex II wastes	Application of a direct fee system linked to the amounts of waste delivered to the PRF
MARPOL Annex IV wastes	Depending of the normal and expected traffic in the port (amounts of sewage normally delivered), application of a NSF system with unlimited or reasonable amounts.
MARPOL Annex V wastes, other than cargo residues	• For EU ports: 100% NSF system • For non-EU ports: 100% NSF system, or NSF for reasonable amounts
MARPOL Annex V cargo residues	Application of a direct fee system linked to the amounts of waste delivered to the PRF
MARPOL Annex VI wastes	Application of a direct fee system linked to the amounts of waste delivered to the PRF
Cruise/passenger ports	
MARPOL Annex I wastes	For ship-generated oily waste (bilge water, sludge, waste oil): application of an ADM system, containing a fixed indirect fee supplemented with a refundable (deposit) part or penalty (in case of no delivery). As cruise/passenger ports are heavily affected by seasonal traffic (many ships in high season), also NSF can be applied during these periods.
MARPOL Annex II wastes	N/A
MARPOL Annex IV wastes	Depending of the normal and expected (high season) cruise and passenger traffic in the port, application of a 100% NSF system or NSF for reasonable amounts.
MARPOL Annex V wastes	• For EU ports: 100% NSF system • For non-EU ports: 100% NSF system, or NSF for reasonable amounts
MARPOL Annex VI wastes	Application of a direct fee system linked to the amounts of waste delivered to the PRF

Fishing ports	
MARPOL Annex I wastes	• For fishing ports generally visited by the same ships and with which a specific agreement can be arranged: NSF • Visitors to the port: ADM or direct fee system, linked to the amount of waste delivered
MARPOL Annex II wastes	N/A
MARPOL Annex IV wastes	ADM or direct fee system linked to the amount of waste delivered
MARPOL Annex V wastes	• For EU ports: 100% NSF system, including fishing gear • For non-EU ports: 100% NSF system, or NSF for reasonable amounts, including fishing gear • Can be arranged at national or sub-national level • Cost for collection and treatment of passively fished waste may be covered by alternative financing/subsidies on a national or sub-national level
MARPOL Annex VI wastes	N/A
Marinas	
MARPOL Annex I wastes	• For club members and/or seasonal visitors of the marina: 100% NSF system, or NSF for reasonable amounts • Daily visitors: ADM or direct fee system, linked to the amount of waste delivered
MARPOL Annex II wastes	N/A
MARPOL Annex IV wastes	• For club members and/or seasonal visitors of the marina: 100% NSF system, or NSF for reasonable amounts • Daily visitors: ADM or direct fee system, linked to the amount of waste delivered
MARPOL Annex V wastes	• For EU ports: 100% NSF system • For non-EU ports: o 100% NSF system, or NSF for reasonable amounts o Daily visitors: ADM or direct fee system, linked to the amount of waste delivered
MARPOL Annex VI wastes	N/A

Draft Decision IG.24/12

Updated Guidelines Regulating the Placement of Artificial Reefs at Sea

The Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012, in particular those paragraphs relevant to the sound management of chemicals and waste,

Recalling United Nations General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling also the United Nations Environment Assembly resolutions UNEP/EA.4/Res.7 of 15 March 2019, entitled "Environmental sound management of waste" and UNEP/EA.4/Res. 21 of 15 March 2019, entitled "Towards a pollution-free planet",

Having regard to the 1995 Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea, and in particular Article 3(4) (b) thereof, which excludes from the definition of dumping the placement of matter for a purpose other than mere disposal, provided that such placement is not contrary to the aims of the 1995 Dumping Protocol,

Recalling the 2005 Guidelines for the Placement at Sea of Matter for Purpose other than the Mere Disposal (Construction of Artificial Reefs), adopted by the Contracting Parties at their fourteenth meeting (COP 14) (Portoroz, Slovenia, 8-11 November 2005), and noting the progress made and key lessons learnt in their implementation,

Recalling also Decision IG.22/20, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), by which the Contracting Parties mandated the update of the 2005 Guidelines,

Stressing that, subject to the entry into force of the 1995 Dumping Protocol, the dumping of vessels in the Mediterranean Sea Area is prohibited since 31 December 2000, according to Article 4(2) (c) of the Protocol,

Taking into account that the placement of matter for a purpose other than the mere disposal in the Mediterranean Sea Area is not contrary to the aims of the 1995 Dumping Protocol, and that, in line with the object and purpose of the 1995 Dumping Protocol and of the Barcelona Convention, placement activities must not be used to legitimize the dumping of waste or other matter that is prohibited under the 1995 Dumping Protocol,

Taking note of the most recent developments regarding placement of artificial reefs, in particular under the International Maritime Organization Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) and the Protocol thereto,

Mindful of the urgent need to update the 2005 Guidelines to respond to the increasing development of artificial reefs in the Mediterranean Sea Area, combined with its potential adverse impacts on marine and coastal ecosystems and other legitimate uses of the sea, and to further encourage greater awareness of the importance of well planned, adequately managed, properly assessed and monitored artificial reefs in the Mediterranean Sea Area and the benefits for the marine environment that they can generate,

Committed to further streamlining the Mediterranean Action Plan Ecological Objectives, in particular those related to pollution, litter, biodiversity, coast and hydrography and associated Good Environmental Status targets, as well as the relevant provisions of the Regional Plan on Marine Litter Management in the Mediterranean, in the scope of application of the 1995 Dumping Protocol,

Having considered the report of the meeting of the Thematic Focal Points for the Specially Protected Areas and Biodiversity Protocol held in June 2019 and the subsequent action taken,

6. *[Adopt]* the Updated Guidelines Regulating the Placement of Artificial Reefs at Sea, set out in the Annex to the present Decision, which replace the 2005 Guidelines;

7. *Request* the Contracting Parties to make every effort to ensure their effective implementation, keeping in mind that the updated guidelines shall be without prejudice to stricter provisions with respect to the placement of artificial reefs in the Mediterranean Sea Area contained in other existing national or international instruments and/or programmes;

8. *Urge* the Contracting Parties to timely report on placement activities in the Mediterranean Sea Area using the Mediterranean Action Plan (MAP) online Barcelona Convention Reporting System;

9. *Request* the Secretariat to facilitate the work of the Contracting Parties for the implementation of the Updated Guidelines, by further strengthening cooperation and synergies in this area with the London Convention and its Protocol and other relevant International Maritime Organization instruments; and by sharing information with global and regional agreements and programmes on the achievements and progress of the MAP Barcelona Convention system in this area.

[ANNEX
Updated Guidelines for Regulating the Placement of Artificial Reefs at Sea

Table of Contents

List of Abbreviations / Acronyms

BEP	Best Environmental Practice
CFCs	Chlorofluorocarbons
CPs	Contracting Parties
COP	Conference of the Parties
FAO	Food and Agriculture Organization of the United Nations
GFCM	General Fisheries Commission for the Mediterranean
GES	Good Environmental Status
IMAP	Integrated Monitoring and Assessment Programme
IMO	International Maritime Organization
MAP	Mediterranean Action Plan
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PCBs	Polychlorobiphenyls
RAC/SPA	Regional Activity Centre for Specially Protected Areas
SPAMIs	Specially Protected Areas of Mediterranean Importance
UNEP	United Nations Environment Programme
UNEP/MAP	United Nations Environment Programme/Mediterranean Action Plan

PART -A- REQUIREMENTS OF THE DUMPING PROTOCOL AND BARCELONA CONVENTION

1. Introduction

1. Under Article 4.1 of the Dumping Protocol, the dumping of wastes or other matter into the sea, with the exception of those listed in Article 4.2, is prohibited. Article 3(4b) of the amended Dumping Protocol excludes from the definition of "dumping" the placement of matter for a purpose other than the mere disposal provided that such placement is done in accordance with the relevant provisions of the Protocol.

2. In this regard the 'relevant provisions of the Convention' include the general obligations in Article 4, in particular the obligation that Contracting Parties shall, in accordance with the provisions of the Convention, take all possible steps to prevent and eliminate pollution and to protect the marine area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected (Article. 4.2, 4.3). More specifically, the provisions of Article 5 of the Convention, requires that: "The Contracting Parties shall take all appropriate measures to prevent, abate and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area caused by dumping from ships and aircraft or incineration at sea".

3. Moreover, and at the outset of the adoption of Ecosystem Approach for the conservation of the marine ecosystems of the Mediterranean Sea, the CP's shall consider in their placement activities the Operational objectives and Good Environmental Status definitions relating to trace metals and selected organics, as included in the Decision IG.21/3, adopted by the COP18, in 2013.

4. Furthermore, in accordance with Article 6 of the Dumping Protocol, the permit referred to in Article 5 shall be issued only after careful consideration of the factors set forth in the Annex to the Dumping Protocol.

5. These updated Guidelines are prepared in pursuance to Article 3(4, b) of the amended Dumping Protocol of 1996. Their purpose is to assist Contracting Parties in:

(a) Considering the consequences for the marine environment of the placement of artificial reefs on the seabed. Construction of artificial reefs is one example of 'placement' and the Guidelines that follow contain elements that are relevant for a wide range of other coastal and offshore developments that have potential to cause adverse effects in the marine environment and that, therefore, should fall under the control of appropriate national authorities.
(b) Fulfilling their obligations relating to the issue of permits for the placement of matter
(c) Transmitting to the Organization reliable data on the input of matter covered by the Dumping Protocol.

6. **The Updated Guidelines on Placement for Artificial Reefs shall be without prejudice to stricter provisions with respect to the placement for artificial reefs in the Mediterranean Sea Area contained in other existing or future national or international instruments or programmes.**

7. Data and information provided by national authorities, in the framework of reporting exercise to IMO and MAP based on the respective London and Barcelona Conventions, indicate that the placement of vessels is, besides dredging, one of the major dumping activities in the Mediterranean coastal zones. In addition, considering the scientific findings which indicate a number of drawbacks in the placement of matter, and specifically of vessels, for reefs development and the resulting risks for tourist and ecosystems purpose and working in the framework of precautionary principle, the basic concept of these updated Guidelines is to provide instructions on the placement of artificial reefs for ecosystems enhancement and recommendations to ensure the stability of barges, small fishing boats,

tow and tug boats, small ferry boats etc. and, in general all vessels, under 30 m long which are placed at depth of less than 40 m, due to their possible human risks. These updated Guidelines provide as well ample information on placement of vessels in general, and clean-up procedures, which should be implemented before placement of all types of vessels to prevent pollution of the marine ecosystems and to contribute in achieving/maintaining GES in line with the Ecological Objectives 1, 2, 6, 7, 8, 9, and 10 and related GES definitions and targets.

2. Scope

8. Artificial reefs are used in coastal waters in many regions of the world for a range of coastal management applications. The development of artificial reefs in the maritime area is growing. Among the uses being examined by the scientific community are:

(a) reduction of flooding and coastal erosion due to tidal waves;
(b) providing sheltered anchorages for shipping and small boats;
(c) development of habitat for crustaceans' fisheries (e.g. lobsters), particularly in conjunction with juvenile restocking;
(d) providing substrate for algae or mollusc cultivation;
(e) providing means of restricting fishing in areas where stocks or ecosystems are in need of protection;
(f) creating fish aggregation areas for [~~**MPAs**~~] fisheries, sport anglers and diving;
(g) replacing habitats in areas where particular substrates are under threat;
(h) mitigation for habitat loss elsewhere (e.g. consequence of land reclamation);
(i) production of marine resources.

3. Definitions and Purpose

9. An artificial reef is a submerged structure deliberately constructed or placed on the seabed to emulate some functions of a natural reef such as protecting, regenerating, concentrating, and/or enhancing [~~**biological diversity and/or**~~] populations of living marine resources.

10. Objectives of an artificial reef may also include the protection, restoration and regeneration of aquatic habitats, and the promotion of research, recreational opportunities, and educational use of the area.

11. The term does not include submerged structures deliberately placed to perform functions not related to those of a natural reef - such as breakwaters, mooring, cables, pipelines, marine research devices or platforms even if they incidentally imitate some functions of a natural reef.

12. These Guidelines address those structures specifically built for protecting, regenerating, concentrating and/or increasing [~~**biological diversity and/or**~~] the production of living marine resources, whether for fisheries or nature conservation. This includes the protection and regeneration of habitats.

13. Any authorization for the creation of an artificial reef should identify clearly the purposes for which it may be created.

PART-B- ASSESSMENT AND MANAGEMENT OF PLACEMENT OPERATIONS AT SEA

1. Requirements for Construction and Placement

1.1 Materials

14. Artificial reefs should be built from inert materials. For the purpose of these Guidelines, are considered those which do not cause pollution through leaching, physical or chemical weathering and/or biological activity. Physical or chemical weathering of structures may result in increased exposures for sensitive organisms to contaminants and lead to adverse environmental effects.

15. Materials used for the construction of permanent artificial reefs will of necessity be bulky in nature, for example geological material (i.e. rock), concrete or steel. Vessel structures could be placed, under the provisions of the Protocol, provided that the instructions of these updated Guidelines are properly implemented.

16. No materials should be used for the construction of artificial reefs which constitute wastes or other matter whose placement at sea is otherwise prohibited.[134]

1.2 Design

17. Modules for artificial reefs are generally built on land unless they consist solely of natural materials placed in an unmodified form. The materials chosen for the construction of artificial reefs will need to be of sufficient engineering strength, both as individual units and as an overall structure to withstand the physical stresses of the marine environment and not break up, potentially causing serious interference problems over a wide area of the seabed. Artificial reefs must also be constructed and installed in such a way as to ensure that the structures are not displaced or overturned by force of towed gears, waves, currents or erosion processes for their objectives to be fulfilled at all times.

18. Artificial reefs should be designed and built in such a way that they could be removed, if required. The design of the artificial reef should strive to achieve its objectives with minimum occupation of space and interference with the marine ecosystems.

1.3 Placement

19. The placement of artificial reefs should be done with due regard to any legitimate activity underway or foreseen in the area of interest, such as navigation, tourism, recreation, fishing, aquaculture, nature conservation or coastal zone management.

20. Prior to placement of an artificial reef, all groups and individuals who may be affected or interested, should be informed on the characteristics of the artificial reef as well as on its location and depth of placement. They should be given the opportunity to make their views known in due time prior to its placement.

21. The location of a proposed artificial reef and the timing of its construction/placement should be carefully considered by the competent body at an early stage in the planning, especially with regard to:

(a) distance to the nearest coastline;
(b) coastal processes including sediment movement;
(c) recreational areas and coastal amenities;
(d) spawning and nursery areas;
(e) known migration routes of fish or marine mammals;

[134] This provision provides a stricter framework for action than the Protocol

(f) sport and commercial fishing areas;
(g) areas of natural beauty or significance cultural, historical, or archaeological importance;
(h) ~~**[areas of scientific or biological importance (e.g. [marine] key habitats, [Specially Protected Areas cover by the provisions of the Protocol concerning Specially Protected areas and Biological Diversity in the Mediterranean,] SPAMIs, protected areas designated under Council Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna and Council Directive 79/409/EEC on the conservation of birds and under International Conventions or corresponding legislation of other Contracting Parties, [Specially Protected Areas cover by the provisions of the Protocol concerning Specially Protected areas and Biological Diversity in the Mediterranean)]**~~ shipping lanes or anchorages;
(i) designated marine placement sites;
(j) old military exclusion zones, including closed dumpsites;
(k) engineering uses of the seafloor (e.g. potential or ongoing seabed mining, seabed pipelines; undersea cables, desalination or energy conversion sites).
(l) previous dumping sites in the area

22. While in many cases the aim should be to avoid conflict with the above interests, the management objectives for an artificial reef could be directed specifically at interference, such as discouraging the use of certain types of fishing gear. It will also be important to consider information on the following:

(m) water depths (maximum, minimum, mean);
(n) influence on stratification;
(o) tidal period;
(p) direction and velocity of residual currents;
(q) wind and wave characteristics;
(r) impact on coastal protection;
(s) influence of the structure on local suspended solid concentrations.

23. **Special attention will be paid to the technical possibility for future physical access to the reef in case of need, notably with regard to its maximum depth, to allow removing or reforming it once placed. In relation to this, placement of artificial reefs in deep sea beds should be avoided**.

24. The competent authority to issue the permit should ensure that the position surveyed, depth and dimensions of the artificial reef is indicated on nautical charts. In addition, the authority should ensure that advance notice is issued to advise mariners and hydrographic surveying services of the placement.

1.4 Assessment of potential effects-impact hypothesis

25. Assessment of potential effects should lead to a concise statement of the expected consequences on the marine environment, i.e., the "Impact Hypothesis". It provides a basis for deciding whether to approve or reject the proposed placement option and for defining environmental monitoring requirements.

26. The assessment for placement should integrate information on matter characteristics, conditions at the proposed placement-site(s), proposed placement techniques and specify the potential effects on human health, living resources, [~~**MPAs**~~], amenities and other legitimate uses of the sea. It should define the nature, temporal and spatial scales and duration of expected impacts based on reasonably conservative assumptions.

27. In constructing an impact hypothesis, particular attention should be given to, but not limited to, potential impacts on [~~**MPAs**~~] amenities, sensitive areas (e.g., spawning, nursery or feeding areas), habitat (e.g. biological, chemical and physical modification), migratory patterns and marketability of

resources. Consideration should also be given to potential impacts on other uses of the sea including: fishing, navigation, engineering uses, areas of special concern and value, and traditional uses of the sea.

28. All matter may have a variety of physical, chemical and biological effects. Impact hypotheses cannot attempt to reflect them all. It must be recognized that even the most comprehensive impact hypothesis may not address all possible scenarios such as unanticipated impacts. It is therefore, imperative that the monitoring programme be linked directly to the hypothesis and serve as a feedback mechanism to verify the predictions and review the adequacy of management measures applied to the placement operation and at the placement-site. It is important to identify the sources and consequences of uncertainty. The only effects requiring detailed consideration in this context are physical impacts on biota.

29. The expected consequences of placement should be described in terms of affected habitats, processes, species, communities and uses. The precise nature of the predicted effect (e.g., change, response, or interference) should be described. The effect should be quantified in sufficient detail so that there would be no doubt as to the variables to be measured during field monitoring. In the latter context, it would be essential to determine "where" and "when" the impacts can be expected. Emphasis should be placed on biological effects and habitat modification as well as physical and chemical change. The following factors should be addressed:

(a) physical changes and physical effects on biota; and
(b) effects on sediment transport.

30. [~~**Whenever an artificial reef placement is intended to be done within the limits of an MPA (either its core or buffer area), a detailed impact assessment specifically intended for that case has to be done; and a related update of the MPA management plan undertaken before the physical placement works take place.**~~]

31. Where the impact hypothesis indicates any transboundary impacts a consultation procedure should be initiated in accordance with Section 2.5.

1.5 Scientific Experiments

32. Trials involving smaller scale[135] placement for scientific purposes may be required before proceeding with a full-scale deployment in order to evaluate the suitability of artificial reef and to assess the accuracy of the predictions of its impact on the local marine environment. As the use of artificial reefs develops, scientific experiments may be carried out. In these cases, full justification referred to under section 3 of Part A “Definitions and Purposes” may not be possible or necessary.

1.6 Management and Liabilities

33. Authorisations for constructing artificial reefs should:

(a) specify the responsibility for carrying out any management measures and monitoring activities required and for publishing reports on the results of any such monitoring;
(b) specify the owner of the artificial reef and the person liable for meeting claims for future damage caused by those structures and the arrangements under which such claims can be pursued against the person liable.

[135] In the planning phase for a full scale artificial reefs scientists usually carry out small scale placement experiments before proceeding with a full scale deployment in order to evaluate the suitability of the artificial reef and to assess the accuracy of the impacts hypothesis on the local marine environment

2. Requirements for the authorization of placement at sea of matter

2.1 Requirements for a permit application

34. Any application for a permit has to contain data and information specifying:

(a) the purpose for the placement of the artificial reefs,
(b) the impact hypothesis, **including health and safety considerations**,
(c) the types, amounts and sources of the matter to be placed;
(d) the design – which includes selecting appropriate materials and designing the detailed structure, based both on the purpose of the reef
(d) the location of the placement site(s) **and distance from MPAs and fishing shoals**;
(e) the history of previous placement operations and/or past activities with negative environmental impacts;
(f) the method of placement; and
(g) the proposed monitoring and reporting arrangements
(h) **the proposed corrective and mitigating measures**.

2.2 Criteria for the evaluation of a permit application

35. Artificial reefs should only be established if, after due consideration of all environmental costs and socio-economic aspects (e.g. undesirable impacts or alteration), a net benefit can be demonstrated, in relation to the defined objectives. In such assessment of potential effects (which may have to be a formal environmental impact assessment if major impacts cannot be ruled out) the following steps should be followed:

(a) Studies should be carried out that yield the information required to assess:
    i. Possible impacts of the installation of an artificial reef on the indigenous fauna and flora, **marine key habitats and the environment of the site and the wider surroundings**;
    ii. The benefits expected to be obtained from the installation of an artificial reef;
(b) The best alternatives for the design and placement of the artificial reef should be identified. At this stage, the benefits of all options including that of no action should be assessed in relation to their environmental costs and socio-economic aspects;
(c) Before installing an artificial reef, baseline studies should be conducted to provide benchmark data for the subsequent monitoring of the effects of an artificial reef on the marine environment.

36. Where the comparative assessment reveals that adequate information is not available to determine the likely effects of the proposed placement option, including the potential long-term harmful consequences, then this option should not be considered further. In addition, where analysis of the comparative assessment shows that the placement option is less preferable than other option, a permit should not be issued for the placement.

37. Each assessment should conclude with a statement in support of a decision to either issue or refuse a permit for placement. Opportunities should be provided for public review and participation in the permit evaluation process.

2.3 Conditions for issuing a permit

38. A decision to issue a permit should be based on the elements provided by the preliminary survey. If the characterisation of these conditions is insufficient for the formulation of an impact hypothesis, additional information will be required before any final decision is made with regard to issuing a permit.

39. A decision to issue a permit should only be made where all the impact assessments are complete, taking into account the defined criteria, and where the monitoring requirements have been determined. The conditions set out in the permit should be such as to ensure, in so far as practicable, that environmental disturbance and detriment are minimized, and that benefits are maximized. **In this regard, the permit should specify preventive or mitigating and corrective measures aiming at preventing or mitigating a potential impact.**

40. Regulators should strive at all times to enforce procedures which ensure that environmental changes are as far below the limits of allowable environmental change as practicable, taking into account technological capacities and economic, social and political considerations.
The authority responsible for issuing the permit should take into consideration relevant research findings when specifying permit requirements.

2.4 Supplemental conditions for issuing a permit for an existing placement site

41. The issuing of a permit for placement at a site where past placement activities were carried out should be based on a comprehensive review of results and objectives of existing monitoring programmes. The review process provides an important feedback and informed decision-making regarding the impacts of further placement activities, and whether a permit may be issued for further placement on site. Furthermore, such a review will indicate whether the field-monitoring programme needs to be continued, revised or terminated.

2.5 Consultation procedure in case of transboundary impacts

42. With reference to Section 1.4 of Part B and in case the impacts hypothesis indicates any transboundary impacts a consultation procedure should be initiated at least 32 weeks before any planned date of a decision on that question by sending to the Secretariat a notification containing:

(a) an assessment prepared in accordance with Part B to this Guidelines, including the summary in accordance with Part B of these Guidelines;
(b) an explanation why the relevant Contracting Party considers that the requirements of Section 1.4 of Part B of these Guidelines may be satisfied;
(c) any further information necessary to enable other Contracting Parties to consider the impacts and practical availability of options for re-use, recycling and placement.
(d) MAP Secretariat shall immediately send copies of the notification to all Contracting Parties.

43. If a Contracting Party wishes to object to, or comment on, the issue of the permit, it shall inform the Contracting Party which is considering the issue of the permit not later than the end of 16 weeks from the date on which the MAP Secretariat circulated the notification to the Contracting Parties, and shall send a copy of the objection or comment to the MAP Secretariat. Any objection shall explain why the Contracting Party which is objecting considers that the case put forward fails to satisfy the requirements of Section 1.4 of Part B of these Guidelines. That explanation shall be supported by scientific and technical arguments. MAP Secretariat shall circulate any objection or comment to the other Contracting Parties.

44. Contracting Parties shall seek to resolve by mutual consultations any objections made under the previous paragraph. As soon as possible after such consultations, and in any event not later than the end of 22 weeks from the date on which the MAP Secretariat circulated the notification to the Contracting Parties, the Contracting Party proposing to issue the permit shall inform the MAP Secretariat of the outcome of the consultations. The MAP Secretariat shall forward the information immediately to all other Contracting Parties.

45. If such consultations do not resolve the objection, the Contracting Party which objected may, with the support of at least two other Contracting Parties, request the MAP Secretariat to arrange an ad hoc meeting as appropriate to discuss the objections raised. Such a request shall be made not later than

the end of 24 weeks from the date on which the MAP Secretariat circulated the notification to the Contracting Parties.

46. The Secretariat shall arrange for such an ad hoc meeting to be held within 6 weeks of the request for it, unless the Contracting Party considering the issue of a permit agrees to an extension. The meeting shall be open to all Contracting Parties, the operator of the installation in question and all observers to MAP Secretariat. The meeting shall focus on the information provided in accordance with section 1 of Part B of these Guidelines.

47. The chairman of the meeting shall be the MAP Coordinator, or a person appointed by MAP Coordinator. Any question about the arrangements for the meeting shall be resolved by the chairman of the meeting.

48. The chairman of the meeting shall prepare a report of the views expressed at the meeting and any conclusions reached. That report shall be sent to all Contracting Parties within two weeks of the meeting.

49. The competent authority of the relevant Contracting Party may take a decision to issue a permit at any time after:

(a) the end of 16 weeks from the date of dispatch of the copies under paragraph 43 (d) of the consultation procedure, if there are no objections at the end of that period;
(b) the end of 22 weeks from the date of dispatch of the copies under paragraph 43 (d) of the consultation procedure, if any objections have been settled by mutual consultation;
(c) the end of 24 weeks from the date of dispatch of the copies under paragraph 43 (d) of the consultation procedure, if there is no request for an ad hoc meeting;
(d) receiving the report of the ad hoc meeting from the chairman of that meeting.

50. Before making a decision with regard to any permit, the competent authority of the relevant Contracting Party shall consider both the views and any conclusions recorded in the report of the ad hoc meeting, and any views expressed by Contracting Parties in the course of this procedure.

51. Copies of all the documents which are to be sent to all Contracting Parties in accordance with this procedure shall also be sent to those observers who have made a standing request for this to the Secretariat.

PART-C- PLACEMENT OF VESSELS HULL AND SUPERSTRUCTURE[136]

52. **For the purpose of these updated Guidelines, the term vessel applies to the vessel's hull, which is the main body of the vessel and its superstructure, which consists of parts of the vessel that project above her main deck.**

53. Placement of vessels should not be permitted by competent national authorities before securing that cleaning has been completed, in accordance with requirements under section 4 of the Part C of these updated Guidelines.

54. Placement of vessels for the creation of artificial reefs is practiced by growing numbers of CPs in the Mediterranean region. This practice has, in principle, many ecosystems, economic and recreational benefits. Nevertheless, experiences from the Mediterranean region and other part of the world revealed several limitations and drawbacks which make vessels placement practices non beneficial to the marine ecosystems, the economy of coastal municipalities, maritime traffic and creating human health risks. Taking into consideration these facts, these updated Guidelines provide recommendations to the CPs to be consider by national relevant authorities before granting a vessel placement permit. It should be read in conjunction with the Art. 3(4b) of Dumping Protocol and offer guidance, based on observation and experience, on how to perform vessels placement. In this respect it is highly recommended to consider the provision of other relevant international Conventions (such as Hong Kong Convention, Basel Convention etc.).

1. Benefits

55. Benefits could be summarized, among others, as follows**:**

(a) Vessels make interesting diving locations for both recreational divers and technical deep diving mixed-gas users. Vessels are also regularly utilized as angling sites by recreational fishermen and the charter fishing industry.
(b) Vessels used as artificial reefs, can, alone, or in conjunction with other types of artificial reefs, generate reef-related economic contributions to coastal municipalities.
(c) Steel-hulled vessels are considered durable artificial reef material when placed at depths and orientations that insure stability in major storm events. Large vessels have life spans as artificial reefs that may exceed 60 years, depending on vessel type, physical condition, location of deployment, and storm severity.
(d) Reuse of large steel-hulled vessels as artificial reefs may be more economical than scrapping the vessels domestically.
(e) Vessels, due to high vertical profile, attract both pelagic and demersal fishes. Vertical surfaces produce upwelling conditions, current shadows, and other current speed and direction alterations that are attractive to schooling forage fishes, which in turn attract species of commercial and recreational importance, resulting in increased catch rates for fishermen.
(f) Vessels, like other artificial reef material, can augment benthic structure which locally increases shelter opportunities and reef fish carrying capacity in locations where natural structure is sparse, or create structure which is more preferable or attractive to certain fish species than locally less complex hard bottom.
(g) Steel-hulled vessel reefs that are not well publicized, located far offshore, or otherwise difficult to access for fishing and diving because of depth and currents may, if properly sited, provide important refuge for reef fish species. Such vessels can provide important aggregation, shelter, and residence sites for reef fish species that have been traditionally over-

[136] The entire Part C of this updated Guideline is placed in square brackets for further consideration by the MAP Focal Points Meeting.

fished.

(h) Vessels under certain conditions may provide habitat for spawning aggregations of some managed reef fishes.
(i) Vessels may provide extensive surface area for epibenthic colonization. This colonization results in the enhancement of lower trophic level biomass at the vessel site.
(j) Under some circumstances, depending on location and season, some vessels may hold greater abundances and higher biomass of fish species, including some recreationally important species (i.e. snappers), than nearby natural reefs.
(k) Vessels may reduce anchor damage and other physical damage by directing a proportion of the reef users away from nearby natural reefs. Similarly, vessels provide diving alternatives to natural reef sites where physical damage to natural reefs through anchor damage, grounding, handling, crawling on, specimen collecting, and spear fishing have accelerated deterioration of natural reefs and their associated fauna.

2. Limitations and drawbacks

56. The literature highlighted number of limitations and drawbacks related to placement of vessels for artificial reefs:

(a) Vessels were originally designed and utilized for purposes other than artificial reef construction. They can be contaminated with pollutants, including: PCBs, radioactive control dials, petroleum products, lead, mercury, zinc, and asbestos. Hazardous wastes and other pollutants are difficult and expensive to remove from ships. Hazardous material itself, once removed must be disposed of under proper Guidelines without any damage to the environment.
(b) Damage to private and public property during cleaning operations or subsequent towing, vessels sinking outside of the designated site creating hazards to navigation, and ships damaging natural habitats due to improper deployment or subsequent movement.
(c) Vessel stability during storms is variable. Vessels placed in shallow depths (less than 50 m) are more susceptible to movement during major storm events than vessels placed at greater depths and local oceanographic characteristics should be taken into account.
(d) Damage to the structural integrity of vessels sunk as artificial reefs can also occur from storms. However, it should be noted that natural reefs, and some other less durable types of artificial reef structures have also experienced storm damage. Some vessels that may resist significant hull movement in a storm can still experience substantial structural damage. Loss of structural integrity can increase hazards to divers on artificial reefs by creating a disorienting environment or increasing potential for snagging equipment or for physical injury from jagged metal, etc.
(e) Removal of hazardous materials, pollutants, and other material not authorized for artificial reef disposal under the permit requires additional expense, time, and in some cases special equipment and expertise. The cost to safely place a vessel in the sea as an artificial reef increases as the size of the vessel, number of compartments, void spaces, and overall complexity increase.
(f) Vessels typically provide proportionately less shelter for demersal fishes and invertebrates than other materials of comparable total volume. This is because the large hull and deck surfaces provide few, if any, holes and crevices. This lack of shelter from predation greatly reduces the usefulness of a ship as nursery for the production of fishes and invertebrates. Also, while a high vertical profile can be attractive to pelagic fish species, unless a vessel hull is extensively modified to allow for access, water circulation and light penetration, most of the interior of the vessel is not utilized by marine fishes and macro invertebrates.

(g) Use of vessels for artificial reef can result in conflicts between divers and fishermen and any other legitimate use of the sea. Although such conflicts can occur on natural reefs, there is often preferential use of vessels by divers resulting in domination of some vessel reef sites by diving user groups. This is particularly true in areas with large tourist and resident diving populations that are selectively attracted to vessels sunk in shallow, clear and warm water environments.
(h) The surface of a steel hull is a less ideal surface for colonization by epibenthos than rocks or concrete. Sloughing of steel, due to corrosion, results in loss of epibenthic animals.
(i) The placement of vessels has an impact on the integrity of seabed, during the placement operations and their movement during storms.

3. Recommendations and Considerations

57. On the basis of the benefits, limitations and drawbacks it is highly advisable to:

(a) The applicant for a vessel placement should ensure the stability of barges, small fishing boats, tow and tug boats, small ferry boats etc. and, in general all vessels under 30 m long which are placed at depth of less than 40 m due to their possible human risks.
(b) Recommend a buffer zone of about 450 m between any natural hard and soft bottom occupied by protected species or habitats and vessels deployed as artificial reef material in depths less than 50 m. This safety buffer is based upon documented movement of vessels, or parts thereof, in storm events. At depths below 50 m but less than 100 m, a buffer distance of a least 100 m is recommended. For the purposes of these Guidelines, hard bottom includes living natural reefs such as coral reefs, oyster reefs, worm reefs, and areas of naturally occurring hard bottom or rocky outcrops to which are attached well developed varying biological assemblages such as perennial algal species, and/or such invertebrates as sea fans, bryozoans, sea whips, hydroids, ascidians, sponges, or corals.
(c) Literature and regional experiences have demonstrated that it is possible to have a viable artificial reef program without vessels. It is important for managers to assess their objectives when securing a vessel, since cleaning and towing costs, especially when transboundary transport is involved, can be prohibitive.
(d) With the rapid increase in recreational sport diving activities in some areas, ship deployment in certain areas may have greater value to the diving industry than to the recreational hook and- line fishery. Vessels deployed in shallow water (18-30 m) are especially attractive to recreational SCUBA divers. If the funding source is fishing license revenues, and the site is dominated by divers, this issue should be considered.
(e) If the intent of developing an artificial reef is to provide recreational fishing opportunities with some level of fishing success, while at the same time avoiding user conflict, the combined effect of spear fishing and hook-and-line harvest and liability associated with diver accidents during wreck diving, may lead to a recommendation to sink vessels at greater depths (40 to 100 m).
(f) Consider using only those steel hulled vessels which are designed for operating in heavy sea conditions, such as sea tugs, oil rig re-supply vessels, trawlers, and small freighters, which are all structurally sound, the focus should be on structural and habitat complexity of vessels, rather than strictly vertical height or sheer overall length.
(g) Some contractors or other organizations tasked with cleaning vessels, or their hired laborers and volunteers have historically not always followed proper hazardous materials and other waste handling and disposal, and/or clean up instructions, including in these updated Guidelines, due to lack of expertise or training, inadequate facilities, equipment and manpower, desire to reduce project time and expenses, or insufficient guidance or over sight

provided by the contract or project manager, and focus on removal of salvageable material to the detriment of meeting other cleaning and preparation objectives.

(h) All petroleum products, both liquid and semi-solid must be removed from tanks on ships with follow-up inspection. It is not sufficient to draw the tanks down and then weld the hatch closed. Experience has demonstrated that corrosion of the metal of the ship will eventually release residual fuel into the environment and that relatively small quantities can trigger regulatory and public relations consequences.

(i) Resistance to a 20-year storm event is a minimum acceptable level of stability. For vessels deployed within approximately 900 m of natural coral reefs, well developed hard bottom communities, or oil and gas infrastructures recommend that the vessel stability requirement at the depth placed increase to resistance to movement in a 50-year storm event.

(j) Avoid the use of explosives to the extent possible in sinking vessels under 45m in length where alternate sinking methods (opening sea cocks, flooding with pumps, opening up temporarily sealed pre-cut holes, etc.) are feasible. If explosives must be used for sinking larger vessels with many watertight compartments, there should be careful placement by experts of the minimal amount of structural cutting explosives necessary to sink the vessel safely and efficiently. The minimization of vessel damage and the avoidance of harm to marine life are important vessel sinking objectives. Potential impacts to marine mammals, turtles, and fishes should be considered

(k) It is important to develop and implement cleaning standards for pollutants known to occur on ships; require testing for PCBs on boats and ships constructed prior to 1975 (when PCB manufacture ended); require an asbestos inspection. Identified asbestos that is secured or encased may be left undisturbed, and in place prior to sinking.

(l) Liability issues must be recognized and addressed by permittees who are required to provide long-term responsibility for materials on their permitted artificial reef sites, including ships. Demonstration of this responsibility could include liability insurance, posting a bond or other indemnifying instrument to ensure resolution of liability issues associated with the towing, cleaning and sinking of ships on state submerged lands. This liability includes damages caused by movement of the materials during storm events.

(m) All constraints that may be placed on sinking a ship (i.e. minimum depth, distance from shore, complexity of vessel that may require additional technical assistance, stability requirements, vessel orientation, cost, time involved in project, etc.) should be reassessed, in order to decide early on whether one or more of these constraints will result in a final outcome that will not be successful in achieving the project's objectives.

(n) It is recommended to establish a national coordinated reefing plan. Prior to the release of any ships under such a program, the national authority should be encouraged to the maximum extent possible to take all necessary steps to ensure the funding of the cleaning, preparation, towing and sinking of vessels in their entirety as a turnkey project, at a location selected by the state reef program designated to obtain the vessel.

4. Vessels Clean up

58. Suggestions for planning work:

a) Gather Information About the Vessel, ship and Boat

59. Several parts of these Guidelines require that information concerning the vessel, ship and boat be provided to the Designated Authority. If this information is not available, the clean-up organization or the permit applicant will have to develop some or all of the information, which typically come at a significant cost. As a condition of purchase of the vessel, ship and boat, permit applicants should

collect from the owner of the vessel, ship and boat the following information and certificates (issued by competent authorities):

(a) asbestos certificates, indicating that the vessel, ship and boat is asbestos-free, or detailing the location of asbestos remaining in the vessel, ship and boat;
(b) PCB certificates, indicating that the vessel, ship and boat is PCB-free, or detailing the location of PCBs remaining in the vessel, ship and boat;
(c) for warships and naval auxiliaries, an “ammunition-free” certificate issued by defence authorities;
(d) for warships, naval auxiliaries, vessel, ship and boats that have been engaged as research ships, and other vessel, ship and boats that may have carried radioactive materials, a radiation inspection certificate;
(e) a certificate that refrigerants and halons have been removed from shipboard systems;
(f) other certificates relating to removal/addition of equipment, components or products;
(g) information on hazardous materials left in the vessel, ship and boat;
(h) information on exterior hull paint including paint type, detailed technical information on the paint, and date of application;
(i) information on machinery, compartment and tank layout, ideally in the form of a general arrangement drawing or firefighting compartment diagram;
(j) information on the fuels carried and used by the vessel ship and boat;

b) Develop a Work Plan to Reduce Costs

60. The two main operations (salvage and clean-up) will typically overlap and may proceed in parallel in different sections of the vessel, ship and boat. Experience has shown that it is critical, from an economic perspective, to have a comprehensive plan detailing the activities to be undertaken. Failure to develop and use a plan has in the past, led to several repetitions of the same cleaning operations, or inability to salvage certain components due to access issues or lack of time. As funding for projects is usually finite, it is important for the viability of the project that efforts are not being wasted or opportunities missed to generate funds through salvage. The Designated Authority will not weaken the requirements as set forth in the Guidelines because the applicant or clean-up contractor has not adequately organized the work. Salvage and clean-up operations that could be considered a success from an economic as well as environmental perspective have required an extensive planning effort.

61. In general terms, salvage operations should come first, aiming to minimize debris and contamination with oils or other products that will have to be cleaned-up at a later stage. Experience indicates that a close link is required between the salvage and clean-up effort. Previous salvage operations that have not considered subsequent clean-up operations have resulted in massive cleaning requirements.

62. Clean-up would typically be the last operation in the continuum of activity. In any given section, clean-up would normally start at the highest part of the compartment or tank and proceed downwards to the bilge.

63. The following general principles have been developed from previous efforts:

(a) deal with the large concentrations of oil and hazardous products early in the operation;
(b) keep compartments clean and make concerted efforts to avoid spillage during salvage and clean-up;
(c) consider removing, instead of cleaning, heavily contaminated machinery and piping;
(d) removal is typically far quicker and allows for less overall effort in clean-up as access is

improved and ongoing contamination from drips and seepage is minimized;
(e) maintain a strong project management presence at the site.

c) Maintain Security During Clean-up

64. Security of the vessel, ship and boat and the surrounding site should be addressed in the clean-up and salvage plan. Experience indicates that security issues are not static and need constant attention over the life of the project. However, to assist applicants and ensure the safety, it is recommended that the following issues be addressed:

(a) public safety: Vessel, ship and boat undergoing salvage operations are dangerous sites. The public must be prevented from accidentally or casually accessing the interior of the vessel, ship and boat and the clean-up site.
(b) salvage security: This is closely linked to the public safety issue. Inevitably, some members of the public will actively seek to gain illegal entrance to the site and vessel, ship and boat. This security issue requires constant vigilance and repeated assessment.
(c) -liability insurance should also be considered
(d) -environmental liability: Some of the material removed from the vessel, ship and boat could become a significant environmental liability if it were to be mishandled, disturbed or spilled. Material should not be allowed to accumulate at the site. Personnel involved in clean-up and salvage operations must be aware of environmental due diligence responsibilities.
(e) It is highly recommended that a secure lock-up (for tools, valuable salvage items, items that are potentially hazardous, etc.) be made available.

d) Prepare for Inspections

65. Under normal circumstances the responsible of the Designated Authority will require a minimum of three weeks' notice to arrange an inspection. It is expected that two inspections will be conducted, with all deficiencies being corrected for the second and final inspection. If subsequent inspections are required these will likely involve further expenses being charged directly to the permit applicant.

66. The inspection team will consist of the responsible of the Designated Authority, plus any necessary specialist support staff. The permit applicant should ensure that the senior personnel from the clean-up team, and the salvage team, if it is a different organization, are onsite for the inspection(s). These personnel should accompany the Designated Authority during the inspection to allow full insight into any findings. The Designated Authority may, but is not obliged to, make suggestions concerning the clean-up effort. Where it is possible to correct minor findings during the course of the inspection, the Designated Authority may, if time allows, re-inspect the particular finding.

67. Special attention needs to be given to questions of access and personnel safety. The Designated Authority needs to inspect every part of the vessel, ship and boat without incurring undue personal risk.

e) General notes on salvage and recycling

68. A notable portion of most vessel, ship and boats is normally economically salvageable. Items that have been salvaged and sold intact in previous clean-up and salvage projects include diesel generators and associated equipment, various types of lockers, anchors and chain, watertight hatches and doors, furniture, and certain galley equipment. Valves, especially those of large diameter, are a further potential source of revenue. Depending on the rated voltage and frequency employed in the vessel, ship and boat, motors may be a further source of revenue. The difference between "used" value and

scrap value can be significant. Salvage and clean-up contractors are encouraged to actively seek markets for used equipment and outfit items.

69. Equipment that has no current market may still have scrap value based on the raw material. Commonly found metals that are salvageable include:

(a) Bronze: This metal is typically cast, and is found in propellers, valve bodies, cooler bodies, and various machinery castings.
(b) Brass: Brass is typically found in machined form. Items likely to be found in a vessel, ship and boat include tube plates in coolers, small valves, decorative fittings, flush-deck covers for valves, and various machinery components.
(c) Copper-nickel: Copper-nickel is used extensively in seawater piping systems and is commonly used as tubing material in coolers and condensers. Both 90-10 (most common) and 70-30 grades have been in use in the marine industry.
(d) Aluminum: Most aluminum is in sheet, plate or stiffener form. It may be found in a wide variety of outfit items including lockers, desks, bunks and shelving. Structural aluminum has been used in some vessel, ship and boats to minimize top weight, and is commonly found in masts and deck-houses.
(e) Copper: Copper is found in electrical cables, small diameter tubing (pressure gauges), motors, generators, and miscellaneous electrical fittings. Copper salvage is generally a break-even process in economic terms.
(f) Stainless Steel: Stainless steel is most commonly employed in sheet or plate form and is found in food preparation and serving areas, medical facilities, upper deck lockers, and some exterior fittings.
Although steel is not generally economical to salvage, in many instances it will be cheaper and more effective overall to remove and recycle steel piping and equipment. This is a particularly effective strategy where the effort to clean the material in-situ is significant, or the material would cause access problems for the clean-up effort.

f) General notes on personnel safety during clean-up and inspections

70. Clean-up and salvage contractors are advised that their activities in the vessel, ship and boat and at the surrounding site will be subject to national requirements.

g) Notes on vessel, ship and boat stability during clean-up and transits

71. Operations associated with salvage, clean up and diver access have the potential to adversely impact vessel, ship and boat stability. This can be an important issue, especially if the vessel, ship and boat have to be moved to its sinking location. Failure to consider intact and damaged stability during operations could result in premature and uncontrolled capsizing and/or sinking of the vessel, ship and boat. This situation is entirely preventable.

72. Organizations embarking on SCUBA diving attraction projects are advised to obtain the services of a naval architect who is provincially registered to practice as a Professional Engineer, to review salvage plans and serve as a stability consultant.

73. Issues that need to be considered during the planning phase include, inter alia:

(a) Weight Removal: Weight removal will impact on the center of gravity, and hence the stability, of the vessel, ship and boat. In general terms, weight removed low in the ship (ballast bars, bilge piping, etc.) has an adverse impact on stability while weight removed high in the ship has a positive impact on stability.

(b) Hull Openings: Hull openings are often required for salvage efforts, but they do present a risk of flooding. Hull openings should be well above the water line. Permit applicants must consider carefully hull breaches, especially if the vessel, ship and boat must be moved after hull openings are made.
(c) Natural roll, list, loll, and the possibility of encountering higher sea states must be borne in mind by the permit applicant.
(d) Watertight Integrity: Internal watertight integrity may not be at initial design Guidelines at the time of vessel, ship and boat disposal and is often further compromised by salvage activity.
(e) Free Surface Effects: Free surface may be an issue if fluids are allowed to accumulate in bilges, or if tanks are kept in a partially full condition. Stability of the vessel, ship and boat should be considered as an integral part of the salvage and clean-up plan. The permit applicant must continuously be aware of vessel, ship and boat stability conditions and be prepared to take action to improve vessel, ship and boat stability when required

h) Tank cleaning

74. Here are several accepted and widely used methods to clean fuel and oil tanks. The best method to use will depend on the type of hydrocarbon in the tank, the amount of residue in the tank, and the extent of any hard or persistent deposits and residues. In general, lower quality fuels will require more cleaning effort. Similarly, tanks for dirty or water-contaminated oil will require more cleaning effort.

75. When cleaning tanks, the factors that need to be considered are the Guidelines requirements, the machinery and resources available, and the method or facilities available to deal with cleaning residues. It may be necessary to experiment with several cleaning methods to find one that will work in the particular circumstances. Where cleaning is expected to be complex or difficult the permit applicant should consider securing the services of a professional tank cleaning contractor. Options for cleaning tanks include, inter alia:

(a) mechanical cleaning

76. Mechanical cleaning involves mechanical removal of sludge and remaining fluids and wiping down all surfaces with oil absorbent material. Although costly in terms of manpower, it does limit the spread of contamination and minimize production of fluids which are expensive to dispose of.

(b) steam or hot water washing:

77. This method is quite effective, although it requires special equipment and generates large volumes of oily water. If this method is contemplated, the organization should have a plan to deal with the oily water that complies with local regulations and the National Shipping Act. Surfactants (or soaps) are not recommended, as they tend to emulsify any oil present and make the oily water exceptionally difficult to treat. This would likely drive disposal costs higher than necessary. In tanks where deck heads and sides are reasonably free of contamination, pressure washing can cause significant contamination of these otherwise clean surfaces through splashing, misting, and carry-over.

(c) solvent washing

78. Solvent washing may be an option where exceptionally tenacious deposits or films are encountered. Note that the used solvent will require subsequent removal and all of the liquid product generated will require special handling and disposal. In isolated cases, especially where low grade fuels have been stored, it may be necessary to resort to more advanced tank cleaning methods such as ultrasonic or special solvents.

79. It may be advantageous to employ all three methods in any given vessel, ship and boat, depending on the nature and location of the contamination. In general, mechanical cleaning would be the first

method to try, followed by steam/hot water washing, then solvent washing in exceptionally difficult cleaning situations.

80. Whichever method is employed, the effluent and waste must be collected and treated. Large volumes will require the services of a pumper truck while smaller quantities may be handled in barrels. Care must be exercised in transfer operations to avoid spills. If large quantities of oil or oil-contaminated liquids are to be transferred the use of a boom around the vessel, ship and boat should be considered.

i) Cleaning compartments with bilges

81. Cleaning bilges is frequently complicated by poor access caused by piping, gratings, and equipment. During the planning phase the clean-up contractor should consider the access issue carefully. In many cases it is cheaper and easier to remove interference items (especially when they themselves are dirty or contaminated) than it is to attempt to clean the items and the adjacent bilge.

82. Bilges, once clean, are very vulnerable to recontamination. Contractors should be aware of the following types of situations which have given rise to problems in the past:

(a) Piping, valves and fittings in hydrocarbon systems will continue to weep for some time after initial draining. These drips can -over a quite short period of time- lead to a significant rework effort. Drips should be captured whenever possible;
(b) Containers used for clean-up are vulnerable to tipping, especially in the uncertain footing and poor lighting conditions often found in vessel, ship and boats undergoing sinking preparation. Buckets should be removed as they are used, or if they are employed for catching drips, emptied regularly;
(c) Water should not be allowed to enter bilges unless it is part of a planned clean-up campaign. Water generally complicates clean-up of bilges as the water must be handled as oily wastewater. In general, the approach and methods for cleaning bilges is the same as for cleaning tanks.

j) Dealing with piping and fittings

83. Contractors should identify those pipes and fittings that contain fuels, oils and oily water as part of the planning activity. If ship’s drawings are not available, it will be necessary to develop this information on site. Authority will generally assume that piping has contained hydrocarbons unless the piping is clearly identified as being part of a non-hydrocarbon system, or there is clear evidence to indicate that the piping was not part of a hydrocarbon system (e.g. sea water piping to coolers, fresh water piping to domestic spaces). As per the Guidelines, piping in the bilge will be assumed to be contaminated with oil until proven clean.

k) Cleaning fitted machinery

84. Cleaning fitted machinery is a lengthy and difficult process. Whenever possible, fitted machinery should be sold into the used machinery market or removed for recycling.

85. The general approach to cleaning diesel engines/generators, gearboxes, compressors, etc. is similar. The clean-up plan should identify the fluids and other contaminants in the machine to be removed. Care should be exercised to capture fluids to avoid further clean-up effort. Fluid types should not be mixed, as this may increase disposal costs. Large reservoirs of fluids should be drained first, followed by smaller accumulations in machinery housings, piping, and fittings. The force of gravity will assist in collecting the fluids over a period of time, and the clean-up plan should allow for an adequate drainage period. The precise period required will vary with internal machinery clearances, length and size of piping, fluid viscosity and temperature. As weeping of oils and fuels will continue

for several days or weeks, clean-up plans should recognize the requirement to catch the seepage during this period so as to minimize collateral contamination of bilges, decks, piping bundles, etc.
General guidance for specific equipment follows.

l) Combustion Engines

86. External Oil System: Drain the sump. Identify all external oil lines, coolers and other fittings. Open and drain these items. After draining, consideration should be given to removing these items from the vessel, ship and boat to prevent oil weeping from connections. Remove all oil filter and strainer elements, pressure gauges and gauge lines.

87. Fuel System: Remove fuel injectors. Identify all external fuel pressure lines, return lines and fittings. Open and drain these items. After draining, consideration should be given to removing these items from the vessel, ship and boat to prevent fuel weeping from connections. Remove all fuel filters and strainers, pressure gauges and gauge lines. Open and drain any governors.

88. Engine Internals: Open all explosion doors, hand-hole doors, maintenance access panels, etc. On some engines it may be desirable to cut further access openings. Remove heads and clean thoroughly, or drain and remove from vessel, ship and boat—note that heads may have salvage value depending on engine type and condition. Open all internal oil lines and galleries. Remove oil pump or open it and clean it for inspection. Open bearing pedestals and clean. Open turbo charger or supercharger bearings. At this point it is generally desirable to cut open the main oil sump for better access. Wipe out internal surfaces of engine. Persistent weeping indicates an oil or fuel accumulation that requires investigation.

89. Cooling System: Drain all treated water.

m) gearboxes

90. Gearboxes may be stand-alone items of equipment or integrated into a piece of machinery. The feature in common is a lubricating oil system. Treat initially as for “external oil system” covered under combustion engines. Open all covers and access panels. In most cases it will be necessary to cut further access holes to allow for the interior of the gearbox to be adequately cleaned. Open all internal oil lines. Open bearing pedestals (especially those in a horizontal plane) if there are oil accumulation pockets. The Designated Authority will need to see at least one bearing open to assess construction. Remove or drain gearing sprayers. Wipe down all surfaces.

n) other Machinery

91. Other machinery, often termed *auxiliary machinery*, can be considered in two broad classifications for clean-up purposes. The first group is machinery that does not employ oil lubrication and does not contain grease other than within sealed rolling element bearings.
These machines do not generally require hydrocarbon clean-up unless they were employed pumping fuel or oil or have large grease reservoirs. Typical pieces of machinery that would usually not require clean-up include small water pumps and ventilation fans.

92. The second broad classification of machinery is equipment that utilizes lubricating oil or contains greases outside of sealed bearings. While auxiliary machinery (air compressors, refrigerant compressors, circulating pumps, steam turbines, etc.) varies considerably in purpose and construction detail, the individual pieces can be dealt with in a similar manner during clean-up. Any working fluids that are hydrocarbon-based or otherwise hazardous (e.g. CFCs) should be removed first, and the pump-end left open. Fitted lubricating oil systems should be cleaned as noted under the heading “external oil system” in the combustion engine section. If a gearbox is fitted, it should be treated as for the section on gearboxes.

93. Experience indicates that oil sumps in small pieces of machinery will almost always need to be cut open to allow adequate access for cleaning. Wipe down all internal oiled surfaces.
Grease packed couplings, stuffing boxes, chain sprockets, worm drives, etc. must generally be opened, unless they meet the restrictive “small quantities” exemption in the Guidelines.

94. The grease is usually best removed by mechanical means, although in some cases of very limited access (such as gun rings), it may be necessary to resort to steam or solvent washing.

95. Basic knowledge of machines and an understanding of the purpose of the specific equipment typically allow the clean-up effort to proceed more efficiently.

o) Suggestions on handling debris

96. Salvage and clean-up operations will generate a large quantity of material that needs to be removed from the vessel, ship and boat.

p) Salvage

97. The salvage and clean-up plan must address separating various types of salvage and debris. Care should be exercised in separating metals for recycling, as contamination with other metals, or with debris, will significantly lower the salvage value. Bins may be considered for salvage materials, but access should be controlled. Material that is placed in salvage bins should be clean and free of oils or other products. Failure to observe this guideline may lead to difficulties with control of contaminated run-off at the site.

q) waste and debris

98. Hazardous material must be carefully segregated from the normal waste stream to avoid contaminating the normal stream, thus incurring large costs to dispose of the whole amount as hazardous material.

99. Liquid waste presents special handling problems for clean-up crews. Recovered oils and fuels may be employed for site or vessel, ship and boat heating purposes if suitable, but other liquids will typically need to be processed through licensed hazardous waste contractors. To keep disposal costs in check, waste liquids should not be mixed, and containers should be labelled with all available information on the product. Liquid storage and movement around the site must be tightly controlled. Spills will generate significant clean-up costs. Control of run-off from temporary storage sites is an issue and must be addressed in the clean-up plan. A covered area with an impermeable floor and berm is highly recommended and may be required by local authorities.

100. Solid waste requirements vary by province and sometimes by municipality. Local requirements and restrictions must be determined during the planning phase. Items that should be addressed include disposal of used oil absorbent materials, non-asbestos insulation, wallboard, tile, linoleum and underlayment, carpet, and furniture.

101. An area will need to be set aside for oil and fuel pipes, fittings, etc. to drain. This must be done in a covered area and is often best accomplished in a compartment in the vessel, ship and boat set aside for this purpose.

PART –D- MONITORING OPERATIONS FOR PLACEMENT AT SEA OF MATTER FOR A PURPOSE OTHER THAN MERE DISPOSAL

1. Definition

102. For the purposes of assessing and regulating the environmental impacts of placement operations, monitoring is defined as the repeated measurement of an effect, whether direct or indirect, on the marine environment and/or of interferences with other legitimate uses of the sea.

103. The monitoring programme should also be aimed at establishing and assessing the environmental impacts and/or conflicts of the artificial reef with other legitimate uses of the maritime area or parts **thereof and be in line with IMAP for relevant Ecological Objectives**. Depending on the outcome of such monitoring, it may be necessary to carry out alterations to the structure or to consider its removal. In the case of placements taking extended periods of time (years), monitoring should be concurrent with the construction in order to influence modification of the reef, as required.

2. Objectives

104. In order to carry out the monitoring programme in a resource-effective manner, it is essential for the objectives of the programme to be clearly defined. The monitoring observations required at a placement site tends to fall into two basic categories:

(a) pre- placement investigations designed to assist in the selection of the site or to confirm that the selected site is suitable; and
(b) post-placement studies intended to verify that: the permit conditions have been met; this process is referred to as compliance monitoring; and, the assumptions made during the permit issuing and site selection processes were valid and adequate to prevent adverse human health and environmental effects as a consequence of placement; this process is referred to as field monitoring, with the results of such reviews providing the basis for modifying the criteria for issuing a new permit for future placement operations at existing and proposed placement sites.

105. Whenever possible, the monitoring programme should be aligned with the current MEDPOL monitoring programmes **and IMAP** for the Ecological Objectives 1, 2, **3, 4**, 5, 6, 7, 8, 9, and 10 in line with the Integrated Monitoring and Assessment Programme (IMAP) of the Mediterranean Sea and Coast and Related Assessment Criteria set out in Decision IG. 22/7 of the COP 19.

3. Quality control

106. Quality control is defined as the operational techniques and activities that are used to fulfil requirements relating to quality. These include monitoring criteria and Guidelines, sampling methods, sample locations and frequency, and reporting procedures.

107. Before any monitoring programme is developed and implemented, the following quality control issues have to be addressed:

(a) What testable hypotheses can be derived from the impact hypothesis?
(b) What exactly should be measured?
(c) What is the purpose of monitoring a particular variable or physical, chemical or biological effect?
(d) In what compartment and at which locations can measurements be made most effectively?
(e) For how long should the measurements be carried out to meet the defined aim?
(f) With what frequency should measurements be carried out?
(g) What should be the temporal and spatial scale of the measurements made to test the impact hypothesis?

(h) How should the data from the monitoring programme be managed and interpreted?

108. Monitoring observations are typically concerned with the physical, chemical and biological characteristics of the placement site.

(a) Physical observations consist of hydrological surveys of water mass properties, such as temperature, salinity and density, over the entire water column and extending horizontally over the entire region likely to be affected by the placement of matter.
(b) Chemical observations conducted in and around the placement site need to be related to the type of matter involved. Generally, where it is not possible to remove all potentially contaminating material before placement and where chemical effects may therefore be expected, proper analyses need to be carried out of the surface microlayer of sea, which constitutes an extremely active biological zone in which a wide range of chemicals, such as heavy metals and oil soluble substances, tend to accumulate. Chemical observations also need to be conducted on sea where substances, although not present in the matter placed in major quantities or concentrations may, because of their persistent nature, accumulate either on the seabed or in benthic communities in the vicinity of the placement site.
(c) The frequency of biological observations should depend on the scale of the placement operation and the degree of risk to potential resources. Where physical effects on the seabed are expected, it may be necessary to conduct an assessment of the phytoplankton and zooplankton biomass and productivity prior to placement to establish a general picture of the area. Observations of the plankton immediately following placement can help to determine whether acute effects are occurring. Monitoring of the benthic and epibenthic flora and fauna is likely to be more informative because they tend to be subjected not only to the influence of the overlying water column and any changes that occur in it.

109. Post-placement monitoring should be designed to determine:

(a) Whether the impact zone differs from the zone predicted; and
(b) Whether the extent of changes outside the impact zone differs from those predicted.

110. The former can be ascertained by designing a sequence of measurements in space and time with a view to ensuring that the projected spatial scale of change is not exceeded. The latter can be shown through measurements which provide information on the extent of the change occurring outside the impact zone as a result of the placement operation. These measurements are often based on a null hypothesis, i.e. that no significant change can be detected. The spatial extent of sampling depends on the size of the area designated for placement.

111. However, it must be recognised that long-term variations arise as a result of purely natural causes and that it may be difficult to distinguish them from changes which are induced artificially, particularly in relation to populations of organisms.

112. Where it is considered that effects are likely to be largely physical, monitoring may be based on remote methods (e.g. acoustic measurements, side-scan sonar). It must be recognized, however, that certain ground measurements will always remain necessary for the interpretation of the remote sensing images.
113. Concise reports on monitoring activities should be prepared and made available to relevant stakeholders and other interested parties. Reports should detail the measurements made, the results obtained and the manner in which these data relate to the monitoring objectives and confirm the impact hypothesis. The frequency of reporting will depend on the scale of the placement operation, the intensity of monitoring and the results obtained.

4. Quality assurance

114. Quality assurance may be defined as all planned and systematic activities implemented to provide

adequate confirmation that monitoring activities are fulfilling requirements related to quality.

115. The results of monitoring activities should be reviewed at regular intervals in relation to their objectives in order to provide a basis for:

(a) modifying or terminating the field monitoring programme;
(b) amending or revoking the placement permit;
(c) redefining or closing the placement site; and
(d) modifying the basis for assessing placement permit in the Mediterranean Sea.

116. The results of any reviews of monitoring activities should be communicated to all Contracting Parties involved in such activities. The licensing authority is encouraged to take relevant research findings into consideration with a view to the modification of monitoring programmes

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Draft Decision IG.24/13

Development of a Set of Regional Measures to Support the Development of Green and Circular Businesses and to Strengthen the Demand for more Sustainable Products

The Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", endorsed by the General Assembly in its resolution 66/288 of 27 July 2012, in particular those paragraphs relevant to sustainable consumption and production,

Recalling also General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling further the Environment Assembly resolutions of 15 March 2019, UNEP/EA.4/Res.1, entitled "Innovative pathways to achieve sustainable consumption and production" and UNEP/EA.4/Res.4, entitled "Addressing environmental challenges through sustainable business practices",

Bearing in mind the international community's commitment expressed in the Ministerial Declaration of the United Nations Environment Assembly at its fourth session to advance sustainable consumption and production patterns, including, but not only, through circular economy and other sustainable economic models and the implementation of the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns,

Having regard to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities (1996), in particular article 5 thereof on general obligations and Article 9 thereof on scientific and technical cooperation, to the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (1996), in particular Article 5 thereof on general obligations, and to the Protocol on Integrated Coastal Zone Management in the Mediterranean (2008), in particular Article 9 thereof on economic activities,

Recalling Decisions IG.22/2 and IG.22/5, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the Mediterranean Strategy for Sustainable Development 2016–2025, and the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean respectively, which highlight that businesses, especially green businesses and entrepreneurs, are key drivers in the transition to green and blue economies in the Mediterranean countries,

Recalling the mandate of SCP/RAC within the MAP-Barcelona Convention System and its relevance to the implementation of this Decision,

Acknowledging also the need to shift from traditional linear business models to innovative green and circular business models, and that in order to achieve this shift, a proper enabling policy environment should be in place together with strengthened business support organisations and appropriated financial instruments at the regional and national level,

Noting with appreciation the work undertaken in that direction under the Mediterranean Green Businesses Programme which has contributed to the creation of green companies in the southern Mediterranean countries,

Having considered the report of the meeting of the Focal Points of the Regional Activity Centre for Sustainable Consumption and Production, held in Barcelona, Spain, on 14-15 May 2019,

1. *Request* the Secretariat to prepare a set of regional measures to support the development of green and circular businesses and strengthen the demand for more sustainable products, according to the timeline set out in Annex I to the present Decision, as a way to support the shift to green and circular economy from traditional linear business models to innovative green and circular business models;

2. *Also request* the Secretariat to ensure that regional measures target those economic sectors which are identified by the relevant Protocols to the Barcelona Convention and have a particular impact on the marine and coastal environment, and address related cross-cutting issues;

3. *Further request* the Secretariat to develop specific criteria for the definition of green and circular businesses in the Mediterranean, based on existing initiatives at global, regional and national levels for consideration by the Contracting Parties to the Barcelona Convention and its Protocols at the 22nd Meeting of the Contracting Parties (COP 22);

4. *Require* the Secretariat to make every effort to ensure that the preparation of the set of regional measures and the development of criteria is in synergy with existing regional and national policy frameworks supporting the development of green and circular businesses.

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Annex I: Timeline for the development of a set of regional measures to support the development of green and circular businesses and to strengthen the demand for more sustainable products

When?	What?
1st quarter 2020	• Request to SCP/RAC Focal Points to nominate national experts to support the development of the regional measures and criteria (SCP/RAC will develop Terms of Reference for these national experts) • Review of existing information • Preparation of a baseline study • Preparation of the Terms of Reference of an online consultation mechanisms, using the appropriate existing relevant SCP web platform managed by SCP/RAC, facilitating the involvement and participation of all relevant stakeholders and partners
2nd quarter 2020	• Launch of the online consultation • Development of a first draft of the measures and criteria
3rd quarter 2020	• Organisation of a regional consultation meeting in order to ensure the inputs of key Mediterranean stakeholders, particularly the business sector, economic leaders, financing stakeholders and other relevant bodies active on green economy and circular economy in the Mediterranean region. • Closing on the online consultation • Updated list of regional measures and criteria and circulation of the draft to the SCP/RAC Focal Points for online consultation
4th quarter 2020	• Organisation of a consultation meeting with national experts nominated by the Contracting Parties to the Barcelona Convention • Advanced list of measures and criteria shared with SCP/RAC Focal Points for a second online consultation
1st quarter 2021	• Submission of the final draft of the measures and criteria to the SCP/RAC Focal Points and MCSD Meetings
2nd quarter 2021	• SCP/RAC Focal Points and MCSD Meetings • Updated list of measures and criteria integrating comments of MCSD Members and SCP/RAC Focal Points • Preparation of the draft Decision
3rd quarter 2021	• Draft Decision submitted to the MAP Focal Points Meeting
4th quarter 2021	• Draft Decision submitted to COP 22 for endorsement

Annex IV

Programme of Work and Budget 2018-2019

[Rationale for the Proposed Programme of Work 2020-2021

Introduction

1. Decision IG.23/14 on "Programme of Work (PoW) and Budget for 2018-2019", mandated the Secretariat, in consultation with the Bureau, and in line with the relevant provisions of the Governance Paper, Decision IG.17/05 (COP 15) and the UNEP/MAP Mid-term Strategy 2016-2021 (MTS), Decision IG.22/01 (COP 19), to prepare for consideration and approval by COP 21 a simplified and more strategic results-based PoW and Budget for 2020-2021, explaining the key principles and assumptions on which it is based, taking into account the progress achieved during the implementation of the 2018-2019 PoW.

2. In line with Decision IG.23/14, the proposed 2020-2021 PoW is designed to ensure coherence and continuity with the results achieved during the current biennium to effectively deliver the MTS by 2021, applying the following main principles:

a. Strong ownership by the Contracting Parties through regular consultation during the preparatory process and optimal reflection of regional priorities and country needs;
b. Coherence with the most recent developments in global processes, such as the implementation of the 2030 Agenda for Sustainable Development, the preparation of the post-2020 Biodiversity Framework, UNEA Resolutions, the Paris Agreement, and global Multilateral Environmental Agreements (MEAs) and justification and linkages of the proposed action to these global processes, as appropriate;
c. Internal transparency, consultation, communication, efficiency and flexibility;
d. Learning from the lessons of the current and previous biennia (design and implementation);
e. Delivering as one, as MAP system and in an integrated manner;
f. Effective partnerships and outreach to boost implementation and efficiency;
g. Rigorous and transparent planning, monitoring, and reporting of implementation;
h. Consideration of priorities and themes that will influence the development of the next MTS.

3. In designing the 2020-2021 PoW, the following substantive and operational factors were taken into account:

a. Consider the specific importance of the 2020-2021 biennium, as the last biennium of the MTS lifespan, for its full achievement;
b. Put emphasis on strategic outcomes that have not been fully addressed in the past two biennia and may have a concrete and visible impact on achieving the MTS objectives;
c. Ensure coherence and continuity with the deliverables achieved during the current and previous biennia, including corrective measures as need be, and program the remaining outputs to effectively deliver the MTS by 2021;
d. Achieve integration, complementarity and amplifying impact of activities funded by core and non-core resources;
e. Consider the lessons learnt from the implementation of UMOJA and its impact on programming and setting priorities;
f. Consider the relevant emerging issues of global and regional importance including the streamlining of gender parity/equality across all themes;
g. Embed a forward-looking dimension: thoughts were given to possible priorities for the new MTS cycle and its links with SDG and relevant global agenda and initiatives;
h. Better highlight key linkages and synergies across the MTS themes and strategic outcomes; ensure and enhance integration among MAP Component work in an effective manner giving priority to common outputs and activities; strengthen partnerships at regional and global levels

with relevant major actors, with special emphasis on global MEAs administered by UNEP; and reinforce the leading role of the MAP system within the Regional Seas Programme of UNEP;

i. Ensure, where appropriate, a geographical balance of locations for activities at sub-regional and national levels.

4. During the preparation of the 2020-2021 PoW, attention was paid to work towards a simplified and more strategic results-based PoW, as mandated by COP 20, by:

a. Clustering, to the extent possible, the main activities and ensuring a better balance of their number per outputs; and defining clear deliverables;
b. Assessing the activities/deliverables in the framework of 2016-2017 and 2018-2019 PoW vis a vis the overall strategic outcomes and outputs of the MTS and identifying gaps to be filled during the next biennium for the full implementation of the MTS by 2021;
c. Assessing the PoW target achievements of the first two biennia of the current MTS;
d. Considering the results/deliverables of the current biennium PoW against the agreed indicators and where applicable, related baseline values;
e. Maintaining, wherever possible, the same indicators and related targets of the other biennia of the MTS which are realistic and in line with the expected deliverables; additional indicators and targets were not recommended unless indispensable – this also with the goal of making the evaluation of the MTS as accurate and effective as possible;
f. Considering on a priority basis MTS key outputs which had no or minimal activities in the two past biennia of the current MTS.

5. The proposed 2020-2021 PoW and its effective implementation aim at further strengthening the contribution and leadership role of the MAP-Barcelona Convention system, as a unique legally-binding regional agreement and an effective collaboration framework gathering Mediterranean coastal States and the EU in partnership with other actors including civil society, for the protection of the Mediterranean Sea and its coastal regions, to achieve Good Environmental Status and contribute to their sustainable development in the framework of the Mediterranean Strategy for Sustainable Development (MSSD).

6. The proposed 2020-2021 PoW is built around 40 strategic outcomes and 70 key outputs deriving from the MTS, to be delivered through the implementation of 144 main activities, distributed over the overarching theme (Governance comprising 45 activities), 3 core themes (Land and Sea-based Pollution, Biodiversity and Ecosystems, Land and Sea Interaction and Processes comprising 33, 24 and 12 activities respectively) and 3 cross-cutting themes (Integrated Coastal Zone Management-ICZM, Sustainable Consumption and Production-SCP, Climate Change Adaptation, comprising 8, 11 and 11 activities respectively).

7. To measure the progress and results of activities' implementation, a set of 53 Indicators and corresponding Targets are proposed, distributed over the 7 themes (15 under Governance, 5 under the Land and Sea-based Pollution, 12 under the Biodiversity and Ecosystems, 5 under Land and Sea Interaction and Processes, 5 under Integrated Coastal Zone Management, 7 under Sustainable Consumption and Production, and 4 under Climate Change Adaptation).

Overarching Theme: Governance

8. The envisaged activities are expected to promote and support the ratification process and achieve that all Protocols enter into force. The activities are furthermore expected to contribute to an effective reporting and compliance mechanism, that will enable an in-depth analysis of the implementation of the regulatory framework of the Barcelona Convention, as key to further promote

such implementation and the credibility, effectiveness and visibility of MAP. As a core function of the Secretariat, several activities are envisaged to ensure effective decision-making and review of implementation by the MAP relevant bodies (COP, Bureau, MAP and MAP Components' Focal Points, MCSD and its Steering Committee, Compliance Committee, etc.).

9. A key deliverable for this biennium is the evaluation of the 2016-2021 MTS and the preparation of the MTS for the next period (2022-2027). This will be done through an inclusive, participatory, Contracting Parties' driven process that will include a dedicated MAP Focal Points meeting at the first half of 2021.

10. The further implementation of the Ecosystem Approach Roadmap is envisaged through several policies and strategies' development, including the development of a coordinated IMAP and the execution of the 2023 Mediterranean Quality Status Report (2023 MED QSR) Roadmap, complemented by activities under several core themes of the PoW on the development of regional measures, assessment criteria and thresholds, etc.

11. The preparation of three major policy documents such as the SAP BIO considering the Post-2020 Biodiversity Agenda, the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (post-2021) and the MAP data management policy are among the planned key policy instruments expected to define the way forward for the 10-15 forthcoming years in the related fields for the Mediterranean region.

12. The proposed 2020-2021 PoW also envisages work on the MSSD implementation, focusing on the Mediterranean sustainability dashboard, in accordance with Decision IG. 23/4 as well as work to further strengthen and sustain the Simplified Peer Review Mechanism (SIMPEER).

13. The proposed 2020-2021 PoW envisages the implementation and update of the Resource Mobilization Strategy and the timely and coordinated execution and progress review of MAP projects with external funding, with the initiation of the six child projects in the framework of the GEF-funded MedProgramme and of other projects' design and implementation.

14. An important dimension of the proposed PoW is the strengthening of partnerships with major regional and global actors to maximize synergies, the participation in global and regional initiatives, as well as the strengthening of participation and engagement of the civil society, including on dealing with specific challenges such as marine litter and climate change.

15. With regards to knowledge management, the proposed PoW reflects the intention to reinforce the role of the MAP system in assessment work in the region, and its contribution to global assessment processes especially in the framework of UNEP. It aims to implement actions defined in the 2023 MED QSR Roadmap and to support the coordinated implementation of IMAP at regional, sub- regional and national level. Further work will be promoted on thematic products building on the findings of the State of Environment and Development Report (SoED) 2019 for outreach, while the PoW also aims to develop and implement the second set of activities included in the Med 2050 Roadmap.

16. Several information and communication technology (ICT) tools are expected to be delivered on processing, circulating and sharing information, knowledge and tools, with the aim to improve the level of environmental information reaching decision-makers and the public and to increase the visibility and impact of the MAP-Barcelona Convention system. The IMAP pilot Info System will be expanded to all Common Indicators of IMAP, building the conditions for 2023 MED QSR data collection and upload.

17. The proposed 2020-2021 PoW also includes activities aiming to establish/extend collaborations and promote educational programmes in cooperation with academic institutions.

18. Finally, the PoW also envisages activities to enhance awareness and the MAP- Barcelona Convention system's visibility and impact, through the implementation and update of the UNEP/MAP Operational Communication Strategy and contribution to national, regional and global events.

Core Theme: Land and Sea Based Pollution

19. The main objective of the proposed 2020-2021 PoW for this core theme is to support the continued implementation of the updated NAPs (LBS Protocol, 1996), of the Regional Plans on Marine Litter, POPs, BOD and Mercury, of the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), of the Mediterranean Offshore Action Plan and the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean. It also aims to develop or update key pollution-related Regional Plans and Protocol Annexes, and to further implement IMAP for pollution and marine litter cluster improving pollution monitoring, assessment and reporting, including data quality and control. Finally, efforts will be made at identifying emerging issues of particular relevance to the Mediterranean region (e.g. under-water noise, e-waste, etc.) that require responses to be developed for the following period's MTS.

20. More specifically, the proposed 2020-2021 PoW envisages:

a. Evaluating the implementation of targeted measures prepared for the Regional Plans of Mercury, POPs and BOD in parallel with ongoing reporting of the biennium 2018-2019 carried out for existing Regional Plans;
b. Updating the annexes of the pollution-related LBS, Dumping, Hazardous Waste and Offshore Protocols and sharing best practices on Dumping Protocol Guidelines implementation;
c. Updating Guidelines to assess pollutant loads deriving from diffuse sources and riverine inputs to transitional waters;
d. Facilitating international cooperation and mutual assistance under the Prevention and Emergency Protocol, through development/ update of recommendations, tools and guidelines;
e. Developing/updating the Regional Plans for Municipal Wastewater Treatment, Sewage Sludge Management and Marine Litter Management;
f. Enhancing efforts for coordinated implementation of IMAP cluster on pollution and marine litter and continuing the support of national monitoring programmes on marine litter, contaminants and eutrophication in line with IMAP, the LBS Protocol and the Regional Plan on Marine Litter Management in the Mediterranean; including capacity building;
g. Reinforcing the generation and reporting of new quality-assured national monitoring data to IMAP Info System;
h. Updating thematic assessment products related to pollution and marine litter cluster of IMAP from land-based and sea-based sources of pollution;
i. Implementing pilot projects in several Mediterranean countries on PCB and mercury removal, disposal and prevention, and site decontamination based on NAP hotspots;
j. Providing technical assistance and strengthening national capacities to implement the Regional Strategy for Prevention of and Response to Marine Pollution from Ships, mainly on response to oil and/or HNS spill accidents; and
k. Developing a roadmap for the designation of the Mediterranean Sea or parts thereof, as SOx Emission Control Area(s), in close coordination with IMO.

Core Theme: Biodiversity and Ecosystems

21. The main objective of the proposed PoW for this core theme is to strengthen the implementation of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol, 1995) and its related Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean region (SAP BIO, 2003), including the updating/development of biodiversity related National Action Plans (NAPs) to achieve GES. It also aims to support the active implementation the Regional Action Plans and Strategies for the conservation of endangered and threatened species and their habitats.

22. More specifically, the proposed 2020-2021 PoW envisages:

a. Supporting the development/ update of SAP BIO-related National Action Plans (NAPs), in line with the SAP BIO objectives, GES and related targets and relevant global goals and commitments;
b. Enhancing the management of MPAs/SPAMIs and conservation of endangered/ threatened species and key habitats through development of guidelines, manuals and technical tools, and the organization of key meetings, including the ad-hoc group on MPAs (AGEM) and the 2020 Forum on MPAs;
c. Supporting and strengthening the identification and declaration of MPAs/SPAMIs and the establishment of effective management plans;
d. Further developing and expanding MPAs/SPAMI twinning programmes in the region to enhance capacities on management, monitoring and enforcement activities;
e. Assessing the status of the Mediterranean MPAs, complemented by an analysis of the state of play of other area-based conservation measures (OECMs) in the Mediterranean, and elaborating a strategic document on MPAs and other effective OECMs in line with the CBD post-2020 Biodiversity Framework;
f. Enhancing efforts for coordinated implementation of IMAP cluster on Biodiversity and Non-indigenous species (NIS) and further supporting national monitoring and assessment on biodiversity and NIS in line with IMAP, and SPA/BD Protocol, including IMAP-compatible joint monitoring programmes;
g. Implementing and/or updating key biodiversity-related regional plans and strategies (i.e. on cetaceans, dark habitats, marine turtles, marine vegetation, pelagic habitats etc.), including the update of the Mediterranean Strategy on Ships Ballast Water Management and Action Plan to achieve GES;
h. Supporting mainstreaming of biodiversity and ecosystem conservation elements into ICZM and MSP implementation;
i. Providing technical assistance and capacity building activities on species and habitats monitoring and observation as well as on MPA planning and management, including socio-economic aspects and fundraising and innovative funding;
j. Further developing and promoting cooperation on spatial-based protection and management measures on marine biodiversity.

Core Theme: Land and Sea Interactions and Processes

23. The main objective of the proposed PoW for this core theme is to facilitate the understanding of the land and sea interactions, reduce pressures on the coastal and marine ecosystems and implement concrete projects with a view to proposing adequate prevention, conservation and/or recovery measures.

24. More specifically, the proposed 2020-2021 PoW envisages:

a. Supporting implementation of CAMP projects representing the core activity under the LSI theme, including national CAMP and at least one transboundary/ transnational CAMP, building on the outcomes of feasibility studies carried out in the current biennium;
b. Further promoting and supporting region-wide coherent implementation of Marine Spatial Planning (MSP), in compliance with the Barcelona Convention and relevant Protocols, and in line with IMAP/GES and related targets;
c. Supporting the development of management plans (Marine Spatial Plan and/or Integrated Management Plan) in Contracting Parties' coastal areas, building on knowledge generated and tools/methodologies developed during the current biennium;
d. Strengthening national capacities on LSI analysis and integration into ICZM/MSP implementation, including land-use and land-use change analysis;
e. Enhancing efforts for coordinated implementation of IMAP cluster on Coast and Hydrography and further supporting national monitoring and assessment in line with IMAP provisions;
f. Further supporting CAMP network, including promotion and testing of information and communication technology (ICT) tools;
g. Assessing and evaluating socioeconomic aspects of land-sea interactions and identifying ways to foster blue economy in support of SDG 14 implementation in the Mediterranean.

Cross Cutting Theme: Integrated Coastal Zone Management (ICZM)

25. The main objective of the proposed PoW for this cross-cutting theme is to contribute to the implementation of the ICZM Protocol and its Common Regional Framework (expected to be adopted by COP 21). The proposed activities will also contribute to the implementation of the Integrated Monitoring and Assessment Programme (IMAP) with regard to the coast-related ecological objectives (EO 7 and EO 8).

26. More specifically, the proposed 2020-2021 PoW envisages:

a. Supporting the preparation and adoption of national ICZM Strategies and Plans in several Contracting Parties;
b. Enhancing region-wide knowledge and expertise on the conceptualization of linkages between IMAP, LSI, and MSP as part of ICZM implementation;
c. Undertaking analyses, and consultations and providing recommendations to support ratification of the ICZM Protocol in several Contracting Parties;
d. Updating the Common Indicators of the IMAP cluster on Coast, on the basis of new data and information on sea level rise;
e. Supporting the establishment and functioning of national or sub-national coordination mechanisms, including Inter-Ministerial Coordination (ICM) frameworks in support of ICZM strategies and projects preparation and/or implementation;
f. Providing learning and ICT tools to support national work on the implementation of ICZM (i.e. MedOpen trainings, ICZM Platform etc.).

Cross Cutting Theme: Sustainable Consumption and Production (SCP)

27. The main objective of the proposed PoW for this cross-cutting theme is to facilitate the implementation of the SCP Regional Action Plan activities, focusing on the 4 major areas of consumption and production that have been selected according to their relevance with the LBS, HW and ICZM Protocols and to their contribution as main source of pollution in the marine and coastal areas: (i) food, fisheries and agriculture, (ii) goods manufacturing, (iii) tourism, (iv) housing and construction.

28. More specifically, the proposed 2020-2021 PoW envisages:

a. Supporting the development of National SCP/ Circular Economy Action Plans in several Contracting Parties;
b. Conducting a mid-term evaluation of the SCP Regional Action Plan;
c. Developing and implementing SCP pilots, for the identification of circular economy opportunities with a particular focus on food and textile sectors;
d. Populating the set of SCP indicators in line with the Decision IG.23/4 adopted by COP 20;
e. Supporting the assessment of environmental, and socio-economic performance of green entrepreneurs and circular business and the development of key measures and supporting structures, such as label/standard schemes;
f. Building capacities of green entrepreneurs, start-ups and SMEs as SCP drivers, through targeted trainings and tools and supporting their access to finance;
g. Scaling up SCP solutions in the Mediterranean by increasing visibility of sustainable products and services, providing coaching, and supporting open innovation and matchmaking platforms;
h. Further developing SCP networks and alliances for exchange of knowledge and dissemination of best practices.

Cross Cutting Theme: Climate Change Adaptation

29. The main objective of the proposed PoW for this cross-cutting theme is to contribute to strengthening the resilience of the Mediterranean natural and socio-economic systems to climate change by mainstreaming relevant considerations into the implementation of existing regional strategies, regional action plans and measures and support the implementation of the Regional Climate Change Adaptation Framework.

30. More specifically, the proposed 2020-2021 PoW envisages:

a. Supporting mainstreaming of climate change in the implementation of existing instruments (including environmental taxation, climate change impact on biodiversity etc.);
b. Identifying and promoting efficient climate change adaptation measures;
c. Supporting the preparation of national climate change adaptation strategies and the integration of biodiversity conservation elements and nature-based solutions in several Contracting Parties;
d. Streamlining climate change adaptation elements into national coastal zone management strategies and plans;
e. Assessing and promoting alternative renewable marine energies (i.e. wind power, tidal energy) in the Mediterranean;
f. Populating and disseminating indicators of climate change impacts on biodiversity and natural resources, also addressing socio-economic trends;
g. Promoting knowledge, awareness and stakeholders' engagement on climate change, through case studies, guidance, tools and sharing of best practices and lessons learnt.

Key Principles for the Budget Preparation

31. In line with paragraphs 14 and 15 of Decision IG.23/14 on the Programme of Work and Budget for 2018-2019 the Secretariat prepared two alternative budget proposals for 2020-2021 biennium (with respectively 0 and 4% increase of the approved budget for 2018-2019 biennium) and a third one including the partial use of the MTF positive balance. These proposals were submitted to and reviewed by the 88th Bureau Meeting, Rome, Italy, May 2019.

32. The Bureau welcomed these proposals and encouraged the Secretariat to finalize the work along these lines for submission to the MAP Focal Points Meeting. The Bureau agreed that an additional amount of 720,000 EUR could be taken from the positive balance of the MTF to cover: (a) the additional mandates as explained in the Report on Specific Issues UNEP/MED BUR.88/6; (b) the in-cash counterpart contribution to the MedProgramme; and (c) the 2% increase of the operational costs of RACs. This would be based on additional information on the indicative balance of the MTF of the 2018-19 biennium and details and justifications for the current state and proposed increase of the operational costs of the RACs. Such additional information regarding RACs' operational costs, as requested by the Bureau, is provided in Appendix to this Decision, while the information on the indicative balance of the MTF is presented in paragraphs 48-51 below. The Bureau also requested the Secretariat to bring to the attention of the MAP Focal Points Meeting the need for timely nomination of Contracting Parties representatives to avoid increase of travel costs and loss of efficiency and explore other modalities to reduce those costs.

33. Based on the above, the Secretariat developed two budget proposals for the consideration of MAP Focal Points meeting. Under the first alternative, the income amounts to EUR 13,296,144 and the total commitments amount to EUR 13,803,222, which include, as it was approved for the 2018-2019 budget, the use of savings of EUR 545,111. Under the second alternative, the income amounts to EUR 13,296,144, and the total commitments amount to EUR 14,993,169, which include the use of EUR 1,793,528. Both alternatives include the same amount of secured external funding, at approximately EUR 13,264 million. The first alternative opts for approximately EUR 8,763 million of non-secured external resources, while the second alternative opts for approximately EUR 7,726 million of non-secured external resources.

34. As regards the core expenditure budget (excluding the Greek Host Country Contribution), under the first alternative, it is maintained at the 2018-2019 level in nominal terms, amounting to EUR 13,113,620 (including PSC), while under the second alternative, it is increased, amounting to EUR 14,303,569[1] (including PSC). This includes the amount of EUR 528,421, which corresponds to an increase of four percent on approved biennial budget 2018-2019[2] in nominal terms. It also includes the amount of EUR 720,000, which will be utilized to cover the funding needs of (a) EUR 381,423[3] for additional important mandates, such as the preparation of the MTS 2022-2027, the completion of the IMAP Infosystem, the preparation of updated SAP BIO and the implementation of the Offshore Action Plan as well as the preparation of Regional Plans under the LBS Protocol of the Barcelona Convention, which will require substantial financial and human resources; (b) in-cash counterpart contribution to the Med Programme estimated at EUR 189,204 for the biennium 2020-2021; and (c) 2% increase per year over the biennium of the Administrative Support costs of RACs of EUR 90,900 for the biennium.

35. Both options include professional staff salary costs projected for the CU for the biennium 2020-2021 for the posts of Programme Officer QSR Expert (P3) and Information and Communication

[1] Rounded figure.
[2] The 4% increase is calculated on 2018-2019 direct costs (excl. PSC) and adding the 13% PSC on top of the calculated amount of EUR 467,634, resulting in a total of EUR 528,421.
[3] Rounded figure

Officer (P3). As per the practice of UNEP/MAP and in consultation with Headquarters, Posts and Operational Costs of the Secretariat (Coordinating Unit (CU) including MED POL) are estimated by using the budgeted costs for the year 2019 with an increase of 2% per cent per annum for professional staff salary costs to cover for salary step increase, inflation and exchange rate fluctuations, while retaining the general service staff salary costs and other operating costs at 2019 levels. The same applies to the estimated costs of REMPEC.

36. Under both alternatives, the projected increase in posts indicated above, is absorbed by a decrease in the respective budget allocations for activities of all MAP Components except for CU. MED POL budget allocations for activities are absorbing 52 per cent of this increase in posts to minimize to the extent possible substantive reduction of budget allocations for activities to the RACs. However, in the second option, the 4% increase and the use of 720,000 EUR from the MTF positive balance results in increased budget allocation for activities for all MAP Components except for MED POL.

37. Under the first alternative, total activities' budget for the biennium 2020-2021 is reduced by EUR 601,543 (excl. PSC) as compared to the biennium 2018-2019.

38. Under the second alternative, total activities' budget for the biennium 2020-2021 is increased by EUR 371,066 (excl. PSC) as compared to the biennium 2018-2019 and by EUR 972,609 as compared to the first alternative. Under the second alternative, the projected costs for activities are increased for all Components except for MED POL as indicated above. The additional amount under the second alternative, taken from the MTF positive balance, is utilized to fund the increase in the costs of activities, including the cash contribution to GEF MedProgramme, the 2% increase in the operational costs of the RACs and the increase in the Working Capital Reserve.

39. The proposed 2020-2021 Programme of Work as indicated in the previous section is designed to fully deliver the MTS. Therefore, in both scenarios the envisaged MTF resources are insufficient for the full delivery of the proposed PoW. The Secretariat envisages additional support from external sources to support the IMAP and MPA agendas (4 million EUR from EU for 42 months as of July 2019); as well as approximately USD 22,500,000 from the GEF MedProgramme, which will be allocated to the MAP-Barcelona Convention system to support the: 1) revised TDA; 2) the preparation of regional standards on wastewater management; 3) disposal of POPs and Mercury; 4) ICZM; 5) management of coastal aquifers and IWRM; 6) effective management of MPAs; and 7) investments addressing the implementation of the approved NAPs. Work is ongoing to negotiate and prepare other projects to support Ecosystem Approach Roadmap Implementation, Marine Litter Regional Plan, Pollution Control Measures; etc.

40. Important mandates of crucial relevance for the delivery of the MAP-Barcelona Convention work, such as the preparation of the MTS 2022-2027, the completion of the IMAP Infosystem, the preparation of the updated SAP BIO and the implementation of the Offshore Action Plan, as well as the preparation of Regional Plans under the LBS Protocol of the Barcelona Convention will require substantial financial and human resources. It is estimated that delivering the above mandates in the 2020-2021 biennium requires at least EUR 500,000, considering the extensive consultation processes required with the Contracting Parties as well as the integrated work amongst MAP Components. Furthermore, the Secretariat suggests that the proposed budget for 2020-2021 will include a provision of USD 600,000 over a period of five years for its contribution in cash to the MedProgramme (against the total projected amount of approximately USD 42,300,000[4]), out of which USD 240,000 will be

[4] Out of this total projected amount, USD 22,500,000 will be allocated to the MAP Barcelona Convention system (see par. 39) and the remaining amount of USD 20,000,000 (approx.) will be allocated to regional partners.

provided for the biennium 2020-2021 and USD 360,000 will be provided for the remaining three years (2022-2024), as future contribution in cash.

41. In light of the above, the second option, considering the MTF total net assets of USD 8.1 million as at 31 December 2017, is recommended by the Secretariat as the most suitable, although still financially insufficient to fully support the effective delivery of the proposed PoW.

42. The utilization of part of the MTF surplus as suggested above will allow for a net cash balance in addition to the Working Capital Reserve, as explained below. In view of the above, and if the second budget alternative is approved, this balance will be at the level of approximately USD 5.9 million (USD 3.8 million + USD 2.1 million – see paragraph 54).

43. Considering Umoja requirements, it is recommended to explicitly approve the programmatic part of the budget at the level of outputs and strategic outcomes, and no longer at the activity level, per MAP leading Component. This increases flexibility and simplifies the monitoring of expenses.

Updated scale of assessed contributions

44. The table of contributions annexed to this draft Decision is based on the UN scale of assessments for the period 2019 to 2021, adopted by the UN General Assembly (UNGA) at its 73rd Session on 22 December 2018 in Resolution A/RES/73/271. The scale of assessments for the ordinary contributions to the Mediterranean Trust Fund is based on the UN scale of assessments established for 2019 to 2021. In its conclusions, the Bureau supported the proposal of the Secretariat on the methodology applied for the adaptation of MTF scale of assessments to the current UN scale of assessments and requested its submission to the MAP Focal Points and to the Contracting Parties at their next meetings, for their consideration and approval.

45. The Bureau, in its 88th meeting, also requested the Secretariat to submit an analysis of the methodology of the application of the adjusted scale of assessments and submit a proposal to the next meeting of the Contracting Parties for the timely application of the scale of assessments as a standing procedure, applicable from the year 2020. The UN Scale of assessments is updated triennially, while the MAP Programme of Work and Budget is adopted biennially. Therefore, the updated UN scale of assessments will not be known at the time of budget approval or cannot be estimated beforehand for specific biennia. Give this background, there are two options that could be followed. The first one would allow direct application of the new assessment scale before the formal COP Decision, on the basis of the approval of the UN Scale in New York by the Contracting Parties – however, this is in contradiction with Procedure 4 of the Financial Rules and Procedures for the Funds of the Barcelona Convention, which require adoption by consensus of the assessed scale “based on the applicable scale of assessments of the United Nations (UNGA)”. The other option is to inform the Contracting Parties, immediately after the adoption of updated assessment scales by the General Assembly, of the expected assessed contribution per each Contracting Party, pending their adoption by consensus at the following COP, in order to allow longer time for their consideration and planning of national budgets. In this case, however, formal invoices would still be issued on the basis on the previous scale of assessment and could be followed by a “provisional” adjusted invoice. The Secretariat continues exploring these options and will share with MAP Focal Points more information, taking into consideration the approach followed by other MEAs.

Working Capital Reserve

46. Since 2015, a Working Capital Reserve (WCR) has been established in line with Procedure 3 of the Financial Rules and Procedures for the funds of the Barcelona Convention. The level of the

WCR shall be determined by the Conference of the Parties by consensus, bearing in mind the desirability of bringing its level to the recommended UN rate of 15 percent of the average annual budget for the biennium, inclusive of programme support costs. In line with COP 18 Decision IG.21/17, the WCR was established at the level of 15 percent of the annual expenditures.

47. For the biennium 2020-2021 the total WCR in the first option is the same as for the current biennium. For the second option, the WCR should be replenished with an amount of EUR 96,502.

Status of MTF positive balance and Retain of Net Cash Balance

MTF positive balance

48. The Total Net Assets of USD 8.1 million, as reflected in the certified and audited Statement of Financial Position for the year ended 31 December 2017, comprises of the WCR of USD 1.133 million and the accumulated surplus of USD 6.985 million.

49. The accumulated surplus contains: (a) assessed contributions receivable of USD 500,342. Accounts receivable are reduced by the allowance for doubtful accounts (AFDA), which is a provision for bad and doubtful debts recorded as accruals at the end of the reporting period, while the remaining value of the assessed contributions receivable as reflected in the Statement of Financial Position might include arrears for which an allowance of less than 100% is calculated, all in accordance with the UN IPSAS policy framework; (b) advance transfers of USD 339,799 not yet recorded as expenditures. As soon as the respective expenditure is recorded, the total net assets will be reduced accordingly; and (c) other accounting items of USD 19,594 (i.e. other assets and property, plant and equipment). The result of the deduction of the sum of above items of USD 859,735 from the accumulated surplus of USD 6,985,902 is the net cash balance of USD 6,126,167 as at the end of the year 2017. A similar analysis for 2018 and 2019 accounts cannot be completed before the end of the biennium and financial statements are finalized for both years.

50. Several factors are brought to bear on the accumulation of the MTF surplus. Following the MTF deficit of USD 4.5 million in 2009, the implementation of the functional review recommendations led to the generation of significant savings on the personnel costs of UNEP/MAP (Coordinating Unit and MED POL) through either abolishment of posts, downgrading or merging the functions of several posts in one. Savings on the personnel costs were also generated through vacant posts due to lengthy selection and recruitment processes. In addition, and with a view to strengthening the MTF positive balance, the staff costs for three posts, namely the Coordinator (D1), the Deputy Coordinator (P5) and the Governance Programme Officer (P4), were temporarily charged to QML, thereby increasing the MTF surplus by approximately USD 0.9 million per biennium.

51. In addition, during past biennia the budget allocations were lower than the approved amounts mostly due to the delays in the payment of contributions, which prevented the timely programming of the entire approved budget, in conformity with decision of the Contracting Parties to programme only the amounts corresponding to contributions already received. Lastly, the impact of exchange rate fluctuations on both income and expenditures, which depends on the timing and magnitude of foreign currency movements as well as on the time lag between when pledges are received and when expenses are incurred, is roughly estimated to account for 5%-10% of the accumulated surplus.

Retaining a net cash balance

52. As indicated above, the WCR has been established since 2015. The level of the Working

Capital Reserve was determined by the COP by consensus, at the level of 15% of the average annual budget for the biennium, inclusive of programme support costs. Drawdowns from the WCR may be authorized by the Executive Director and shall be replenished from contributions, or gains on exchange, as soon as possible.

53. In addition to WCR, it is recommended that a net cash balance, equivalent to a six-month budget, be retained for each biennial budget cycle to ensure seamless continuation of operations. Through this mechanism it will be ensured that the timing of payments of the contributions does not affect the implementation of the PoW, in particular the release of annual budget funds to the RACs which is meant for the beginning of each financial year. This net cash balance shall be maintained for each biennial budget cycle at a level sufficient to meet unforeseen needs, to temporarily finance unanticipated projects or phases of projects, and to meet such other purposes as may be determined from time to time by the Conference of the Parties. Retaining a net cash balance is the practice of other MEAs. More information in this regard including an opinion from UNEP Headquarters will be provided on the occasion of the MAP FP meeting.

54. Increasing the level of WCR beyond 15% to better support the smooth operation of the system for at least 6-month period instead of retaining a positive cash balance is not a recommended option, as its utilization would involve a lengthy approval and administrative process that would defeat the purpose of an urgent financial measure to face unpredictable needs. For the biennium 2020-2021, an appropriate net cash balance is estimated at the approximate amount of six months of operations of the MAP system, i.e. EUR 3.3 million (equiv. USD 3.8 million)[5].

Financial Implementation of the Programme of Work and Budget 2018-2019

55. For MTF (Fund:40MEL), the budget consumption rate for the biennium 2018-2019, as of 30 June 2019, reached the level of approximately 94%, out of which 56% represents the expenditure level and 38% represents the commitments level. It should be noted that for the year 2019 the programme support costs as well as the expenses incurred by implementing partners against committed amounts are not reflected in the above rates (as they were not yet recorded at the time the data were retrieved from Umoja). Therefore, in the case of the expenses incurred by the implementing partners, the expenditure rate is expected to increase reducing the commitments accordingly, as soon as the respective reports are received and recorded. In the case of PSC, which is not included in the commitments, the expenditure rate as well as the overall budget consumption rate, are expected to increase by at least 2%, as soon as the respective expenses are recorded. In view of the above and considering the additional expenses that will be incurred during the last semester of the biennium the budget consumption rate is expected to approach 100%.

Programme Support Costs (PSC)

56. The programme support revenue for 2019 has considerably increased compared to the allocation for the previous years, thereby providing for the strengthening of the support to the operations of UNEP/MAP. In order to enhance the capacity of the financial and administrative operations of UNEP/MAP, this status would allow for the creation of three new positions to be funded from OTA.

57. The additional posts will support meeting and travel organization and programmatic

[5] The “net cash balance” to be retained is calculated on the expected ordinary income and it is converted from EUR to USD at the average exchange rate of 0.862 (EUR 6,648,072/12months*6months=EUR 3,324,036→ EUR 3,324,036/0.862=USD 3,856,190)

administrative functions as well as permanent IT services (to replace the current IT contract providing hourly support). Proposed positions will be at the level of G5 (two posts, of which one established but not funded) and P2 (one post). MAP Administration and Finance Unit has been working on a very tight support level. Considering the additional planned activities of CU and MED POL, additional administrative requirements and timelines for meeting support, additional time spent on Umoja which disaggregates functions and procedures and represents a constant learning curve as new modules are introduced, additional support is needed in order to meet the desired output of UNEP, our Implementing Partners and the Donors in a timely manner.

58. The recommended posts of a Programme Operations Support Officer (P2) together with an additional IT Assistant (G5) and a Travel Payment Assistant (G5, already established but not funded) will result in an increase of the current cost by EUR 399,894, bringing the total of OTA-funded staff costs from EUR 821,348 to EUR 1,221,242 for the biennium.

Payment of Contributions and of Arrears

59. The level of assessed contributions received yearly during the biennium 2016-2017 has reached 97 %. During the current biennium, such level has been of 97,40 % (2018) and 82,23 % (as of 1 July 2019).

60. Early payment of assessed contributions remains a challenge. Decision IG.21/15 on Financial Rules and Procedures for the funds of the Barcelona Convention adopted at COP 18 (Istanbul, Turkey, December 2013) stipulates that the "Contributions for each calendar year are expected within the first quarter of that year and should be paid promptly and in full." In the first quarter of 2019 the collection rate was only 30.77%. The Contracting Parties are urged to make the early payment of contributions in 2020-2021 to allow for the full and effective implementation of the Programme of Work.

61. As at 1 July 2019, four Contracting Parties were in arrears with the payment of their contributions in excess of the preceding two full years, as reflected in detail in the status of contributions in the Annex. The four Countries in arrears for over 24 months and their unpaid pledges for 2018 and prior years, as at 1 July 2019, are indicated below.

- State of Libya EUR 614,466
- Syrian Arab Republic EUR 104,124
- Algeria EUR 148,829
- Lebanon EUR 45,644

62. It can be noted that the arrears payments of Egypt were received on 1 July 2019.

Strengthening of the Secretariat and MAP Components

63. At its 88th meeting, Rome, Italy, May 2019, the Bureau of the Contracting Parties recommended that the 2022-2027 Mid Term Strategy (MTS), to be developed during the 2020-2021 biennium, is accompanied by an in-depth assessment of the current structure and needs for enabling the Secretariat to deliver the new MTS, and especially the Coordinating Unit, including MED POL, and other MAP Components.

64. Further to the review of the RAC operational costs and needs referred to in paragraph 32 above, and attached in Appendix to this Decision, and of the analysis of the OTA-funded administrative support, the Secretariat, in order to provide a preliminary indication of a desirable

profile for the Secretariat, has made some initial internal reflections, which are summarized below.

65. There is a need to establish a Marine Scientist post (possibly upgrading the existing QSR Programme Management Officer position from P3 to P4) to support the implementation of the Ecosystem Approach Roadmap and specifically of IMAP; a Marine Litter Programme Management Officer position at P2/P3 level to support the implementation of the Marine Litter Regional Plan; upgrade the post of MED POL Programme Management Officer from P4 to P5 to coordinate MED POL Programme implementation; establish an additional post of Programme Assistant for MED POL; upgrade the post of Head of Office, REMPEC from P4 to P5; and add a new UNEP/MAP Post at P2/P3 level to support the implementation of the Offshore Protocol, located in Malta at REMPEC. Given the higher volume of responsibilities and activities, the upgrade of the two positions of Coordinator and Deputy Coordinator to the previous levels may also be considered.

66. This would result in additional costs of approximately EUR 700,000 per biennium.

Other Issues

67. An exchange rate of 0.862, which is the calculated average of the UN Operational Rates of Exchange for the period from 01 January 2018 to 30 June 2019, is applied for the conversion of amounts from USD to EUR.

68. The indicative EUR value of the Host Country contribution in 2020-2021 is slightly less than that in 2018-2019, due to the different exchange rates applied for the conversion of USD 400,000 to EUR.

69. Part C (RAC's Hosting Countries' Contributions) of Table 2. “Overview of Income and Commitments” in the Annex to this Decision will be filled in upon receipt of expected value of contributions from the host countries of the RACs and will be presented to the COP 21.

70. Core MTF funds (Assessed Ordinary Contribution and EC Discretionary Contribution) are allocated to priority activities, in line with the proposed PoW. External Resources will complement the core funds in the implementation of the activities of the PoW. The “External Resources” are broken down into “Secured External Funding” and “Non-Secured External Funding” for the biennium 2020-2021.

71. The Agreement between the Hellenic Republic and the UN regarding the Headquarters of the Coordinating Unit for the Mediterranean Action Plan (Host Country Agreement-HCA), which was ratified by Hellenic Law No. 1511 on 11 January 1985, identifies host country obligations concerning the headquarters seat. Article II, Section 3 of the HCA reads as follows: “[t]he Government grants to the United Nations, and the United Nations accepts from the Government, the permanent use and occupation of a headquarters seat for the Unit as may from time to time be defined in the supplemental agreements to be concluded between the United Nations and the Government”. The Supplemental Agreement Number One to the HCA, signed on 18 June 1982 specifies in its Section 1 that “[f]or the purposes of the Headquarters agreement, the Headquarters seat to which Section 3 thereof refers is hereby defined as consisting of the second floor of the building situated on King Constantine Avenue, Nr. 48, Athens, measuring 800 square meters”.

72. A lease agreement was signed from 1 June 1982 to 30 May 1987, and since then, it has only been tacitly renewed. Regrettably, the UN headquarter premises of the Coordinating Unit have received no maintenance for at least one decade, are inadequate and bear the risk of liability issues as they

present safety and health hazards. The situation has seriously deteriorated during the past three years. In response to recurring efforts from the Coordinator to address the situation, the Ministry of Environment has generously looked at available options among publicly-owned buildings and offered in 2017 alternative premises, which however for economic reasons were lost to a private investor in January 2018. Efforts to relocate the UNEP/MAP Coordinating Unit have proven so far inconclusive.

73. In 2019, the Secretariat has started looking for alternative office premises from the private sector, as the current condition of the office premises is no longer acceptable. This situation has led to a proposal to the Government of the Hellenic Republic through the Ministry of Environment, requesting to launch the required procedure to prepare a new Supplemental Agreement that needs to be finalized with the Ministry of Foreign Affairs of the Hellenic Republic.

[Draft Decision IG.24/14

Programme of Work and Budget 2020-2021

The 21st Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, hereinafter referred to as the Barcelona Convention,

Recalling Articles 18 and 24(2) of the Barcelona Convention and Decision IG.21/15 of COP 18 (Istanbul, Turkey, 3-6 December 2013) on the Financial Rules and Procedures for the funds of the Barcelona Convention;

Recalling Decision IG.22/1 of COP 19 (Athens, Greece, 9-12 February 2016) adopting the Medium-Term Strategy 2016-2021 (MTS) as the framework for the development and implementation of the Programme of Work of UNEP/MAP;

[Recalling also its decision IG.24/… on the preparation of the 2022-2027 Medium-Term Strategy;]

Welcoming the Progress Report on the activities carried out during the 2018-2019 biennium and the related expenditure report;

Emphasizing the need for stable, adequate and predictable financial resources for MAP and the Mediterranean Trust Fund;

Welcoming the improvement in the rate of collection of assessed contributions including parts of the arrears and the establishment and maintenance of the Working Capital Reserve;

Appreciating the guidance provided to the Secretariat by the Bureau of the Contracting Parties to the Barcelona Convention during the 2018-2019 biennium;

Expressing deep appreciation to the Contracting Parties and other partners that have provided additional financial and other resources for the implementation of the activities of the 2018-2019 biennium, including the Italian Cooperation Agreement, and *welcoming* the financial resources mobilized by the Secretariat including RACs for the same purpose;

1. *Approves* the 2020-2021 Programme of Work and Budget set out in the Annex to this Decision;

2. *Approves* the budget appropriations, as set out in Table 1. "Overview of income and commitments" of the Annex to this Decision; the income in the amount of EUR 13,296,144, composed of the Mediterranean trust Fund in the amount of EUR 11,413,577, the European Union discretionary contribution in the amount of EUR 1,192,968 and the host country contribution of EUR 689,600 (USD 800,000); the use of savings from the MTF positive balance in the amount of [EUR 545,111] [EUR 1,793,528];

3. *Approves* the assessed 2020-2021 ordinary contributions from Parties shown in Table 2 "Expected Ordinary Income" of the Annex to this Decision, which is based on the 2019-2021 scale of assessment adopted by the UN General Assembly at its 73rd Session in Resolution A/RES/73/271;

4. *Requests* the Executive Director of UNEP, in consultation with the United Nations Environment Assembly, to extend the Mediterranean Trust Fund through 31 December 2021;

5. *Approves* the staffing of the Coordinating Unit including MED POL for 2020-2021 as indicated in Table 4a. "Details of Salaries and Administrative Costs of the Secretariat" in the Annex to this Decision;

6. *Takes note of* the staffing of REMPEC for 2020–2021 as indicated in Table 4b, "Details of Salaries and Administrative Costs of REMPEC" in the Annex to this Decision*;*

7. *Urges* the Contracting Parties to strictly adhere to Procedure 4.2 of the Financial Rules and Procedures and pay their contributions to the Mediterranean Trust Fund (MTF) in the first quarter of each year to allow for the full and effective implementation of the Programme of Work;

8. *Requests* the Secretariat to keep up to date information on the status of Contracting Parties' contributions to the Mediterranean Trust Fund and to continue to post it in a publicly available place on the UNEP/MAP website;

9. *Urges* the Contracting Parties to adhere to nomination deadlines of their representatives in meetings of the MAP system and to avoid modifications and cancellation of their travel in order to minimize losses arising from the increase of airfare and cancellation fees and inefficiencies;

10. *Invites* the Contracting Parties to consider increasing their voluntary contributions in cash and/or in kind in support of the implementation of the 2020-2021 Programme of Work;

11. *Urges* the Contracting Parties and other partners including industry to contribute adequate human and financial resources to meet the external funding requirements for priorities still unfunded under the 2020-2021 Programme of Work and Budget and to support the resource mobilization activities of the Secretariat;

12. *Approves* the programmatic part of the budget at the level of outputs;

13. *Urges* the Government of the Hellenic Republic to undertake all the required steps in order to ensure that fully adequate premises are made available to the Coordinating Unit within the shortest delay and in line with its commitments under the Host Country Agreement, and *request* the Secretariat to report to the Contracting Parties and to the Bureau on the progress made;

14. *Agree* on the need to retain a net cash balance at the maximum level equivalent to a six-month budget when conditions allow it, as a measure to temporarily meet unforeseen needs of the implementation of the Programme of Work, to pre-finance projects, and for such other purposes as may be determined from time to time by the Conference of the Parties;

15. *Requests* the Secretariat, in consultation with the Bureau, to prepare for consideration and approval by COP 22 a result-based Programme of Work and Budget for 2022-2023, explaining the key principles and assumptions on which it is based and taking into account the progress achieved during the implementation of the 2020-2021 Programme of Work, and in full alignment with the MTS.

16. *Also requests* the Secretariat to submit two options for the budget 2022-2023, one reflecting zero increase on the approved budget of 2020-2021, and the other proposing an increase sufficient to cover both the implementation of the possibly expanded mandates deriving from the 2022-2027 Medium-Term Strategy and the required additional capacity and operational costs of the entire Secretariat including MAP Components[, considering also the need for adequate MTF allocation required to effectively execute their mandates and operations.]]

Annex

Programme of Work and Budget 2020-2021

Option 1

Table 1. Overview of Income and Commitments

All amounts in €

Part A (Core Funding)		exchange rate	0.918	*Proposed Budget 2020-2021 ALTERNATIVE 1* [1]	exchange rate	0.862
	€	€	€	€	€	€
A. Income	*Approved 2018*	*Approved 2019*	*Total 2018-2019*	*Proposed 2020*	*Proposed 2021*	*Total 2020-2021*
Expected Ordinary Income						
MTF Ordinary Contributions	5,706,788	5,706,788	11,413,576	5,706,788	5,706,788	11,413,576
EU Discretionary Contribution	596,484	596,484	1,192,968	596,484	596,484	1,192,968
Greek Host Government Contribution[2]	367,200	367,200	734,400	344,800	344,800	689,600
TOTAL of Expected Ordinary Income	**6,670,472**	**6,670,472**	**13,340,944**	**6,648,072**	**6,648,072**	**13,296,144**
B. Savings to be used	**374,771**	**170,336**	**545,107**	**38,494**	**506,617**	**545,111**
Total Available Funds	**7,045,243**	**6,840,808**	**13,886,051**	**6,686,566**	**7,154,689**	**13,841,255**
C. Commitments	*Approved 2018*	*Approved 2019*	*Total 2018-2019*	*Proposed 2020*	*Proposed 2021*	*Total 2020-2021*
Activities	2,197,582	1,904,304	4,101,886	1,547,883	1,952,460	3,500,343
Posts and Other Administrative Costs[3]	4,019,821	4,200,264	8,220,085	4,418,379	4,461,726	8,880,105
Programme Support Costs	720,959	701,815	1,422,774	682,272	740,502	1,422,774
TOTAL Regular Commitments	**6,938,362**	**6,806,383**	**13,744,745**	**6,648,534**	**7,154,688**	**13,803,222**
Provision for Working Capital Reserve (incl. PSC) [4]	**38,031**		**38,031**	**38,031**		**38,031**
Grand Total	**6,976,393**	**6,806,383**	**13,782,776**	**6,686,565**	**7,154,688**	**13,841,253**
Difference between Income and Commitments (CAL)[5]	68,850	34,425	103,275	0	0	0

Part B (External Funding)

	Total 2018-2019	*Total 2020-2021*
UNEP/MAP Project Funding	9,018,339	4,595,500
Resources mobilized by Components	2,720,000	8,668,871
Resources to be mobilized	2,345,000	8,763,500
TOTAL	**14,083,339**	**22,027,871**

Part C (RAC's Hosting Countries' Contributions)[6]

Country (Center)	*2018*	*2019*	*Total 2018-2019*	*2020*	*2021*	*Total 2020-2021* [7]
Croatia (PAP/RAC)	159,666	159,666	319,332			0
France (BP/RAC)			0			0
Italy (INFO/RAC)	100,000	100,000	200,000			0
Malta (REMPEC)	255,000	255,000	510,000			0
Spain (CP/RAC)			0			0
Tunisia (SPA/RAC)	90,000	90,000	180,000			0
TOTAL of Host Country Contributions (in cash/kind)	**604,666**	**604,666**	**1,209,332**	**0**	**0**	**0**

(1)*: ALTERNATIVE 1* reflects ZERO increase of 2018-2019 budget in nominal terms.

(2): The equivalent of USD 400,000 in EUR using the budget rate (0.862 for 2020-2021 based on the average rate calculated for the period 01/2018-06/2019 and 0.918 for 2018-2019).

(3): Proposed figure includes the Greek Host Country Contribution, while Table 3 excludes the same.

(4): The WCR for 2018-2019 was retained in the proposed budget for 2020-2021 as the actual expenditure figure for 2018-2019 is not yet available.

(5): The deficit recovery was completed in 2019, hence no further transactions are required for the biennium 2020-2021.

(6): National contributions towards MAP's Regional Activities Centers (RACs) from the respective Host Country.

(7): The information on the RAC's Hosting Countries' Contributions for 2020-2021 will be provided as soon as it is available.

Table 2. Expected Ordinary Income

Assessed Ordinary Contributions apportioned to Parties of the Barcelona Convention for the 2020–2021 biennium (EUR)[1]

									0% Increase in Total Assessed Contributions		
Contracting Parties	**2018-2019 MTF Applied Scale of Assessments %**	**Approved Ordinary Contributions for 2018 (in €)**	**Approved Ordinary Contributions for 2019 (in €)**	**UN Scale of Assessments (2019-2021)_[ST/ADM/SER.B/992] %**	**Adjusted Scale of Assessments without EU A.O.C.* (2019-2021) %**	**Adjusted Scale of Assessments with 2.5% for EU A.O.C.* (2019-2021) %**	**Revised Ordinary Contributions for 2019 (in €)**	**Difference between revised and approved Ordinary Contributions for 2019 (in €)**	**Proposed Ordinary Contributions for 2020 (in €)**	**Proposed Ordinary Contributions for 2021 (in €)**	**Proposed Ordinary Contributions for 2020-2021 (in €)**
Albania	0.06	3,217	3,217	0.008	0.062	0.061	3,467	250	3,467	3,467	6,933
Algeria	1.13	64,746	64,746	0.138	1.075	1.048	59,801	-4,945	59,801	59,801	119,603
Bosnia and Herzegovina	0.09	5,228	5,228	0.012	0.093	0.091	5,200	-28	5,200	5,200	10,400
Croatia	0.70	39,813	39,813	0.077	0.600	0.585	33,367	-6,445	33,367	33,367	66,735
Cyprus	0.30	17,292	17,292	0.036	0.280	0.273	15,600	-1,692	15,600	15,600	31,201
EU	2.50	142,670	142,670		-	2.500	142,670	0	142,670	142,670	285,339
Egypt	1.07	61,126	61,126	0.186	1.449	1.412	80,602	19,475	80,602	80,602	161,203
France	34.24	1,954,037	1,954,037	4.427	34.478	33.616	1,918,407	-35,629	1,918,407	1,918,407	3,836,815
Greece	3.32	189,412	189,412	0.366	2.850	2.779	158,603	-30,808	158,603	158,603	317,207
Israel	3.03	172,924	172,924	0.490	3.816	3.721	212,338	39,414	212,338	212,338	424,676
Italy	26.41	1,507,250	1,507,250	3.307	25.755	25.112	1,433,064	-74,187	1,433,064	1,433,064	2,866,128
Lebanon	0.32	18,499	18,499	0.047	0.366	0.357	20,367	1,868	20,367	20,367	40,734
Libya (State of Libya)	0.88	50,268	50,268	0.030	0.234	0.228	13,000	-37,268	13,000	13,000	26,001
Malta	0.11	6,434	6,434	0.017	0.132	0.129	7,367	932	7,367	7,367	14,734
Monaco	0.07	4,021	4,021	0.011	0.086	0.084	4,767	745	4,767	4,767	9,534
Montenegro	0.03	1,609	1,609	0.004	0.031	0.030	1,733	124	1,733	1,733	3,467
Morocco	0.38	21,716	21,716	0.055	0.428	0.418	23,834	2,118	23,834	23,834	47,668
Slovenia	0.59	33,780	33,780	0.076	0.592	0.577	32,934	-846	32,934	32,934	65,868
Spain	17.22	982,447	982,447	2.146	16.713	16.296	929,953	-52,494	929,953	929,953	1,859,906
Syrian Arab Republic	0.17	9,652	9,652	0.011	0.086	0.084	4,767	-4,885	4,767	4,767	9,534
Tunisia	0.20	11,260	11,260	0.025	0.195	0.190	10,834	-427	10,834	10,834	21,667
Turkey	7.17	409,387	409,387	1.371	10.678	10.411	594,113	184,726	594,113	594,113	1,188,225
TOTAL ORDINARY CONTRIBUTIONS (MTF)	**100**	**5,706,788**	**5,706,788**	**12.840**	**100**	**100**	**5,706,788**	**0**	**5,706,788**	**5,706,788**	**11,413,576**

ADDITIONAL CONTRIBUTIONS

		Contribution for 2018 (in €)	**Expected Contribution for 2019 (in €)**						**Expected Contribution for 2020 (in €)**	**Expected Contribution for 2021 (in €)**	**Expected Contribution for 2020-2021 (in €)**
EC Discretionary Conribution		596,484	596,484						596,484	596,484	**1,192,968**
Host Country Contribution (Greece) [(2)]		367,200	367,200						344,800	344,800	**689,600**

(1): The proposed contributions for 2020-2021 are aligned with current UN assessed rates (2019-2021).
(2): The equivalent of USD 400,000 in EUR using the budget rate (0.862 for 2020-2021 and 0.918 for 2018-2019).

*A.O.C.=Assessed Ordinary Contribution(s)

Table 3. Summary of Activities and Administrative Costs by Component (MTF/EU discr.)

	Approved Budget 2018-2019 (in €)			Proposed Budget 2020-2021 (in €) ALTERNATIVE 1		
(in €)	2018	2019	Total 2018-2019	2020	2021	Total 2020-2021
CU						
TOTAL ACTIVITIES	299,863	747,969	1,047,832	292,602	755,230	1,047,832
POSTS AND OPERATIONAL COSTS	1,199,860	1,342,540	2,542,400	1,526,211	1,551,060	3,077,271
TOTAL	**1,499,723**	**2,090,509**	**3,590,232**	**1,818,813**	**2,306,290**	**4,125,103**
MEDPOL						
TOTAL ACTIVITIES	762,773	335,000	1,097,773	397,417	386,462	783,879
POSTS AND OPERATIONAL COSTS	594,093	590,274	1,184,367	604,152	613,938	1,218,090
TOTAL	**1,356,866**	**925,274**	**2,282,140**	**1,001,569**	**1,000,400**	**2,001,969**
REMPEC						
TOTAL ACTIVITIES	222,000	86,000	308,000	171,608	71,000	242,608
ADMINISTRATIVE SUPPORT	595,704	602,861	1,198,565	611,402	620,114	1,231,516
TOTAL	**817,704**	**688,861**	**1,506,565**	**783,010**	**691,114**	**1,474,124**
BP/RAC						
TOTAL ACTIVITIES	280,800	90,600	371,400	161,650	161,650	323,300
ADMINISTRATIVE SUPPORT	452,700	452,700	905,400	452,700	452,700	905,400
TOTAL	**733,500**	**543,300**	**1,276,800**	**614,350**	**614,350**	**1,228,700**
PAP/RAC						
TOTAL ACTIVITIES	157,146	168,735	325,881	141,546	141,546	283,092
ADMINISTRATIVE SUPPORT	438,317	438,317	876,634	438,317	438,317	876,634
TOTAL	**595,463**	**607,052**	**1,202,515**	**579,863**	**579,863**	**1,159,726**
SPA/RAC						
TOTAL ACTIVITIES	275,000	301,000	576,000	231,000	265,118	496,118
ADMINISTRATIVE SUPPORT	346,547	346,547	693,094	346,547	346,547	693,094
TOTAL	**621,547**	**647,547**	**1,269,094**	**577,547**	**611,665**	**1,189,212**
INFO/RAC						
TOTAL ACTIVITIES	80,000	70,000	150,000	55,606	73,000	128,606
ADMINISTRATIVE SUPPORT	39,250	39,250	78,500	39,250	39,250	78,500
TOTAL	**119,250**	**109,250**	**228,500**	**94,856**	**112,250**	**207,106**
SCP/RAC						
TOTAL ACTIVITIES	120,000	105,000	225,000	96,454	98,454	194,908
ADMINISTRATIVE SUPPORT	55,000	55,000	110,000	55,000	55,000	110,000
TOTAL	**175,000**	**160,000**	**335,000**	**151,454**	**153,454**	**304,908**
SUBTOTAL	**5,919,053**	**5,771,793**	**11,690,846**	**5,621,462**	**6,069,386**	**11,690,848**
PSC*	720,959	701,815	1,422,774	682,272	740,502	1,422,774
GRAND TOTAL	6,640,012	6,473,608	**13,113,620**	6,303,734	6,809,888	**13,113,622**

TOTAL ACTIVITIES	*2,197,582*	*1,904,304*	*4,101,886*	*1,547,883*	*1,952,460*	*3,500,343*
TOTAL ADMIN & OPERAT.	*3,721,471*	*3,867,489*	*7,588,960*	*4,073,579*	*4,116,926*	*8,190,505*
DIRECT COSTS	*5,919,053*	*5,771,793*	*11,690,846*	*5,621,462*	*6,069,386*	*11,690,848*
PSC	*720,959*	*701,815*	*1,422,774*	*682,272*	*740,502*	*1,422,774*
GRAND TOTAL	*6,640,012*	*6,473,608*	*13,113,620*	*6,303,734*	*6,809,888*	*13,113,622*

**PSC calculation 13% and 4.5% prorated to the respective income.*

Table 4a. Details of Salaries and Administrative Costs (Secretariat)

Secretariat	Approved Budget (in €)			Proposed Budget (in €) with 2% increase		
	2018	2019	Total 2018-2019	2020	2021	Total 2020-2021
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff [3]						
Coordinator - D.1	227,405	229,679	457,084	234,273	238,958	473,231
Deputy Coordinator - P.5	205,215	207,268	412,483	211,413	215,641	427,054
Programme Officer (Governance) - P.4	176,451	178,215	354,666	181,780	185,415	367,195
Programme Officer (MEDPOL) - P.4	176,451	178,215	354,666	181,780	185,415	367,195
Programme Officer (MEDPOL Monitoring & Assessment Officer) - P.3	149,247	150,740	299,987	153,755	156,830	310,585
Programme Officer (Socio-economic Activities/Sust. Development) - P.3	149,247	150,740	299,987	153,755	156,830	310,585
Programme Officer (MEDPOL Pollution) - P.3[5]	149,247	150,740	299,987	153,755	156,830	310,585
Legal Officer - P.3	149,247	150,740	299,987	153,755	156,830	310,585
Programme Officer QSR Expert - P3[4]	0	150,740	150,740	153,755	156,830	310,585
Information and Communication Officer-P3[5]	0	0	0	153,755	156,830	310,585
Admin/Fund Management Officer - P.4[1]	0	0	0	0	0	0
Programming / Administrative Officer - P.2[1]	0	0	0	0	0	0
Total Professional Staff	**1,382,510**	**1,547,077**	**2,929,587**	**1,731,776**	**1,766,409**	**3,498,185**
General Service Staff						
Meetings and Procurement Assistant - G.6[1]	0	0	0	0	0	0
Payments and Travel Assistant - G.5[1]	0	0	0	0	0	0
Budget Assistant - G.6[1]	0	0	0	0	0	0
Administrative Assistant - G.6[1]	0	0	0	0	0	0
Information Assistant- G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant (MEDPOL) - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Administrative Clerk - G.4 / G.5 [1]	0	0	0	0	0	0
IT Assistant / G.5 [1]	0	0	0	0	0	0
Total General Service Staff	**216,000**	**216,000**	**432,000**	**216,000**	**216,000**	**432,000**
TOTAL POSTS	**1,598,510**	**1,763,077**	**3,361,587**	**1,947,776**	**1,982,409**	**3,930,185**
Other Administrative Costs						
Travel on Official Business	120,000	120,000	240,000	120,000	120,000	240,000
Other Office costs [2]	75,443	49,737	125,180	62,590	62,590	125,180
Total Other Administrative Costs	**195,443**	**169,737**	**365,180**	**182,590**	**182,590**	**365,180**
TOTAL POST AND OTHER ADMINISTRATIVE COSTS	**1,793,953**	**1,932,814**	**3,726,767**	**2,130,366**	**2,164,999**	**4,295,365**

(1) Post is covered by the Programme Support Costs.

(2) Allocation for MAP staff training, ICT services and MAP Office contingency plan development.

(3) Two percent increase in the international staff cost in 2020 and 2021.

(4) The post was financed by the savings in 2019.

(5) The Post was finacned by the Government of Italy in 2018-2019.

Table 4b. Details of Salaries and Administrative Costs (REMPEC)[5]

REMPEC	Approved Budget (in €)			Proposed Budget 2020-2021 (in €) 2% increase		
	2018	2019	Total 2018-2019	2020	2021	Total 2020-2021
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff[4]						
Head of Office P.4	165,080	166,731	331,811	170,066	173,467	343,533
Programme Officer (Prevention) P.3	126,167	127,429	253,596	129,977	132,577	262,554
Programme Officer (OPRC) P.3	131,573	132,888	264,461	135,546	138,257	273,803
Programme Officer (Offshore) P.3[(1)]	0	0	0	0	0	0
Associate Professional Officer (APO) [(2)]	0	0	0	0	0	0
Total Professional Staff	**422,820**	**427,048**	**849,868**	**435,589**	**444,301**	**879,890**
General Service Staff						
Administrative/Financial Assistant - G7[(3)]	24,644	25,773	50,417	25,773	25,773	51,546
Assistant to the Director - G.7	36,319	37,408	73,727	37,408	37,408	74,816
Secretary - G.5	26,293	27,004	53,297	27,004	27,004	54,008
Total General Service Staff	**87,256**	**90,185**	**177,441**	**90,185**	**90,185**	**180,370**
TOTAL POSTS	**510,076**	**517,233**	**1,027,309**	**525,774**	**534,486**	**1,060,260**
Other Administrative Costs						
Travel on Official Business	35,000	35,000	70,000	35,000	35,000	70,000
Office costs	50,628	50,628	101,256	50,628	50,628	101,256
Total Other Administrative Costs	**85,628**	**85,628**	**171,256**	**85,628**	**85,628**	**171,256**
TOTAL POST AND OTHER ADMINISTRATIVE	**595,704**	**602,861**	**1,198,565**	**611,402**	**620,114**	**1,231,516**

(1) Proposed activities in the PoW for the biennium 2020/2021 in relation to the Offshore Action Plan is subject to the availability of financial ressources for this post.

(2) This post will be covered by the relevant International Maritime Organization Member State in the framework of the IMO Associate Professional Officer (APO) programme.

(3) This post is partially covered by IMO contribution (Euro 13,000 per annum) paid from IMO's share of Project Support Costs.

(4) Two percent annual increase on the international staff costs for 2020 and 2021.

(5) The final table will be provided by REMPEC and will be presented to COP21.

THEME 1. GOVERNANCE

Strategic objectives:
1. To strengthen regional and national governance mechanisms, resource availability and capacity for the implementation of and compliance with the Barcelona Convention, its Protocols, the Mediterranean Strategy for Sustainable Development and the adopted regional Strategies and Action Plans;
2. To mobilize additional resources to Mediterranean Trust Fund in order to increase its impacts;
3. To strengthen synergies, complementarities, and collaboration among international and regional partners and organizations active in the Mediterranean region, and enhance stakeholders' participation and outreach;
4. To deliver knowledge-based assessments of the Mediterranean environment and scenario development for informed decision-making and stakeholder work;
5. To ensure visibility of the MAP/Barcelona Convention, its role and achievements.

2020-2021 Indicators:
1. Number of new ratifications of Barcelona Convention and its Protocols;
2. (a) Level of satisfaction of services rendered to MAP meetings;
(b) Number of "green meetings" organised;
3. Share of external financial resources mobilized by the entire MAP system to co-finance MTF for the implementation of the Mid-Term Strategy;
4. (a) Number of Parties reporting on the implementation of the Barcelona Convention and its Protocols;
(b) Number of reporting format questions/ sections completed;
5. Number of regional programmatic and policy instruments developed;
6. Percentage of biennial increase of civil society accredited organizations including private sector partnering with MAP;
7. Number of MoUs/MoCs concluded or updated;
8. Number of joint activities with partners;
9. (a) Number of countries updating and implementing national IMAP-compatible monitoring and assessment programmes;
(b) Number of IMAP Common Indicators populated with data for 2019-2020;
10. Number of reports, factsheets and other scientific publications produced by the MAP System;
11. (a) Number of Info/MAP services provided;
(b) Number of data set and/or data services made available through Info/MAP platform;
12. Number of downloads of publications available on MAP system websites;
13. Number of communication products released;
14. Number of events featuring MAP system;
15. Number of webpages on the UN Environment/MAP and MAP Components websites viewed annually.

2020-2021 Targets:
1. At least 4 additional ratifications of Protocols and amendments to one Protocol entered into force;
2. (a) 80% level of satisfaction;
(b) At least 50% of meetings
3. At least 40% of MTF budget;
4. (a) 22 National Reports submitted online;
(b) At lest 80% of reporting format questions/sections completed per legal instrument;
5. At least 4 regional programmatic and policy instruments;
6. At least 30% compared to the current number;
7. 4 MoU/MoC concluded or updated;
8. At least 20 joint activities with partners;
9. (a) 21 countries;
(b) Minimum 15 IMAP Common Indicators populated per country;
10. 25 reports, factsheets and other scientific publications;
11. (a) At least 7 on 10;
(b) 6 data sets/ services;
12. 5,000 downloads per annum;
13. At least 12 online press releases and 30 news items;
14. 30 events/ side events;
15. At least 30,000 total pages viewed per annum.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
1.1. Contracting Parties supported in the implementation of the Barcelona Convention, its Protocols, Regional Strategies and Action Plans.						**377,602 €**	**1,124,602 €**	**1,502,204 €**	**2,471,500 €**	**688,000 €**	
1.1.1. Ratification of the Barcelona Convention and its Protocols by all Contracting Parties supported.						**0 €**	**0 €**	**0 €**	**0 €**	**10,000 €**	
1. Follow-up and promote ratification of Protocols with a particular focus on those not yet entered into force or ratified by less than 50% of Contracting Parties.	Send letters and organise missions to concerned CPs; Communicate with Depositary and CPs, Embassies in Athens. Enhance capacity-building activities towards increasing ratifications (workshops and communication material).	CU	MED POL, PAP/RAC, REMPEC, SPA/RAC, SCP/RAC	Respective CPs	a) Increased number of ratifications of the Protocols; b) 1 Protocol entered into force by end of 2021 at the latest.			0 €		10,000 €	
1.1.2. Effective legal, policy, and logistic support provided to MAP decision-making process including advisory bodies meetings						**280,000 €**	**1,028,000 €**	**1,308,000 €**	**0 €**	**610,000 €**	
1. Organize COP 22.	In house expertise, preparation of Host Country Agreement; pre- and in-session working documents in 4 languages, information documents, ensure conference services, venue, organize side events, make travel arrangements for 1 participant per CP and up to 10 representatives from MAP partners (civil society) and for the Secretariat.	CU	All MAP Components	Host country , CPs, MAP Partners	a) COP 22 successfully delivered; b) Progress achieved during the biennium 2020-2021 reviewed and acknowledged; c) COP 22 Declaration, Decisions including the new MTS 2022-2027 and the PoW 2022-2023 reviewed and adopted, recommendations of the Compliance Committee and the MCSD reviewed; d) Status of implementation of the Convention and its Protocols reviewed; e) MAP visibility and outreached enhanced.	0 €	300,000 €	300,000 €		60,000 €	The figures shown as external resources indicate any additional costs that may go beyond the approved budget, to be incurred by a CP should it offers to host the meetings.
2. Organize the 89th, 90th and 91st Meetings of the Bureau as well as meeting on the eve of COP 22.	In house expertise, working documents in 2 languages, information documents, conference services, venue, travel arrangements for 1 delegate per Bureau member and for the Secretariat.	CU	All MAP Components		a) The 89th, 90th and 91st Meetings of the Bureau as well as a Bureau meeting on the eve of COP 22 successfully delivered; b) Progress of implementation of the MAP PoW 2020-2021 reviewed on a 6-monthly basis; c) Guidance provided to the Secretariat and the Contracting Parties on specific issues; d) Main directions of the new PoW 2022-2023 and the MTS 2022- 2027 defined.	65,000 €	35,000 €	100,000 €		35,000 €	
3. Organize the Meeting of the MAP Focal Points preceded by the MAP Component/Thematic Focal Points and the EcAp Coordination Group Meetings.	In house expertise, working documents in 2 languages, Information documents, conference services, venue, travel arrangements for one delegate per CP and for the Secretariat.	CU	All MAP Components	MAP Focal Points, MAP Partners	a) Meeting of MAP Focal Points and EcAp Coordination Group Meeting successfully convened; b) Progress on the implementation of the MAP PoW 2020-2021 reviewed and acknowledged; c) Draft Decisions prepared reviewed and finalised for submission to COP 22; d) The new MTS 2022-2027 and the PoW and Budget 2022-2023 reviewed in depth for submission and consideration by COP 22.		120,000 €	120,000 €		65,000 €	
	In house expertise, working documents in 2 languages, Information documents, conference services, venue, travel arrangements for one delegate per CP and for the Secretariat / respective MAP Components.	MED POL, PAP/RAC, Plan Bleu/RAC, REMPEC, SCP/RAC, SPA/RAC, INFO/RAC	CU	MAP Components Focal Points, MAP Partners	a) Component/Thematic FP Meetings successfully convened; b) Technical aspects of the implementation of the Protocols reviewed; c) Progress on the implementation of MAP Components' led activities of the PoW 2020-2021 reviewed; d) Technical and policy documents reviewed for further review by higher MAP bodies, including draft decisions, policy papers, assessment products etc.; e) Proposed PoW 2022-2023 activities reviewed for further submission to MAP Focal Points meeting.		350,000 €	350,000 €		10,000 €	MED POL FP Meeting: €50,000; PAP/RAC FP Meeting: €40,000; SPA/RAC FP Meeting €70,000; REMPEC FP Meeting: €70,000; SCP/RAC FP Meeting: €45,000; Plan Bleu FP Meeting: €40,000; INFO/RAC FP Meeting €35,000.
4. Organize Compliance Committee Meetings.	Working and information documents in two languages, conference services, participation arrangements for up to 14 Compliance Committee members and/or alternates; In house expertise.	CU	MED POL, SPA/RAC, REMPEC, PAP/RAC, SCP/RAC, INFO/RAC	Compliance Committee	a) 2 Compliance Committee Meetings successfully convened; b) Non-compliance situations addressed and brought to the attention of COP 22; c) Guidance provided to the Contracting Parties as appropriate; d) Possible joint sessions with Compliance Committees of other MEAs held.	35,000 €	35,000 €	70,000 €		50,000 €	
5. Organize the 19th Meeting of the MCSD and its Steering Committee annual meetings; Undertake and conclude the mid-term evaluations of the MSSD and SCP Regional Action Plan	In house expertise, consultancy, agreement with Host Country, working documents in English and French, information documents, conference services, travel arrangements for MCSD and MCSD Steering Committee members, regional workshops.	CU, Plan Bleu/RAC, SCP/RAC	All other MAP components	MCSD and its Steering Committee, MAP Partners	a) 19th Meeting of the MCSD successfully convened; conclusions and recommendations provided to the Contracting Parties; b) 2 meetings of the MCSD Steering Committee, at least 1 of them face-to-face, successfully convened; c) Mid-term evaluations of the MSSD and SCP Regional Action Plan successfully delivered (desktop analysis; external expertise; consultation document; online consultation, working groups, and participatory workshops).	55,000 €	103,000 €	158,000 €		35,000 €	The figures shown as external resources indicate any additional costs that may go beyond the approved budget, to be incurred by a CP should it offers to host the meetings.
6. Formulate the MAP MTS 2022-2027 through an inclusive, participatory Contracting Parties's driven process.	In house expertise, consultancy, meetings of MAP Focal Points (working documents in 2 languages, information documents, conference services).	CU	All MAP Components	CPs, MAP partners	a) MTS 2016-2021 evaluation and review successfully delivered; b) MTS 2022-2027 prepared and submitted to MAP FP and COP 22 through a participatory process and under Parties' leadership.	25,000 €	50,000 €	75,000 €		30,000 €	The figures shown as external resources indicate any additional costs that may go beyond the approved budget, to be incurred by a CP should it offers to host the meetings.
7. Formulate in coordination with regional bodies a Post-2020 Strategic Action Programme for the conservation of biodiversity and sustainable management of natural resources in the Mediterranean Region (SAP BIO 2021-2035).	Regional meetings, conference services, in-house expertise and coordination; travel arrangements for members of the Advisory Committee Consultancy, coordination meetings, including SAP BIO Nat. Correspondents ones.	SPA/RAC	CU and other MAP Components as relevant	CPs, SAP BIO Advisory Committee member organizations SPA/RAC Focal Points, ACCOBAMS, CBD, FAO, GFCM, IUCN, MedPAN, MedWet, WWF	a) SAP BIO Advisory Committee established and held; b) Overall and Specific Guidance provided to the drafting of SAP BIO 2021-2035, ecosystem approach based, aligned with the Sustainable Development Goals (SDG), and harmonized with the Global CBD Post 2020 biodiversity framework; c) SAP BIO 2021-2035 prepared and submitted to the meetings of SPA/RAC and Biodiversity Thematic Focal Points, ECAP Coordination Group, MAP Focal Points and COP 22; d) 2021-2035 Strategic Action Programme for the conservation of biodiversity and sustainable management of natural resources in the Mediterranean Region (SAP BIO 2021-2035) aligned with the Sustainable Development Goals (SDG), harmonized with the Global CBD Post 2020 biodiversity framework and based on the findings and recommendations of the 2004-2019 SAP BIO, elaborated and presented to the SPA/BD FP, EcAp CG, MAP FP meeting and COP 22.	50,000 €	35,000 €	85,000 €		150,000 €	Non-secured external funding possibly from MAVA.
8. Develop/ update regional Strategies/ Action Plans addressing sea-based pollution.	In house expertise, consultancy, regional meetings, travel, interpretation, translation	REMPEC, CU	MAP Components	CPs, OFOG, IMO, offshore industries	a) Regional Strategy for Prevention of and Response to Marine Pollution from Ships (post 2021), ecosystem approach based and aligned with relevant SDG prepared for submission to meetings of REMPEC Focal Points, ECAP Coordination Group, MAP Focal Points and COP 22; b) Stengthened implementation of the Mediterranean Offshore Action Plan and Action Plan kept under review through regular meetings of the Offshore Protocol Focal Points.	50,000 €		50,000 €		55,000 €	Non-secured extenal funding possiby from IMO ITCP 2020
9. Develop the MAP data management policy, including on IMAP Info-System.	In house expertise, conference services, translation, interpretation, reports, regional meeting(s), participation arrangements for CPs delegates	INFO/RAC	All MAP Components	Regional information system platforms, EEA etc.	IMAP data policy elaborated for submission to meetings of relevant Thematic/MAP Components Focal Points, ECAP Coordination Group, and MAP Focal Points and as appropriate to COP 22, and its implementation ensured in an integrated manner.			0 €		110,000 €	Non-secured external funding under negotiation.

10. Enhance the sustainability of MAP operations.	In house expertise, Sustainable MAP Operations Task Force meetings.	CU, all MAP components	All MAP Components, Sustainable MAP Operations Task Force		a) Set of criteria and indicators to measure sustainability of MAP operations developed; b) Application of sustainable practices ensured in MAP operations and meetings/events (paperless meetings, CO2 calculation etc.); c) Internal Task Forces at the Coordinating Unit and each MAP component operational and/or team meetings conducted.			0 €		10,000 €	
1.1.3. Strengthen interlinkages between Core and Cross-cutting themes and facilitate Coordination at national level across the relevant sectors.						**3,000 €**	**2,000 €**	**5,000 €**	**31,000 €**	**58,000 €**	
1. Streamline in relevant national policies the updated MAP strategies and ecosystem approach-based GES targets (MSSD, SCP AP, Regional Strategy on pollution prevention from ships, ICZM Action Plan, Offshore AP, RSFCCA).	In-house expertise, consultations and meetings	CU, MED POL, PAP/RAC, SPA/RAC, REMPEC	All MAP Components	CPs	Main findings and recommendations from the review of LBS NAPs, ICZM national Strategies, Sea-based pollution NAPs, Biodiversity NAPs, assessing the level of integration and GES mainstreaming, reviewed by Thematic/Components Focal Points Meetings and other MAP bodies.			0 €		28,000 €	
2. Continue work on regional tools, including possible guidelines, on sustainable tourism with a particular focus on nautical activities, pleasure boating including cruises.	In-house expertise, consultancy; consultation and dissemination activities, including participatory workshop(s) and publication(s)	Plan Bleu	CU and other Components (including mainly SCP/RAC, PAP/RAC, SPA/RAC and REMPEC)	UN-WTO, UNEP/DTIE, UNESCO, EU/EC, French Agency for Development,	Guidelines or voluntary codes of conduct on sustainable tourism developed (with a particular focus on cruise and recreational boating), building on capitalisation activities and methodological compilations produced in 2018-2019, through a participatory process in line with the MSSD 2016-2025 Vison and Objectives, taking into account in particular the SCP/Action Plan, the ICZM Protocol, the SAP BIO and the Marine Litter Regional Plan.	3,000 €	2,000 €	5,000 €	31,000 €	30,000 €	Secured external funding through InterreMED program (follow-up of Phase 1). Non-secured external funding possibly through ADEME.
1.1.4. Funding opportunities for regional and national priorities identified, donors/partners informed and engaged, through the implementation of the updated Resource Mobilization Strategy (RMS), and Contracting Parties assisted in mobilizing resources.						**94,602 €**	**94,602 €**	**189,204 €**	**2,440,500 €**	**10,000 €**	
1. Implement and update the Resource Mobilization Strategy.	In-house expertise, meetings	CU	All MAP Components	Partner Organisations and IFA	a) Updated RMS implemented in a coordinated manner; b) Project fiches updated and reviewed by the CU; c) Bilateral meetings with donors successfully convened and additional external resources secured; d) Coordinated submission of project proposals in line with the RMS; e) RMS updated in line with the new MTS development.			0 €		10,000 €	
2. Ensure timely and coordinated execution and progress review of MAP Projects with external funding.	In-house expertise, consultancy, project posts establishment.	CU, All MAP Components	All MAP Components	GEF, UNIDO, UN Economy Division, UNESCO IHP, EU, EIB, EBRD, IUCN, WWF Mediterranean, GWP Med.	a) MedProgramme: - Six Child Projects under MedProgramme successfully initiated and execution started; - Programme Coordinating Unit set up; - Steering Committee meetings organised; - Stakeholders meetings organised; - Project Work Plan timely implemented. b) IMAP/ MedMPA: - Execution continued successfully; - Steering Committee meetings organised; - Project Work Plan timely implemented. c) GEF Adriatic: - Execution continued successfully; - Steering Committee meetings organised; - Project Work Plan timely implemented. d) SwitchMed: - Execution continued successfully; - Steering Committee meetings organised; - Project Work Plan timely implemented. e) Two new full-fledged Project Proposals prepared and submitted.	94,602 €	94,602 €	189,204 €	2,440,500 €		a) The total funds managed by UNEP/MAP for the MedProgramme are USD 36,626,147 over the period 2020-2025. Out of this figure, USD 23,257,063 will be directly executed by UNEP/MAP and RACs. It is assessed that approx. 45% of these funds will be used in the 2020-2021 period. The MTF allocation represents the in-cash contribution to the Programme for the first two years out of 600.000 USD for the entire Programme duration; b) 1,800,000 EUR (approx.) for 2020-2021 out of total 4 million EUR; c) USD 630,00 out of the total budget of USF 1,817,900 over the period 2017-2020; d) 3,419,025 EUR (approx.) for 2020-2021 out of total 6,362,379 EUR.
1.2. Contacting Parties supported in compliance with the Barcelona Convention, its Protocols, Regional Strategies and Action Plans						**3,000 €**	**3,000 €**	**6,000 €**	**0 €**	**70,000 €**	
1.2.1. Compliance mechanisms effectively functioning and technical and legal advice provided to Contracting Parties, including technical assistance to enhance implementation of the Convention and its Protocols including reporting.						**3,000 €**	**3,000 €**	**6,000 €**	**0 €**	**70,000 €**	
1. Provide technical assistance and guidance to CPs in the implementation of the Barcelona Convention and its Protocols.	In house expertise, guidelines, internal coordination.	CU, INFO/RAC	All MAP Components		a) Guidance on the national implementation of the BC and its Protocols provided; b) Informal hearings held by the Compliance Committee, as need be.			0 €		10,000 €	
2. Provide support to Contracting Parties to facilitate the process of national implementation reporting.	In-house legal and technical expertise.	CU, INFO/RAC	All MAP Components		a) Reporting tutorial document developed to facilitate the national reporting process; b) "FAQ-type" document prepared addressing key difficulties/challenges in reporting; c) Database compiling national laws implementing the BC and its Protocols built up (Informea).	0 €	0 €	0 €		50,000 €	External funding sought to provide technical support to the CPs, as need be, for reporting purposes.
3. Assess the status of the implementation of the Barcelona Convention and its Protocols through the reports submitted by the CP for the period 2018-2019 for submission to the Compliance Committee and COP 22.	In-house legal and technical expertise.	CU	All MAP Components		a) Substantive analysis of the national reports on the implementation of the BC and its Protocols prepared; b) Progress of implementation assessed; c) General and specific issues at stake highlighted and brought to the attention of MAP and relevant Component Focal Points; d) 2018-2019 trend analysis evaluation prepared.	3,000 €	3,000 €	6,000 €		10,000 €	
1.3. Strengthening participation, engagement, synergies and complementarities among global and regional institutions						**15,000 €**	**14,628 €**	**29,628 €**	**0 €**	**165,000 €**	
1.3.1. Regional cooperation activities promoting dialogue and active engagement of global and regional organizations and partners, including on SAP BIO, Marine Litter, SCP, ICZM, MSP and Climate Change (e.g. regional conference, donor meetings).						**5,000 €**	**5,000 €**	**10,000 €**	**0 €**	**60,000 €**	
1. Encourage NGOs to become MAP Partners and facilitate their contribution to MAP objectives including annual round table discussions back-to-back with other meetings.	In-house expertise, consultancy, on-line consultation on policy documents, support attendance in MAP meetings.	CU	All MAP Components	MAP Partners, CPs	a) Civil Society Organisations more involved in policy development and implementation, as per relevant COP decisions; Contribution of MAP Partners inputs provided to the new MTS; b) Involve MAP Partners in the development of the new MTS; c) Engagement mechanism/strategy for Civil Society Organisations in the Mediterranean region developed; d) Accreditation of existing MAP Partner renewed; e) New partners added to the list of MAP Partners.	5,000 €	5,000 €	10,000 €			
2. Undertake periodic reviews of bilateral cooperation with partner organisations to enhance synergies and impact on the ground on areas of common interest.	In-house expertise, document preparations, back-to-back or separate meetings.	CU, MAP Components	MAP Components/ CU	IMO, LC/LP, BRSC, FAO/GFCM, ACCOBAMS, Regional Seas Conventions and Action Plans, EEA, IAEA, IPIECA, IOGP, CEFIC, FEDERCHIMICA, MOIG, WWF-MedPo, MEDPAN, IOC-UNESCO, IHP UNESCO, GWP-Med, Benguela Current Commission	a) New areas for leading role of MAP further defined (e.g. SD, SDG, IMAP, Marine Litter, ICZM, Ocean governance); b) Cooperation Agreements with at least two partners updated; c) New areas of cooperation identified and added to existing bilateral cooperation agendas (e.g. MSP, dumping of munitions); d) Cooperation with the oil and gas industry and the chemical industry strengthened; e) Synergies enhanced with sub-regional initiatives; f) A comprehensive plan of action developed including milestones, budgets and manpower required to implement the Offshore Protocol in the Mediterranean countries; g) Joint activities for the prevention of plastic pollution and toxic chemicals prepared and new agreement signed between SCP/RAC and the BRS Secretariat (following the MoU signed between Barcelona and BRS Secretariats); h) Joint work programme with ACCOBAMS implemented and reviewed; i) Collaboration with FAO/GFCM further strengthened.			0 €			
3. Co-organize with co-Chairs the UfM H2020 Review and Monitoring and Capacity Building Sub Groups annual meetings.	In-house expertise; working meetings.	CU, MED POL	SCP/RAC, Plan Bleu, INFO/RAC	UfM, EU, EEA, IFIs including EIB, EBRD, etc.	a) The UfM H2020 Review and Monitoring and Capacity Building Sub Groups annual meetings successfully delivered; b) Strengthened cooperation with EEA, EIB and UfM in the framework of H2020; c) Work Programme of the three H2020 Components followed up in a continuous manner and their synergies with UN Environment/ MAP-MED POL activities enhanced, joint activities developed and implemented as appropriate.			0 €			A new phase of H2020 is expected to start in 2020.
4. Coordinate with key partners in supporting the implementation of the Regional Plan on Marine Litter; Strengthen and expand the Regional Collaboration Platform for Marine Liter in the Mediterranean established in September 2016; Enhance collaboration with European Regional Seas on marine litter and other issues of common concern.	In-house expertise, coordination, consultancy, meetings	MED POL	CU, SCP/RAC, REMPEC, SPA/RAC	Collaboration Platform Partners, UfM H2020 Initiative, Regional Seas Programmes and Conventions, GPML,RFMOs	a) One communication campaign on prevention actions to fight against Marine Litter jointly organised by the members of the Regional Collaboration Platform for Marine Litter; b) Mediterranean Node updated as follows: - Marine litter-related webinars are made available to the Mediterranean community though the Mediterranean Node; - Reports, projects and experts rosters uploaded; c) Visibility on work undertaken on marine litter in the Mediterranean enhanced and shared at global level; d) Work undertaken at regional level, including by RFMOs further coordinated and links with global instruments strengthened (including G7 and G20 Action Plans);	0 €	0 €	0 €		60,000 €	
	In-house expertise, participation at meetings, position papers, formal submission	REMPEC	CU, MEDPOL, SPA/RAC	IMO, FAO	e) Synergies between the Regional Plan on Marine Litter Management in the Mediterranean and the IMO Action Plan to address marine plastic litter from ships, as well as other relevant plans or initiatives, explored and established.			0 €			
1.3.2. Participation in relevant existing or new international initiatives and dialogue (e.g. ABNJ, MPAs, Offshore, Sustainable Development) to highlight the Mediterranean regional specificities and increase synergies						**10,000 €**	**9,628 €**	**19,628 €**	**0 €**	**30,000 €**	
1. Promote BC, its Protocols and the MSSD 2016-2025 with a particular focus on pollution control and prevention, biodiversity and ICZM ; enhance collaboration with International organisation and European Regional Seas on marine litter and other issues of common interest.	Prepare side events, communication and visibility materials, in-house coordination and expertise, Meetings follow up/participation, position papers, formal submission. consultancies, coordination exchanges and meetings, implementation agreement(s) In house work	CU MED POL, REMPEC, SPA/RAC, PAP/RAC, SCP/RAC, Plan Bleu/RAC, INFO/RAC	All MAP Components	IMO, LDP, CBD, BSR Conventions, EUSAIR, EU MSFD, EU IMP, Adriatic Ionian Initiative, UNGA, EU, GEF, UNESCO, SPA/BD Thematic Focal Points, GFCM, IUCN CBD Secretariat	a) The role and visibility of the BC and UNEP/MAP promoted in international fora and new partnerships created; b) Contribution provided to UNEA, UNEP Regional Seas; c) Progress report on REMPEC activities submitted at each session of IMO/MEPC and at relevant sessions of the IMO Technical Cooperation Committee; d) Information on MAP work on the implementation of the BC and its Protocols shared with the Governing Bodies of the London Dumping Protocol, CBD, BRS Conventions, and UN BBNJ meetings; e) Participation at EU Working Group on MSP and the Joint EU Working Group on ICZM and MSP; EUSAIR, WESTMED and other relevant macro-regional strategies; f) Collaboration with OSPAR, HELCOM and Black Sea Commissions strengthened and synergies with other Regional Seas Programmes established; g) Synergies established with the IMO Action Plan to address marine plastic litter from ships (activity linked to 1.3.1.4.e); h) Position papers, preparation of communication materials in the field of (i) Ships ballast water control and (ii) Promoting of PSSAs in the Mediterranean; i) Side event on MAP/Barcelona Convention - SPA/BD Protocol organized within CBD COP15 (Beijing, 2020); j)Workshop/side event featuring Biodiversity in the Mediterranean under MAP/Barcelona Convention organized successfully within IUCN World Conservation Congress 2020 (Marseilles, 2020); k) Contribute to the CBD Post-2020 biodiversity framework with Mediterranean perspective inputs; l) Follow up the ongoing BBNJ process for harmonizing the relevant aspects of the elaboration of new SAP BIO 2021-2035 with it; m) ICZM Protocol and Common Regional Framework for ICZM (expected to be adopted by COP 21) promoted; Synergies maximised as appropriate.	10,000 €	9,628 €	19,628 €		30,000 €	
1.3.3. MSSD implementation set in motion through actions on visibility, capacity building, and the preparation of guidelines to assist countries adapt the Strategy to their national contexts.						**0 €**	**0 €**	**0 €**	**0 €**	**75,000 €**	

1. Strengthen further and sustain the Simplified Peer Review Mechanism (SIMPEER).	In-House expertise, coordination and management, consultancy; meetings, workshop, web platform	Plan Bleu	CU, MAP Components	CPs	a) Peer review process extended to 2 to 4 more CPs; b) Updated web platform; c) Updated SIMPEER methodology, including through collaborations and follow-up with previous participating countries; d) SIMPEER process links to National Voluntary Reviews of the HLPF continued.	0 €	0 €	0 €		75,000 €	
1.4. Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.						**91,606 €**	**111,000 €**	**202,606 €**	**409,000 €**	**1,045,000 €**	
1.4.1. Periodic assessments based on DPSIR approach and published addressing inter alia status quality of marine and coastal environment, interaction between environment and development as well as scenarios and prospective development analysis in the long run. These assessments include climate change-related						**52,000 €**	**73,000 €**	**125,000 €**	**150,000 €**	**285,000 €**	
1. Undertake actions defined in 2023 MED QSR road map related to IMAP Cluster on Pollution toward integrated assessment of GES.	In-house expertise, consultancy, working meetings of expert teams and MAP components	CU, MED POL	All MAP Components, IMAP Task Force	CPs, MAP Partners, GEF	a) IMAP Guidance Factsheets on Pollution and Marine Litter are regularly updated for review in CorMon meetings on Pollution and Marine Litter; b) Methodological concept to assess the interrelation of pressures/impacts/status of marine environment, in line with the approaches provided within analysis of IMAP cross-cutting issues for Pollution Cluster is developed and proposed; c) Methodological concept to support better integration of thematic assessment products related to IMAP Common Indicators (Pollution and Marine Litter) i.e. integration between Ecological Objectives (at national, sub-regional and regional scale) is agreed and tested; d) Steering Committee for the process of Transboundary Diagnostic Analysis (TDA) 2015 preparation is established; e) Main elements for the new TDA defined.			0 €	50,000 €		
2. Support the preparation of QSR 2023, by capitalizing on the results of SoED 2019, MSSD Dashboard and MedECC assessment report.	In-house coordination and management, external expertise and services, meetings	Plan Bleu	CU, MAP Components	MedECC	Inputs, information leads and lessons learned derived from SoED and MSSD dashboard feeding into QSR 2023 preparation, including input and leads on the link and geographic coincidence between state and pressures, as well as pressures and stakes.	0 €	0 €	0 €		30,000 €	
3. Prepare thematic products building on the findings of the State of the Environment and Development Report 2019 for outreach.	In-house expertise, consultancy, specialized services	Plan Bleu	CU and other Components	ADEME, AFD, Agence de l'eau Rhone Méditerranée Corse, CIHEAM, CMI/World Bank, EEA, FAO, IUCN, MedECC, OME, Maison Mediterranéenne des Sciences de l'homme, Tour du Valat, etc.	4 to 16 pages thematic briefs prepared and disseminated.	12,000 €	13,000 €	25,000 €		50,000 €	Non-secured external funding possibly through the Agence de l'eau Rhone Méditerranée Corse (contribution over 2019-2020). Other funding to be identified.
4.Develop and implement the second set of activities included in the Med 2050 Roadmap.	In-house expertise; Consultancy; Web platform; Networking	Plan Bleu	CU and other Components	CPs, IPEMED, CIHEAM, IUCN, OME, CMI/World Bank, others including regional and sub-regional networks, civil society, private sector and local government representatives (tbc)	a) MED2050 network moderated and producing newsletters; b) MED2050 thematic briefs produced; c) MED2050 website developed and utilized; d) Survey/workshops on contrasted visions in the Mediterranean successfully held; e) Report analyzing these visions produced; f) Dissemination of scientific analyses on trends and disruption factors in an integrated framework; g) Workshops and analysis report on transition pathways successfully completed; h) Report of 2020-2021 activities prepared for further consideration and guidance to COP 22.	40,000 €	60,000 €	100,000 €	100,000 €	205,000 €	Expected from GEF Med Programme 170 000, Voluntary in-kind contribution from CPs; In-kind contribution from partners (drafting of chapters/ sub-chapters, etc.). Several applications on-going or pre-identified to be confirmed.
1.4.2. MSSD implementation monitored, as appropriate and evaluated, as appropriate on periodic basis through the agreed set of indicators in line with SDG and the sustainability dashboard.						**18,000 €**	**17,000 €**	**35,000 €**	**100,000 €**	**180,000 €**	
1. Improve the work on the indicators of the Mediterranean sustainability dashboard in accordance with Decision IG. 23/4.	In-house expertise; consultancy.	Plan Bleu, CU, SCP/RAC, and MCSD members	Other Components	EEA, GFN, UN SD, IUCN-Med, OME, others, tbc	a) Dashboard indicators populated and updated to show trends; b) Development/improvement of the core set of Indicators for the monitoring of the MSSD implementation in synergy with the ongoing work on SDGs at the global level; c) Related factsheets and updating of the Med sustainability dashboard.	8,000 €	7,000 €	15,000 €		30,000 €	
2. Exchange of best practices on data and indicators among National Observatories and observation networks (in synergy with the MSSD dashboard, IMAP indicators, SEIS) and update the Regional Observatory.	In-house expertise; consultancy, In-country missions, Workshops.	Plan Bleu	CU, INFO/RAC and other Components	EEA, European Topic Centres	a) Workshops organized with the participation of national Observatories and observation networks (to exchange best practices on SDG indicators, MSSD dashboard, NSSD monitoring, IMAP indicators, SEIS); b) Workshops reports produced; c) Factsheets on best practices produced and disseminated; d) CPs national and relevant regional Observatories referenced on Plan Bleu's observatory Website and main relevant national products and activities referenced / disseminated;	5,000 €	5,000 €	10,000 €	100,000 €	120,000 €	Secured external funding through GEF CP 1.1 and 2.1, on specific countries and aspects. Additional external resources needed to ensure full regional mobilization, including visits in participating countries.
	In-house expertise, external services	Plan Bleu	CU and other Components		e) Regional Observatory in Plan Bleu's website updated with recent assessment findings, maps and infographics, and visibility increased.	5,000 €	5,000 €	10,000 €		30,000 €	
1.4.3. Implementation of IMAP (the EcAp-based integrated monitoring and assessment programme) coordinated, including GES common indicators fact sheets, and supported by a data information centre to be integrated into Info/MAP platform.						**0 €**	**0 €**	**0 €**	**0 €**	**410,000 €**	
1. Support the coordinated implementation of IMAP at regional, sub-regional and national level.	In-house expertise and coordination, meeting(s), consultancies services, organizing online working group meetings, travel organization and conference services	CU	MAP Components, IMAP Task Force	ACCOBAMS, GFCM, IUCN, EEA	a) Coordinated approach followed to organize CorMon Meetings; b) Guidance fact sheets of IMAP common indicators (EO XYZ) updated; c) Common indicators and guidance fact sheets related to EO4 and EO6 developed; d) Actions of QSR 2023 roadmap related to all IMAP Components, with regards to scale of monitoring and assessment; data quality assurance and Integrated assessment of GES developed as per the agreed timeline; e) Related data sharing policy reviewed and implemented.			0 €		410,000 €	
1.4.4. Interface between science and policy-making strengthened through enhanced cooperation with global and regional scientific institutions, knowledge sharing platforms, dialogues, exchange of good practices and publications.						**16,000 €**	**16,000 €**	**32,000 €**	**159,000 €**	**125,000 €**	
1. Implement, sustain, and strengthen the mechanism to assist Barcelona Convention implementation with scientific institutions and promote their participation in research and development activities and facilitate transfer of technology.	In-house expertise, consultancies, workshop, publications	CU, Plan Bleu	All MAP Components	MCSD	a) Guidelines to strengthen the dialogue between science and policy, including business and civil society based on the UNEP Science Strategy;			0 €		10,000 €	
	In-house expertise, consultancies, workshop, publications.	Plan Bleu	CU and other Components	European Topic Center – University of Malaga (ETC UMA), Barcelona Metropolitan Area (MedCities), CPMR, UNIMED, REC	b) Database of scientific community maintained; Stakeholder's mapping updated and further developed; c) Policy papers prepared with communities of stakeholders including scientists, private sector and local governments; and advocated with policy-makers on sustainable biodiversity management, sustainable tourism and/or blue economy; d) Assistance provided to relevant Mediterranean stakeholders, ensuring synergies among this community, and increasing the visibility and impacts of their projects' results towards common identified strategical targets; e) Plan Bleu acting as a Science Policy Practice Interface to foster the exchange of experiences and knowledge sharing, and thus influencing a behavioural and policy change in the Mediterranean region;	11,000 €	11,000 €	22,000 €	144,000 €	0 €	Secured external funding from InterregMED projects on Biodiversity Protection, and Blue Growth phase II.
	In-house expertise, stakeholder dialogue with NFPs and MCSD Members, consultation exercises, communication, networking, external services, in country science-policy meetings	Plan Bleu		CPs, MCSD members, Union for the Mediterranean, MedECC, Aix-Marseille University, CIESM, MedCoast, MedClivar, MISTRALS, Research Institute for Development, ADEME, Monaco	f) Assessment report on Environmental and Climate Change Drivers and Risks and Summary for Policy-Makers discussed, finalized and disseminated.	5,000 €	5,000 €	10,000 €	15,000 €	105,000 €	Secured external funding from ADEME. Non-secured external funding to be mobilized, for up to three thematic focus and territorial declinations.
2. Contribute to strengthen Science Policy Interface in the Mediterranean with regards to IMAP implementation and for feeding the knowledge gap to promote effective measures to achieve GES.	In-house expertise, implementing partner, and consultations at MAP meetings	MED POL	All MAP Components	CPs and MAP partners	a) Participation in working groups, projects steering committees, advocacy groups, scientific panels, and involvement in academic institutions actively pursued with the aim of enhancing the role of MAP/ MED POL and for exchanging information and data needed to support/ promote the activities undertaken by MAP/MED POL, and to streamline MED POL priorities as appropriate to the work of the Mediterranean scientific community;			0 €		0 €	
	In-house expertise, travel	REMPEC		IMO, HELCOM, BONN AGREEMENT, MONGOOS, HCMR, Cedre, ISPRA, ATRAC, AASTMT, etc.	b) Information disseminated on R&D activities and programmes, including data sharing and projects, in cooperation with other Regional Agreements.			0 €		10,000 €	
1.4.5. Educational programmes, including e-learning platforms and college level degrees on governance and thematic topics of MAP relevance organized in cooperation with competent institutions.						**5,606 €**	**5,000 €**	**10,606 €**	**0 €**	**45,000 €**	
1. Further establish/extend educational activities and promote educational programmes in cooperation with academic institutions, focusing on marine and coastal issues, with the aim to promote education on sustainable development.	In-house expertise, coordination and management meetings	CU		Academic Institutions, including MEPIELAN/Panteion University, Aegean University, and other Universities	a) Joint Postgraduate courses on MAP related issues developed;			0 €		10,000 €	
		PAP/RAC	CU	CPs and their universities	b) Agreements prepared and signed with relevant academic institutions for including the MedOpen virtual training course in the academic curriculum;			0 €			
		INFO/RAC	CU, All MAP Components	All Components, CPs, academic institutions	c) e-learning platform operational to support e-learning course; d) MAPs training material collected and prepared; e) MAPs Training courses integrated in the platform;	5,606 €	5,000 €	10,606 €		35,000 €	
		Plan Bleu	CU and other Components	CPs and their universities, academic networks and knowledge management institutions	f) Agreements prepared and signed with relevant academic and knowledge management institutions.	0 €	0 €	0 €			
1.5. MAP knowledge and MAP information system enhanced and accessible for policy- making, increased awareness and understanding.						**85,000 €**	**33,000 €**	**118,000 €**	**0 €**	**790,000 €**	
1.5.1. Info/MAP platform and platform for the implementation of IMAP fully operative and further developed, connected to MAP components' information systems and other relevant regional knowledge platforms, to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public						**75,000 €**	**23,000 €**	**98,000 €**	**0 €**	**770,000 €**	
1. Repower InfoMAP infrastructure and maintain and upgrade InfoMAP modules.	In-house coordination and expertise, service contract	INFO/RAC	CU, All MAP Components	Regional information system platforms	a) Existing modules of InfoMap System upgraded; b) Technological Infrastructure upgraded; c) MedPol InfoSystem migrated in the IMAP System; d) Data and metadata from Regional organisation integrated; e) MAP's database and products integrated; f) MAP Component technical supporting performed.	40,000 €	13,000 €	53,000 €		80,000 €	

2.Complete IMAP infosystem development for all IMAP Common Indicators and further develop data dictionaries, information standards and quality controls.	In-house coordination and expertise, service contract	INFO/RAC	CU, All MAP Components	Regional information system platforms	a) IMAP information System finalised; b) Dataflow in the Data Centre to support IMAP selected; c) IMAP full set of Indicators implemented;			0 €		235,000 €	Non-secured external funding under negotiation.
		INFO/RAC			d) Data Dictionaries and Information Standards upgraded and developed; e) Quality control on data formats and data coherence upgraded and developed.			0 €		135,000 €	
3. Undertake Dashboard Data Analysis and customization.	In-house coordination and expertise, service contract	INFO/RAC	CU, All MAP Components		a) Data Analytic dashboard developed; b) Data Analytic dashboard customised.			0 €		75,000 €	
4. Develop Climate change adaptation prototype platform.	In-house coordination and expertise, service contract	INFO/RAC	CU, Plan Bleu, PAP/RAC, other MAP Components		Prototype of Climate Change Adaptation platform developed;			0 €		50,000 €	
5. Maintain, upgrade and implement MAP Components' databases and data platforms.	In-house coordination and expertise, service contract, consultancy	INFO/RAC, MED POL	CU, SPA/RAC, PAP/RAC,	CPs	a) Historical MED POL monitoring database is successfully migrated to IMAP Info System; b) New MED POL monitoring Data Flow fully integrated in the IMAP Info System; c) Data protocols for interlinkages between BCRS, NBB/PRTR Infosystem, IMAP, InfoMAPNode prepared and tested.			0 €		100,000 €	
		SPA/RAC, INFO/RAC		Contracting Parties, MedPAN, IUCN, ACCOBAMS, HCMR, Action Plans Partners	a) Mediterranean Biodiversity Platform maintained, data updated (data.rac-spa.org) and connected to other relevant SDIs (Emodnet, InfoMAP); b) MAMIAS content updated and harmonized with EASIN and AquaNIS and collaboration formalized; c) SDF online application updated (data included) and linked to the Mediterranean Biodiversity Platform; d) MAPMED database updated and filled with existing data.	25,000 €	10,000 €	35,000 €		45,000 €	Non-secured external funding under negotiation.
		REMPEC, INFO/RAC		CPs	a) Existing REMPEC's information and communication system and decision support tools (*i.e. REMPEC Website, Country Profile, Mediterranean Oil Spill Waste Management, MEDGIS-MAR, MENELAS information System, Beta version of the online Mediterranean Guide on Cooperation and Mutual Assistance in responding to Marine Pollution Incidents*) upgraded, updated and interconnected, where appropriate; b) CPs and relevant partners enabled to share data in accordance with the requirements of the 2002 Prevention and Emergency Protocol and IMAP.	10,000 €		10,000 €		20,000 €	
6. Redesign the online SPAMI Evaluation System.	In house coordination and expertise, consultancies, services	SPA/RAC	INFO/RAC	Concerned SPA/RAC Focal Points, SPAMI managers	Online SPAMI Evaluation System redesigned and operational.			0 €		30,000 €	
1.5.2. Barcelona Convention online Reporting System (BCRS) updated and operational, improved and maintained, and complemented and streamlined with other reporting requirements.						**10,000 €**	**10,000 €**	**20,000 €**	**0 €**	**20,000 €**	
1. Ensure effective operation of the BCRS on-line reporting system.	In-house coordination and expertise, service contract	INFO/RAC, CU	All MAP Components		The BCRS on-line reporting system tuned and upgraded.	10,000 €	10,000 €	20,000 €		20,000 €	
1.6. Raised awareness and outreach.						**55,500 €**	**24,500 €**	**80,000 €**	**175,000 €**	**750,500 €**	
1.6.1. The UNEP/MAP communication strategy updated and implemented.						**55,500 €**	**24,500 €**	**80,000 €**	**175,000 €**	**750,500 €**	
1. Implement the operational Communication Strategy.	In-house expertise, cosultancy, service contracts, travel	INFO/RAC, CU	All MAP Components	MAP COMM TF	**a) MAP and MAP Components' websites updated regularly**			0 €		35,000 €	
		INFO/RAC, CU			**b) Communication material and campaigns developed:** - Newsworthy opportunities are identified; - Communication campaigns are designed and implemented; - Communication materials are tailored to MAP target audiences and can include media briefings, social media packages, web pages, etc.; - One communication campaign for each 'State of the Mediterranean Environment' publication; - One communication campaign developed on key topics identified for the biennium; - Communication campaigns developed at the occasion of key dates such as UN observancies related to the Environment; - MAP featured in regional and international meetings and conferences;			0 €		150,000 €	
		INFO/RAC, CU			**c) Communication pack for MAP flagship publications developed;**			0 €		30,000 €	
		INFO/RAC, CU			**d) Biennial publication on emerging topics/threats highlighting existing knowledge gaps prepared;**			0 €		30,000 €	
		INFO/RAC, CU			**e) Engagement with traditional media increased and MAP presence on social media developed:** - An updated media contact list is available in partnership with the Contracting Parties; - Engagement with the media is increased both in a proactive and reactive way to enhance the perception of MAP by journalists as a reference on issues linked to the Mediterranean environment.; - MAP presence on the Twitter social media platform is developed;			0 €		10,000 €	
		INFO/RAC, CU			**f) Homogeneity and consistency of MAP system's image increased:** - A set of presentation and communication material and templates is available to all MAP staff (Power Points, Fact Sheets, brochures, roll-up), aiming at presenting MAP as a single and coherent entity, communicating as one; - Communicating as One' guidelines for joint MAP products and communications to be followed by each MAP component and project; - MAP-branded regional visibility items prepared; - Corporate graphical layout for MAP publications developed: series of publication layouts;			0 €		60,000 €	
		INFO/RAC, CU			**g) MAP's multiple database and information systems leveraged to raise awareness and understanding:** - Maps and data products elaborated using a customized data visualization public interface highlighting key data from MAP multiple databases;			0 €		40,000 €	
		INFO/RAC, CU			**h) MAP's reach increased by joint communication:** - All MAP Components participating in annual COM campaigns;			0 €		30,000 €	
		INFO/RAC, CU			**i) Knowledge on MAP mandate and action enhanced:** - Accessibility of general information on MAP website improved, ensuring content is tailored to each targeted audiences; - Annual report highlighting MAP key achievements; - Communication campaign for COP 22; - MED NEWS - the MAP Newsletter; - MAP visibility increased at high level events; - Videos, spots, slide shows, scientific documentaries;	0 €	10,000 €	10,000 €		45,000 €	
		INFO/RAC, CU			**j) Internal communication increased:** - Regular MAP Communication Task Force meetings held;			0 €		10,000 €	
		INFO/RAC, CU			**k) MAP Staff communication capacity enhanced:** - Communication training for MAP staff organised; - Internal MAP networking and share of information enhanced; - Directory of all the MAP network maintenance and update (repository of NFPs designations); - On-line Event Calendar of all the MAP network initiatives maintenance and update; - Groupware of all the MAP network available: communication tool for document repository and interest groups management; - Surveys and questionnaires platform available; - Help desk and assistance for all the components of InfoMAP network.			0 €		30,000 €	

		SPA/RAC	INFO/RAC, CU	MAP Communication Task force, MAP Partners, Contracting Parties	a) Marine biodiversity-related communication material and tools prepared and disseminated in line with the new MAP communication strategy (produce 2 short films on marine species and ecosystems of the SPA/RAC action plans); b) Contribution provided to the development of a communication pack for MAP flagship publications i.e. SoED2019; c) Goodies and promotional material on SPA/RAC produced.	10,000 €	10,000 €	20,000 €			
		REMPEC	INFO/RAC, CU	IMO	a) Awareness, information materials on marine pollution from ships produced and disseminated; b) Communication events on REMPEC activities organised.			0 €		10,000 €	
		Plan Bleu	CU, INFO/RAC and Other Components	CPs, ADEME, AFD, CIHEAM, CMI/World Bank, EEA, FAO, IUCN, MedECC, OME, Maison Mediterranéenne des Sciences de l'homme, Tour du Valat, etc.	SOED 2019 published and disseminated, through the following steps: (a) Executive Summary translated into ES, AR; (b) Editing and layout of full report in FR and EN; (c) SoED dedicated web site established and online; (d) Video(s) including sub-titles prepared and disseminated; (e) Infographics prepared and disseminated through very short (max 2 pages) documents; (f) SoED launching events organised in at least 2 Mediterranean countries.	35,500 €	4,500 €	40,000 €	10,000 €	50,000 €	Secured external funding from ADEME. Additional funding to be identified, including CPs contributions for workshops at national / sub-regional levels.
		MED POL, Plan Bleu, INFO/RAC	CU, INFO/RAC and other Components	EEA	Key findings of the Second report on the Implementation of H2020 finalised and disseminated through the following steps: (a) Communication material on the thematic chapters on Industrial Emissions and Waste timely delivered; (b) Findings incorporated in key documents and communication platforms.			0 €		17,500 €	
		CU	All MAP Components		a) A communication toolkit developed for use by Mediterranean Civil Society Organizations for their own awareness-raising/ advocacy activities on environmental and sustainability issues (focusing on MTS Themes), including at least 2 language versions (including Arabic) and high-quality print files for posters, flyers, captioned photos and multimedia elements, where applicable, including a recorded video message (with subtitles) from MAP; b) Illustrated children's version of the Barcelona Convention and its Protocols produced, explaining the Convention to a young audience and identifying linkages with similar material developed by the United Nations on the 2030 Agenda for Sustainable Development and the 17 SDGs; c) Two (2) public/media outreach events organised; d) Campaign to raise awareness of microplastics organised; e) Braille version of the Barcelona Convention prepared.			0 €		95,000 €	
		Plan Bleu	CU, INFO/RAC and other Components	ADEME, IDDRI, MTES, media	a) Communication format modernized: Short publications, press releases, infographics and video(s) produced and disseminated; b) Communication media modernized: Plan Bleu Website modernized; utilization of social media strengthened; c) Development of specific websites for SoED 2019 and MED2050; d) CU and other Components communication activities and products disseminated through Plan Bleu's Website; e) CU and other Components communication activities and products disseminated through Plan Bleu's newsletter; f) CU and other Components communication activities and products disseminated through Plan Bleu's social medias (Facebook, Twitter, Linkedin); g) Communication on Plan Bleu and UN Environment/MAP activities and mandate in regional and international events.			0 €	59,000 €	59,000 €	Non-secured external funding possibly from MTES (French Ministry for Environment and Sustainability Transition).
2. Organize the annual celebrations of the Mediterranean Coast Day.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other MAP Components	CPs, local authorities, NGOs, media	Two regional Med Coast Day celebrations organised.	10,000 €		10,000 €	46,000 €	5,000 €	Secured eternal funding from GEF MedProgramme.
3. Support national/local Coast Day celebrations organised by CPs.	In-house coordination and management, external expertise and services	PAP/RAC	CU and other MAP Components	CPs, local authorities, NGOs, media	Three national Coast Day celebrations supported with technical and promotional material, and participation of PAP/RAC representatives.			0 €	60,000 €		Secured external funding from MAVA.
4. Implement the 3rd edition of the agreed procedure to grant the Istanbul Environment Friendly City Award.	In-house expertise, consultancy, service contracts.	CU	Plan Bleu/RAC, INFO/RAC and other MAP Components, as appropriate.		Next edition of the Istanbul Environment Friendly City Award to be granted at COP 22.			0 €		44,000 €	Expected voluntary contribution from CPs.
TOTAL THEME 1. GOVERNANCE						***627,708 €***	***1,310,730 €***	***1,938,438 €***	***3,055,500 €***	***3,508,500 €***	

THEME 1. GOVERNANCE	**MTF 2020**	**MTF 2021**	**MTF TOTAL 2020-2021**	**Secured External Funding TOTAL 2020-2021**	**Non-Secured External Funding TOTAL 2020-2021**
Coordinating Unit	**292,602 €**	**755,230 €**	**1,047,832 €**	**2,490,500 €**	**1,002,000 €**
MED POL	**0 €**	**50,000 €**	**50,000 €**	**0 €**	**78,929 €**
REMPEC	**60,000 €**	**70,000 €**	**130,000 €**	**0 €**	**96,429 €**
PB/RAC	**124,500 €**	**152,500 €**	**277,000 €**	**459,000 €**	**785,429 €**
SPA/RAC	**85,000 €**	**125,000 €**	**210,000 €**	**0 €**	**226,429 €**
PAP/RAC	**10,000 €**	**40,000 €**	**50,000 €**	**106,000 €**	**6,429 €**
INFO/RAC	**55,606 €**	**73,000 €**	**128,606 €**	**0 €**	**1,311,429 €**
SCP/RAC	**0 €**	**45,000 €**	**45,000 €**	**0 €**	**1,429 €**
TOTAL	***627,708 €***	***1,310,730 €***	***1,938,438 €***	***3,055,500 €***	***3,508,500 €***
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	**627,708 €**	**1,310,730 €**	**1,938,438 €**	**3,055,500 €**	**3,508,500 €**
Sum of Outputs Subtotals	**627,708 €**	**1,310,730 €**	**1,938,438 €**	**3,055,500 €**	**3,508,500 €**

THEME 2: Land and Sea Based Pollution

Ecological Objectives:
1. Human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms, and oxygen deficiency in bottom waters;
2. Contaminants cause no significant impact on coastal and marine ecosystems and human health;
3. Marine and coastal litter does not adversely affect coastal and marine environments;
4. Noise from human activities causes no significant impact on marine and coastal ecosystems;
5. New and emerging land-based pollution related problems are identified and tackled, as appropriate.

Strategic objectives:
1. To eliminate to the extent possible, prevent, reduce and control selected/regulated pollutant inputs, oil discharges and spills;
2. To prevent, reduce and control marine litter generation and its impact on the coastal and marine environment.

2020-2021 Indicators:
1. Number of marine pollution prevention and control regulatory instruments and policies updated or developed;
2. Number of new and updated guidelines and other implementation instruments streamlining SCP tools for key sectors and areas of consumption and production;
3. Number of countries submitting reports on annual pollution loads and pollution monitoring data for agreed pollutants;
4. (a) Number of projects identified and or prepared to eliminate pollution hot spots and respond to marine pollution;
(b) Quantities of obsolete chemicals and marine litter disposed in environmentally sound manner/reduced in selected areas;
5. Number of businesses, entrepreneurs, financial agents and civil society organizations capacitated to promote SCP solutions alternative to POPs and toxic chemicals, and marine litter reduction.

2020-2021 Targets:
1. 7 regional regulatory instruments/ policies developed/updated;
2. 6 new/updated guidelines and other implementation instruments developed/updated;
3. 21 Contracting Parties;
4. (a) At least 7 pilot projects on marine pollution;
(b) 600 tons of PCBs disposed in environmentally sound manner in selected areas; on the ground preparation for disposal in the next biennium of 1400 tons of PCBs and 30 tons of mercury in environmentally sound manner in selected areas; decreasing trend in reducing beach litter towards achieving the target of reduction of 20% by 2024 in pilot areas.
5. At least 100 trainees.

Main Activities	Means of implementation	Lead: CU and or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
2.1. Strengthening regional implementation of the obligations under the Barcelona Convention and 4 pollution -related Protocols, and of programmes of measures in existing relevant Regional Strategies and Action Plans.						**81,500 €**	**31,448 €**	**112,948 €**	**50,000 €**	**195,000 €**	
2.1.1. Targeted measures of the regional plans/strategies facilitated and implemented.						**81,500 €**	**31,448 €**	**112,948 €**	**50,000 €**	**195,000 €**	
1. Assess the implementation of the existing Regional Plans/Measures developed under Article 15 of the LBS Protocol, including socio-economic analysis.	In-house expertise, consultancies, regional meeting(s)	MED POL	SCP/RAC	CPs, UFM H2020, SEIS Project	a) Reports submitted by the Contracting Parties for the biennium 2018-2019 for existing Regional Plans' implementation reviewed; b) Final evaluation of implementation of targeted measures (with a timetable by 2021) prepared for the Regional Plans of Mercury, POPs and BOD5; c) Best practices on the implementation of the Regional Plans and other common measures shared at regional level and gaps and priorities for further technical support and capacity building identified.	11,000 €	6,500 €	17,500 €		25,000 €	This Activity will be implemented in conjuction with Activity 2.1.1.2.
2. Promote the use of relevant instruments and incentives to prevent/ reduce plastic pollution including the generation of single-use plastic bags and microplastics; abandoned, lost, discarded fishing gear (ALDFG); marine litter generated from aquaculture activities; marine litter from ships; and e-waste.	In-house expertise, consultancies, regional meeting(s), implementing partner(s)	MED POL	SCP/RAC	UN Environment Economy Division, SWITCH MED, FAO, GFCM, Marlice, ACCOBAMS, WWF/MEDPO	a) Best practices identified and shared with the CPs at regional level; b) Technical capacities of CPs enhanced to facilitate implementation of legally binding measures of the Regional Plan on Marine Litter Management in the Mediterranean; c) Gaps and priorities for technical support and capacity building identified;	10,000 €	10,000 €	20,000 €		60,000 €	Non-secured external funding under negotiation.
	In-house expertise, consultancies, regional/sub regional workshop(s)/ meeting(s)	SCP/RAC	MED POL		d) Best practices shared at regional level on new emerging measures, i.e. related to plastic pollution, EPR schemes for plastic packaging, microplastics, intentionally added in production processes and products, single use plastics, to facilitate the implementation of the Regional Plan on Marine Litter Management; e) Gaps and priorities for technical support and capacity building identified;	0 €	0 €	0 €	0 €	20,000 €	Non-secured extrnal funding possibly through WES (Water and Environment Support) Project (EU DG NEAR).
	In-house expertise, consultancy	REMPEC	MED POL	CPs, IMO, EBRD	f) Technical support provided to CPs, which so request, to implement the IMO Action Plan to address marine plastic litter from ships and the related provisions of the Regional Plan on Marine Litter Management in the Mediterranean, where appropriate.			0 €		30,000 €	Non-secured external funding possibly through ITCP 2020-2021: National PRF activities.
3. Promote reduction of municipal wastewater from small agglomerations using nature-based solutions; and prevention of sewage sludge and storm water-related waste from entering into the marine environment using BAT/BEP, and in particular Waste to Energy Technologies (W-ET).	In-house expertise, regional meeting(s), implementing partner(s)	MED POL	SCP/RAC, Plan Bleu	UFM H2020, GEF	a) Best practices identified and shared with the CPs at regional level; b) Technical capacities of CPs enhanced to facilitate implementation of legally binding measures of the Regional Plan on the reduction of BOD5 from urban waste water; c) Main elements of strategies and plans elaborated.	5,000 €	13,948 €	18,948 €	50,000 €	40,000 €	Secured external funding through GEF Med Programme Child Project 1.2.
4. Promote the use of relevant instruments for the identification and implementation of alternatives to POPs and mercury at the regional, and sub-regional level.	In-house expertise, consultancies, regional/sub regional workshop(s)	SCP/RAC	MEDPOL	GEF, UN Environment Chemicals Branch, BRSC Secretariat	a) Experiences and best practices on strategies for the prevention of new POPs shared with CPs at regional level, to facilitate the implementation of Regional Plans on POPs; b) Gaps and priorities for technical support and capacity building identified.	0 €	0 €	0 €	0 €	20,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project (EU DG NEAR).
5. Strengthen the capacity of individual coastal States to respond efficiently to marine pollution incidents through the development of sub-regional operational agreements and contingency plans, and enhance the levels of pre-positioned spill response equipment under the direct control of Mediterranean coastal States.	Consultancy, in-house expertise, meeting(s), travel	REMPEC	CU	IMO, OSPAR/Bonn Agreement, HELCOM, ITOPF, Cedre, ISPRA, etc	a) Technical support provided to CPs, which so request, to assess, prepare, adopt, update as well as implement and test national contingency plans and sub-regional agreements/contingency plans dealing with preparedness for and response to oil and HNS spills from ships, sea ports, oil handling facilities and offshore installations; b) Mechanism for the mobilisation of response equipment and experts in case of emergency implemented;	24,500 €		24,500 €			
	In-House expertise	REMPEC		ATRAC, Cedre, FEDERCHIMICA, ISPRA, MONGOOS, SAF, IMO	c) Mediterranean Assistance Unit (MAU) maintained and, where appropriate, expanded; and MAU special revolving fund replenished.	1,000 €	1,000 €	2,000 €			
6. Improve follow-up of pollution events, monitoring and surveillance of illicit discharges, as well as enhance level of enforcement and the prosecution of discharge offenders.	In-house expertise, consultancy, regional meeting(s), travel, interpretation, translation	REMPEC	CU	IMO, Cedre, INTERPOL, CBSS (ENPRO), OSPAR (NSN), Bonn Agreement	a) Meeting of MENELAS organised and recommendations implemented through technical support provided to CPs, which so request; b) Co-ordinated aerial surveillance operations for illicit ship pollution discharges promoted and supported.	30,000 €		30,000 €			
2.2 Development or update of new/existing action plans, programmes and measures, common standards and criteria, guidelines.						**74,108 €**	**18,000 €**	**92,108 €**	**182,720 €**	**330,000 €**	
2.2.1 Guidelines, decision-support tools, common standards and criteria provided for in the Protocols and the Regional Plans, developed and/or updated for key priority substances or sectors.						**48,108 €**	**12,000 €**	**60,108 €**	**152,720 €**	**185,000 €**	
1. Update the Annexes of the pollution-related Protocols.	In-house expertise, implementing partner(s)	MED POL	CU, SCP/RAC	BRSC, IMO	a)Working group(s) established by COP21 and Annexes to LBS and Dumping Protocols updated as appropriate for submission to COP 22; b) Annexes to the HW Protocol updated in line with ongoing efforts to update the annexes of the Basel Convention, as appropriate for submission to COP 22;	0 €	0 €	0 €	25,000 €	45,000 €	Secured external funding through GEF MedProgramme CP 1.2
		REMPEC	CU, MED POL	IMO	c) Working group established (OFOG) and Annexes to the Offshore Protocol updated for COP 22 consideration.			0 €		60,000 €	
2. Develop/ update technical Guidelines addressing diffuse sources, [placement of artificial reefs] and plastic pollution.	In-house expertise, consultancy, implementing partner(s)	MED POL	Info/RAC, Plan Bleu	EU REACH Regulation, Minamata Convention, EU Water Framework Directive, E-PRTR	a) NBB Guidelines updated addressing: - Diffuse sources of pollution; - Aquaculture sectors and riverine inputs for transitional waters; - The gap between PRTR and NBB reporting;	10,000 €	10,000 €	20,000 €		30,000 €	
		REMPEC	CU	CPs (OFOG), IOGP	b) Mediterranean Offshore Guidelines for the Conduct of Environmental Impact Assessment (EIA) reviewed by the Barcelona Convention Offshore Oil and Gas Group (OFOG), finalised and submitted for COP 22 consideration.					50,000 €	
		MED POL	SPA/RAC	IMO, London Convention and London Protocol, GFCM	c) Updated report on Artificial Reefs prepared for submission to the meetings of MED POL FPs, ECAP Coordination Group, MAP FPs and COP 22;	6,000 €	2,000 €	8,000 €			

	In-house expertise, consultancies	SCP/RAC	MEDPOL	H2020 Initiative, EC, national and international organisations working on plastic prevention	Technical guidelines on measures to reduce/ prevent single-use plastic items, other than plastic bags, prepared.	28,000 €	0 €	28,000 €	0 €	0 €	
3. Revise the existing recommendations, principles and guidelines, and develop new ones aimed at facilitating international cooperation and mutual assistance within the framework of the 2002 Prevention and Emergency Protocol.	In-house expertise, consultancy, service contract	REMPEC	CU	IMO, OSPAR/Bonn Agreement, HELCOM, ITOPF, Cedre, ISPRA, etc	a) Inter-regional HNS response guidelines developed; b) Maritime Integrated Decision Support Information System on Transport of Chemical Substances (MIDSIS-TROCS) updated and upgraded; c) Manual and tool to evaluate oil spill management capabilities developed; d) CECIS Marine Pollution integrated in the Mediterranean Emergency Reporting System (MedERSys); e) Guidance for the development of national mechanism for the mobilisation of response equipment and experts developed; f) Study carried out on the issue related to spills of condensate.	4,108 €		4,108 €	127,720 €		Secured external funding (del a to e) from WestMOPOCo.
2.2.2 Regional programmes of measures identified and negotiated for pollutants/ categories (sectors) showing increasing trends, including the revision of existing regional plans and areas of consumption and production.						**26,000 €**	**6,000 €**	**32,000 €**	**30,000 €**	**145,000 €**	
1. Develop the Regional Plan for Municipal Wastewater Treatment.	In-house expertise, consultancies, regional meeting(s)	MED POL	SCP RAC, Plan Bleu	UfM, H2020 Initiative, MAP Partners	Regional Plans developed/upgraded for submission to the meetings of MED POL FPs, ECAP Coordination Group, MAP FPs and COP 22: a) Regional Plan on Municipal Wastewater Treatment; b) Regional Plan (new) on Sewage Sludge Management; c) Regional Plan on Marine Litter upgraded, or technical annexes prepared and incorporated within the existing Regional Plan.	6,000 €	6,000 €	12,000 €	10,000 €	65,000 €	Secured extrenal funding from GEF MedProgramme CP 1.2
2. Develop the Regional Plan for Sewage Sludge Management.		MED POL				10,000 €	0 €	10,000 €	10,000 €	40,000 €	
3. Upgrade Marine Litter Regional Plan/or develop new technical annexes to incorporate new elements including microplastics and emerging pollutants as appropriate.		MED POL				10,000 €	0 €	10,000 €	10,000 €	40,000 €	
2.3 Strengthening and implementation of marine pollution prevention and control legislation and policies at national level, including through enforcement and Integration into sectorial processes.						**34,417 €**	**20,000 €**	**54,417 €**	**30,000 €**	**270,000 €**	
2.3.1 Adopted NAPs (Art. 15, LBS Protocol) implemented and targeted outputs timely delivered.						**24,417 €**	**20,000 €**	**44,417 €**	**30,000 €**	**180,000 €**	
1. Support streamlining NAP measures in the national regulatory systems and their implementation.	In-house expertise, consultancies, national and regional meeting(s), implementing partner(s).	MED POL	SCP/RAC	CPs, IMPEL, UfM-H2020, BRSC	a) Templates providing key aspects for national regulations prepared to promote use of BAT/BEP, and standards/GES for different contaminants/pollutants of national and/or regional priority in key industrial sectors including legislation on reporting by industries of pollution releases (PRTR) and risks from accidents; b) Best practices shared and information exchanged with regards to Permitting and Inspection based on the most recent MAP technical guidelines, as well as regarding the prevention and management of risks on the marine and coastal environment from industrial accidents; c) Report on midterm NAP evaluation submitted to the MED POL Focal Points meeting and other MAP bodies as appropriate;	24,417 €	20,000 €	44,417 €		100,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project (EU DG NEAR - H2020).
	In-house expertise, consultancies, national meeting(s)	SCP/RAC	MED POL	CPs	d) At least 3 countries supported for the development of further regulation for the reduction of single-use plastic production and use, including EPR schemes;	0 €	0 €	0 €	0 €	80,000 €	Non-secured external funding under negotiation.
		SCP/RAC		CPs, GEF, UN Environment Economy Division, BRSC, WHO	e) At least 3 countries supported to draft regulation to restrict the import and use of PFOS and PFOA containing products, SCCP and SCCP containing products, HBCD containing products (Lebanon, Morocco and Tunisia).			0 €	30,000 €		Secured external funding from GEF MedProgramme - Child Project 1.1.
2.3.2. NAPs developed to implement the Regional Strategy for Prevention of and Response to Marine Pollution from Ships.						**10,000 €**	**0 €**	**10,000 €**	**0 €**	**10,000 €**	
1. Enhance ratification and implementation of relevant international maritime Conventions related to the protection of the marine environment and support the effectiveness of maritime administrations.	Consultancy, meeting, travel, interpretation, translation, in-House expertise	REMPEC	CU	IMO	Technical support provided to CPs, which so request: a) to prepare, update and implement theirs NAPs; and b) to ratify and implement relevant international maritime conventions related to the protection of the marine environment.	10,000 €		10,000 €		10,000 €	
2.3.3 SCP Regional Action Plan (pollution- related activities) mainstreamed into and implemented through NAPs and national processes, such as SCP National Action Plans and NSSDs.						**0 €**	**0 €**	**0 €**	**0 €**	**80,000 €**	
1. Support the establishment of regulatory and economic measures realated to the implementation of SCP/circular economy.	In-house expertise, consultancies, national meeting(s)	SCP/RAC	MED POL, Plan Bleu	UN Environment Economy Division	Circular economy measures in key sectors of the SCP Regional Action Plan, in particular in the food and agriculture sector with a specific focus on the role of biowaste, developed in 2 countries.	0 €	0 €	0 €		80,000 €	
2.4 Marine Pollution Monitoring and assessment.						**270,000 €**	**203,014 €**	**473,014 €**	**0 €**	**605,000 €**	
2.4.1: National pollution and litter monitoring programmes updated to include the relevant pollution and litter IMAP indicators, implemented and supported by data quality assurance and control						**210,000 €**	**189,292 €**	**399,292 €**	**0 €**	**535,000 €**	
1. Continue supporting updated national monitoring programmes on marine litter, contaminants and eutrophication in line with IMAP, the LBS Protocol and the Regional Plan on Marine Litter.	In-house expertise, consultancies, implementing partner(s), regional meeting(s)	MED POL	CU, IMAP Task Force	IAEA, EU MSFD, National MED POL designated laboratories, relevant scientific institutions ACCOBAMS, INDICIT	a) Scientific and expert support provided to apply integration and aggregation rules for monitoring and reporting of national monitoring data with the view of achieving regular reporting by the CPs on the state of implementation of the national IMAPs, and for providing a minimum of 3 sets of data on IMAP Common Indicators (EO5, EO9, EO10, EO11) in 2019/2020 and 2021/2022; b) Implementation of marine pollution national monitoring programmes supported by undertaking specific joint biodiversity and pollution monitoring programmes in MPAs and in high pressure areas, including provision of related quality of data, as well as respective national reporting using the IMAP Pilot Info System.	0 €	0 €	0 €		405,000 €	
2. Consolidate data dictionaries and data standards for all IMAP Common Indicators related to Pollution and apply data quality control schemes.	In-house expertise, consultancies, implementing partner(s), regional meeting(s), CorMon meeting on pollution	MED POL	CU, IMAP Task Force	EMODnet, EU MSFD, TG DATA	a) Data dictionaries and data standards finalized content-wise for all IMAP Common Indicators, including for IMAP Common Indicators 18, 19 and 20; b) Interoperability with national data templates ensured. All the deliverables above will be submitted for review to respective CorMon meetings on pollution and marine litter.	10,000 €	5,000 €	15,000 €		50,000 €	
3. Undertake harmonized and coordinated quality assurance programmes (contaminants, marine litter and eutrophication) at regional/ sub-regional and national levels.	In-house expertise, consultancies, implementing partner(s), regional meeting(s), CorMon meetings on pollution and marine litter	MED POL	CU, IMAP Task Force	IAEA/ NAEL/ MESL, Quasimeme, Alessandria University, National MED POL Designated Laboratories, relevant Scientific Institutions.	National MED POL/ IMAP laboratories supported to apply good laboratory practices for monitoring contaminants in biota and sediment, eutrophication (nutrients and chlorophyll-a) in sea water, and marine litter monitoring, including proficiency tests (PT) and QA/QC protocols.	110,000 €	100,000 €	210,000 €	0 €	30,000 €	
4. Harmonize and standardize the monitoring and assessment methods of pollution and marine litter in line with IMAP.	In-house expertise consultancies, implementing partner(s), regional meeting(s)	MED POL	CU, IMAP Task Force	EU MSFD WG GES, TGML, TG DATA, relevant scientific institutions	a) Protocols for applying good laboratory practices prepared; b) Monitoring Protocols (6 maximum) related to Pollution (eutrophication and contaminants) Marine Litter, and sampling and analysis of microplastic in WWTP developed/updated and agreed; c) Scales of monitoring and scales of assessment products agreed and updated; assessment criteria/thresholds/baseline values proposed; and reporting format adjusted to agreed scales of monitoring and scales of assessment products; d) CorMon meetings on pollution and marine litter held annually and online working groups established. All the deliverables above will be submitted for review to respective CorMon meetings on pollution and marine litter.	90,000 €	84,292 €	174,292 €	0 €	50,000 €	
2.4.2: Inventories of pollutant loads (NBB, PRTR from land-based sources, and from offshore and shipping) regularly updated, reported and assessed.						**0 €**	**0 €**	**0 €**	**0 €**	**20,000 €**	
1. Ensure efficient NBB/PRTR reporting and provide support to up to 10 CPs including quality assurance control of data.	In-house expertise, regional/ sub - regional meetings	MED POL	Info/RAC	CPs, UfM H2020	a) NBB 2018-2019 reporting cycle analyzed at national, sub-regional and regional river basin levels to contribute to NAP implementation evaluation; b) Reporting gaps assessed and needs for technical support identified and shared with the Contracting Parties.	0 €	0 €	0 €		20,000 €	
2.4.3: Marine pollution assessment tools (in depth thematic assessment, maps and indicator factsheets) developed and updated for key pollutants and sectors within EcAp.						**60,000 €**	**13,722 €**	**73,722 €**	**0 €**	**50,000 €**	

1. Update thematic assessment products related to pollution and marine litter cluster of IMAP, including prevailing industrial sectors and priority pollutants/sectors addressed by the Regional Plans; and sea-based sources of pollution.	In-house expertise, consultancies, regional meeting(s)	MED POL	Plan Bleu, Info-RAC	EEA	a) Updated assessment factsheets prepared with new data originating from IMAP implementation; b) Updated assessment factsheets for NAP/ H2020 initiative/ LBS Protocol implementation prepared; c) Assessment of status and impacts of agriculture nutrients, contaminant, aquaculture, and state of play of urban storm water on the marine environment prepared using to the extent possible existing information; d) Assessment of implementation of Regional Plans by mainstreaming NBB/PRTR monitoring data on the regional/sub-regional levels prepared, using to the extent possible existing information; e) Assessment of the top single use marine litter items in the Mediterranean and their contribution on microplastic generation and leakage into the marine environment prepared, using to the extent possible existing information; f) Assessment and mapping of fisheries and aquaculture contribution to marine litter generation in the Mediterranean.	50,000 €	13,722 €	63,722 €		50,000 €	
	In-house expertise, consultancy	REMPEC	CU, MED POL, Plan Bleu, INFO/RAC	IMO	g) Study on marine pollution from ships (accident and operational pollution, marine litter, air pollution, etc…) and maritime traffic trends in the Mediterranean prepared and disseminated.	10,000 €		10,000 €			
2.5 Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building.						**57,000 €**	**65,000 €**	**122,000 €**	**2,393,820 €**	**985,000 €**	
2.5.1 Training programmes and workshops in areas such as pollution monitoring, pollutant inventories, policy implementation, common technical guidelines, authorization and inspections bodies, compliance with national legislation.						**47,000 €**	**60,000 €**	**107,000 €**	**33,820 €**	**325,000 €**	
1. Support countries in the implementation of IMAP with a particular focus on scale of assessment, offshore monitoring, integration of indicators towards GES and joint monitoring.	In-house expertise, consultancies, implementing partner(s), meeting(s), training workshop(s)	MED POL	CU, IMAP Task Force	EU MSFD-WG GES, TGML, ACCOBAMS	a) Technical assistance provided and capacities built to support IMAP implementation (including Pollution, Marine Litter and noise Clusters) in line with national needs, with a particular focus on aggregation and integration of monitoring data and assessment products, monitoring and assessment scales, offshore monitoring, integration of indicators towards GES, and joint monitoring; b) Sub-regional/regional workshops and trainings related to Pollution and Marine Litter Cluster of IMAP organized in areas of common capacity needs and knowledge gaps (minimum 2 per sub-region).	20,000 €	15,000 €	35,000 €	0 €	135,000 €	Non-secured external funding under negotiation.
2. Share best practices on Dumping Protocol Guidelines implementation at regional/ sub-regional/ national levels.	In-house expertise, consultancies, implementing partner(s), regional meeting(s)	MED POL	REMPEC, SPA/RAC	IMO, London Convention and London Protocol	a) Best practices identified and shared with the CPs in regional meeting; b) Detailed information provided on country work on the implementation of the Dumping Protocol and its Guidelines; c) Synergies maximized with IMO London Protocol work; d) Priority for capacity building and technical assistance to CPs identified.	15,000 €	45,000 €	60,000 €		20,000 €	
3. Develop training programmes around key SCP and circular economy themes.	In-house expertise, consultancies, national training(s)	SCP/RAC	MED POL, Plan Bleu	UN Environment Economy Division, UNIDO	At least 5 capacity building activities developed to enhance knowledge on SCP/circular economy (including on the extension of the life span of products and on packaging).	0 €	0 €	0 €		80,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project (EU DG NEAR).
4. Increase as much as practical, the level of knowledge in the field of prevention of, preparedness for and response to marine pollution by oil and other harmful substances.	In-House expertise, taining(s), workshop(s), travel, interpretation, translation	REMPEC	CU	IMO, OSPAR/Bonn Agreement, HELCOM, ITOPF, Cedre, ISPRA, etc	Technical assistance provided and national capacities strengthened: a) on response to spill incidents involving oil and/or HNS, and b) on relevant international maritime conventions related to the protection of the marine environment.	12,000 €		12,000 €	33,820 €	90,000 €	Secured external funding from WestMOPOCO. Non-Secured external funding possibly through IMO ITCP 202-2021: 3 x Sub-regional activities.
2.5.2 Pilot projects implemented on marine litter, POPs, mercury, and illicit discharges reduced, including through SCP solutions for alternatives to POPs and toxic chemicals and the reduction of upstream sources of marine litter for businesses, entrepreneurs, financial institutions and civil society.						**0 €**	**0 €**	**0 €**	**2,360,000 €**	**660,000 €**	
1. Expand the pilots on FfL and Adopt a Beach and other marine litter removal/reduction and prevention (SCP) pilot projects (particularly focused on plastics and microplastics).	In-house expertise, consultancies, implementing partner(s), meeting(s)	MED POL	SPA/RAC	CPs, GFCM, Members of the Regional Cooperation Platform on Marine Litter in the Mediterranean	a) Small-scale projects to apply the provisions of the FAO guidelines regarding reduction of amounts of ALDFG and "Fishing-for-litter" guidelines are implemented in 7 Mediterranean countries; b) Marine litter reduction targets approved by COP 19 achieved at pilot project sites; c) FAO guidelines applied to reduce ALDFG;			0 €	0 €	600,000 €	Non-secured external funding under negotiation.
		SCP/RAC	MED POL	CPs, UN Environment Economy Division, BeMed Club	d) 2 pilot activities developed, supporting the further development of innovative circular economy solutions to plastic pollution.			0 €		60,000 €	Non-secured external funding under negotiation.
2. Launch pilot projects on PCB and new POPs reduction and prevention and site decontamination based on updated NAP hotspots/ sensitive areas.	In-house expertise, consultancies, implementing partner(s), meeting(s)	MED POL	SCP/RAC	CPs, GEF, BRSC, UN Environment (including Chemicals Branch), Economy Division	a) Pilot project designed and initiated; b) Disposal of approximately 600 tons of PCBs and PCB wastes from Algeria and Lebanon completed; c) Detailed inventories of PCBs stocks principally in Albania and Algeria developed;			0 €	400,000 €		Secured external funding from GEF MED Programme CP 1.1
	In-house expertise, consultancies, technical assistance, national meeting(s)	SCP/RAC	CU, MEDPOL		d) Sampling and analysis of fire-fighting foams, soil and groundwater for PFOS/PFOA on fire incident sites, EPS XPS pellets being used by the companies and of SCCP and MCCP imported for PVC production used by companies prepared in 3 countries (Lebanon, Morocco and Tunisia) e) Pilot Demonstrations, substitution of PFOS foams and of HBCD in pellet of EPS XPS by environmentally sound alternatives done in 3 countries; f) Capacities on "New POPs management" enhanced in 3 countries.			0 €	90,000 €		Secured external funding from GEF MED Programme CP 1.2
3.Launch pilot projects on mercury reduction and prevention and site decontamination based on updated NAP hotspots/ sensitive areas.	In-house expertise, consultancies, implementing partner(s), meeting(s)	MED POL	SCP/RAC	CPs, GEF, BRSC, UN Environment (including Chemicals Branch), Economy Division, Minamata Convention, WHO	a) Preparatory work undertaken to dispose 30 tons of mercury by 2022 in an environmentally sound manner; b) Detailed inventories of mercury developed;			0 €	1,600,000 €		Secured external funding from GEF MED Programme CP 1.1
	In-house expertise, consultancies, technical assistance, national meeting(s)	SCP/RAC	CU, MEDPOL		c) Audits-inventory in public hospitals realised in 2 countries (Tunisia and Lebanon); d) Capacities on mercury management enhanced in 2 countries; e) Substitution of mercury containing medical devices in particular thermometers by Environmentally Sound Alternatives done in 2 countries.			0 €	270,000 €		Secured external funding from GEF MED Programme CP 1.2
2.5.3: Marine pollution prevention and control measures and assessments integrated in ICZM Protocol implementation projects, CAMPs and related Strategic Environment Impact Assessments						**10,000 €**	**5,000 €**	**15,000 €**	**0 €**	**0 €**	
1. Contribute to new CAMPs to consider litter and pollution prevention and reduction measures (including offshore activities).	In-house expertise, consultancies, national workshop(s), meeting(s)	MED POL	PAP/RAC		a) MED POL related actions with regards to monitoring and assessment implemented within planned CAMPs; b) Assessment findings based on IMAP integrated within transboundary CAMPs.	10,000 €	5,000 €	15,000 €			CAMP to be decided
2.6 Enhanced cooperation at regional, sub- regional and national levels to prevent and control marine pollution.						**0 €**	**0 €**	**0 €**	**276,000 €**	**30,000 €**	
2.6.2 Networks and initiatives of businesses, entrepreneurs and civil society providing SCP solutions contributing to alternatives to POPs and toxic chemicals and to reduce upstream sources of marine litter supported and coordinated.						**0 €**	**0 €**	**0 €**	**276,000 €**	**30,000 €**	
1. Undertake training and support programme to support SMEs and CSOs to implement innovative solutions to prevent the generation of waste ending up as marine litter and the shift to safe alternatives to POPs and toxic chemicals.	In-house expertise, consultancies, regional event, national meeting(s)	SCP/RAC	CU	UNIDO, UN Environment, Economy Division	a) 1 Mediterranean Business Award with a special emphasis on businesses led by women developed; b) 1 strategy for the long-term sustainability of the award prepared.			0 €	276,000 €		Secured external funding through SwitchMed II (EU DG NEAR)
	In-house expertise, consultancies, regional event, national meeting(s), peer-to-peer exchanges, Business to Business (B2B) workshop	SCP/RAC		Beyond Plastic Med Initiative (BeMed)	a) Technical assistance provided and national capacities on innovative solutions to prevent plastic pollution, including microplastics intentionally added in products or production processes, enhanced.			0 €		30,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project.
2.7 Identifying and tackling new and emerging issues, as appropriate.						**30,000 €**	**2,000 €**	**32,000 €**	**0 €**	**210,000 €**	
2.7.1 Reviews/policy briefs developed and submitted to Contracting Parties on emerging pollutants, ocean acidification, climate change and linkages with relevant global processes.						**30,000 €**	**2,000 €**	**32,000 €**	**0 €**	**210,000 €**	

1. Review toxic chemicals of concern used for the plastic production.	In-house expertise, consultancies	SCP/RAC	MEDPOL	BRSC, IMO	1 review brief on the toxic chemicals, used in plastics, and that are of concern for the implementation of a circular economy in the Mediterranean produced.	10,000 €	2,000 €	12,000 €	0 €	0 €	
2. Examine the possibility of designating the Mediterranean Sea, or parts thereof, as SOx Emission Control Area(s) under MARPOL Annex VI and effectively implement the existing energy efficiency measures.	In-house expertise, consultancies, translation	REMPEC	CU	IMO	a) Roadmap for the preparation of a submission to the IMO to designate the Mediterranean Sea Area as Emission Control Area (ECA) for sulphur oxides (SOx) pursuant to MARPOL Annex VI implemented. b) The following studies prepared and overseen by the SOx ECA Technical Committee of Experts: i) analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean ii) analyses of the impacts on short sea shipping activity as well on the social and economic development for islands, insular and remote areas iii) additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies). c) Main technical elements of a draft submission to the IMO developed by the SOx ECA Technical Committee of Experts.	20,000 €		20,000 €		195,000 €	Non-secured external funds possibly from IMO ITCP 2020-2021 (€ 45,000) and resource mobilisation required up to € 150,000 from other donors for studies.
3. Review solutions to fight against plastic pollution.	In-house expertise, consultancies	SCP/RAC	Plan Bleu, MEDPOL, CU	CSIC, zero waste network, ICLEI	3 policy papers prepared on the innovative solutions to plastic pollution.			0 €		15,000 €	
TOTAL THEME 2: LAND AND SEA BASED POLLUTION						***547,025 €***	***339,462 €***	***886,487 €***	***2,932,540 €***	***2,625,000 €***	

	THEME 2: LAND AND SEA BASED POLLUTION	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
	Coordinating Unit			**0 €**		
	MED POL	**397,417 €**	**336,462 €**	**733,879 €**	**2,105,000 €**	**1,805,000 €**
	REMPEC	**111,608 €**	**1,000 €**	**112,608 €**	**161,540 €**	**435,000 €**
	PB/RAC			**0 €**		
	SPA/RAC			**0 €**		
	PAP/RAC			**0 €**		
	INFO/RAC			**0 €**		
	SCP/RAC	**38,000 €**	**2,000 €**	**40,000 €**	**666,000 €**	**385,000 €**
	TOTAL	***547.025 €***	***339.462 €***	***886.487 €***	***2.932.540 €***	***2.625.000 €***
		0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals		**547,025 €**	**339,462 €**	**886,487 €**	**2,932,540 €**	**2,625,000 €**
Sum of Outputs Subtotals		**547,025 €**	**339,462 €**	**886,487 €**	**2,932,540 €**	**2,625,000 €**

THEME 3. BIODIVERSITY AND ECOSYSTEMS

Ecological Objectives / Long-Term Targeted Impacts:
1. Biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic, and climatic conditions;
2. Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem;
3. Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock;
4. Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and -related viability;
5. Sea-floor integrity is maintained, especially in priority benthic habitats.

Strategic objectives:
1. To strengthen the management, including socio-economic aspects, and extend the network of Coastal and Marine Protected Areas including SPAMIs;
2. To strengthen the implementation of action plans on endangered and threatened species key habitats and Non-Indigenous Species;
3. To promote Coastal and Marine Protected Areas as a contribution to Blue Economy;
4. To strengthen the resilience of Mediterranean natural and socioeconomic systems to the impacts of climate change.

2020-2021 Indicators:	2020-2021 Targets:
1. Number of countries implementing the Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats as well as the Action Plan on Species Introductions and Invasive Species; 2. Number of regional strategies/ plans developed/ updated; 3. Number of guidelines and other tools elaborated/updated and disseminated; 4. Number of CPs supported to implement a monitoring programme on endangered species and key habitats 5. Number of NAPs developed or updated in line with SAP BIO, EcAp, Aichi Targets and the Nagoya Protocol, including streamlining of climate change and SCP Regional Action Plan; 6. (a) Number of regulatory measures developed and agreed at national levels; (b) Number of MPAs having an operational management plan elaborated with SPA/RAC support; 7. Number of biodiversity-related actions implemented within national CAMPs; 8. Number of convened scientific meetings on Mediterranean marine biodiversity; 9. Number of joint strategies and/or working programmes developed with Partners; 10. Number of trainings on marine biodiversity conservation; 11. Number of SPAMI reviewed, to assess their management effectiveness; 12. (a) Number of pilot projects on marine litter in MPA/ SPAMIs; (b) Number of MPA/SPAMIs with a management plan in place addressing marine litter.	1. 11 countries; 2. 3 regional strategies/ plans developed/ updated; 3. 5 Guidelines/ tools; 4. 5 CPs 5. 6 NAPs; 6. (a) 6 national regulatory measures; (b) 3 MPAs; 7. 1 action; 8. 9 meetings; 9. 1 joint strategy further strengthened; 10. 10 trainings; at least 100 national experts trained; 11. 11 SPAMI reviewed; 12. (a) 8 pilot projects; (b) 8 MPA/SPAMIs with a management plan addressing marine litter in place.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
3.1. Strengthening regional implementation of the obligations under the Barcelona Convention, and its relevant Protocols and other instruments.						**18,000 €**	**2,000 €**	**20,000 €**	**60,000 €**	**515,000 €**	
3.1.1. A comprehensive coherent network of well managed MPAs, including SPAMIs, to achieve Aichi Target 11 in the Mediterranean set up and implemented.						**18,000 €**	**2,000 €**	**20,000 €**	**60,000 €**	**505,000 €**	
1. Develop and strengthen effective SPAMI/MPA management.	In-house coordination and expertise, consultations, meeting(s)	SPA/RAC	CU and other Components as relevant	ACCOBAMS, CBD, EEA, GFCM, IUCN, MedPAN, OCEANA, WWF	a) Ad hoc Group of experts on MPAs (AGEM) operational; (if continued by the 14th Meeting of SPA/BD thematic Focal Points); b) Scientific and technical advice delivered to SPA/RAC by AGEM) on i) future orientations in MPA planning and governance, and ii) development of a regional strategy for MPAs for the Mediterranean in line with the CBD post-2020 global biodiversity framework (contribution to activity 3.2.1.1);			0 €			
	In-house coordination and expertise, consultancies, services, field surveys, coordination meetings, national workshops, exchange visits	SPA/RAC		SPAMI managers, concerned SPA/RAC Focal Points, national and local stakeholders, national and local civil society organizations	c) Twinning programmes developed and implemented among partner SPAMIs (8 MPAs/SPAMIs involved in the twinning programme); experience shared on best practices and lesson learnt; d) Management, monitoring and enforcement activities harmonized and improved; e) Capacity-building activities, training workshops and exchange visits implemented; f) Local stakeholders and civil society involved in SPAMI management; g) The SPAMI label recognition and visibility improved.			0 €		480,000 €	
2. Organize the 2020 Forum of Marine Protected Areas in the Mediterranean.	In-house coordination and expertise, regional event, consultancies, services, organizing committee meeting(s)	SPA/RAC	CU and other Components as relevant	MedPAN (co-organizer), host country authorities, ACCOBAMS, CBD, GFCM, IUCN, MedWet/Tour du Valat, Plan Bleu, WWF, Europarc Federation, AFB, Conservatoire du littoral, etc.	a) 2020 Forum of Marine Protected Areas in the Mediterranean organized; b) The 2020 Status Report on Mediterranean MPAs elaborated and disseminated during the forum; c) Declaration of the 2020 MPA Forum developed; d) Proceedings of the 2020 MPA Forum put online. The 2020 MPA Forum recommendations will feed into the process for development of post-2020 strategic document on MPAs and other effective area-based conservation measures in the Mediterranean (3.2.1.1).	15,000 €		15,000 €	60,000 €		Secured external funding through the IMAP/MPA project (EU).
3. Draft the SPAMI Day and SPAMI Award (Mediterranean Diploma) concepts and criteria.	In-house coordination and expertise, consultancies	SPA/RAC	CU and other Components as relevant	SPA/RAC Focal Points, SPAMI managers, regional partners, donors	SPAMI Day and SPAMI Award (Mediterranean Diploma) concepts and criteria prepared, reviewed by SPA/BD Focal Points and submitted to COP 22.	3,000 €	2,000 €	5,000 €		25,000 €	Non-secured external funding under negotiation.
3.1.2. Most relevant area-based management measures are identified and implemented in cooperation with relevant global and regional organizations, through global and regional tools (SPAMIs, FRAs, PSSAs, etc.), including for the conservation of ABNJ, taking into consideration the information on Mediterranean EBSAs.						**0 €**	**0 €**	**0 €**	**0 €**	**10,000 €**	
1. Support deep sea and deep seabed vulnerable marine ecosystems identification and conservation in areas within and beyond national jurisdiction, in collaboration with respective countries and relevant bodies and promote their conservation through appropriate tools and measures, including spatial ones.	In-house coordination and expertise, consultancies, services, coordination meetings with GFCM and CBD, sub-regional/regional workshop(s), implementation agreement(s)	SPA/RAC	CU and other Components as relevant	CPs, FAO, GFCM, CBD, ACCOBAMS, IUCN, OCEANA, EEA	a) A number of deep sea and deep seabed vulnerable marine ecosystems identified in areas within and beyond national jurisdiction; b) Supporting documents prepared, in collaboration with concerned CPs, GFCM and other relevant bodies; c) Their conservation through appropriate tools and measures including Other Effective area-based Conservation Measures (OECMs), precautionary ones comprised, notably spatial ones, promoted in official institutional events (FAO, GFCM and CBD meetings and workshops, etc.).			0 €		10,000 €	
3.2. Development of new action plans, programmes and measures, common standards and criteria, guidelines for the conservation of Coastal and Marine biodiversity and ecosystems.						**40,000 €**	**40,000 €**	**80,000 €**	**519,000 €**	**65,000 €**	
3.2.1. Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats, on species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management are updated to achieve GES.						**20,000 €**	**30,000 €**	**50,000 €**	**495,000 €**	**65,000 €**	
1. Elaborate a post-2020 strategic document on MPAs and other effective area-based conservation measures in the Mediterranean, in line with the CBD post-2020 global biodiversity framework.	In-house coordination and expertise, consultancy, coordination meeting(s)	SPA/RAC	CU and other Components as relevant	SPA/RAC Focal Points, AGEM members, ACCOBAMS, CBD, GFCM, IUCN, MedPAN, MedWet/Tour du Valat, Plan Bleu, WWF, Europarc Federation, AFB, Conservatoire du littoral, 2020 MPA Forum participants	A strategic document on MPAs and other effective area-based conservation measures (OECMs) in the Mediterranean, in line with the CBD post-2020 global biodiversity framework, the SAP BIO 2021-2035 and other global and regional processes, elaborated and submitted to COP 22 through the SPA/BD Focal Points, EcAp CG and MAP Focal Points meetings.	10,000 €	10,000 €	20,000 €	80,000 €		Secured external funding through the IMAP/MPA project (EU).

2. Implement/ update the regional action plans/strategy for the conservation of Mediterranean endangered and threatened species, key Habitats and species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management to mainstream GES.	In house coordination and expertise, external expertise, field work, workshop, expert Meeting(s) (External Expertise & Meeting of Expert designated by countries)	SPA/RAC	CU, REMPEC and other Components as relevant	Action Plan Associates and Partners, ACCOBAMS, CGPM, IUCN-Med, WWF Med Initiative, MAVA Marine turtles and Species projects Partners, NGOs, SPA focal points, RAMOGE	a) The action plans concerning cetaceans and dark habitats updated; b) Relevant scientific documentation contributing to update knowledge and to enhance conservation actions towards the conservation of Mediterranean endangered and threatened species and key habitats elaborated such as: - important nesting areas for marine turtles identified; - distribution of vulnerable megafauna (marine mammals, birds, elasmobranch and marine turtles) elaborated; - distribution and characterization of marine key habitats (marine vegetation, coralligenous and marine caves) elaborated; c) Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats implementation supported through pilot actions at national and regional levels: implementation of the national/ monitoring programmes for biodiversity and NIS (monitoring of the interaction between fisheries activities and cetaceans as well as bird species); d) Implementation of Regional Action Plans for Dark Habitats and cetaceans assessed; e) Joint programme based on the update of the Action Plan on the Conservation of Cetaceans (2016-2020) (under preparation) between SPA/RAC and ACCOBAMS Secretariat implemented; f) First elements for the elaboration of the list of Reference of Pelagic Habitat Types in the Mediterranean Sea identified.	10,000 €	20,000 €	30,000 €	415,000 €	40,000 €	Secured external funding through Mava and EU.
3. Support the implementation of the Mediterranean Strategy on Ships' Ballast Water Management and Action Plan and provide assistance to control and manage ships' biofouling to minimise the transfer of invasive aquatic species.	In-House expertise, consultancy, meeting(s), travel, interpretation, translation	REMPEC, SPA/RAC	CU	IMO, CU, GEF, UNDP	a) Mediterranean Strategy and Action Plan on Ships' Ballast Water Management updated to achieve GES; b) Technical support provided to CPs, which so request, to ratify and implement the AFS Convention and the Biofouling Guidelines.			0 €		25,000 €	Non-Secured External Funding from IMO ITCP 2020-2021
3.2.2. Guidelines and other tools for the conservation of endangered and threatened Mediterranean coastal and marine species, key habitats, for non-indigenous species control and prevention as well as the management of marine and coastal protected areas developed/updated and disseminated						**20,000 €**	**10,000 €**	**30,000 €**	**24,000 €**	**0 €**	
1. Elaborate guidelines and technical tools for improving MPA management and the conservation of threatened or endangered species and key habitats in the Mediterranean.	In-house coordination and expertise, consultancy, coordination meeting(s)	SPA/RAC	CU and other Components as relevant	Regional Action Plans Associates and Partners, MedPAN, IUCN, WWF	a) MPA management effectiveness tool for the Mediterranean region developed and made available to the MPA managers and planners; b) Guidelines on monk seal, marine turtles, cartilaginous fishes and marine vegetation elaborated (based on the results of the updating of relevant Regional Action Plans and Strategy); c) "Interpretation Manual" of the new reference list of marine benthic habitats types in the Mediterranean elaborated;	20,000 €	10,000 €	30,000 €	10,000 €		Secured external funding through MAVA.
		SPA/RAC		BirdLife International, GFCM, ACCOBAMS, IUCN, MEDASSET	d) Draft 2020-2030 Mediterranean Strategy/ Action Plan for reduced incidental catches of vulnerable species jointly elaborated by the bycatch and the species projects partners; e) GFCM "manual on standardized monitoring data collection on incidental catch of vulnerable species in the Mediterranean and the Black Sea" elaborated with SPA/RAC contribution for alignment with the vulnerable species and habitat regional Action Plans implementation needs; f) The GFCM online Mediterranean database portal on bycatch data collection implemented with SPA/RAC contribution for alignment with the vulnerable species and habitat Regional Action Plans implementation needs.			0 €	14,000 €		Secured external funding through MAVA.
3.3. Strengthening national implementation of biodiversity conservation policies, strategies and legislation measures.						**23,000 €**	**17,000 €**	**40,000 €**	**495,500 €**	**80,000 €**	
3.3.1. NAPs for the conservation of Mediterranean endangered and threatened species and key habitats and on species introductions and invasive species developed/updated.						**15,000 €**	**10,000 €**	**25,000 €**	**85,500 €**	**80,000 €**	
1. Support countries to update/develop new SAP BIO NAPs on biodiversity including for the conservation of Mediterranean threatened and endangered species and key habitats.	In house coordination and expertise, external expertise, consultancies, workshop(s)	SPA/RAC	MAP Components as appropriate	National experts and organizations, NGOs, SPA Focal Points, Action Plans Partners	New NAPs for the conservation of Mediterranean threatened and endangered species and key habitats elaborated (or existing ones updated) (e.g. 3 NAPs on coralligenous for Lebanon, Morocco & Algeria, 2 NAPs on Vegetation Tunisia & Montenegro, NAP on NIS for Malta).	10,000 €	5,000 €	15,000 €			
2. Support the Contracting Parties and partners in producing and publishing relevant scientific documentation contributing to update knowledge and enhance conservation actions taken towards the conservation of species listed in Annex II to the SPA/BD Protocol.	In house coordination and expertise, external expertise, consultancies, workshop(s)	SPA/RAC	MAP Components as appropriate	National experts and organizations, NGOs, SPA Focal Points, Action Plans Partners; BirdLife International, GFCM, ACCOBAMS, IUCN, MEDASSET	a) Relevant scientific documentations production and publishing relating to species listed in Annex II of the SPA/DB Protocol supported; b) Scientific documents related to incidental catches of vulnerable species elaborated. c) Multitaxa observation programme to collect data on incidental catch of vulnerable species in Tunisia implementation supported	5,000 €	5,000 €	10,000 €	85,500 €	80,000 €	External funding through MAVA.
3.3.2. National measures developed and implemented to strengthen the protection and the management of relevant marine and coastal sites, especially those containing threatened habitats and species (including deep-sea habitats).						**8,000 €**	**7,000 €**	**15,000 €**	**410,000 €**	**0 €**	
1. Provide support at country level through elaboration of focused studies and surveys including management plans for the declaration, establishment, and extension of MPAs.	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national workshop(s)	SPA/RAC	CU and relevant Component as appropriate	MEER, CNL (Algeria), MoE (Lebanon), EGA (Libya), Tyre Coast managers	a) 3 complementary ecological studies, including GIS-based maps for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya); b) 3 complementary socio-economic/fisheries studies for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya); c) 3 management plans for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya); d) 3 business plans for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya);			0 €	130,000 €		Secured external funding through IMAP/MPA project (EU).
		SPA/RAC		Concerned SPA/RAC Focal Points and MPA managers, national and local stakeholders	e) Ecological/socio-economic diagnosis studies, to support 1 or 2 Mediterranean countries (e.g. Syria) in declaring new MPAs, implemented/elaborated;	8,000 €	7,000 €	15,000 €			
		SPA/RAC		HCEFLCD (Morocco), APAL (Tunisia)	f) Capacity building workshops organized, local management units strengthened, and best practices developed and applied for an effective management of the Jbel Moussa (Morocco) and North-Eastern Islets of Kerkennah Archipelago future MPAs (Tunisia);			0 €	180,000 €		Secured external funding through IMAP/MPA project (EU).

		SPA/RAC		EGA (Libya), IUCN-Med, WWF	g) A national inventory of marine and coastal sites of conservation interest in Libya elaborated; h) MPA management plans elaborated; i) A Civil Society Organization (CSO) participatory platform prepared and initiated; j) Marine key habitats mapped and marine mega fauna (mammals, seabirds, turtles and cartilaginous fishes) monitored; k) Libyan national staff trained on MPA network planning and management; l) Awareness and communication campaigns and material, on the value and importance of MPAs, elaborated and their implementation initiated.			0 €	100,000 €		Secured external funding through GEF MedProgramme.
3.3.3. Biodiversity and ecosystem protection actions integrated in CAMPs, other ICZM Protocol implementation projects and Strategic Environment Impact Assessments.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Undertake the implementation of the marine and coastal biodiversity component within CAMP programmes.	In-house coordination and expertise, services, field surveys, coordination meeting(s), national workshop(s)	SPA/RAC	PAP/RAC, CU and other Components as relevant	SPA/RAC Focal Point, Bosnia & Herzegovina environmental authorities	Gap analysis and rapid assessment survey needed for the identification, characterization, conservation and management of marine biodiversity in Bosnia & Herzegovina territorial waters, undertaken.			0 €			
3.4. Monitoring, inventory and assessment of biodiversity with focus on endangered and threatened species, nonindigenous species and key habitats.						**50,000 €**	**56,000 €**	**106,000 €**	**820,000 €**	**0 €**	
3.4.1. Monitoring programmes for key species and habitats as well as invasive species, as provided for in the IMAP are developed and implemented, including on the effectiveness of marine and coastal protected areas, and on climate change impacts.						**35,000 €**	**56,000 €**	**91,000 €**	**230,000 €**	**0 €**	
1. Support the development and implementation of National/Sub-regional Monitoring Programme(s) in line with biodiversity cluster of IMAP.	In house expertise and coordination, external expertise, workshop organization, field work, conference facilities, CorMon meeting on Biodiversity and NIS	SPA/RAC	CU, IMAP Task Force	Action Plan Associates and Partners, ACCOBAMS, CGPM, IUCN-Med, WWF Med Initiative, MAVA Marine turtles project Partners, NGOs	National Monitoring Programmes for threatened and endangered species and key habitats carried out within the implementation of the Regional Action Plans for the conservation of threatened and endangered species and marine key habitats in the Mediterranean (i.e. NAP Vegetation in Egypt & Algeria) considering the IMAP, the indicator fact sheets and the monitoring protocols. The above deliverables will be submitted to the CorMon meeting on Biodiversity and NIS.	5,000 €	10,000 €	15,000 €			
	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national workshop(s), CorMon meeting on Biodiversity and NIS	SPA/RAC		SPA/RAC Focal Points, concerned Contracting Parties' environmental authorities	a) IMAP implementation at national level supported; best practices shared; b) IMAP implemented in MPAs and high pressure areas by Contracting Parties; c) Set of data on biodiversity common indicators reported and uploaded to the UNEP/MAP InfoMAP platform and quality assurance performed; d) Guidance fact sheets on IMAP common indicators on biodiversity updated; e) Guidance fact sheets on fisheries-related IMAP common indicators updated; f) CorMon meeting on Biodiversity and NIS held annually. The above deliverables will be submitted to the CorMon meeting on Biodiversity and NIS and its outcomes will be further submitted to the ECAP Coordination Group meeting.	10,000 €	30,000 €	40,000 €	210,000 €		Secured external funding through IMAP/MPA project (EU).
	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national and regional workshop(s),	SPA/RAC	CU, PAP/RAC, MEDPOL	Concerned Contracting Parties and SPA/RAC Focal Points and GEF Adriatic project National coordinators	A Sub-regional monitoring programme on common indicators for biodiversity implemented at a sub-regional level in the Adriatic Sea in line with IMAP cluster on biodiversity and fisheries to support MSP and ICZM.			0 €	20,000 €		Secured external funding through GEF Adriatic project.
2. Run the ordinary periodic review of SPAMIs.	In-house coordination and expertise, consultancies (2 independent experts per SPAMI), field visits, technical advisory commission meeting(s)	SPA/RAC	CU as relevant	Concerned SPA/RAC Focal Points, SPAMI managers	a) The ordinary periodic review aimed at making an in-depth assessment of SPAMI management effectiveness undertaken for the 11 concerned SPAMIs: 5 SPAMIs in 2020 (Lara-Toxeftra (CY), Torre Guaceto (IT), Tavolara-Punta Coda Cavallo (IT), Miramare (IT), Plemmirio (IT)) and 6 SPAMIs in 2021 (Archipelago of Cabrera (ES), Maro-Cerro Gordo Cliffs (ES), Bouches de Bonifacio (FR), Capo Caccia-Isola Piana (IT), Punta Campanella (IT), Al Hoceima (MA)); b) The report, main findings and recommendations submitted to SPA/BD Focal Point meeting in 2021.	20,000 €	16,000 €	36,000 €			
3.4.2. Biodiversity conservation assessment tools (in-depth thematic assessment, maps and indicator fact sheets) developed and updated to show trends at national, sub-regional and regional levels, and measure the effectiveness of the SAP BIO NAPs and Regional Action Plans implementation.						**15,000 €**	**0 €**	**15,000 €**	**0 €**	**0 €**	
1. Elaborate the 2020 Status Report on Mediterranean MPAs.	In-house coordination and expertise, consultancies, services	SPA/RAC	CU	MedPAN, GFCM, ACCOBAMS, IUCN, WWF	a) The 2020 Status Report on Mediterranean MPAs elaborated, disseminated and submitted to the meeting of the SPA/RAC Focal Points;	15,000 €		15,000 €			
		SPA/RAC			b) State of play of MPA and other area-based conservation measures in the Mediterranean developed.			0 €			
3.4.3. Common indicators on biodiversity and non-indigenous species monitored through IMAP in MPAs and SPAMIs, and relevant data sets established.						**0 €**	**0 €**	**0 €**	**490,000 €**	**0 €**	
1. Cooperate at sub-regional level to test joint monitoring activities in (a) selected area(s), thus supporting countries to implement joint monitoring programmes in line with the IMAP recommendations in MPAs/SPAMIs.	In-house coordination and expertise, consultancies, services, coordination meeting(s), national and regional workshop(s), CorMon meetings	SPA/RAC	CU, MED POL and other Components as relevant, IMAP Task Force	SPA/RAC Focal Points, MED POL Focal Points, concerned Contracting Parties' environmental authorities	a) IMAP implemented on a comparable basis; b) Set of data on IMAP common indicators reported to the UNEP/MAP Info/MAP platform. All deliverables above will be submitted to CorMon meetings on all IMAP Clusters.			0 €	490,000 €		Secured external funding through IMAP/MPA project (EU)
3.4.4. Inventory of vulnerable and fragile coastal and marine ecosystems and assessment of sensitivity and adaptive capacities of coastal and marine ecosystems to changes in sea conditions as well as of the role of services they provide developed.						**0 €**	**0 €**	**0 €**	**100,000 €**	**0 €**	
1. Support CPs to develop distribution and sensitivity maps of the main marine habitats.	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national workshop(s)	SPA/RAC	CU	Concerned SPA/RAC Focal Points, National experts and organizations, NGOs, Action Plans Partners	Distribution and sensitivity maps of the main marine habitats, in Malta and Turkey, and dedicated data bases developed and available on the Mediterranean Biodiversity Platform and other relevant platforms.			0 €	100,000 €		Secured external funding through MAVA Project.
3.5. Technical assistance and capacity building at regional, sub-regional and national levels to strengthen policy implementation and compliance with biodiversity -related national legislation.						**15,000 €**	**25,118 €**	**40,118 €**	**635,000 €**	**80,000 €**	
3.5.1. Capacity-building programmes related to the development and management of marine and coastal protected areas, to the conservation and monitoring of endangered and threatened coastal and marine species and key habitats, and to monitoring issues dealing with climate change and biodiversity developed and implemented, including pilots to support efforts aimed at MPA/SPAMI establishment and implementation.						**15,000 €**	**25,118 €**	**40,118 €**	**475,000 €**	**20,000 €**	
1. Organize specific training courses, workshops, symposia related to the conservation and monitoring of threatened and endangered Mediterranean marine species, key habitats and non-indigenous species.	In house expertise and coordination, contractual services, consultants, partners	SPA/RAC	CU, INFO/RAC and other Components as relevant	ACCOBAMS, MAVA Marine turtles project partners, MAVA species Project partners, Berne convention, IUCN Marine turtles' specialists Group for the Mediterranean, NGOs, Universities, SPA focal Points, Mediterranean Action plans partners and Associates	a) 7th Mediterranean Conference on marine turtles (Morocco) organized; b) Cetaceans biannual Conference for south Mediterranean countries organized; c) Regional training session on the identification of marine key habitats (Common Indicator CI-1, EO1 & CI-2,EO1of IMAP) and the use of SDF web application organized; d) Workshop on important areas for marine turtles, (MAVA Marine turtle project) organized; e) Technical workshops to identify important areas for vulnerable species based on the collected data within the Species MAVA project organized; f) Sub-regional trainings on the threatened and endangered species organized; g) Regional training session on the use of the Mediterranean Platform for biodiversity organized.	10,000 €	15,000 €	25,000 €	70,000 €	20,000 €	Secured external funding through MAVA and EU Projects.

2. Organize training of practitioners to follow IMAP implementation and observatories of the Mediterranean related to biodiversity and human activities and related impacts in marine and coastal areas.	In-house coordination and expertise, consultancies, services, coordination meeting(s), regional training workshop, implementation agreement(s)	SPA/RAC	CU, and other Components as relevant	Concerned SPA/RAC Focal Points, concerned Contracting Parties' environmental authorities	National capacities reinforcement events elaborated (i.e. monitoring, assessment and reporting quality assured data related to IMAP common indicators) through "Train the trainers" workshops for biodiversity and non-indigenous species.			0 €	70,000 €		Secured external funding through IMAP/MPA project (EU)
3. Strengthen and enhance capacity building activities on the conservation of Mediterranean marine biodiversity.	In-house coordination and expertise, consultancies, services, coordination meeting(s), training workshop(s)	SPA/RAC	CU, MED POL and other Components as relevant	Concerned SPA/RAC Focal Points, concerned MED POL Focal Points, concerned Contracting Parties' environmental authorities	a) National team of experts set up; b) Training workshops on GES and vulnerability assessment organized; c) Complementary studies to the IMAP implementation elaborated (in MPAs and high-pressure areas) in order to ensure submitting quality assured data to regional data platforms.			0 €	70,000 €		Secured external funding through IMAP/MPA project (EU)
4. Develop and implement training and capacity building programmes on MPA planning and management, including socio-economic aspects, as well as on fundraising and innovative funding for MPAs.	In-house coordination and expertise, consultancies, services, coordination meetings, training workshops, field and exchange visits, implementation agreements,	SPA/RAC	Plan Bleu, PAP/RAC	Concerned SPA/RAC Focal Points, MPA managers; AGEM members	a) Capacity building programme on MPA planning and management including socio-economic aspects for the Jbel Moussa (Morocco) and North-Eastern Islets of Kerkennah Archipelago future MPAs (Tunisia) developed and implemented;			0 €	240,000 €		Secured external funding through IMAP/MPA project (EU)
		SPA/RAC	CU, Plan Bleu	Concerned SPA/RAC Focal Points; AGEM members; M2PA	b) Training package on fundraising and innovative funding for MPAs available; c) "Train the trainers" regional workshop on fundraising and innovative funding for MPAs organized.	5,000 €	10,118 €	15,118 €			
5. Develop capacity building programmes and training material in the frame of the implementation of 9 Mediterranean marine observatories' strategy and joint technical action among 28 European and Mediterranean partners.	In-house coordination and expertise, services, workshop(s)	SPA/RAC	CU and other Components as relevant	WCMC, relevant ODYSSEA project partners	Trainings focusing on technical (sensors implementation and maintenance, data acquisition and transmission, database management, modelling tools), managerial and marketing aspects of Oceanographic Observatories will be provided as a contribution to the implementation of a network of 9 operational marine observatories across the Mediterranean basin integrating data and numerical forecasts, with the partnership of 28 European and Mediterranean partners.			0.00%	25,000 €		Secured external funding through ODYSSEA project (EU)
3.5.2. Training and awareness-raising programmes on SCP solutions contributing to the conservation of the ecosystems and biodiversity delivered to businesses, entrepreneurs, financial institutions and civil society.						**0 €**	**0 €**	**0 €**	**160,000 €**	**60,000 €**	
1. Support the implementation of SCP solutions in MPAs, with a particular focus on the issue of Marine Litter.	In-house experience, consultancies, local workshops, meeting(s)	SCP/RAC	SPA/RAC, MED POL	UNISI, ISPRA, MPAs, SPAMIs, MedPAN, MIO-ECSDE, Interreg Med Project	8 MPAs/SPAMIs supported to develop and implement measures for the management and prevention of marine litter.	0 €	0 €	0 €	160,000 €	60,000 €	Secured funds through the Interreg Med- Plastic Busters MPAs Project Funds to be secured to work with 3 MPAs from the southern Mediterranean
3.6. Enhanced cooperation at regional, sub- regional and national levels to protect and conserve biodiversity and ecosystems.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
3.6.1. Joint strategies and programmes on biodiversity and ecosystem conservation developed, by taking into account NAPs in cooperation with relevant partner organizations at global and regional levels.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Promote Joint Cooperation on spatial-based protection and management measures for marine biodiversity.	In-house coordination and expertise, coordination exchanges and meetings, implementation agreement(s)	SPA/RAC	CU and other Component as relevant	SPA/BD Thematic Focal Points, ACCOBAMS, GFCM, IUCN, MedPAN, WWF	a) A further advanced draft text agreed by Parties on a Joint Cooperation on spatial-based protection and management measures for marine biodiversity; b) Coordination supported, notably with GFCM and other relevant bodies and Parties' advise on feasible synergies regarding tools and measures for spatial conservation of the Mediterranean biodiversity and natural resources management.			0 €			
TOTAL THEME 3. BIODIVERSITY AND ECOSYSTEMS						***146,000 €***	***140,118 €***	***286,118 €***	***2,529,500 €***	***740,000 €***	

THEME 3. BIODIVERSITY AND ECOSYSTEMS	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			0 €		
MED POL			0 €		
REMPEC	0 €	0 €	0 €	0 €	25,000 €
PB/RAC			0 €		
SPA/RAC	146,000 €	140,118 €	286,118 €	2,369,500 €	655,000 €
PAP/RAC			0 €		
INFO/RAC			0 €		
SCP/RAC	0 €	0 €	0 €	160,000 €	60,000 €
TOTAL	***146,000 €***	***140,118 €***	***286,118 €***	***2,529,500 €***	***740,000 €***
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	**146,000 €**	**140,118 €**	**286,118 €**	**2,529,500 €**	**740,000 €**
Sum of Outputs Subtotals	**146,000 €**	**140,118 €**	**286,118 €**	**2,529,500 €**	**740,000 €**

THEME 4. LAND AND SEA INTERACTION AND PROCESSES

Ecological Objectives / Long-Term Targeted Impacts:
1. The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved;
2. Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.

Strategic objectives:
1. To reduce anthropogenic pressure on coastal and marine areas in order to prevent or reduce their degradation;
2. To ensure preservation of the integrity of coastal ecosystems, landscapes and geomorphology;
3. To adopt measures to reduce the negative impact of natural hazards and in particular of climate change;
4. To ensure that activities on the land and the sea part of the coastal zones are compatible and mutually supportive.

2020-2021 Indicators:
1. Number of tools and methodological documents developed for implementation by the Contracting Parties and/or tested/disseminated;
2. Number of ongoing projects, including CAMPs, addressing land-sea interactions;
3. Coastal networks established and functioning;
4. Number of MSP pilots integrating LSI developed and implemented;
5. (a) Number of trainings on MSP implementation held;
(b) Number of national experts trained.

2020-2021 Targets:
1. 5 tools/ methodological documents;

2. 1 national CAMP implemented and one transboundary CAMP launched;
3. CAMP network maintained;
4. At least one MSP pilot;
5. (a) 2 trainings held;
(b) 50 national experts trained.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
4.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.						**8,000 €**	**0 €**	**8,000 €**	**5,000 €**	**30,000 €**	
4.1.1. Contracting Parties assisted in identifying, implementing and evaluating specific measures and tools to reduce pressures on coastal and marine areas (e.g. coastal setback, land policy measures, zoning).						**8,000 €**	**0 €**	**8,000 €**	**5,000 €**	**30,000 €**	
1. Support the socio-economic evaluation of measures in Regional Strategies and Action Plans.	In house expertise; Consultancy	Plan Bleu	CU and other components	Partners in the MEDREGION project, under HCMR coordination	Methodological guidelines developed to support CPs and stakeholders conducting socio-economic evaluations of measures in Regional Strategies and Action Plans, adapted to plastics reduction and prevention measures among others.	8,000 €		8,000 €	5,000 €	30,000 €	
4.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.						**30,000 €**	**31,546 €**	**61,546 €**	**200,000 €**	**20,000 €**	
4.2.2. Marine Spatial Planning defined in the context of the Barcelona Convention and applied, as appropriate.						**30,000 €**	**31,546 €**	**61,546 €**	**200,000 €**	**20,000 €**	
1. Support region-wide coherent application of MSP, including its links with ICZM and transboundary issues, and implementation of MSP pilot projects.	In-house expertise, coordination and management, external expertise and services, regional workshop/ meeting(s)	PAP/RAC	CU and other Components	CPs, DG MARE, IOC-UNESCO	a) Best practices shared and capacities strengthened on MSP application, through training sessions/ regional workshop, focusing on mapping of LSI and its use within the ICZM and MSP process; b) Priorities for technical support and capacity building identified;		31,546 €	31,546 €		20,000 €	
		PAP/RAC		GEF, National and local authorities and institutions of Montenegro	c) Marine spatial plan for the marine waters under the jurisdiction of Montenegro prepared;			0 €	200,000 €		Secured External Funding through GEF
		PAP/RAC		CPs, DG MARE, HELCOM, OSPAR, BSC	d) A toolbox for the analytical phase of the MSP process defined; e) Specific guidance for its use provided to build national capacities.	30,000 €		30,000 €			
4.3 Strengthening national implementation.						**80,000 €**	**70,000 €**	**150,000 €**	**0 €**	**625,000 €**	
4.3.1. New generation of CAMPs prepared to promote land-sea interactions, also addressing trans-boundary aspects, as appropriate.						**80,000 €**	**70,000 €**	**150,000 €**	**0 €**	**625,000 €**	
1. Implement CAMP projects in a number of Contracting Parties, including as appropriate transboundary/ transnational dimension, and links between coastal and open sea areas subject to major pressures.	In-house expertise, coordination and management, external expertise and services, national/ regional meeting(s)	PAP/RAC	CU and other Components, as appropriate	CP's national and local authorities and institutions	a) CAMP kick-off meeting organised in Bosnia and Herzegovina; b) Working teams established; c) Project activities launched: the horizontal ones (capacity building; spatial data infrastructure) and the specific ones (marine habitats and protected areas; monitoring of marine and coastal environment; sustainable tourism; marine litter prevention);			0 €			Activity partly implemented during 2018-2019 biennium. It is proposed to re-phase savings of 65,000 EUR to the biennium 2020-2021.
		PAP/RAC			d) Agreement signed with the host-countries for a transboundary CAMP, based on the findings and recommendations of the Feasibility Study prepared in the biennium 2018-19, and CAMP activities launched.	80,000 €	70,000 €	150,000 €		625,000 €	Non-secured external funding under negotiation.
4.4. Monitoring and assessment.						**9,150 €**	**9,150 €**	**18,300 €**	**140,000 €**	**270,000 €**	
4.4.1. Mapping of interaction mechanisms on coastal and marine environment at regional and local levels developed, including assessment of the risks of sea level rise and coastal erosion, and their impacts on coastal environment and communities.						**9,150 €**	**9,150 €**	**18,300 €**	**0 €**	**190,000 €**	
1. Test the methodology for Land-Sea Interactions (LSI).	In-house expertise, coordination, external expertise and services, national/ regional meeting(s)	PAP/RAC	CU	CPs	a) Assistance provided to up to two CPs in testing the LSI methodology developed within the SIMWESTMED and SUPREME projects; b) Findings and lessons learned shared with all CPs; c) Priorities for further work identified.			0 €		100,000 €	
2. Implement the SDG 14 in the Mediterranean by promoting the Blue Economy.	In house expertise; Sectoral workshops; Consultancy	Plan Bleu	CU and other Components	CPs, CIHEAM, CMI/World Bank, CRPM, European Commission, FAO, UfM, WWF; private sector, NGOs and local government representatives	a) Key transitions and corresponding policy instruments to foster the Blue Economy based on local innovations, including innovations identified in case studies in the 2018-2019 PoW (in fisheries and aquaculture, maritime transport and port activities, wind energy, tourism and recreation, biological resources) identified; b) Recommendations for a transition towards a Blue Economy in the Mediterranean, including through the development of financing and economic instruments, and innovative partnerships developed.	9,150 €	9,150 €	18,300 €		50,000 €	
3. Develop / consolidate tools to facilitate climate change integration into the decision-making process.	In-house expertise; Consultancy; Publications	Plan Bleu	PAP/RAC, CU	CP, Scientific institutions including MedECC, MedSEA, World Bank or CMI or EIB (tbc)	Assessment tools to evaluate the economic and ecological stakes of sea level rise and coastal risks further developed and disseminated, building on the outcomes of the Coastal Risk Index pilot utilization among others.	0 €	0 €	0 €		40,000 €	

4.4.2. National coast and hydrography monitoring programmes developed and updated to include the relevant IMAP common indicators, interactions and processes.						**0 €**	**0 €**	**0 €**	**140,000 €**	**80,000 €**	
1. Consolidate common knowledge to inform MSP as a tool to support GES achievement and EcAp application in the Adriatic area (close link with Key Output 4.2.2).	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components	GEF, national and local authorities and institutions of the two project countries (Albania and Montenegro)	National IMAPs finalised for Albania and Montenegro.			0 €	70,000 €		Secured external funding through the GEF Adriatic Project.
2. Support the implementation of national IMAPs' Coast and Hydrology cluster.	In-house coordination and management, external expertise and services, regional meeting, regional/sub regional trainings, CorMon meetings	PAP/RAC	CU	CPs	a) Technical assistance provided and national capacities enhanced for the implementation of Coast and Hydrography components of national IMAP's; b) Minimum two sets of data (EO7, EO 8) reported by CPs; c) Country/sub-regional capacity building trainings organised, as appropriate; d) Minimum one CorMon meeting on Coast and Hydrography held;			0 €		80,000 €	Non-secured external funding under negotiation.
	In-house coordination and management, external expertise and services, national/regional meeting(s)	PAP/RAC		GEF, national and local authorities and institutions of the project countries, other CPs	e) In-depth analysis of the land-use and land-use change according to IMAP Common Indicator made in the Albania, Algeria, Egypt, Lebanon, Morocco and Tunisia; f) Generated knowledge transmitted and used by the CPs in the planning process.			0 €	70,000 €		Secured external funding through the GEF MedProgramme.
4.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.						**0 €**	**0 €**	**0 €**	**105,000 €**	**0 €**	
4.5.1. Capacity building for the application of tools for assessing interactions and integrating them in planning/management of coastal and marine environment implemented.						**0 €**	**0 €**	**0 €**	**105,000 €**	**0 €**	
1. Undertake capacity building for land-use and land-use change analysis.	In-house coordination and management, external expertise, national meeting(s)	PAP/RAC	CU	CPs, GEF	a) Training material updated for one face-to-face workshops for the GEF MedProgramme project participating countries on how to make the analysis and how to use it for planning purposes; b) Technical assistance provided and national capacities enhanced.			0 €	35,000 €		Secured external funding through the GEF MedProgramme.
2. Coordinate testing of the use of the coastal and marine Geoportal at sub-regional level.	In-house coordination and management, external expertise, (sub)regional meeting(s)	PAP/RAC	INFO/RAC	PORTODIMARE project partners: DGTEP of the Emilia-Romagna Region (Italy), CORILA (Italy), RRC Koper (Slovenia), HCMR (Greece), ZPUIZ (Croatia), JPMDCG (Montenegro), CETEOR (Bosnia-Herzegovina), CP Apulia (Italy), Service OOMM Abruzzo (Italy), Regione di Veneto (Italy)	a) Use of the Geoportal as a common platform for data, information and decision support tested in 6 pilot cases in the Adriatic-Ionian area, in full compliance with the ICZM and MSP principles and policies and supporting the implementation of the EUSAIR Action Plan; b) Transferability plan prepared.			0 €	70,000 €		
4.6 Enhanced cooperation at regional, sub-regional and national levels.						**0 €**	**0 €**	**0 €**	**0 €**	**50,000 €**	
4.6.1. Networks of CAMPs and other ICZM Protocol implementation activities established and cooperation undertaken with other partners to promote the exchange of data, experience and good practices established.						**0 €**	**0 €**	**0 €**	**0 €**	**50,000 €**	
1. Support the functioning of the network by developing guidelines and methodologies, updating information and organising on-line and face-to-face exchanges.	In-house expertise, coordination and management, external expertise, regional meeting(s)	PAP/RAC	CU and INFO/RAC	CPs and all other relevant stakeholders	a) Support to new CAMPs provided through exchange of experiences with previous CAMP and other ICZM projects, and use of tools and other material from these projects; b) Exchange of experiences and information facilitated; c) Human and knowledge base strengthened for the ICZM implementation.			0 €		50,000 €	
4.7 Identifying and tackling with new and emerging issues, as appropriate.						**0 €**	**0 €**	**0 €**	**44,000 €**	**0 €**	
4.7.1. Additional stresses relevant to the Convention on water resources due to climate change assessed in cooperation with other regional interested stakeholders.						**0 €**	**0 €**	**0 €**	**44,000 €**	**0 €**	
1. Prepare integrated coastal, watershed and aquifer management plan.	In-house expertise, coordination and management, external expertise, national meeting(s)	PAP/RAC	CU and other Components	CPs, GEF, IPH-UNESCO, GWP-Med	Integrated Management Plan (IMP) for the Damour area of Lebanon prepared according to the IMF methodology.			0 €	44,000 €		Secured external funding through the GEF MedProgramme.
TOTAL THEME 4. LAND AND SEA INTERACTION AND PROCESSES						***127,150 €***	***110,696 €***	***237,846 €***	***494,000 €***	***995,000 €***	

THEME 4. LAND AND SEA INTERACTION AND PROCESSES	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			**0 €**		
MED POL			**0 €**		
REMPEC			**0 €**		
PB/RAC	**17,150 €**	**9,150 €**	**26,300 €**	**5,000 €**	**120,000 €**
SPA/RAC			**0 €**		
PAP/RAC	**110,000 €**	**101,546 €**	**211,546 €**	**489,000 €**	**875,000 €**
INFO/RAC			**0 €**		
SCP/RAC			**0 €**		
TOTAL	***127,150 €***	***110,696 €***	***237,846 €***	***494,000 €***	***995,000 €***
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	**127,150 €**	**110,696 €**	**237,846 €**	**494,000 €**	**995,000 €**
Sum of Outputs Subtotals	**127,150 €**	**110,696 €**	**237,846 €**	**494,000 €**	**995,000 €**

THEME 5. INTEGRATED COASTAL ZONE MANAGEMENT

Long-Term Targeted Impacts:
1. The sustainable development of coastal zones is facilitated by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development;
2. The sustainable use of natural resources is ensured, particularly with regard to water use;
3. The coherence is achieved between public and private initiatives and between all decisions by the public authorities, at the national, regional and local levels, which affect the use of the coastal zone.

Strategic objectives:
1. Support the effective implementation of the ICZM Protocol at regional, national and local levels, as stipulated in the Action Plan 2012-2019;
2. Strengthen the capacities of Contracting Parties to use in an effective manner ICZM policies, instruments, tools and processes.

2020-2021 Indicators:	**2020-2021 Targets:**
2. (a) Number of MedOpen Training Courses; (b) Number of persons trained; 3. Number of countries reporting updated/new national policies and action plans, which mainstream climate change adaptation and SCP measures; 4. Number of ICZM coordination mechanisms established; 5. (a) Number of trainings on ICZM; (b) Number of persons trained.	2. (a) 2 courses; (b) 30 participants; 3. At least 3 countries; 4. 3 inter-ministerial coordination frameworks established; 5. (a) 3 trainings held; (b) 50 persons trained.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
5.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.						0 €	0 €	0 €	0 €	50,000 €	
5.2.2. Methodological framework for land and sea interactions, considering in particular MSP and ICZM, developed and applied.						**0 €**	**0 €**	**0 €**	**0 €**	**50,000 €**	
1. Conceptualize links between IMAP, LSI and MSP, and provide relevant guidance.	In-house expertise, coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components	CPs	A framework linking IMAP, LSI and MSP as part of ICZM prepared and explained in details.			0 €		50,000 €	
5.3 Strengthening national implementation.						0 €	0 €	0 €	285,000 €	0 €	
5.3.1. National ICZM Strategies including streamlining pollution, biodiversity, adaptation to climate change and SCP, land and sea interaction as well as sustainable cities prepared and applied.						**0 €**	**0 €**	**0 €**	**240,000 €**	**0 €**	
1. Support the preparation of national ICZM strategies and plans.	In-house expertise, coordination and management, external expertise and services, national meetings	PAP/RAC	CU and other Components	CPs, GEF, UNDP	a) National ICZM strategies for Egypt and Lebanon prepared; b) Feedback provided on the national ICZM strategy of Tunisia;			0 €	132,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
		PAP/RAC		CPs, GEF, MAVA Foundation	c) Two ICZM plans for selected coastal areas of Montenegro and Morocco prepared; d) Management plan for a wetland in Tunisia (Ghar El Melh) prepared.			0 €	108,000 €		Secured external funding through the GEF MedProgramme and MAVA.
5.3.2. Countries assisted in carrying out gap analysis on national legal and institutional frameworks for ICZM in order to streamline as need be the ICZM Protocol provisions into national legislations.						**0 €**	**0 €**	**0 €**	**45,000 €**	**0 €**	
1. Promote ratification of the ICZM Protocol.	In-house coordination and management, external expertise and services, national meetings	PAP/RAC	CU and other Components	CPs, GEF	a) Analysis of national legal and institutional frameworks in the domains of relevance to the ICZM Protocol (for Algeria and Tunisia) undertaken; b) Recommendations provided on the basis of the analysis' findings; c) Priority actions to facilitate ratification of the ICZM Protocol identified;			0 €	35,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
		PAP/RAC			d) National consultations organised in support of the ICZM Protocol ratification; e) Feedback from national stakeholders participating in consultation obtained and used within the ratification process in Algeria, Egypt and Tunisia.			0 €	10,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
5.4 Monitoring and assessment.						0 €	0 €	0 €	0 €	30,000 €	
5.4.1. Fact sheets for ICZM indicators developed to evaluate the effectiveness of coastal and marine resources management measures.						**0 €**	**0 €**	**0 €**	**0 €**	**30,000 €**	
1. Update IMAP Common Indicators on Coast and Hydrography Cluster.	In-house coordination and management, external expertise and services	PAP/RAC	CU, IMAP Task Force	CPs, EEA, UNEP/GRID	IMAP Common Indicators of the "Coastal" cluster updated with new relevant data and information on sea level rise.			0 €		30,000 €	
5.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.						11,546 €	0 €	11,546 €	135,000 €	0 €	
5.5.1. MedOpen Training Programme on ICZM regularly updated and implemented, in coordination with the relevant NFPs.						**11,546 €**	**0 €**	**11,546 €**	**135,000 €**	**0 €**	
1. Organise MedOpen advanced training courses on ICZM.	In-house expertise, coordination and management, external expertise and services	PAP/RAC	INFO/RAC	CPs, GEF	a) MedOpen updated to include up-to-date learning material; b) One advanced training session in English and one in French delivered.	11,546 €		11,546 €	56,000 €		Secured external funding through the GEF MedProgramme and MAVA.

2. Support implementation of ICZM Protocol at sub-regional level.	In-house coordination and management, external expertise and services	PAP/RAC	CU	GEF eligible CPs	a) Three sub-regional trainings organised for the GEF eligible countries; b) Technical assistance provided and capacities enhanced in support of the ICZM Protocol implementation in a coherent manner at sub regional level.			0 €	79,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
5.6 Enhanced cooperation at regional, sub-regional and national levels.						10,000 €	0 €	10,000 €	30,000 €	0 €	
5.6.1. ICZM coordination enhanced through: (i) Mediterranean ICZM Platform; (ii) national ICZM coordination bodies.						**10,000 €**	**0 €**	**10,000 €**	**30,000 €**	**0 €**	
1. Ensure and maintain the functioning of the Mediterranean ICZM Platform.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and INFO/RAC	CPs and all other relevant stakeholders	a) Work of the ICZM Platform coordinated and facilitated through up-to-date information and knowledge; b) National coordination bodies responsible for the implementation of the ICZM Protocol supported.	10,000 €		10,000 €			
2. Establish and/or enhance Inter-Ministerial Coordination (ICM) frameworks.	In-house expertise, coordination and management, external expertise and services, meetings	PAP/RAC	CU	GEF eligible CPs	National consultations organised and proposals for ICZM made for Bosnia and Herzegovina, Lebanon and Tunisia.			0 €	30,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
TOTAL THEME 5. INTEGRATED COASTAL ZONE MANAGEMENT						***21,546 €***	***0 €***	***21,546 €***	***450,000 €***	***80,000 €***	

THEME 5. INTEGRATED COASTAL ZONE MANAGEMENT	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			**0 €**		
MED POL			**0 €**		
REMPEC			**0 €**		
PB/RAC			**0 €**		
SPA/RAC			**0 €**		
PAP/RAC	**21,546 €**	**0 €**	**21,546 €**	**450,000 €**	**80,000 €**
INFO/RAC			**0 €**		
SCP/RAC			**0 €**		
TOTAL	***21,546 €***	***0 €***	***21,546 €***	***450,000 €***	***80,000 €***

0 €	0 €	0 €	0 €	0 €	
Sum of Outcomes Subtotals	**21,546 €**	**0 €**	**21,546 €**	**450,000 €**	**80,000 €**
Sum of Outputs Subtotals	**21,546 €**	**0 €**	**21,546 €**	**450,000 €**	**80,000 €**

THEME 6: Sustainable Consumption and Production

Strategic objectives:
1. To establish prosperous Mediterranean region, with non-pollutant, circular, socially inclusive economies based on sustainable consumption and production patterns, securing the sustainable management of natural resources and energy, ensuring the well-being of societies and contributing to clean environment and healthy ecosystems that provide goods and services for present and future generations;
2. To support the effective implementation of the SCP Action Plan and its roadmap;
3. To strengthen technical capacities of businesses, entrepreneurs, financing agents, and civil society implement SCP solutions;
4. To promote SCP in key economic sectors and lifestyles which are upstream drivers of chemicals and marine litter;
5. To strengthen technical capacities of businesses, entrepreneurs, financing agents, and civil society implement SCP solutions reducing toxic chemicals and marine litter;
6. To provide innovative services and products contributing to the conservation and sustainable management of biodiversity and ecosystems;
7. To strengthen technical capacities of businesses, entrepreneurs, financing agents, and civil society to implement SCP solutions contributing to the conservation of biodiversity and ecosystems;
8. To reduce the pressure of human activities in coastal and marine areas through the implementation of SCP tools.

2020-2021 Indicators:	**2020-2021 Targets:**
1. Number of new/updated guidelines, policy documents and other implementation tools addressing SCP for key sectors and areas of consumption and production; 2. Number of training and capacity building activities in application of the SCP Action Plan; 3. Number of businesses, entrepreneurs, financial agents and civil society organizations trained and capacitated to provide SCP solutions and joining the Mediterranean SCP Action Network, the Switchers Platform and the Green Impact Investment Network; 4. Number of projects implementing the SCP Action Plan engaging different stakeholders identified by the facilitators; 5. Number of SCP NAPs developed; 6. a) Number of Switchers Support National Partnerships created; b) Number of investor-ready Switchers linked with financial actors; 7. Number of activities to stimulate demand for sustainable products and services.	1. 4 tools/guidelines/policy documents; 2. 5 activities; 3. 800 trainees; 4. 3 projects; 5. 2 SCP NAPs; 6. a) 8 partnerships; b) 80 investor-ready Switchers linked with financial actors; 7. 10 activities.

Main Activities	Means of implementation	Lead: CU and or Component	Other: CU or Component	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
6.1. Development of new action plans, programmes of measures, common standards and criteria, guidelines and implementation of current ones.						**11,454 €**	**9,000 €**	**20,454 €**	**157,000 €**	**600,000 €**	
6.1.1. Selected actions of the SCP Action Plan directly contributing to prevent, reduce and eliminate marine pollution and protect/enhance biodiversity and ecosystems as well as address climate change in the marine and coastal areas of the Mediterranean identified and implemented.						**11,454 €**	**9,000 €**	**20,454 €**	**157,000 €**	**70,000 €**	
1. Support development of National SCP/ Circular Economy Action Plans.	In-house expertise, consultancies, national/ regional meeting(s)	SCP/RAC	CU, MED POL	CPs	a) At least 2 countries supported for the development of SCP / Circular Economy plans identifying priority value chains and proposing actions for capacity building, policy instruments and partnerships; b) At least 1 country supported in the development of actions to foster sustainable consumption, eco-labelling and/or sustainable public procurement. c) At least 1 country supported in decentralizing circular economy initiatives	11,454 €	9,000 €	20,454 €	0 €	70,000 €	
2. Conduct a Mid-term evaluation of the SCP Regional Action Plan.		SCP/RAC	CU, Plan Bleu	CPs, SwitchMed Partners	Mid-term evaluation of the SCP Action Plan, feeding the new MTS preparation process, prepared and submitted to the SCP/RAC Focal Points meeting.	0 €	0 €	0 €	0 €	0 €	Funds for the mid-term evaluation of the SCP Action Plan are included under activity 1.1.2.5. This activity includes both the mid-term evaluations of the MSSD and the SCP Action, both processes will be develop in full synergy in order to make an efficient use of available resources.
3. Assess the role of green businesses and green employment for the protection of the Mediterranean environment.		SCP/RAC	CU	UNIDO, UN Environment Economy Division	1 background document prepared, key policy measures to aknowledge and support the development of green and circular businesses identified, reviewed by key stakeholders and submitted to the SCP/RAC Focal Points meeting.	0 €	0 €	0 €	157,000 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
6.1.3. Methodological tools for SCP mainstreaming in the priority areas of consumption and production of the Regional Action Plan on SCP - tourism, food, housing and goods manufacturing implemented and new ones developed for other sectors.						**0 €**	**0 €**	**0 €**	**0 €**	**530,000 €**	
1. Develop pilot activities for the identification of circular economy opportunities within key sectors of the SCP Action Plan.	In-house expertise, consultancies, national workshop(s)	SCP/RAC	CU	UNIDO, UN Environment Economy Division	a) 1 tool for the identification of Circular Economy opportunities within the food and textile value chains developed; b) 1 Pilot test with a cluster of textile companies performed; c) 1 Pilot test of with a cluster of food companies performed;			0 €	0 €	500,000 €	
		SCP/RAC			d) Regional and national pilot informational and voluntary/procedural policy instruments developed with 2 countries (switchers Voluntary commitment…).			0 €	0 €	30,000 €	
6.2. Monitoring and assessment.						**0 €**	**0 €**	**0 €**	**113,000 €**	**0 €**	
6.2.1. SCP Action Plan indicators aligned with MSSD relevant work, identified, selected and factsheets developed.						**0 €**	**0 €**	**0 €**	**113,000 €**	**0 €**	
1. Follow-up on SCP indicators under the framework of the SCP Action Plan and MSSD implementation.	In-house expertise, consultancies	SCP/RAC	CU, Plan Bleu	UNIDO, UN Environment Economy Division	The 25 SCP indicators populated to provide a better vision of the situation and progress in the region.			0 €	83,000 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
2. Assess environmental, social and economic performance of green entrepreneurs and circular businesses, contributing to the SCP Action Plan implementation.		SCP/RAC			1 MEAL System (Monitoring, Evaluation, Accountability and Learning) to assess environmental, social and economic performance of green entrepreneurs and circular businesses consolidated.			0 €	30,000 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
6.3. Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building.						**15,000 €**	**14,454 €**	**29,454 €**	**1,852,500 €**	**0 €**	
6.3.1. Training and support programme for green entrepreneurs and civil society as SCP drivers.						**15,000 €**	**14,454 €**	**29,454 €**	**1,852,500 €**	**0 €**	
1. Undertake training and support programme for green entrepreneurs, start-ups and SMEs.	In-house expertise, consultancies, national workshop(s), training(s), coaching, mentoring	SCP/RAC	CU	UNIDO, UN Environment Economy Division	a) 1 Online Platform of Green Business Development Tools and Methodologies developed;	15,000 €	14,454 €	29,454 €	1,852,500 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
		SCP/RAC			b) Switchers Support National Partnerships, gathering Business Development Service Providers supporting Green Entrepreneurs, set up in 8 Mediterranean countries (Morocco, Algeria, Tunisia, Egypt, Jordan, Palestine, Israel and Lebanon);						
		SCP/RAC			c) Transfer of Green Business Development capacities, methodologies and tools to the Business Development Service Providers carried out;						
		SCP/RAC			d) Training and support schemes for green entrepreneurs implemented by the National Partnerships designed and facilitated;						
		SCP/RAC			e) Mentoring and replication support among Switchers performed;						
		SCP/RAC			f) Financial deals between green entrepreneurs and financial actors promoted.						
6.4. Enhanced cooperation at regional, sub- regional and national levels to prevent and control marine pollution.						**32,000 €**	**28,000 €**	**60,000 €**	**1,256,331 €**	**35,000 €**	
6.4.1. Establishment of networks and initiatives of businesses, entrepreneurs, civil society, providing SCP solutions promoted.						**0 €**	**0 €**	**0 €**	**517,121 €**	**0 €**	

1. Strengthen the Mediterranean Green Impact Investing Network (Switchers Fund).	In-house expertise, consultancies ,sub-regional and national meeting(s)	SCP/RAC	CU	UNIDO, UN Environment Economy Division, Organisation for Security and Co-operation in Europe (OSCE)	Access to finance for entrepreneurs in the ideation and early stages of development provided through the Switchers funds, in particular via meet-ups with regional and national financing institutions, grants, etc. Experts led roundtables with green financing institutions.	0 €	0 €	0 €	124,654 €	0 €	Secured external funding through the GIMED (ENI CBC Med).
2. Scale up SCP solutions in the Mediterranean.		SCP/RAC	CU, MED POL	UNIDO, UN Environment Economy Division, UNCTAD, Lebanon Berytech Foundation, Palestine Leaders Organisation, Tunisia Connect, Egypt Alexandria Business Association, Italy Fondazione di Communita di Messina	a) Visibility to sustainable products and services in partnership with online retailer platforms increased;	0 €	0 €	0 €	102,743 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
		SCP/RAC			b) Group coaching for access to markets, B2B business services and a value-chain integration pilot developed together with the partner organisation UNCTAD;	0 €	0 €	0 €	124,654 €	0 €	Secured external funding through the GIMED (ENI CBC Med).
		SCP/RAC			c) 1 online open innovation and matchmaking platform allowing creation of market pull by partner producer and retailer companies developed.	0 €	0 €	0 €	102,743 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
3. Establish supporting structures for green and circular businesses.		SCP/RAC	CU, MED POL	CPs, private businesses, Lebanon Berytech Foundation, Palestine Leaders Organisation, Tunisia Connect, Egypt Alexandria Business Association, Italy Fondazione di Communita di Messina	a) 1 Green and Circular Economy label/standard scheme for green and circular businesses/entrepreneurs developed; b) 1 policy paper – 'recommendations for improving green and circular markets and supporting eco-innovative ventures prepared.	0 €	0 €	0 €	62,327 €	0 €	Secured external funding through the GIMED (ENI CBC Med).
6.4.2. A Mediterranean SCP Hub for knowledge exchange and networking fully operative and performing as connector and lever for new partnerships and initiatives providing SCP solutions.						**32,000 €**	**28,000 €**	**60,000 €**	**739,210 €**	**35,000 €**	
1. Manage a Mediterranean Community of SCP stakeholders that is a space for the exchange of knowledge on SCP, training, and the establishment of alliances, projects and business opportunities.	In-house expertise, consultancies, regional event	SCP/RAC	CU, INFO/RAC	UNIDO, UN Environment Economy Division, Lebanon Berytech Foundation, Palestine Leaders Organisation, Tunisia Connect, Egypt Alexandria Business Association, Italy Fondazione di Communita di Messina	Dissemination of the results of the SCP and Circular Economy practices in Southern Mediterranean countries enhanced via: a) The Switchers Support Programme site, the Switchers' stories platform, the SwitchersFund site, the SwitchMed Programme website, the GIMED Project website; b) The preparation of SwitchMed Programme and GIMED Newsletters; c) The facilitation of the SwitchMed and GIMED Social Media accounts; d) The organisation of 1 SwitchMed Connect event.	32,000 €	28,000 €	60,000 €	739,210 €	35,000 €	Secured external funding through the SwitchMed II (EU DG NEAR).
TOTAL THEME 6: Sustainable Consumption and Production						***58,454 €***	***51,454 €***	***109,908 €***	***3,378,831 €***	***635,000 €***	

THEME 6: Sustainable Consumption and Production	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			0 €		
MED POL			0 €		
REMPEC			0 €		
PB/RAC			0 €		
SPA/RAC			0 €		
PAP/RAC			0 €		
INFO/RAC			0 €		
SCP/RAC	58,454 €	51,454 €	109,908 €	3,378,831 €	635,000 €
TOTAL	*58,454 €*	*51,454 €*	*109,908 €*	*3,378,831 €*	*635,000 €*
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	58,454 €	51,454 €	109,908 €	3,378,831 €	635,000 €
Sum of Outputs Subtotals	58,454 €	51,454 €	109,908 €	3,378,831 €	635,000 €

THEME 7. CLIMATE CHANGE ADAPTATION

Strategic objectives:
1. To strengthen the resilience of the Mediterranean natural and socioeconomic systems to climate change by promoting integrated adaptation approaches and better understanding of impacts.
2. To reduce anthropogenic pressure on coastal and marine biodoversity to maintain their contribution to climate change adaptation.

2020-2021 Indicators:	**2020-2021 Targets:**
1. Number of existing regional strategies and action plans streamlining climate change adaptation perspectives; 2. Number of new action plans, programmes and measures, common standards and criteria, guidelines mainstreaming climate change adaptation; 3. Number of countries adopting/updating National Climate Change Adaptation Strategies and Action Plans taking into consideration related marine and coastal environment issues; 4. Number of countries enhancing capacity at regional, sub-regional and national levels including technical assistance and capacity building on climate change adaptation issues.	1. 1 regional strategy and/or action plan; 2. 5 instruments; 3. 1 country; 4. 4 countries.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
7.1. Strengthening the regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.						**0 €**	**0 €**	**0 €**	**0 €**	**100,000 €**	
7.7.1. Climate Change Adaptation main activities identified and mainstreamed into the implementation of existing regional strategies, regional action plans and measures.						**0 €**	**0 €**	**0 €**	**0 €**	**100,000 €**	
1. Promote environmental taxation especially for fossil fuel emissions.	In house expertise, consultancy	Plan Bleu	CU and other Components	CPs, OECD	Report on environmental taxation in the Mediterranean countries developed.	0 €	0 €	0 €		40,000 €	
2. Promote the use of alternative, renewable energy resources in the Mediterranean.	In house expertise, consultancy, regional meeting(s)	Plan Bleu	CU	CPs, IRENA	a) State of play on production and use of marine renewable energies (wind power, tidal energy etc.) in the Mediterranean prepared; b) Best practices, including BAT and BEP, on marine renewable energies shared; c) Priorities for technical assistance and capacity building identified.	0 €	0 €	0 €		60,000 €	
7.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.						**0 €**	**0 €**	**0 €**	**20,000 €**	**70,000 €**	
7.2.1. Climate change adaptation, including related vulnerabilities and risks, key activites mainstreamed into the development of new/updated regional strategies, regional action plans and measures addressing biodiversity, pollution and land and sea interactions.						**0 €**	**0 €**	**0 €**	**20,000 €**	**0 €**	
1. Adapt the PAP/RAC Guidelines for adapting to climate change and variability to the Adriatic basin.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	CU	AdriAdapt project partners: CMCC (Italy), DHMZ (Croatia), IUAV Venezia (Italy), Unioni dei Communi Valle del Savio (Italia), ARPA Emilia-Romagna (Italy), Commune di Cervia (Italy), Šibenik-Knin County (Croatia), City of Vodice (Croatia)	a) Guidelines on mainstreaming adaptation into coastal management along Adriatic coasts in Croatian and Italian produced; b) Guidelines for building coastal resilience in Croatian, English and Italian produced.			0 €	20,000 €		Secured external funding from AdriAdapt (Interreg Italy-Croatia).
7.2.3. Promote integration of ecosystem-based responses in National Climate Change Adaptation Strategies.						**0 €**	**0 €**	**0 €**	**0 €**	**70,000 €**	
1. Support Contracting Parties to enhance the marine biodiversity component on their updated National Determined Contributions (NDCs), in line with the UNFCCC COP21 Paris Agreement.	In house coordination and expertise,consultancies, coordination with CBD and UNFCCC	SPA/RAC	CU, Plan Bleu and relevant Components	UNFCCC Secretariat, CBD Secretariat	Guidelines to enhance the marine biodiversity component of countries updated NDCs to increase alignment and integration of marine biodiversity concerns and SDG 14 pursuit, harmonized and coordinated with related tools and initiatives by the UNFCCC and the CBD to maximize synergies.			0 €		10,000 €	
2. Promote the integration of Nature Based Solutions in Climate Change Adaptation Strategies.	In house expertise, workshop(s), consultancy, contractual services, side event(s)	Plan Bleu	MED POL, SPA/RAC	CPs, AFD, Conservatoire du Littoral, IUCN, Tour du Valat, MedWET, MAVA	a) Good practices on Nature Based solutions, including innovative policy instruments identified; b) NBS promoted and disseminated, including potential Side event at IUCN 2020; c) Analyses making the case for NBS, including through economic valuation of ecosystem services identified/ developed and disseminated; d) Revised / enriched policy paper for consideration by national and regional governments prepared.	0 €	0 €	0 €		60,000 €	
7.3 Strengthen national implementation.						**0 €**	**0 €**	**0 €**	**304,000 €**	**0 €**	
7.3.1. Climate change adaptation priority fields identified and mainstreamed into the relevant MAP policies, as appropriate.						**0 €**	**0 €**	**0 €**	**304,000 €**	**0 €**	
1. Mainstream the climate change adaptation into local ICZM plans.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	CU, Plan Bleu	CPs, GEF, GWP-Med	Recommendations provided for adaptation measures to be mainstreamed into local ICZM plans in Morocco and Montenegro prepared within the GEF Medprogramme.			0 €	15,000 €		Secured external funding through GEF SCCF Project.
2. Create a catalogue of climate change adaptation measures and mitigation policies.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	INFO/RAC	AdriAdapt project partners: CMCC (Italy), DHMZ (Croatia), IUAV Venezia (Italy), Unioni dei Communi Valle del Savio (Italia), ARPA Emilia-Romagna (Italy), Commune di Cervia (Italy), Šibenik-Knin County (Croatia), City of Vodice (Croatia)	Searchable description of measures and best practices (with priority given to Adriatic and European experiences) created and included in the Climate Adapt platform (forseeing the possibilty of its future extention to the entire Mediterranean basin).			0 €	24,000 €		Secured external funding through AdriAdapt (Interreg Italy-Croatia)
3. Support the preparation of strategies for climate change adaptation.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	CU	AdriAdapt project partners: CMCC (Italy), DHMZ (Croatia), IUAV Venezia (Italy), Unioni dei Communi Valle del Savio (Italia), ARPA Emilia-Romagna (Italy), Commune di Cervia (Italy), Šibenik-Knin County (Croatia), City of Vodice (Croatia)	Two strategies for climate change adaptation prepared for the municipalities of Šibenik and Vodice in Croatia.			0 €	265,000 €		

7.4 Monitoring and Assessment.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
7.4.1. Climate Change vulnerability issues considered in existing monitoring programmes.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Develop vulnerability and impact indicators of climate change on biodiversity and natural resources, also addressing socio-economic trends.	In house expertise, workshop(s), contractual services	Plan Bleu	CU and other Components	CPs, MedECC, AE RMC, IME	a) Vulnerability and impacts indicators of climate change on natural resources, also addressing socio-economic trends. identified; b) Plan Bleu Observatory enriched with information on climate change impacts and risks, including MedECC findings; c) Related factsheets and case studies prepared; d) Policy paper developed.	0 €	0 €	0 €			
7.5 Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building.						**20,000 €**	**0 €**	**20,000 €**	**100,000 €**	**10,000 €**	
7.5.1. Awareness and engagement of key stakeholders on climate change adaptation and on its links with the core themes enhanced.						**20,000 €**	**0 €**	**20,000 €**	**100,000 €**	**10,000 €**	
1.Improve the adaptation of existing tools such as Imagine to engage stakeholders on climate change adaptation strategies.	In house expertise, workshop(s) (training of trainers), contractual services	Plan Bleu	PAP/RAC	GEF, GWP Med (Tunisia)	a) Climagine method (integrating climate change issues in the participatory approach "Imagine") developed and implemented on several coastal sites; b) Case studies published and disseminated; c) Climagine implementation guide prepared and disseminated.	0 €	0 €	0 €	100,000 €	10,000 €	Secured external funding through GEF programme.
2. Promote regional dialogue on Climate Change impacts and adaptation strategies.	In-house expertise, consultancy, networking with scientific institutions and practitioners, regional workshop	Plan Bleu	CU, PAP/RAC and other Components	CPs, MedECC, UfM, AE RMC, ADEME	a) Regional actors better informed of the impact of climate change; b) Scientific results, lessons learned and best practices on adaptation strategies shared.	20,000 €		20,000 €			
TOTAL THEME 7. CLIMATE CHANGE ADAPTATION						***20,000 €***	***0 €***	***20,000 €***	***424,000 €***	***180,000 €***	

THEME 7. CLIMATE CHANGE ADAPTATION	**MTF 2020**	**MTF 2021**	**MTF TOTAL 2020-2021**	**2021**	**2021**
Coordinating Unit			**0 €**		
MED POL			**0 €**		
REMPEC			**0 €**		
PB/RAC	**20,000 €**	**0 €**	**20,000 €**	**100,000 €**	**170,000 €**
SPA/RAC	**0 €**	**0 €**	**0 €**	**0 €**	**10,000 €**
PAP/RAC	**0 €**	**0 €**	**0 €**	**324,000 €**	**0 €**
INFO/RAC			**0 €**		
SCP/RAC			**0 €**		
TOTAL	***20,000 €***	***0 €***	***20,000 €***	***424,000 €***	***180,000 €***
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	**20,000 €**	**0 €**	**20,000 €**	**424,000 €**	**180,000 €**
Sum of Outputs Subtotals	**20,000 €**	**0 €**	**20,000 €**	**424,000 €**	**180,000 €**

Option 2

Table 1. Overview of Income and Commitments

All amounts in €

Part A (Core Funding)		exchange rate	0.918	*Proposed Budget 2020-2021 ALTERNATIVE 2 (1)*	exchange rate	0.862
	€	€	€	€	€	€
A. Income	*Approved 2018*	*Approved 2019*	*Total 2018-2019*	*Proposed 2020*	*Proposed 2021*	*Total 2020-2021*
Expected Ordinary Income						
MTF Ordinary Contributions	5,706,788	5,706,788	11,413,576	5,706,788	5,706,788	11,413,576
EU Discretionary Contribution	596,484	596,484	1,192,968	596,484	596,484	1,192,968
Greek Host Government Contribution(2)	367,200	367,200	734,400	344,800	344,800	689,600
TOTAL of Expected Ordinary Income	**6,670,472**	**6,670,472**	**13,340,944**	**6,648,072**	**6,648,072**	**13,296,144**
B. Savings to be used	**374,771**	**170,336**	**545,107**	**755,325**	**1,038,202**	**1,793,528**
Total Available Funds	**7,045,243**	**6,840,808**	**13,886,051**	**7,403,397**	**7,686,274**	**15,089,672**
C. Commitments	*Approved 2018*	*Approved 2019*	*Total 2018-2019*	*Proposed 2020*	*Proposed 2021*	*Total 2020-2021*
Activities	2,197,582	1,904,304	4,101,886	2,103,867	2,369,085	4,472,952
Posts and Other Administrative Costs(3)	4,019,821	4,200,264	8,220,085	4,445,015	4,515,531	8,960,546
Programme Support Costs	720,959	701,815	1,422,774	758,013	801,658	1,559,671
TOTAL Regular Commitments	**6,938,362**	**6,806,383**	**13,744,745**	**7,306,895**	**7,686,274**	**14,993,169**
Provision for Working Capital Reserve (incl. PSC) (4)	**38,031**		**38,031**	**96,502**		**96,502**
Grand Total	**6,976,393**	**6,806,383**	**13,782,776**	**7,403,397**	**7,686,274**	**15,089,671**
Difference between Income and Commitments (CAL)(5)	68,850	34,425	103,275	0	0	0

Part B (External Funding)

	Total 2018-2019	*Total 2020-2021*
UNEP/MAP Project Funding	9,018,339	4,595,500
Resources mobilized by Components	2,720,000	8,668,871
Resources to be mobilized	2,345,000	7,726,500
TOTAL	**14,083,339**	**20,990,871**

Part C (RAC's Hosting Countries' Contributions)(6)

Country (Center)	*2018*	*2019*	*Total 2018-2019*	*2020*	*2021*	*Total 2020-2021 (7)*
Croatia (PAP/RAC)	159,666	159,666	319,332			0
France (BP/RAC)			0			0
Italy (INFO/RAC)	100,000	100,000	200,000			0
Malta (REMPEC)	255,000	255,000	510,000			0
Spain (CP/RAC)			0			0
Tunisia (SPA/RAC)	90,000	90,000	180,000			0
TOTAL of Host Country Contributions (in cash/kind)	**604,666**	**604,666**	**1,209,332**	**0**	**0**	**0**

(1)*: ALTERNATIVE 2* reflects increase of 2018-2019 budget in nominal terms.

(2): The equivalent of USD 400,000 in EUR using the budget rate (0.862 for 2020-2021 based on the average rate calculated for the period 01/2018-06/2019 and 0.918 for 2018-2019).

(3): Proposed figure includes the Greek Host Country Contribution, while Table 3 excludes the same.

(4): The WCR for 2018-2019 was retained in the proposed budget for 2020-2021 as the actual expenditure figure for 2018-2019 is not yet available.

(5): The deficit recovery was completed in 2019, hence no further transactions are required for the biennium 2020-2021.

(6): National contributions towards MAP's Regional Activities Centers (RACs) from the respective Host Country.

(7): The information on the RAC's Hosting Countries' Contributions for 2020-2021 will be provided as soon as it is available.

Table 2. Expected Ordinary Income

Assessed Ordinary Contributions apportioned to Parties of the Barcelona Convention for the 2020–2021 biennium (EUR)[1]

									0% Increase in Total Assessed Contributions		
Contracting Parties	**2018-2019 MTF Applied Scale of Assessments %**	**Approved Ordinary Contributions for 2018 (in €)**	**Approved Ordinary Contributions for 2019 (in €)**	**UN Scale of Assessments (2019-2021)_[ST/ADM/SER.B/992] %**	**Adjusted Scale of Assessments without EU A.O.C.* (2019-2021) %**	**Adjusted Scale of Assessments with 2.5% for EU A.O.C.* (2019-2021) %**	**Revised Ordinary Contributions for 2019 (in €)**	**Difference between revised and approved Ordiarny Contributions for 2019 (in €)**	**Proposed Ordinary Contributions for 2020 (in €)**	**Proposed Ordinary Contributions for 2021 (in €)**	**Proposed Ordinary Contributions for 2020-2021 (in €)**
Albania	0.06	3,217	3,217	0.008	0.062	0.061	3,467	250	3,467	3,467	6,933
Algeria	1.13	64,746	64,746	0.138	1.075	1.048	59,801	-4,945	59,801	59,801	119,603
Bosnia and Herzegovina	0.09	5,228	5,228	0.012	0.093	0.091	5,200	-28	5,200	5,200	10,400
Croatia	0.70	39,813	39,813	0.077	0.600	0.585	33,367	-6,445	33,367	33,367	66,735
Cyprus	0.30	17,292	17,292	0.036	0.280	0.273	15,600	-1,692	15,600	15,600	31,201
EU	2.50	142,670	142,670		-	2.500	142,670	0	142,670	142,670	285,339
Egypt	1.07	61,126	61,126	0.186	1.449	1.412	80,602	19,475	80,602	80,602	161,203
France	34.24	1,954,037	1,954,037	4.427	34.478	33.616	1,918,407	-35,629	1,918,407	1,918,407	3,836,815
Greece	3.32	189,412	189,412	0.366	2.850	2.779	158,603	-30,808	158,603	158,603	317,207
Israel	3.03	172,924	172,924	0.490	3.816	3.721	212,338	39,414	212,338	212,338	424,676
Italy	26.41	1,507,250	1,507,250	3.307	25.755	25.112	1,433,064	-74,187	1,433,064	1,433,064	2,866,128
Lebanon	0.32	18,499	18,499	0.047	0.366	0.357	20,367	1,868	20,367	20,367	40,734
Libya (State of Libya)	0.88	50,268	50,268	0.030	0.234	0.228	13,000	-37,268	13,000	13,000	26,001
Malta	0.11	6,434	6,434	0.017	0.132	0.129	7,367	932	7,367	7,367	14,734
Monaco	0.07	4,021	4,021	0.011	0.086	0.084	4,767	745	4,767	4,767	9,534
Montenegro	0.03	1,609	1,609	0.004	0.031	0.030	1,733	124	1,733	1,733	3,467
Morocco	0.38	21,716	21,716	0.055	0.428	0.418	23,834	2,118	23,834	23,834	47,668
Slovenia	0.59	33,780	33,780	0.076	0.592	0.577	32,934	-846	32,934	32,934	65,868
Spain	17.22	982,447	982,447	2.146	16.713	16.296	929,953	-52,494	929,953	929,953	1,859,906
Syrian Arab Republic	0.17	9,652	9,652	0.011	0.086	0.084	4,767	-4,885	4,767	4,767	9,534
Tunisia	0.20	11,260	11,260	0.025	0.195	0.190	10,834	-427	10,834	10,834	21,667
Turkey	7.17	409,387	409,387	1.371	10.678	10.411	594,113	184,726	594,113	594,113	1,188,225
TOTAL ORDINARY CONTRIBUTIONS (MTF)	**100**	**5,706,788**	**5,706,788**	**12.840**	**100**	**100**	**5,706,788**	**0**	**5,706,788**	**5,706,788**	**11,413,576**

ADDITIONAL CONTRIBUTIONS

		Contribution for 2018 (in €)	**Expected Contribution for 2019 (in €)**						**Expected Contribution for 2020 (in €)**	**Expected Contribution for 2021 (in €)**	**Expected Contribution for 2020-2021 (in €)**
EC Discretionary Conribution		596,484	596,484						596,484	596,484	**1,192,968**
Host Country Contribution (Greece) [(2)]		367,200	367,200						344,800	344,800	**689,600**

(1): The proposed contributions for 2020-2021 are aligned with current UN assessed rates (2019-2021).
(2): The equivalent of USD 400,000 in EUR using the budget rate (0.862 for 2020-2021 and 0.918 for 2018-2019).

*A.O.C.=Assessed Ordinary Contribution(s)

Table 3. Summary of Activities and Administrative Costs by Component (MTF/EU discr.)

Proposed Budget 2020-2021

(in €)	Approved Budget 2018-2019 (in €)			Proposed Budget 2020-2021 (in €) ALTERNATIVE 2		
	2018	2019	Total 2018-2019	2020	2021	Total 2020-2021
CU						
TOTAL ACTIVITIES	299,863	747,969	1,047,832	387,602	807,861	1,195,463
POSTS AND OPERATIONAL COSTS	1,199,860	1,342,540	2,542,400	1,526,211	1,551,060	3,077,271
TOTAL	**1,499,723**	**2,090,509**	**3,590,232**	**1,913,813**	**2,358,921**	**4,272,734**
MEDPOL						
TOTAL ACTIVITIES	762,773	335,000	1,097,773	477,000	525,014	1,002,014
POSTS AND OPERATIONAL COSTS	594,093	590,274	1,184,367	604,152	613,938	1,218,090
TOTAL	**1,356,866**	**925,274**	**2,282,140**	**1,081,152**	**1,138,952**	**2,220,104**
REMPEC						
TOTAL ACTIVITIES	222,000	86,000	308,000	277,085	76,000	353,085
ADMINISTRATIVE SUPPORT	595,704	602,861	1,198,565	611,402	620,114	1,231,516
TOTAL	**817,704**	**688,861**	**1,506,565**	**888,487**	**696,114**	**1,584,601**
BP/RAC						
TOTAL ACTIVITIES	280,800	90,600	371,400	207,800	207,800	415,600
ADMINISTRATIVE SUPPORT	452,700	452,700	905,400	461,754	470,989	932,743
TOTAL	**733,500**	**543,300**	**1,276,800**	**669,554**	**678,789**	**1,348,343**
PAP/RAC						
TOTAL ACTIVITIES	157,146	168,735	325,881	165,896	194,000	359,896
ADMINISTRATIVE SUPPORT	438,317	438,317	876,634	447,083	456,025	903,108
TOTAL	**595,463**	**607,052**	**1,202,515**	**612,979**	**650,025**	**1,263,004**
SPA/RAC						
TOTAL ACTIVITIES	275,000	301,000	576,000	296,922	306,000	602,922
ADMINISTRATIVE SUPPORT	346,547	346,547	693,094	353,478	360,547	714,025
TOTAL	**621,547**	**647,547**	**1,269,094**	**650,400**	**666,547**	**1,316,947**
INFO/RAC						
TOTAL ACTIVITIES	80,000	70,000	150,000	157,856	117,554	275,410
ADMINISTRATIVE SUPPORT	39,250	39,250	78,500	40,035	40,836	80,871
TOTAL	**119,250**	**109,250**	**228,500**	**197,891**	**158,390**	**356,281**
SCP/RAC						
TOTAL ACTIVITIES	120,000	105,000	225,000	133,706	134,856	268,562
ADMINISTRATIVE SUPPORT	55,000	55,000	110,000	56,100	57,222	113,322
TOTAL	**175,000**	**160,000**	**335,000**	**189,806**	**192,078**	**381,884**
SUBTOTAL	**5,919,053**	**5,771,793**	**11,690,846**	**6,204,082**	**6,539,816**	**12,743,898**
PSC*	720,959	701,815	1,422,774	758,013	801,658	1,559,671
GRAND TOTAL	6,640,012	6,473,608	**13,113,620**	6,962,095	7,341,474	**14,303,569**

TOTAL ACTIVITIES	*2,197,582*	*1,904,304*	*4,101,886*	*2,103,867*	*2,369,085*	*4,472,952*
TOTAL ADMIN & OPERAT.	*3,721,471*	*3,867,489*	*7,588,960*	*4,100,215*	*4,170,731*	*8,270,946*
DIRECT COSTS	*5,919,053*	*5,771,793*	*11,690,846*	*6,204,082*	*6,539,817*	*12,743,898*

PSC	*720,959*	*701,815*	*1,422,774*	*758,013*	*801,658*	*1,559,671*
GRAND TOTAL	*6,640,012*	*6,473,608*	*13,113,620*	*6,962,095*	*7,341,475*	*14,303,569*

**PSC calculation 13% and 4.5% prorated to the respective income.*

Table 4a. Details of Salaries and Administrative Costs (Secretariat)

Secretariat	Approved Budget (in €)			Proposed Budget (in €) with 2% increase		
	2018	2019	Total 2018-2019	2020	2021	Total 2020-2021
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff [3]						
Coordinator - D.1	227,405	229,679	457,084	234,273	238,958	473,231
Deputy Coordinator - P.5	205,215	207,268	412,483	211,413	215,641	427,054
Programme Officer (Governance) - P.4	176,451	178,215	354,666	181,780	185,415	367,195
Programme Officer (MEDPOL) - P.4	176,451	178,215	354,666	181,780	185,415	367,195
Programme Officer (MEDPOL Monitoring & Assessment Officer) - P.3	149,247	150,740	299,987	153,755	156,830	310,585
Programme Officer (Socio-economic Activities/Sust. Development) - P.3	149,247	150,740	299,987	153,755	156,830	310,585
Programme Officer (MEDPOL Pollution) - P.3[5]	149,247	150,740	299,987	153,755	156,830	310,585
Legal Officer - P.3	149,247	150,740	299,987	153,755	156,830	310,585
Programme Officer QSR Expert - P3[4]	0	150,740	150,740	153,755	156,830	310,585
Information and Communication Officer-P3[5]	0	0	0	153,755	156,830	310,585
Admin/Fund Management Officer - P.4[1]	0	0	0	0	0	0
Programming/Administration Officer - P.2[1]	0	0	0	0	0	0
Total Professional Staff	**1,382,510**	**1,547,077**	**2,929,587**	**1,731,776**	**1,766,409**	**3,498,185**
General Service Staff						
Meetings and Procurement Assistant - G.6[1]	0	0	0	0	0	0
Payments and Travel Assistant - G.5[1]	0	0	0	0	0	0
Budget Assistant - G.6[1]	0	0	0	0	0	0
Administrative Assistant - G.6[1]	0	0	0	0	0	0
Information Assistant- G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant (MEDPOL) - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Administrative Clerk - G.4/G.5[1]	0	0	0	0	0	0
IT Assistant - G.5[1]	0	0	0	0	0	0
Total General Service Staff	**216,000**	**216,000**	**432,000**	**216,000**	**216,000**	**432,000**
TOTAL POSTS	**1,598,510**	**1,763,077**	**3,361,587**	**1,947,776**	**1,982,409**	**3,930,185**
Other Administrative Costs						
Travel on Official Business	120,000	120,000	240,000	120,000	120,000	240,000
Other Office costs [2]	75,443	49,737	125,180	62,590	62,590	125,180
Total Other Administrative Costs	**195,443**	**169,737**	**365,180**	**182,590**	**182,590**	**365,180**
TOTAL POST AND OTHER ADMINISTRATIVE COSTS	**1,793,953**	**1,932,814**	**3,726,767**	**2,130,366**	**2,164,999**	**4,295,365**

(1) Post is covered by the Programme Support Costs.

(2) Allocation for MAP staff training, ICT services and MAP Office contingency plan development.

(3) Two percent increase in the international staff cost in 2020 and 2021.

(4) The post was financed by the savings in 2019.

(5) The Post was finacned by the Government of Italy in 2018-2019.

Table 4b. Details of Salaries and Administrative Costs (REMPEC)[5]

REMPEC	Approved Budget (in €)			Proposed Budget 2020-2021 (in €) 2% increase		
	2018	2019	Total 2018-2019	2020	2021	Total 2020-2021
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff[4]						
Head of Office P.4	165,080	166,731	331,811	170,066	173,467	343,533
Programme Officer (Prevention) P.3	126,167	127,429	253,596	129,977	132,577	262,554
Programme Officer (OPRC) P.3	131,573	132,888	264,461	135,546	138,257	273,803
Programme Officer (Offshore) P.3[(1)]	0	0	0	0	0	0
Associate Professional Officer (APO) [(2)]	0	0	0	0	0	0
Total Professional Staff	**422,820**	**427,048**	**849,868**	**435,589**	**444,301**	**879,890**
General Service Staff						
Administrative/Financial Assistant - G7[(3)]	24,644	25,773	50,417	25,773	25,773	51,546
Assistant to the Director - G.7	36,319	37,408	73,727	37,408	37,408	74,816
Secretary - G.5	26,293	27,004	53,297	27,004	27,004	54,008
Total General Service Staff	**87,256**	**90,185**	**177,441**	**90,185**	**90,185**	**180,370**
TOTAL POSTS	**510,076**	**517,233**	**1,027,309**	**525,774**	**534,486**	**1,060,260**
Other Administrative Costs						
Travel on Official Business	35,000	35,000	70,000	35,000	35,000	70,000
Office costs	50,628	50,628	101,256	50,628	50,628	101,256
Total Other Administrative Costs	**85,628**	**85,628**	**171,256**	**85,628**	**85,628**	**171,256**
TOTAL POST AND OTHER ADMINISTRATIVE	**595,704**	**602,861**	**1,198,565**	**611,402**	**620,114**	**1,231,516**

(1) Proposed activities in the PoW for the biennium 2020/2021 in relation to the Offshore Action Plan is subject to the availability of financial ressources for this post.

(2) This post will be covered by the relevant International Maritime Organization Member State in the framework of the IMO Associate Professional Officer (APO) programme.

(3) This post is partially covered by IMO contribution (Euro 13,000 per annum) paid from IMO's share of Project Support Costs.

(4) Two percent annual increase on the international staff costs for 2020 and 2021.

(5) The final table will be provided by REMPEC and will be presented to COP21.

THEME 1. GOVERNANCE

Strategic objectives:
1. To strengthen regional and national governance mechanisms, resource availability and capacity for the implementation of and compliance with the Barcelona Convention, its Protocols, the Mediterranean Strategy for Sustainable Development and the adopted regional Strategies and Action Plans;
2. To mobilize additional resources to Mediterranean Trust Fund in order to increase its impacts;
3. To strengthen synergies, complementarities, and collaboration among international and regional partners and organizations active in the Mediterranean region, and enhance stakeholders' participation and outreach;
4. To deliver knowledge-based assessments of the Mediterranean environment and scenario development for informed decision-making and stakeholder work;
5. To ensure visibility of the MAP/Barcelona Convention, its role and achievements.

2020-2021 Indicators:
1. Number of new ratifications of Barcelona Convention and its Protocols;
2. (a) Level of satisfaction of services rendered to MAP meetings;
(b) Number of "green meetings" organised;
3. Share of external financial resources mobilized by the entire MAP system to co-finance MTF for the implementation of the Mid-Term Strategy;
4. (a) Number of Parties reporting on the implementation of the Barcelona Convention and its Protocols;
(b) Number of reporting format questions/ sections completed;
5. Number of regional programmatic and policy instruments developed;
6. Percentage of biennial increase of civil society accredited organizations including private sector partnering with MAP;
7. Number of MoUs/MoCs concluded or updated;
8. Number of joint activities with partners;
9. (a) Number of countries updating and implementing national IMAP-compatible monitoring and assessment programmes;
(b) Number of IMAP Common Indicators populated with data for 2019-2020;
10. Number of reports, factsheets and other scientific publications produced by the MAP System;
11. (a) Number of Info/MAP services provided;
(b) Number of data set and/or data services made available through Info/MAP platform;
12. Number of downloads of publications available on MAP system websites;
13. Number of communication products released;
14. Number of events featuring MAP system;
15. Number of webpages on the UN Environment/MAP and MAP Components websites viewed annually.

2020-2021 Targets:
1. At least 4 additional ratifications of Protocols and amendments to one Protocol entered into force;
2. (a) 80% level of satisfaction;
(b) At least 50% of meetings
3. At least 40% of MTF budget;
4. (a) 22 National Reports submitted online;
(b) At lest 80% of reporting format questions/sections completed per legal instrument;
5. At least 4 regional programmatic and policy instruments;
6. At least 30% compared to the current number;
7. 4 MoU/MoC concluded or updated;
8. At least 20 joint activities with partners;
9. (a) 21 countries;
(b) Minimum 15 IMAP Common Indicators populated per country;
10. 25 reports, factsheets and other scientific publications;
11. (a) At least 7 on 10;
(b) 6 data sets/ services;
12. 5,000 downloads per annum;
13. At least 12 online press releases and 30 news items;
14. 30 events/ side events;
15. At least 30,000 total pages viewed per annum.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
1.1. Contracting Parties supported in the implementation of the Barcelona Convention, its Protocols, Regional Strategies and Action Plans.						**447,602 €**	**1,150,029 €**	**1,597,631 €**	**2,471,500 €**	**563,000 €**	
1.1.1. Ratification of the Barcelona Convention and its Protocols by all Contracting Parties supported.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Follow-up and promote ratification of Protocols with a particular focus on those not yet entered into force or ratified by less than 50% of Contracting Parties.	Send letters and organise missions to concerned CPs; Communicate with Depositary and CPs, Embassies in Athens. Enhance capacity-building activities towards increasing ratifications (workshops and communication material).	CU	MED POL, PAP/RAC, REMPEC, SPA/RAC, SCP/RAC	Respective CPs	a) Increased number of ratifications of the Protocols; b) 1 Protocol entered into force by end of 2021 at the latest.	0 €	0 €	0 €			
1.1.2. Effective legal, policy, and logistic support provided to MAP decision-making process including advisory bodies meetings						**330,000 €**	**1,053,427 €**	**1,383,427 €**	**0 €**	**515,000 €**	
1. Organize COP 22.	In house expertise, preparation of Host Country Agreement; pre- and in-session working documents in 4 languages, information documents, ensure conference services, venue, organize side events, make travel arrangements for 1 participant per CP and up to 10 representatives from MAP partners (civil society) and for the Secretariat.	CU	All MAP Components	Host country, CPs, MAP Partners	a) COP 22 successfully delivered; b) Progress achieved during the biennium 2020-2021 reviewed and acknowledged; c) COP 22 Declaration, Decisions including the new MTS 2022-2027 and the PoW 2022-2023 reviewed and adopted, recommendations of the Compliance Committee and the MCSD reviewed; d) Status of implementation of the Convention and its Protocols reviewed; e) MAP visibility and outreached enhanced.	0 €	300,000 €	300,000 €		60,000 €	The figures shown as external resources indicate any additional costs that may go beyond the approved budget, to be incurred by a CP should it offers to host the meetings.
2. Organize the 89th, 90th and 91st Meetings of the Bureau as well as meeting on the eve of COP 22.	In house expertise, working documents in 2 languages, information documents, conference services, venue, travel arrangements for 1 delegate per Bureau member and for the Secretariat.	CU	All MAP Components		a) The 89th, 90th and 91st Meetings of the Bureau as well as a Bureau meeting on the eve of COP 22 successfully delivered; b) Progress of implementation of the MAP PoW 2020-2021 reviewed on a 6-monthly basis; c) Guidance provided to the Secretariat and the Contracting Parties on specific issues; d) Main directions of the new PoW 2022-2023 and the MTS 2022- 2027 defined.	70,000 €	35,000 €	105,000 €		30,000 €	
3. Organize the Meeting of the MAP Focal Points preceded by the MAP Component/Thematic Focal Points and the EcAp Coordination Group Meetings.	In house expertise, working documents in 2 languages, Information documents, conference services, venue, travel arrangements for one delegate per CP and for the Secretariat.	CU	All MAP Components	MAP Focal Points, MAP Partners	a) Meeting of MAP Focal Points and EcAp Coordination Group Meeting successfully convened; b) Progress on the implementation of the MAP PoW 2020-2021 reviewed and acknowledged; c) Draft Decisions prepared reviewed and finalised for submission to COP 22; d) The new MTS 2022-2027 and the PoW and Budget 2022-2023 reviewed in depth for submission and consideration by COP 22.		120,000 €	120,000 €		50,000 €	
	In house expertise, working documents in 2 languages, Information documents, conference services, venue, travel arrangements for one delegate per CP and for the Secretariat / respective MAP Components.	MED POL, PAP/RAC, Plan Bleu/RAC, REMPEC, SCP/RAC, SPA/RAC, INFO/RAC	CU	MAP Components Focal Points, MAP Partners	a) Component/Thematic FP Meetings successfully convened; b) Technical aspects of the implementation of the Protocols reviewed; c) Progress on the implementation of MAP Components' led activities of the PoW 2020-2021 reviewed; d) Technical and policy documents reviewed for further review by higher MAP bodies, including draft decisions, policy papers, assessment products etc.; e) Proposed PoW 2022-2023 activities reviewed for further submission to MAP Focal Points meeting.		350,000 €	350,000 €		10,000 €	MED POL FP Meeting: €50,000; PAP/RAC FP Meeting: €40,000; SPA/RAC FP Meeting €70,000; REMPEC FP Meeting: €70,000; SCP/RAC FP Meeting: €45,000; Plan Bleu FP Meeting: €40,000; INFO/RAC FP Meeting €35,000.
4. Organize Compliance Committee Meetings.	Working and information documents in two languages, conference services, participation arrangements for up to 14 Compliance Committee members and/or alternates; In house expertise.	CU	MED POL, SPA/RAC, REMPEC, PAP/RAC, SCP/RAC, INFO/RAC	Compliance Committee	a) 2 Compliance Committee Meetings successfully convened; b) Non-compliance situations addressed and brought to the attention of COP 22; c) Guidance provided to the Contracting Parties as appropriate; d) Possible joint sessions with Compliance Committees of other MEAs held.	45,000 €	45,000 €	90,000 €		30,000 €	
5. Organize the 19th Meeting of the MCSD and its Steering Committee annual meetings; Undertake and conclude the mid-term evaluations of the MSSD and SCP Regional Action Plan	In house expertise, consultancy, agreement with Host Country, working documents in English and French, information documents, conference services, travel arrangements for MCSD and MCSD Steering Committee members, regional workshops.	CU, Plan Bleu/RAC, SCP/RAC	All other MAP Components	MCSD and its Steering Committee, MAP Partners	a) 19th Meeting of the MCSD successfully convened; conclusions and recommendations provided to the Contracting Parties; b) 2 meetings of the MCSD Steering Committee, at least 1 of them face-to-face, successfully convened; c) Mid-term evaluations of the MSSD and SCP Regional Action Plan successfully delivered (desktop analysis; external expertise; consultation document; online consultation, working groups, and participatory workshops).	55,000 €	103,427 €	158,427 €		30,000 €	The figures shown as external resources indicate any additional costs that may go beyond the approved budget, to be incurred by a CP should it offers to host the meetings.
6. Formulate the MAP MTS 2022-2027 through an inclusive, participatory Contracting Parties's driven process.	In house expertise, consultancy, meetings of MAP Focal Points (working documents in 2 languages, information documents, conference services).	CU	All MAP Components	CPs, MAP Partners	a) MTS 2016-2021 evaluation and review successfully delivered; b) MTS 2022-2027 prepared and submitted to MAP FP and COP 22 through a participatory process and under Parties' leadership.	25,000 €	60,000 €	85,000 €		20,000 €	The figures shown as external resources indicate any additional costs that may go beyond the approved budget, to be incurred by a CP should it offers to host the meetings.
7. Formulate in coordination with regional bodies a Post-2020 Strategic Action Programme for the conservation of biodiversity and sustainable management of natural resources in the Mediterranean Region (SAP BIO 2021-2035).	Regional meetings, conference services, in-house expertise and coordination; travel arrangements for members of the Advisory Committee Consultancy, coordination meetings, including SAP BIO Nat. Correspondents ones.	SPA/RAC	CU and other MAP Components as relevant	CPs, SAP BIO Advisory Committee member organizations SPA/RAC Focal Points, ACCOBAMS, CBD, FAO, GFCM, IUCN, MedPAN, MedWet, WWF	a) SAP BIO Advisory Committee established and held; b) Overall and Specific Guidance provided to the drafting of SAP BIO 2021-2035, ecosystem approach based, aligned with the Sustainable Development Goals (SDG), and harmonized with the Global CBD Post 2020 biodiversity framework; c) SAP BIO 2021-2035 prepared and submitted to the meetings of SPA/RAC and Biodiversity Thematic Focal Points, ECAP Coordination Group, MAP Focal Points and COP 22; d) 2021-2035 Strategic Action Programme for the conservation of biodiversity and sustainable management of natural resources in the Mediterranean Region (SAP BIO 2021-2035) aligned with the Sustainable Development Goals (SDG), harmonized with the Global CBD Post 2020 biodiversity framework and based on the findings and recommendations of the 2004-2019 SAP BIO, elaborated and presented to the SPA/BD FP, EcAp CG, MAP FP meeting and COP 22.	55,000 €	30,000 €	85,000 €		150,000 €	Non-secured external funding possibly from MAVA.
8. Develop/ update regional Strategies/ Action Plans addressing sea-based pollution.	In house expertise, consultancy, regional meetings, travel, interpretation, translation	REMPEC, CU	MAP Components	CPs, OFOG, IMO, offshore industries	a) Regional Strategy for Prevention of and Response to Marine Pollution from Ships (post 2021), ecosystem approach based and aligned with relevant SDG prepared for submission to meetings of REMPEC Focal Points, ECAP Coordination Group, MAP Focal Points and COP 22; b) Stengthened implementation of the Mediterranean Offshore Action Plan and Action Plan kept under review through regular meetings of the Offshore Protocol Focal Points.	70,000 €		70,000 €		35,000 €	Non-secured extenal funding possiby from IMO ITCP 2020
9. Develop the MAP data management policy, including on IMAP Info-System.	In house expertise, conference services, translation, interpretation, reports, regional meeting(s), participation arrangements for CPs delegates	INFO/RAC	All MAP Components	Regional information system platforms, EEA etc.	IMAP data policy elaborated for submission to meetings of relevant Thematic/MAP Components Focal Points, ECAP Coordination Group, and MAP Focal Points and as appropriate to COP 22, and its implementation ensured in a coordinated manner.	10,000 €		10,000 €		100,000 €	Non-secured external funding under negotiation.
10. Enhance the sustainability of MAP operations.	In house expertise, Sustainable MAP Operations Task Force meetings.	CU, all MAP components	All MAP Components, Sustainable MAP Operations Task Force		a) Set of criteria and indicators to measure sustainability of MAP operations developed; b) Application of sustainable practices ensured in MAP operations and meetings/events (paperless meetings, CO2 calculation etc.); c) Internal Task Forces at the Coordinating Unit and each MAP component operational and/or team meetings conducted.		10,000 €	10,000 €			
1.1.3. Strengthen interlinkages between Core and Cross-cutting themes and facilitate Coordination at national level across the relevant sectors.						**13,000 €**	**2,000 €**	**15,000 €**	**31,000 €**	**48,000 €**	
1. Streamline in relevant national policies the updated MAP strategies and ecosystem approach-based GES targets (MSSD, SCP AP, Regional Strategy on pollution prevention from ships, ICZM Action Plan, Offshore AP, RSFCCA).	In-house expertise, consultations and meetings	CU, MED POL, PAP/RAC, SPA/RAC, REMPEC	All MAP Components	CPs	Main findings and recommendations from the review of LBS NAPs, ICZM national Strategies, Sea-based pollution NAPs, Biodiversity NAPs, assessing the level of integration and GES mainstreaming, reviewed by Thematic/Components Focal Points Meetings and other MAP bodies.	10,000 €		10,000 €		18,000 €	

2. Continue work on regional tools, including possible guidelines, on sustainable tourism with a particular focus on nautical activities, pleasure boating including cruises.	In-house expertise, consultancy; consultation and dissemination activities, including participatory workshop(s) and publication(s)	Plan Bleu	CU and other Components (including mainly SCP/RAC, PAP/RAC, SPA/RAC and REMPEC)	UN-WTO, UNEP/DTIE, UNESCO, EU/EC, French Agency for Development	Guidelines or voluntary codes of conduct on sustainable tourism developed (with a particular focus on cruise and recreational boating), building on capitalisation activities and methodological compilations produced in 2018-2019, through a participatory process in line with the MSSD 2016-2025 Vison and Objectives, taking into account in particular the SCP/Action Plan, the ICZM Protocol, the SAP BIO and the Marine Litter Regional Plan.	3,000 €	2,000 €	5,000 €	31,000 €	30,000 €	Secured external funding through InterreMED program (follow-up of Phase 1). Non-secured external funding possibly through ADEME.
1.1.4. Funding opportunities for regional and national priorities identified, donors/partners informed and engaged, through the implementation of the updated Resource Mobilization Strategy (RMS), and Contracting Parties assisted in mobilizing resources.						**104,602 €**	**94,602 €**	**199,204 €**	**2,440,500 €**	**0 €**	
1. Implement and update the Resource Mobilization Strategy.	In-house expertise, meetings; consultancies to draft project proposals	CU	All MAP Components	Partner Organisations and IFA	a) Updated RMS implemented in a coordinated manner; b) Project fiches updated and reviewed by the CU; c) Bilateral meetings with donors successfully convened and additional external resources secured; d) Coordinated submission of project proposals in line with the RMS; e) RMS updated in line with the new MTS development.	10,000 €		10,000 €			
2. Ensure timely and coordinated execution and progress review of MAP Projects with external funding.	In-house expertise, consultancy, project posts establishment.	CU, All MAP Components	All MAP Components	GEF, UNIDO, UN Economy Division, UNESCO IHP, EU, EIB, EBRD, IUCN, WWF Mediterranean, GWP Med.	a) MedProgramme: - Six Child Projects under MedProgramme successfully initiated and execution started; - Programme Coordinating Unit set up; - Steering Committee meetings organised; - Stakeholders meetings organised; - Project Work Plan timely implemented. b) IMAP/ MedMPA: - Execution continued successfully; - Steering Committee meetings organised; - Project Work Plan timely implemented. c) GEF Adriatic: - Execution continued successfully; - Steering Committee meetings organised; - Project Work Plan timely implemented. d) SwitchMed: - Execution continued successfully; - Steering Committee meetings organised; - Project Work Plan timely implemented. e) Two new full-fledged Project Proposals prepared and submitted.	94,602 €	94,602 €	189,204 €	2,440,500 €		a) The total funds managed by UNEP/MAP for the MedProgramme are USD 36,626,147 over the period 2020-2025. Out of this figure, USD 23,257,063 will be directly executed by UNEP/MAP and RACs. It is assessed that approx. 45% of these funds will be used in the 2020-2021 period. The MTF allocation represents the in-cash contribution to the Programme for the first two years out of 600.000 USD for the entire Programme duration; b) 1,800,000 EUR (approx.) for 2020-2021 out of total 4 million EUR; c) USD 630,00 out of the total budget of USF 1,817,900 over the period 2017-2020; d) 3,419,025 EUR (approx.) for 2020-2021 out of total 6,362,329 EUR
1.2. Contacting Parties supported in compliance with the Barcelona Convention, its Protocols, Regional Strategies and Action Plans						**8,000 €**	**8,000 €**	**16,000 €**	**0 €**	**50,000 €**	
1.2.1. Compliance mechanisms effectively functioning and technical and legal advice provided to Contracting Parties, including technical assistance to enhance implementation of the Convention and its Protocols including reporting.						**8,000 €**	**8,000 €**	**16,000 €**	**0 €**	**50,000 €**	
1. Provide technical assistance and guidance to CPs in the implementation of the Barcelona Convention and its Protocols.	In house expertise, guidelines, internal coordination.	CU, INFO/RAC	All MAP Components		a) Guidance on the national implementation of the BC and its Protocols provided; b) Informal hearings held by the Compliance Committee, as need be.	5,000 €	5,000 €	10,000 €			
2. Provide support to Contracting Parties to facilitate the process of national implementation reporting.	In-house legal and technical expertise.	CU, INFO/RAC	All MAP Components		a) Reporting tutorial document developed to facilitate the national reporting process; b) "FAQ-type" document prepared addressing key difficulties/challenges in reporting; c) Database compiling national laws implementing the BC and its Protocols built up (Informea).	0 €	0 €	0 €		50,000 €	External funding sought to provide technical support to the CPs, as need be, for reporting purposes.
3. Assess the status of the implementation of the Barcelona Convention and its Protocols through the reports submitted by the CP for the period 2018-2019 for submission to the Compliance Committee and COP 22.	In-house legal and technical expertise.	CU	All MAP Components		a) Substantive analysis of the national reports on the implementation of the BC and its Protocols prepared; b) Progress of implementation assessed; c) General and specific issues at stake highlighted and brought to the attention of MAP and relevant Component Focal Points; d) 2018-2019 trend analysis evaluation prepared.	3,000 €	3,000 €	6,000 €			
1.3. Strengthening participation, engagement, synergies and complementarities among global and regional institutions						**30,000 €**	**20,000 €**	**50,000 €**	**0 €**	**155,000 €**	
1.3.1. Regional cooperation activities promoting dialogue and active engagement of global and regional organizations and partners, including on SAP BIO, Marine Litter, SCP, ICZM, MSP and Climate Change (e.g. regional conference, donor meetings).						**10,000 €**	**10,000 €**	**20,000 €**	**0 €**	**50,000 €**	
1. Encourage NGOs to become MAP Partners and facilitate their contribution to MAP objectives including annual round table discussions back-to-back with other meetings.	In-house expertise, consultancy, on-line consultation on policy documents, support attendance in MAP meetings.	CU	All MAP Components	MAP Partners, CPs	a) Civil Society Organisations more involved in policy development and implementation, as per relevant COP decisions; Contribution of MAP Partners inputs provided to the new MTS; b) MAP Partners involved in the development of the new MTS; c) Engagement mechanism/strategy for Civil Society Organisations in the Mediterranean region developed; d) Accreditation of existing MAP Partner renewed; e) New partners added to the list of MAP Partners.	5,000 €	5,000 €	10,000 €			
2. Undertake periodic reviews of bilateral cooperation with partner organisations to enhance synergies and impact on the ground on areas of common interest.	In-house expertise, document preparations, back-to-back or separate meetings.	CU, MAP Components	MAP Components/ CU	IMO, LC/LP, BRSC, FAO/GFCM, ACCOBAMS, Regional Seas Conventions and Action Plans, EEA, IAEA, IPIECA, IOGP, CEFIC, FEDERCHIMICA, MOIG, WWF-MedPo, MEDPAN, IOC-UNESCO, IHP UNESCO, GWP-Med, Benguela Current Commission	a) New areas for leading role of MAP further defined (e.g. SD, SDG, IMAP, Marine Litter, ICZM, Ocean governance); b) Cooperation Agreements with at least two partners updated; c) New areas of cooperation identified and added to existing bilateral cooperation agendas (e.g. MSP, dumping of munitions); d) Cooperation with the oil and gas industry and the chemical industry strengthened; e) Synergies enhanced with sub-regional initiatives; f) A comprehensive plan of action developed including milestones, budgets and manpower required to implement the Offshore Protocol in the Mediterranean countries; g) Joint activities for the prevention of plastic pollution and toxic chemicals prepared and new agreement signed between SCP/RAC and the BRS Secretariat (following the MoU signed between Barcelona and BRS Secretariats); h) Joint work programme with ACCOBAMS implemented and reviewed; i) Collaboration with FAO/GFCM further strengthened.			0 €			
3. Co-organize with co-Chairs the UfM H2020 Review and Monitoring and Capacity Building Sub Groups annual meetings.	In-house expertise; working meetings.	CU, MED POL	SCP/RAC, Plan Bleu, INFO/RAC	UfM, EU, EEA, IFIs including EIB, EBRD, etc.	a) The UfM H2020 Review and Monitoring and Capacity Building Sub Groups annual meetings successfully delivered; b) Strengthened cooperation with EEA, EIB and UfM in the framework of H2020; c) Work Programme of the three H2020 Components followed up in a continuous manner and their synergies with UN Environment/ MAP-MED POL activities enhanced, joint activities developed and implemented as appropriate.			0 €			A new phase of H2020 is expected to start in 2020.
4. Coordinate with key partners in supporting the implementation of the Regional Plan on Marine Litter; Strengthen and expand the Regional Collaboration Platform for Marine Liter in the Mediterranean established in September 2016; Enhance collaboration with European Regional Seas on marine litter and other issues of common concern.	In-house expertise, coordination, consultancy, meetings	MED POL	CU, SCP/RAC, REMPEC, SPA/RAC	Collaboration Platform Partners, UfM H2020 Initiative, Regional Seas Programmes and Conventions, GPML,RFMOs	a) One communication campaign on prevention actions to fight against Marine Litter jointly organised by the members of the Regional Collaboration Platform for Marine Litter; b) Mediterranean Node updated as follows: - Marine litter-related webinars are made available to the Mediterranean community though the Mediterranean Node; - Reports, projects and experts rosters uploaded; c) Visibility on work undertaken on marine litter in the Mediterranean enhanced and shared at global level; d) Work undertaken at regional level, including by RFMOs further coordinated and links with global instruments strengthened (including G7 and G20 Action Plans);	5,000 €	5,000 €	10,000 €		50,000 €	Non-secured external funding under negotiation.
	In-house expertise, participation at meetings, position papers, formal submission	REMPEC	CU, MEDPOL, SPA/RAC	IMO, FAO	e) Synergies between the Regional Plan on Marine Litter Management in the Mediterranean and the IMO Action Plan to address marine plastic litter from ships, as well as other relevant plans or initiatives, explored and established.			0 €			
1.3.2. Participation in relevant existing or new international initiatives and dialogue (e.g. ABNJ, MPAs, Offshore, Sustainable Development) to highlight the Mediterranean regional specificities and increase synergies						**20,000 €**	**10,000 €**	**30,000 €**	**0 €**	**30,000 €**	
1. Promote BC, its Protocols and the MSSD 2016-2025 with a particular focus on pollution control and prevention, biodiversity and ICZM ; enhance collaboration with International organisation and European Regional Seas on marine litter and other issues of common interest.	Prepare side events, communication and visibility materials, in-house coordination and expertise, Meetings follow up/participation, position papers, formal submission. consultancies, coordination exchanges and meetings, implementation agreement(s) In house work	CU MED POL, REMPEC, SPA/RAC, PAP/RAC, SCP/RAC, Plan Bleu/RAC, INFO/RAC	All MAP Components	IMO, LDP, CBD, BSR Conventions, EUSAIR, EU MSFD, EU IMP, Adriatic Ionian Initiative, UNGA, EU, GEF, UNESCO, SPA/BD Thematic Focal Points, GFCM, IUCN CBD Secretariat	a) The role and visibility of the BC and UNEP/MAP promoted in international fora and new partnerships created; b) Contribution provided to UNEA, UNEP Regional Seas; c) Progress report on REMPEC activities submitted at each session of IMO/MEPC and at relevant sessions of the IMO Technical Cooperation Committee; d) Information on MAP work on the implementation of the BC and its Protocols shared with the Governing Bodies of the London Dumping Protocol, CBD, BRS Conventions, and UN BBNJ meetings; e) Participation at EU Working Group on MSP and the Joint EU Working Group on ICZM and MSP; EUSAIR, WESTMED and other relevant macro-regional strategies; f) Collaboration with OSPAR, HELCOM and Black Sea Commissions strengthened and synergies with other Regional Seas Programmes established; g) Synergies established with the IMO Action Plan to address marine plastic litter from ships (activity linked to 1.3.1.4.e); h) Position papers, preparation of communication materials in the field of (i) Ships ballast water control and (ii) Promoting of PSSAs in the Mediterranean; i) Side event on MAP/Barcelona Convention - SPA/BD Protocol organized within CBD COP15 (Beijing, 2020); j)Workshop/side event featuring Biodiversity in the Mediterranean under MAP/Barcelona Convention organized successfully within IUCN World Conservation Congress 2020 (Marseilles, 2020); k) Contribute to the CBD Post-2020 biodiversity framework with Mediterranean perspective inputs; l) Follow up the ongoing BBNJ process for harmonizing the relevant aspects of the elaboration of new SAP BIO 2021-2035 with it; m) ICZM Protocol and Common Regional Framework for ICZM (expected to be adopted by COP 21) promoted; Synergies maximised as appropriate.	20,000 €	10,000 €	30,000 €		30,000 €	
1.3.3. MSSD implementation set in motion through actions on visibility, capacity building, and the preparation of guidelines to assist countries adapt the Strategy to their national contexts.						**0 €**	**0 €**	**0 €**	**0 €**	**75,000 €**	
1. Strengthen further and sustain the Simplified Peer Review Mechanism (SIMPEER).	In-House expertise, coordination and management, consultancy; meetings, workshop, web platform	Plan Bleu	CU, MAP Components	CPs	a) Peer review process extended to 2 to 4 more CPs; b) Updated web platform; c) Updated SIMPEER methodology, including through collaborations and follow-up with previous participating countries; d) SIMPEER process links to National Voluntary Reviews of the HLPF continued.	0 €	0 €	0 €	0 €	75,000 €	
1.4. Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.						**148,200 €**	**153,800 €**	**302,000 €**	**409,000 €**	**945,000 €**	
1.4.1. Periodic assessments based on DPSIR approach and published addressing inter alia status quality of marine and coastal environment, interaction between environment and development as well as scenarios and prospective development analysis in the long run. These assessments include climate change-related vulnerabilities and risks on the marine and coastal zone in their analysis, as well as knowledge gaps on marine pollution, ecosystem services, coastal degradation, cumulative impacts and impacts of consumption and production.						**57,000 €**	**73,000 €**	**130,000 €**	**150,000 €**	**280,000 €**	

1. Undertake actions defined in 2023 MED QSR road map related to IMAP Cluster on Pollution toward integrated assessment of GES.	In-house expertise, consultancy, working meetings of expert teams and MAP Components	CU, MED POL	All MAP Components, IMAP Task Force	CPs, MAP Partners, GEF	a) IMAP Guidance Factsheets on Pollution and Marine Litter are regularly updated for review in CorMon meetings on Pollution and Marine Litter; b) Methodological concept to assess the interrelation of pressures/impacts/status of marine environment, in line with the approaches provided within analysis of IMAP cross-cutting issues for Pollution Cluster is developed and proposed; c) Methodological concept to support better integration of thematic assessment products related to IMAP Common Indicators (Pollution and Marine Litter) i.e. integration between Ecological Objectives (at national, sub-regional and regional scale) is agreed and tested; d) Steering Committee for the process of Transboundary Diagnostic Analysis (TDA) 2015 preparation is established; e) Main elements for the new TDA defined.			0 €	50,000 €		
2. Support the preparation of QSR 2023, by capitalizing on the results of SoED 2019, MSSD Dashboard and MedECC assessment report.	In-house coordination and management, external expertise and services, meetings	Plan Bleu	CU, MAP Components	MedECC	Inputs, information leads and lessons learned derived from SoED and MSSD dashboard feeding into QSR 2023 preparation, including input and leads on the link and geographic coincidence between state and pressures, as well as pressures and stakes.	0 €	0 €	0 €		30,000 €	
3. Prepare thematic products building on the findings of the State of the Environment and Development Report 2019 for outreach.	In-house expertise, consultancy, specialized services	Plan Bleu	CU, MAP Components	ADEME, AFD, Agence de l'eau Rhone Méditerranée Corse, CIHEAM, CMI/World Bank, EEA, FAO, IUCN, MedECC, OME, Maison Mediterranéenne des Sciences de l'homme, Tour du Valat, etc.	4 to 16 pages thematic briefs prepared and disseminated.	12,000 €	13,000 €	25,000 €		50,000 €	Non-secured external funding possibly through the Agence de l'eau Rhone Méditerranée Corse (contribution over 2019-2020). Other funding to be identified.
4.Develop and implement the second set of activities included in the Med 2050 Roadmap.	In-house expertise, consultancy, web platform, networking	Plan Bleu	CU, MAP Components	CPs, IPEMED, CIHEAM, IUCN, OME, CMI/World Bank, others including regional and sub-regional networks, civil society, private sector and local government representatives (tbc)	a) MED2050 network moderated and producing newsletters; b) MED2050 thematic briefs produced; c) MED2050 website developed and utilized; d) Survey/workshops on contrasted visions in the Mediterranean successfully held; e) Report analyzing these visions produced; f) Dissemination of scientific analyses on trends and disruption factors in an integrated framework; g) Workshops and analysis report on transition pathways successfully completed; h) Report of 2020-2021 activities prepared for further consideration and guidance to COP 22.	45,000 €	60,000 €	105,000 €	100,000 €	200,000 €	Expected from GEF Med Programme 170 000, Voluntary in-kind contribution from CPs; In-kind contribution from partners (drafting of chapters/ sub-chapters, etc.). Several applications on-going or pre-identified to be confirmed.
1.4.2. MSSD implementation monitored, as appropriate and evaluated, as appropriate on periodic basis through the agreed set of indicators in line with SDG and the sustainability dashboard.						**48,000 €**	**52,000 €**	**100,000 €**	**100,000 €**	**115,000 €**	
1. Improve the work on the indicators of the Mediterranean sustainability dashboard in accordance with Decision IG. 23/4.	In-house expertise, onsultancy	Plan Bleu, CU, SCP/RAC, and MCSD members	Other MAP Components	EEA, GFN, UN SD, IUCN-Med, OME, others, tbc	a) Dashboard indicators populated and updated to show trends; b) Development/improvement of the core set of Indicators for the monitoring of the MSSD implementation in synergy with the ongoing work on SDGs at the global level; c) Related factsheets and updating of the Med sustainability dashboard.	8,000 €	12,000 €	20,000 €		25,000 €	
2. Exchange of best practices on data and indicators among National Observatories and observation networks (in synergy with the MSSD dashboard, IMAP indicators, SEIS) and update the Regional Observatory.	In-house expertise, consultancy, in-country missions, workshops	Plan Bleu	CU, INFO/RAC and other MAP Components	EEA, European Topic Centres	a) Workshops organized with the participation of national Observatories and observation networks (to exchange best practices on SDG indicators, MSSD dashboard, NSSD monitoring, IMAP indicators, SEIS); b) Workshops reports produced; c) Factsheets on best practices produced and disseminated; d) CPs national and relevant regional Observatories referenced on Plan Bleu's observatory Website and main relevant national products and activities referenced / disseminated;	30,000 €	30,000 €	60,000 €	100,000 €	70,000 €	Secured external funding through GEF CP 1.1 and 2.1, on specific countries and aspects. Additional external resources needed to ensure full regional mobilization, including visits in participating countries.
	In-house expertise, external services	Plan Bleu	CU, MAP Components		e) Regional Observatory in Plan Bleu's website updated with recent assessment findings, maps and infographics, and visibility increased.	10,000 €	10,000 €	20,000 €		20,000 €	
1.4.3. Implementation of IMAP (the EcAp-based integrated monitoring and assessment programme) coordinated, including GES common indicators fact sheets, and supported by a data information centre to be integrated into Info/MAP platform.						**10,000 €**	**0 €**	**10,000 €**	**0 €**	**400,000 €**	
1. Support the coordinated implementation of IMAP at regional, sub-regional and national level.	In-house expertise and coordination, meeting(s), consultancies services, organizing online working group meetings, travel organization and conference services	CU	MAP Components, IMAP Task Force	ACCOBAMS, GFCM, IUCN, EEA	a) Coordinated approach followed to organize CorMon Meetings; b) Guidance fact sheets of IMAP common indicators (EO XYZ) updated; c) Common indicators and guidance fact sheets related to EO4 and EO6 developed; d) Actions of QSR 2023 roadmap related to all IMAP Components, with regards to scale of monitoring and assessment; data quality assurance and Integrated assessment of GES developed as per the agreed timeline; e) Related data sharing policy reviewed and implemented.	10,000 €		10,000 €		400,000 €	Non-secured external funding under negotiation.
1.4.4. Interface between science and policy-making strengthened through enhanced cooperation with global and regional scientific institutions, knowledge sharing platforms, dialogues, exchange of good practices and publications.						**15,700 €**	**21,300 €**	**37,000 €**	**159,000 €**	**120,000 €**	
1. Implement, sustain, and strengthen the mechanism to assist Barcelona Convention implementation with scientific institutions and promote their participation in research and development activities and facilitate transfer of technology.	In-house expertise, consultancies, workshop, publications	CU, Plan Bleu	All MAP Components	MCSD	a) Guidelines to strengthen the dialogue between science and policy, including business and civil society based on the UNEP Science Strategy;			0 €		10,000 €	
	In-house expertise, consultancies, workshop, publications.	Plan Bleu	CU and other Components	European Topic Center – University of Malaga (ETC UMA), Barcelona Metropolitan Area (MedCities), CPMR, UNIMED, REC	b) Database of scientific community maintained; Stakeholder's mapping updated and further developed; c) Policy papers prepared with communities of stakeholders including scientists, private sector and local governments; and advocated with policy-makers on sustainable biodiversity management, sustainable tourism and/or blue economy; d) Assistance provided to relevant Mediterranean stakeholders, ensuring synergies among this community, and increasing the visibility and impacts of their projects' results towards common identified strategical targets; e) Plan Bleu acting as a Science Policy Practice Interface to foster the exchange of experiences and knowledge sharing, and thus influencing a behavioural and policy change in the Mediterranean region;	11,000 €	11,000 €	22,000 €	144,000 €		Secured external funding from InterregMED projects on Biodiversity Protection, and Blue Growth phase II.
	In-house expertise, stakeholder dialogue with NFPs and MCSD Members, consultation exercises, communication, networking, external services, in country science-policy meetings	Plan Bleu		CPs, MCSD members, Union for the Mediterranean, MedECC, Aix-Marseille University, CIESM, MedCoast, MedCliVar, MISTRALS, Research Institute for Development, ADEME, Monaco	f) Assessment report on Environmental and Climate Change Drivers and Risks and Summary for Policy-Makers discussed, finalized and disseminated.	4,700 €	10,300 €	15,000 €	15,000 €	100,000 €	Secured external funding from ADEME. Non-secured external funding to be mobilized, for up to three thematic focus and territorial declinations.
2. Contribute to strengthen Science Policy Interface in the Mediterranean with regards to IMAP implementation and for feeding the knowledge gap to promote effective measures to achieve GES.	In-house expertise, implementing partner, and consultations at MAP meetings	MED POL	All MAP Components	CPs and MAP partners	a) Participation in working groups, projects steering committees, advocacy groups, scientific panels, and involvement in academic institutions actively pursued with the aim of enhancing the role of MAP/MED POL and for exchanging information and data needed to support/ promote the activities undertaken by MAP/MED POL, and to streamline MED POL priorities as appropriate to the work of the Mediterranean scientific community;			0 €			
	In-house expertise, travel	REMPEC		IMO, HELCOM, BONN AGREEMENT, MONGOOS, HCMR, Cedre, ISPRA, ATRAC, AASTMT, etc.	b) Information disseminated on R&D activities and programmes, including data sharing and projects, in cooperation with other Regional Agreements.			0 €		10,000 €	
1.4.5. Educational programmes, including e-learning platforms and college level degrees on governance and thematic topics of MAP relevance organized in cooperation with competent institutions.						**17,500 €**	**7,500 €**	**25,000 €**	**0 €**	**30,000 €**	
1. Further establish/extend educational activities and promote educational programmes in cooperation with academic institutions, focusing on marine and coastal issues, with the aim to promote education on sustainable development.	In-house expertise, coordination and management meetings	CU		Academic Institutions, including MEPIELAN/Panteion University, Aegean University, and other Universities	a) Joint Postgraduate courses on MAP related issues developed;	10,000 €		10,000 €			
		PAP/RAC	CU	CPs and their universities	b) Agreements prepared and signed with relevant academic institutions for including the MedOpen virtual training course in the academic curriculum;			0 €			
		INFO/RAC	CU, All MAP Components	All Components, CPs, academic institutions	c) e-learning platform operational to support e-learning course; d) MAPs training material collected and prepared; e) MAPs Training courses integrated in the platform;	7,500 €	7,500 €	15,000 €		30,000 €	
		Plan Bleu	CU, MAP Components	CPs and their universities, academic networks and knowledge management institutions	f) Agreements prepared and signed with relevant academic and knowledge management institutions.			0 €			
1.5. MAP knowledge and MAP information system enhanced and accessible for policy- making, increased awareness and understanding.						**185,000 €**	**90,000 €**	**275,000 €**	**0 €**	**590,000 €**	
1.5.1. Info/MAP platform and platform for the implementation of IMAP fully operative and further developed, connected to MAP components' information systems and other relevant regional knowledge platforms, to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public.						**170,000 €**	**75,000 €**	**245,000 €**	**0 €**	**590,000 €**	
1. Repower InfoMAP infrastructure and maintain and upgrade InfoMAP modules.	In-house coordination and expertise, service contract	INFO/RAC	CU, All MAP Components	Regional information system platforms	a) Existing modules of InfoMap System upgraded; b) Technological Infrastructure upgraded; c) MedPol InfoSystem migrated in the IMAP System; d) Data and metadata from Regional organisation integrated; e) MAP's database and products integrated; f) MAP Component technical supporting performed.	50,000 €	10,000 €	60,000 €		40,000 €	
2.Complete IMAP infosystem development for all IMAP Common Indicators and further develop data dictionaries, information standards and quality controls.	In-house coordination and expertise, service contract	INFO/RAC	CU, All MAP Components	Regional information system platforms	a) IMAP information System finalised; b) Dataflow in the Data Centre to support IMAP selected; c) IMAP full set of Indicators implemented;	20,000 €	15,000 €	35,000 €		200,000 €	

		INFO/RAC			d) Data Dictionaries and Information Standards upgraded and developed; e) Quality control on data formats and data coherence upgraded and developed.	20,000 €	15,000 €	35,000 €		100,000 €	Non-secured external funding under negotiation.
3. Undertake Dashboard Data Analysis and customization.	In-house coordination and expertise, service contract	INFO/RAC	CU, All MAP Components		a) Data Analytic dashboard developed; b) Data Analytic dashboard customised.	20,000 €	15,000 €	35,000 €		40,000 €	
4. Develop Climate change adaptation prototype platform.	In-house coordination and expertise, service contract	INFO/RAC	CU, Plan Bleu, PAP/RAC, other MAP Components		Prototype of Climate Change Adaptation platform developed;			0 €		50,000 €	
5. Maintain, upgrade and implement MAP Components' databases and data platforms.	In-house coordination and expertise, service contract, consultancy	INFO/RAC, MED POL	CU, SPA/RAC, PAP/RAC,	CPs	a) Historical MED POL monitoring database is successfully migrated to IMAP Info System; b) New MED POL monitoring Data Flow fully integrated in the IMAP Info System; c) Data protocols for interlinkages between BCRS, NBB/PRTR Infosystem, IMAP, InfoMAPNode prepared and tested.			0 €		100,000 €	
		SPA/RAC, INFO/RAC		Contracting Parties, MedPAN, IUCN, ACCOBAMS, HCMR, Action Plans Partners	a) Mediterranean Biodiversity Platform maintained, data updated (data.rac-spa.org) and connected to other relevant SDIs (Emodnet, InfoMAP); b) MAMIAS content updated and harmonized with EASIN and AquaNIS and collaboration formalized; c) SDF online application updated (data included) and linked to the Mediterranean Biodiversity Platform; d) MAPMED database updated and filled with existing data.	30,000 €	20,000 €	50,000 €		30,000 €	Non-secured external funding under negotiation.
		REMPEC, INFO/RAC		CPs	a) Existing REMPEC's information and communication system and decision support tools (*i.e. REMPEC Website, Country Profile, Mediterranean Oil Spill Waste Management, MEDGIS-MAR, MENELAS information System, Beta version of the online Mediterranean Guide on Cooperation and Mutual Assistance in responding to Marine Pollution Incidents*) upgraded, updated and interconnected, where appropriate; b) CPs and relevant partners enabled to share data in accordance with the requirements of the 2002 Prevention and Emergency Protocol and IMAP.	30,000 €		30,000 €			
6. Redesign the online SPAMI Evaluation System.	In house coordination and expertise, consultancies, services	SPA/RAC	INFO/RAC	Concerned SPA/RAC Focal Points, SPAMI managers	Online SPAMI Evaluation System redesigned and operational.			0 €		30,000 €	
1.5.2. Barcelona Convention online Reporting System (BCRS) updated and operational, improved and maintained, and complemented and streamlined with other reporting requirements.						**15,000 €**	**15,000 €**	**30,000 €**	**0 €**	**0 €**	
1. Ensure effective operation of the BCRS on-line reporting system.	In-house coordination and expertise, service contract	INFO/RAC, CU	All MAP Components		The BCRS on-line reporting system tuned and upgraded.	15,000 €	15,000 €	30,000 €			
1.6. Raised awareness and outreach.						**105,856 €**	**46,386 €**	**152,242 €**	**175,000 €**	**680,500 €**	
1.6.1. The UNEP/MAP communication strategy updated and implemented.						**105,856 €**	**46,386 €**	**152,242 €**	**175,000 €**	**680,500 €**	
1. Implement the operational Communication Strategy.	In-house expertise, cosultancy, service contracts, travel	INFO/RAC, CU	All MAP Components	MAP COMM TF	**a) MAP and MAP Components' websites updated regularly**	15,356 €		15,356 €		20,000 €	
		INFO/RAC, CU			**b) Communication material and campaigns developed:** - Newsworthy opportunities are identified; - Communication campaigns are designed and implemented; - Communication materials are tailored to MAP target audiences and can include media briefings, social media packages, web pages, etc.; - One communication campaign for each 'State of the Mediterranean Environment' publication; - One communication campaign developed on key topics identified for the biennium; - Communication campaigns developed at the occasion of key dates such as UN observancies related to the Environment; - MAP featured in regional and international meetings and conferences;			0 €		150,000 €	
		INFO/RAC, CU			**c) Communication pack for MAP flagship publications developed;**			0 €		30,000 €	
		INFO/RAC, CU			**d) Biennial publication on emerging topics/threats highlighting existing knowledge gaps prepared;**			0 €		30,000 €	
		INFO/RAC, CU			**e) Engagement with traditional media increased and MAP presence on social media developed:** - An updated media contact list is available in partnership with the Contracting Parties; - Engagement with the media is increased both in a proactive and reactive way to enhance the perception of MAP by journalists as a reference on issues linked to the Mediterranean environment.; - MAP presence on the Twitter social media platform is developed;			0 €		10,000 €	
		INFO/RAC, CU			**f) Homogeneity and consistency of MAP system's image increased:** - A set of presentation and communication material and templates is available to all MAP staff (Power Points, Fact Sheets, brochures, roll-up), aiming at presenting MAP as a single and coherent entity, communicating as one; - Communicating as One' guidelines for joint MAP products and communications to be followed by each MAP component and project; - MAP-branded regional visibility items prepared; - Corporate graphical layout for MAP publications developed: series of publication layouts;			0 €		60,000 €	
		INFO/RAC, CU			**g) MAP's multiple database and information systems leveraged to raise awareness and understanding:** - Maps and data products elaborated using a customized data visualization public interface highlighting key data from MAP multiple databases;			0 €		40,000 €	
		INFO/RAC, CU			**h) MAP's reach increased by joint communication:** - All MAP Components participating in annual COM campaigns;			0 €		30,000 €	
		INFO/RAC, CU			**i) Knowledge on MAP mandate and action enhanced:** - Accessibility of general information on MAP website improved, ensuring content is tailored to each targeted audiences; - Annual report highlighting MAP key achievements; - Communication campaign for COP 22; - MED NEWS - the MAP Newsletter; - MAP visibility increased at high level events; - Videos, spots, slide shows, scientific documentaries;		5,054 €	5,054 €		50,000 €	
		INFO/RAC, CU			**j) Internal communication increased:** - Regular MAP Communication Task Force meetings held;			0 €		10,000 €	
		INFO/RAC, CU			**k) MAP Staff communication capacity enhanced:** - Communication training for MAP staff organised; - Internal MAP networking and share of information enhanced; - Directory of all the MAP network maintenance and update (repository of NFPs designations); - On-line Event Calendar of all the MAP network initiatives maintenance and update; - Groupware of all the MAP network available: communication tool for document repository and interest groups management; - Surveys and questionnaires platform available; - Help desk and assistance for all the components of InfoMAP network.			0 €		30,000 €	
		SPA/RAC	INFO/RAC, CU	MAP Communication Task force, MAP Partners, Contracting Parties	a) Marine biodiversity-related communication material and tools prepared and disseminated in line with the new MAP communication strategy (produce 2 short films on marine species and ecosystems of the SPA/RAC action plans); b) Contribution provided to the development of a communication pack for MAP flagship publications i.e. SoED2019; c) Goodies and promotional material on SPA/RAC produced.	10,000 €	15,000 €	25,000 €			
		REMPEC	INFO/RAC, CU	IMO	a) Awareness, information materials on marine pollution from ships produced and disseminated; b) Communication events on REMPEC activities organised.	5,000 €	5,000 €	10,000 €			

		Plan Bleu	CU, INFO/RAC and Other Components	CPs, ADEME, AFD, CIHEAM, CMI/World Bank, EEA, FAO, IUCN, MedECC, OME, Maison Mediterranéenne des Sciences de l'homme, Tour du Valat, etc.	SOED 2019 published and disseminated, through the following steps: (a) Executive Summary translated into ES, AR; (b) Editing and layout of full report in FR and EN; (c) SoED dedicated web site established and online; (d) Video(s) including sub-titles prepared and disseminated; (e) Infographics prepared and disseminated through very short (max 2 pages) documents; (f) SoED launching events organised in at least 2 Mediterranean countries.	35,500 €	4,500 €	40,000 €	10,000 €	50,000 €	Secured external funding from ADEME. Additional funding to be identified, including CPs contributions for workshops at national / sub-regional levels.
		MED POL, Plan Bleu, INFO/RAC	CU, INFO/RAC and other Components	EEA	Key findings of the Second report on the Implementation of H2020 finalised and disseminated through the following steps: (a) Communication material on the thematic chapters on Industrial Emissions and Waste timely delivered; (b) Findings incorporated in key documents and communication platforms.			0 €		17,500 €	
		CU	All MAP Components		a) A communication toolkit developed for use by Mediterranean Civil Society Organizations for their own awareness-raising/ advocacy activities on environmental and sustainability issues (focusing on MTS Themes), including at least 2 language versions (including Arabic) and high-quality print files for posters, flyers, captioned photos and multimedia elements, where applicable, including a recorded video message (with subtitles) from MAP; b) Illustrated children's version of the Barcelona Convention and its Protocols produced, explaining the Convention to a young audience and identifying linkages with similar material developed by the United Nations on the 2030 Agenda for Sustainable Development and the 17 SDGs; c) Two (2) public/media outreach events organised; d) Campaign to raise awareness of microplastics organised; e) Braille version of the Barcelona Convention prepared.	25,000 €	16,832 €	41,832 €		50,000 €	
		Plan Bleu	CU, INFO/RAC and other Components	ADEME, IDDRI, MTES, media	a) Communication format modernized: Short publications, press releases, infographics and video(s) produced and disseminated; b) Communication media modernized: Plan Bleu Website modernized; utilization of social media strengthened; c) Development of specific websites for SoED 2019 and MED2050; d) CU and other Components communication activities and products disseminated through Plan Bleu's Website; e) CU and other Components communication activities and products disseminated through Plan Bleu's newsletter; f) CU and other Components communication activities and products disseminated through Plan Bleu's social medias (Facebook, Twitter, Linkedin); g) Communication on Plan Bleu and UN Environment/MAP activities and mandate in regional and international events.			0 €	59,000 €	59,000 €	Non-secured external funding possibly from MTES (French Ministry for Environment and Sustainability Transition).
2. Organize the annual celebrations of the Mediterranean Coast Day.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other MAP Components	CPs, local authorities, NGOs, media	Two regional Med Coast Day celebrations organised.	15,000 €		15,000 €	46,000 €		Secured eternal funding from GEF MedProgramme.
3. Support national/local Coast Day celebrations organised by CPs.	In-house coordination and management, external expertise and services	PAP/RAC	CU and other MAP Components	CPs, local authorities, NGOs, media	Three national Coast Day celebrations supported with technical and promotional material, and participation of PAP/RAC representatives.			0 €	60,000 €		Secured external funding from MAVA.
4. Implement the 3rd edition of the agreed procedure to grant the Istanbul Environment Friendly City Award.	In-house expertise, consultancy, service contracts.	CU	Plan Bleu/RAC, INFO/RAC and other MAP Components, as appropriate.		Next edition of the Istanbul Environment Friendly City Award to be granted at COP 22.			0 €		44,000 €	Expected voluntary contribution from CPs.
TOTAL THEME 1. GOVERNANCE						***924,658 €***	***1,468,215 €***	***2,392,873 €***	***3,055,500 €***	***2,983,500 €***	
					THEME 1. GOVERNANCE	**MTF 2020**	**MTF 2021**	**MTF TOTAL 2020-2021**	**Secured External Funding TOTAL 2020-2021**	**Non-Secured External Funding TOTAL 2020-2021**	
					Coordinating Unit	**387,602 €**	**807,861 €**	**1,195,463 €**	**2,490,500 €**	**822,000 €**	
					MED POL	**5,000 €**	**55,000 €**	**60,000 €**	**0 €**	**68,929 €**	
					REMPEC	**105,000 €**	**75,000 €**	**180,000 €**	**0 €**	**€46,428.57**	
					PB/RAC	**159,200 €**	**192,800 €**	**352,000 €**	**459,000 €**	**710,429 €**	
					SPA/RAC	**95,000 €**	**135,000 €**	**230,000 €**	**0 €**	**211,429 €**	
					PAP/RAC	**15,000 €**	**40,000 €**	**55,000 €**	**106,000 €**	**1,429 €**	
					INFO/RAC	**157,856 €**	**117,554 €**	**275,410 €**	**0 €**	**1,121,429 €**	
					SCP/RAC	**0 €**	**45,000 €**	**45,000 €**	**0 €**	**1,429 €**	
					TOTAL	***924,658 €***	***1,468,215 €***	***2,392,873 €***	***3,055,500 €***	***2,983,500 €***	
						0 €	0 €	0 €	0 €	0 €	
Sum of Outcomes Subtotals						**924,658 €**	**1,468,215 €**	**2,392,873 €**	**3,055,500 €**	**2,983,500 €**	
Sum of Outputs Subtotals						**924,658 €**	**1,468,215 €**	**2,392,873 €**	**3,055,500 €**	**2,983,500 €**	

THEME 2: Land and Sea Based Pollution

Ecological Objectives:
1. Human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms, and oxygen deficiency in bottom waters;
2. Contaminants cause no significant impact on coastal and marine ecosystems and human health;
3. Marine and coastal litter does not adversely affect coastal and marine environments;
4. Noise from human activities causes no significant impact on marine and coastal ecosystems;
5. New and emerging land-based pollution related problems are identified and tackled, as appropriate.

Strategic objectives:
1. To eliminate to the extent possible, prevent, reduce and control selected/regulated pollutant inputs, oil discharges and spills;
2. To prevent, reduce and control marine litter generation and its impact on the coastal and marine environment.

2020-2021 Indicators:
1. Number of marine pollution prevention and control regulatory instruments and policies updated or developed;
2. Number of new and updated guidelines and other implementation instruments streamlining SCP tools for key sectors and areas of consumption and production;
3. Number of countries submitting reports on annual pollution loads and pollution monitoring data for agreed pollutants;
4. (a) Number of projects identified and or prepared to eliminate pollution hot spots and respond to marine pollution;
(b) Quantities of obsolete chemicals and marine litter disposed in environmentally sound manner/reduced in selected areas;
5. Number of businesses, entrepreneurs, financial agents and civil society organizations capacitated to promote SCP solutions alternative to POPs and toxic chemicals, and marine litter reduction.

2020-2021 Targets:
1. 7 regional regulatory instruments/ policies developed/updated;
2. 6 new/updated guidelines and other implementation instruments developed/updated;
3. 21 Contracting Parties;
4. (a) At least 7 pilot projects on marine pollution;
(b) 600 tons of PCBs disposed in environmentally sound manner in selected areas; on the ground preparation for disposal in the next biennium of 1400 tons of PCBs and 30 tons of mercury in environmentally sound manner in selected areas; decreasing trend in reducing beach litter towards achieving the target of reduction of 20% by 2024 in pilot areas.
5. At least 100 trainees.

Main Activities	Means of implementation	Lead: CU and or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
2.1. Strengthening regional implementation of the obligations under the Barcelona Convention and 4 pollution -related Protocols, and of programmes of measures in existing relevant Regional Strategies and Action Plans.						**76,500 €**	**51,000 €**	**127,500 €**	**50,000 €**	**160,000 €**	
2.1.1. Targeted measures of the regional plans/strategies facilitated and implemented.						**76,500 €**	**51,000 €**	**127,500 €**	**50,000 €**	**160,000 €**	
1. Assess the implementation of the existing Regional Plans/Measures developed under Article 15 of the LBS Protocol, including socio-economic analysis.	In-house expertise, consultancies, regional meeting(s).	MED POL	SCP/RAC	CPs, UFM H2020, SEIS Project	a) Reports submitted by the Contracting Parties for the biennium 2018-2019 for existing Regional Plans' implementation reviewed; b) Final evaluation of implementation of targeted measures (with a timetable by 2021) prepared for the Regional Plans of Mercury, POPs and BOD5; c) Best practices on the implementation of the Regional Plans and other common measures shared at regional level and gaps and priorities for further technical support and capacity building identified.	11,000 €		11,000 €		20,000 €	This Activity will be implemented in conjuction with Activity 2.1.1.2.
2. Promote the use of relevant instruments and incentives to prevent/ reduce plastic pollution including the generation of single-use plastic bags and microplastics; abandoned, lost, discarded fishing gear (ALDFG); marine litter generated from aquaculture activities; marine litter from ships; and e-waste.	In-house expertise, consultancies, regional meeting(s), implementing partner(s)	MED POL	SCP/RAC	UN Environment Economy Division, SWITCH MED, FAO, GFCM, Marlice, ACCOBAMS, WWF/MEDPO	a) Best practices identified and shared with the CPs at regional level; b) Technical capacities of CPs enhanced to facilitate implementation of legally binding measures of the Regional Plan on Marine Litter Management in the Mediterranean; c) Gaps and priorities for technical support and capacity building identified;		30,000 €	30,000 €		40,000 €	Non-secured external funding under negotiation.
	In-house expertise, consultancies, regional/sub regional workshop(s)/ meeting(s)	SCP/RAC	MED POL		d) Best practices shared at regional level on new emerging measures, i.e. related to plastic pollution, EPR schemes for plastic packaging, microplastics intentionally added in production processes and products, single-use plastics, to facilitate the implementation of the Regional Plan on Marine Litter Management; e) Gaps and priorities for technical support and capacity building identified;	0 €	0 €	0 €	0 €	20,000 €	Non-secured extrnal funding possibly through WES (Water and Environment Support) Project (EU DG NEAR).
	In-house expertise, consultancy	REMPEC	MED POL	CPs, IMO, EBRD	f) Technical support provided to CPs, which so request, to implement the IMO Action Plan to address marine plastic litter from ships and the related provisions of the Regional Plan on Marine Litter Management in the Mediterranean, where appropriate.			0 €		30,000 €	Non-secured external funding possibly through ITCP 2020-2021: National PRF activities.
3. Promote reduction of municipal wastewater from small agglomerations using nature-based solutions; and prevention of sewage sludge and storm water-related waste from entering into the marine environment using BAT/BEP, and in particular Waste to Energy Technologies (W-ET).	In-house expertise, regional meeting(s), implementing partner(s)	MED POL	SCP/RAC, Plan Bleu	UFM H2020, GEF	a) Best practices identified and shared with the CPs at regional level; b) Technical capacities of CPs enhanced to facilitate implementation of legally binding measures of the Regional Plan on the reduction of BOD5 from urban waste water; c) Main elements of strategies and plans elaborated.	10,000 €	20,000 €	30,000 €	50,000 €	30,000 €	Secured external funding through GEF Med Programme Child Project 1.2. Non-secured external funding under negotiation.
4. Promote the use of relevant instruments for the identification and implementation of alternatives to POPs and mercury at the regional, and sub-regional level.	In-house expertise, consultancies, regional/sub regional workshop(s)	SCP/RAC	MEDPOL	GEF, UN Environment Chemicals Branch, BRSC Secretariat	a) Experiences and best practices on strategies for the prevention of new POPs shared with CPs at regional level, to facilitate the implementation of Regional Plans on POPs; b) Gaps and priorities for technical support and capacity building identified.			0 €		20,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project (EU DG NEAR).
5. Strengthen the capacity of individual coastal States to respond efficiently to marine pollution incidents through the development of sub-regional operational agreements and contingency plans, and enhance the levels of pre-positioned spill response equipment under the direct control of Mediterranean coastal States.	Consultancy, in-house expertise, meeting(s), travel	REMPEC	CU	IMO, OSPAR/Bonn Agreement, HELCOM, ITOPF, Cedre, ISPRA, etc	a) Technical support provided to CPs, which so request, to assess, prepare, adopt, update as well as implement and test national contingency plans and sub-regional agreements/contingency plans dealing with preparedness for and response to oil and HNS spills from ships, sea ports, oil handling facilities and offshore installations; b) Mechanism for the mobilisation of response equipment and experts in case of emergency implemented;	24,500 €		24,500 €			
	In-House expertise	REMPEC		ATRAC, Cedre, FEDERCHIMICA, ISPRA, MONGOOS, SAF, IMO	c) Mediterranean Assistance Unit (MAU) maintained and, where appropriate, expanded; and MAU special revolving fund replenished.	1,000 €	1,000 €	2,000 €			
6. Improve follow-up of pollution events, monitoring and surveillance of illicit discharges, as well as enhance level of enforcement and the prosecution of discharge offenders.	In-house expertise, consultancy, regional meeting(s), travel, interpretation, translation	REMPEC	CU	IMO, Cedre, INTERPOL, CBSS (ENPRO), OSPAR (NSN), Bonn Agreement	a) Meeting of MENELAS organised and recommendations implemented through technical support provided to CPs, which so request; b) Co-ordinated aerial surveillance operations for illicit ship pollution discharges promoted and supported.	30,000 €		30,000 €			
2.2 Development or update of new/existing action plans, programmes and measures, common standards and criteria, guidelines.						**127,362 €**	**122,000 €**	**249,362 €**	**182,720 €**	**240,000 €**	
2.2.1 Guidelines, decision-support tools, common standards and criteria provided for in the Protocols and the Regional Plans, developed and/or updated for key priority substances or sectors.						**62,362 €**	**42,000 €**	**104,362 €**	**152,720 €**	**140,000 €**	
1. Update the Annexes of the pollution-related Protocols.	In-house expertise, implementing partner(s)	MED POL	CU, SCP/RAC	BRSC, IMO	a)Working group(s) established by COP21 and Annexes to LBS and Dumping Protocols updated as appropriate for submission to COP 22; b) Annexes to the HW Protocol updated in line with ongoing efforts to update the annexes of the Basel Convention, as appropriate for submission to COP 22;	15,000 €	30,000 €	45,000 €	25,000 €		Secured external funding through GEF MedProgramme CP 1.2

		REMPEC	CU, MED POL	IMO	c) Working group established (OFOG) and Annexes to the Offshore Protocol updated for COP 22 consideration.			0 €		60,000 €	
2. Develop/ update technical Guidelines addressing diffuse sources, [placement of artificial reefs] and plastic pollution.	In-house expertise, consultancy, implementing partner(s), regional meeting(s)	MED POL	Info/RAC, Plan Bleu	EU REACH Regulation, Minamata Convention, EU Water Framework Directive, E-PRTR	a) NBB Guidelines updated addressing: - Diffuse sources of pollution; - Aquaculture sectors and riverine inputs for transitional waters; - The gap between PRTR and NBB reporting;	10,000 €	10,000 €	20,000 €		30,000 €	
		REMPEC	CU	CPs (OFOG), IOGP	b) Mediterranean Offshore Guidelines for the Conduct of Environmental Impact Assessment (EIA) reviewed by the Barcelona Convention Offshore Oil and Gas Group (OFOG), finalised and submitted for COP 22 consideration.					50,000 €	
		MED POL	SPA/RAC	IMO, London Convention and London Protocol, GFCM	c) Updated report on Artificial Reefs prepared for submission to the meetings of MED POL FPs, ECAP Coordination Group, MAP FPs and COP 22;	6,000 €	2,000 €	8,000 €			
	In-house expertise, consultancies	SCP/RAC	MEDPOL	H2020 Initiative, EC, national and international organisations working on plastic prevention	Technical guidelines on measures to reduce/ prevent single-use plastic items, other than plastic bags, prepared.	26,850 €	0 €	26,850 €	0 €	0 €	
3. Revise the existing recommendations, principles and guidelines, and develop new ones aimed at facilitating international cooperation and mutual assistance within the framework of the 2002 Prevention and Emergency Protocol.	In-house expertise, consultancy, service contract	REMPEC	CU	IMO, OSPAR/Bonn Agreement, HELCOM, ITOPF, Cedre, ISPRA, etc	a) Inter-regional HNS response guidelines developed; b) Maritime Integrated Decision Support Information System on Transport of Chemical Substances (MIDSIS-TROCS) updated and upgraded; c) Manual and tool to evaluate oil spill management capabilities developed; d) CECIS Marine Pollution integrated in the Mediterranean Emergency Reporting System (MedERSys); e) Guidance for the development of national mechanism for the mobilisation of response equipment and experts developed; f) Study carried out on the issue related to spills of condensate.	4,512 €		4,512 €	127,720 €		Secured external funding (del a to e) from WestMOPOCo.
2.2.2 Regional programmes of measures identified and negotiated for pollutants/ categories (sectors) showing increasing trends, including the revision of existing regional plans and areas of consumption and production.						**65,000 €**	**80,000 €**	**145,000 €**	**30,000 €**	**100,000 €**	
1. Develop the Regional Plan for Municipal Wastewater Treatment.	In-house expertise, consultancies, regional meeting(s)	MED POL	SCP RAC, Plan Bleu	UfM, H2020 Initiative, MAP Partners	Regional Plans developed/upgraded for submission to the meetings of MED POL FPs, ECAP Coordination Group, MAP FPs and COP 22: a) Regional Plan on Municipal Wastewater Treatment; b) Regional Plan (new) on Sewage Sludge Management; c) Regional Plan on Marine Litter upgraded, or technical annexes prepared and incorporated within the existing Regional Plan.	45,000 €	0 €	45,000 €	10,000 €	30,000 €	
2. Develop the Regional Plan for Sewage Sludge Management.		MED POL				10,000 €	40,000 €	50,000 €	10,000 €	30,000 €	Secured extrenal funding from GEF MedProgramme CP 1.2
3. Upgrade Marine Litter Regional Plan/or develop new technical annexes to incorporate new elements including microplastics and emerging pollutants as appropriate.		MED POL				10,000 €	40,000 €	50,000 €	10,000 €	40,000 €	
2.3 Strengthening and implementation of marine pollution prevention and control legislation and policies at national level, including through enforcement and Integration into sectorial processes.						**58,856 €**	**31,856 €**	**90,712 €**	**30,000 €**	**180,000 €**	
2.3.1 Adopted NAPs (Art. 15, LBS Protocol) implemented and targeted outputs timely delivered.						**20,000 €**	**25,000 €**	**45,000 €**	**30,000 €**	**180,000 €**	
1. Support streamlining NAP measures in the national regulatory systems and their implementation.	In-house expertise, consultancies, national and regional meeting(s), implementing partner(s).	MED POL	SCP/RAC	CPs, IMPEL, UfM-H2020, BRSC	a) Templates providing key aspects for national regulations prepared to promote use of BAT/BEP, and standards/GES for different contaminants/pollutants of national and/or regional priority in key industrial sectors including legislation on reporting by industries of pollution releases (PRTR) and risks from accidents; b) Best practices shared and information exchanged with regards to Permitting and Inspection based on the most recent MAP technical guidelines, as well as regarding the prevention and management of risks on the marine and coastal environment from industrial accidents; c) Report on midterm NAP evaluation submitted to the MED POL Focal Points meeting and other MAP bodies as appropriate;	20,000 €	25,000 €	45,000 €		100,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project (EU DG NEAR - H2020).
	In-house expertise, consultancies, national meeting(s)	SCP/RAC	MED POL	CPs	d) At least 3 countries supported for the development of further regulation for the reduction of single-use plastic production and use, including EPR schemes;			0 €		80,000 €	Non-secured external funding under negotiation.
		SCP/RAC		CPs, GEF, UN Environment Economy Division, BRSC, WHO	e) At least 3 countries supported to draft regulation to restrict the import and use of PFOS and PFOA containing products, SCCP and SCCP containing products, HBCD containing products (Lebanon, Morocco and Tunisia).			0 €	30,000 €		Secured external funding from GEF MedProgramme - Child Project 1.1.
2.3.2. NAPs developed to implement the Regional Strategy for Prevention of and Response to Marine Pollution from Ships.						**20,000 €**	**0 €**	**20,000 €**	**0 €**	**0 €**	
1. Enhance ratification and implementation of relevant international maritime Conventions related to the protection of the marine environment and support the effectiveness of maritime administrations.	Consultancy, meeting, travel, interpretation, translation, in-House expertise	REMPEC	CU	IMO	Technical support provided to CPs, which so request: a) to prepare, update and implement theirs NAPs; and b) to ratify and implement relevant international maritime conventions related to the protection of the marine environment.	20,000 €		20,000 €			
2.3.3 SCP Regional Action Plan (pollution- related activities) mainstreamed into and implemented through NAPs and national processes, such as SCP National Action Plans and NSSDs.						**18,856 €**	**6,856 €**	**25,712 €**	**0 €**	**0 €**	
1. Support the establishment of regulatory and economic measures realated to the implementation of SCP/circular economy.	In-house expertise, consultancies, national meeting(s)	SCP/RAC	MED POL, Plan Bleu	UN Environment Economy Division	Circular economy measures in key sectors of the SCP Regional Action Plan, in particular in the food and agriculture sector with a specific focus on the role of biowaste, developed in 2 countries.	18,856 €	6,856 €	25,712 €	0 €	0 €	
2.4 Marine Pollution Monitoring and assessment.						**313,673 €**	**208,014 €**	**521,687 €**	**0 €**	**550,000 €**	
2.4.1: National pollution and litter monitoring programmes updated to include the relevant pollution and litter IMAP indicators, implemented and supported by data quality assurance and control						**220,000 €**	**194,292 €**	**414,292 €**	**0 €**	**500,000 €**	

1. Continue supporting updated national monitoring programmes on marine litter, contaminants and eutrophication in line with IMAP, the LBS Protocol and the Regional Plan on Marine Litter.	In-house expertise, consultancies, implementing partner(s), regional meeting(s)	MED POL	CU, IMAP Task Force	IAEA, EU MSFD, National MED POL designated laboratories, relevant scientific institutions, ACCOBAMS, INDICIT	a) Scientific and expert support provided to apply integration and aggregation rules for monitoring and reporting of national monitoring data with the view of achieving regular reporting by the CPs on the state of implementation of the national IMAPs, and for providing a minimum of 3 sets of data on IMAP Common Indicators (EO5, EO9, EO10, EO11) in 2019/2020 and 2021/2022; b) Implementation of marine pollution national monitoring programmes supported by undertaking specific joint biodiversity and pollution monitoring programmes in MPAs and in high pressure areas, including provision of related quality of data, as well as respective national reporting using the IMAP Pilot Info System.	10,000 €	5,000 €	15,000 €		370,000 €	Non-secured external funding under negotiation.
2. Consolidate data dictionaries and data standards for all IMAP Common Indicators related to Pollution and apply data quality control schemes.	In-house expertise, consultancies, implementing partner(s), regional meeting(s), CorMon meeting on pollution	MED POL	CU, IMAP Task Force	EMODnet, EU MSFD, TG DATA	a) Data dictionaries and data standards finalized content-wise for all IMAP Common Indicators, including for IMAP Common Indicators 18, 19 and 20; b) Interoperability with national data templates ensured. All the deliverables above will be submitted for review to respective CorMon meetings on pollution and marine litter.	10,000 €	5,000 €	15,000 €		50,000 €	
3. Undertake harmonized and coordinated quality assurance programmes (contaminants, marine litter and eutrophication) at regional/ sub-regional and national levels.	In-house expertise, consultancies, implementing partner(s), regional meeting(s), CorMon meetings on pollution and marine litter	MED POL	CU, IMAP Task Force	IAEA/ NAEL/ MESL, Quasimeme, Alessandria University, National MED POL Designated Laboratories, relevant Scientific Institutions.	National MED POL/ IMAP laboratories supported to apply good laboratory practices for monitoring contaminants in biota and sediment, eutrophication (nutrients and chlorophyll-a) in sea water, and marine litter monitoring, including proficiency tests (PT) and QA/QC protocols.	110,000 €	100,000 €	210,000 €		30,000 €	
4. Harmonize and standardize the monitoring and assessment methods of pollution and marine litter in line with IMAP.	In-house expertise consultancies, implementing partner(s), regional meeting(s)	MED POL	CU, IMAP Task Force	EU MSFD WG GES, TGML, TG DATA, relevant scientific institutions	a) Protocols for applying good laboratory practices prepared; b) Monitoring Protocols (6 maximum) related to Pollution (eutrophication and contaminants), Marine Litter, and sampling and analysis of microplastic in WWTP developed/updated and agreed; c) Scales of monitoring and scales of assessment products agreed and updated; assessment criteria/thresholds/baseline values proposed; and reporting format adjusted to agreed scales of monitoring and scales of assessment products; d) CorMon meetings on pollution and marine litter held annually and online working groups established. All the deliverables above will be submitted for review to respective CorMon meetings on pollution and marine litter.	90,000 €	84,292 €	174,292 €		50,000 €	
2.4.2: Inventories of pollutant loads (NBB, PRTR from land-based sources, and from offshore and shipping) regularly updated, reported and assessed.						**20,000 €**	**0 €**	**20,000 €**	**0 €**	**0 €**	
1. Ensure efficient NBB/PRTR reporting and provide support to up to 10 CPs including quality assurance control of data.	In-house expertise, regional/ sub - regional meetings	MED POL	INFO/RAC	CPs, UfM H2020	a) NBB 2018-2019 reporting cycle analyzed at national, sub-regional and regional river basin levels to contribute to NAP implementation evaluation; b) Reporting gaps assessed and needs for technical support identified and shared with the Contracting Parties.	20,000 €		20,000 €			
2.4.3: Marine pollution assessment tools (in depth thematic assessment, maps and indicator factsheets) developed and updated for key pollutants and sectors within EcAp.						**73,673 €**	**13,722 €**	**87,395 €**	**0 €**	**50,000 €**	
1. Update thematic assessment products related to pollution and marine litter cluster of IMAP, including prevailing industrial sectors and priority pollutants/sectors addressed by the Regional Plans; and sea-based sources of pollution.	In-house expertise, consultancies, regional meeting(s)	MED POL	Plan Bleu, INFO/RAC	EEA	a) Updated assessment factsheets prepared with new data originating from IMAP implementation; b) Updated assessment factsheets for NAP/ H2020 initiative/ LBS Protocol implementation prepared; c) Assessment of status and impacts of agriculture nutrients, contaminant, aquaculture, and state of play of urban storm water on the marine environment prepared using to the extent possible existing information; d) Assessment of implementation of Regional Plans by mainstreaming NBB/PRTR monitoring data on the regional/sub-regional levels prepared, using to the extent possible existing information; e) Assessment of the top single use marine litter items in the Mediterranean and their contribution on microplastic generation and leakage into the marine environment prepared, using to the extent possible existing information; f) Assessment and mapping of fisheries and aquaculture contribution to marine litter generation in the Mediterranean.	50,000 €	13,722 €	63,722 €		50,000 €	
	In-house expertise, consultancy	REMPEC	CU, MED POL, Plan Bleu, INFO/RAC	IMO	g) Study on marine pollution from ships (accident and operational pollution, marine litter, air pollution, etc...) and maritime traffic trends in the Mediterranean prepared and disseminated.	23,673 €		23,673 €			
2.5 Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building.						**77,000 €**	**65,000 €**	**142,000 €**	**2,393,820 €**	**985,000 €**	
2.5.1 Training programmes and workshops in areas such as pollution monitoring, pollutant inventories, policy implementation, common technical guidelines, authorization and inspections bodies, compliance with national legislation.						**67,000 €**	**60,000 €**	**127,000 €**	**33,820 €**	**325,000 €**	
1. Support countries in the implementation of IMAP with a particular focus on scale of assessment, offshore monitoring, integration of indicators towards GES and joint monitoring.	In-house expertise, consultancies, implementing partner(s), meeting(s), training workshop(s)	MED POL	CU, IMAP Task Force	EU MSFD-WG GES, TGML, ACCOBAMS	a) Technical assistance provided and capacities built to support IMAP implementation (including Pollution, Marine Litter and Noise Clusters) in line with national needs, with a particular focus on aggregation and integration of monitoring data and assessment products, monitoring and assessment scales, offshore monitoring, integration of indicators towards GES, and joint monitoring; b) Sub-regional/regional workshops and trainings related to Pollution and Marine Litter Cluster of IMAP organized in areas of common capacity needs and knowledge gaps (minimum 2 per sub-region).	20,000 €	15,000 €	35,000 €		135,000 €	Non-secured external funding under negotiation.
2. Share best practices on Dumping Protocol Guidelines implementation at regional/ sub-regional/ national levels.	In-house expertise, consultancies, implementing partner(s), regional meeting(s)	MED POL	REMPEC, SPA/RAC	IMO, London Convention and London Protocol	a) Best practices identified and shared with the CPs in regional meeting; b) Detailed information provided on country work on the implementation of the Dumping Protocol and its Guidelines; c) Synergies maximized with IMO London Protocol work; d) Priority for capacity building and technical assistance to CPs identified.	15,000 €	45,000 €	60,000 €		20,000 €	
3. Develop training programmes around key SCP and circular economy themes.	In-house expertise, consultancies, national training(s)	SCP/RAC	MED POL, Plan Bleu	UN Environment Economy Division, UNIDO	At least 5 capacity building activities developed to enhance knowledge on SCP/circular economy (including on the extension of the life span of products and on packaging)	0 €	0 €	0 €		80,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project (EU DG NEAR).
4. Increase as much as practical, the level of knowledge in the field of prevention of, preparedness for and response to marine pollution by oil and other harmful substances.	In-House expertise, taining(s), workshop(s), travel, interpretation, translation	REMPEC	CU	IMO, OSPAR/Bonn Agreement, HELCOM, ITOPF, Cedre, ISPRA, etc	Technical assistance provided and national capacities strengthened: a) on response to spill incidents involving oil and/or HNS, and b) on relevant international maritime conventions related to the protection of the marine environment.	32,000 €		32,000 €	33,820 €	90,000 €	Secured external funding from WestMOPOCO. Non-Secured external funding possibly through IMO ITCP 202-2021: 3 x Sub-regional activities.
2.5.2 Pilot projects implemented on marine litter, POPs, mercury, and illicit discharges reduced, including through SCP solutions for alternatives to POPs and toxic chemicals and the reduction of upstream sources of marine litter for businesses, entrepreneurs, financial institutions and civil society.						**0 €**	**0 €**	**0 €**	**2,360,000 €**	**660,000 €**	

1. Expand the pilots on FfL and Adopt a Beach and other marine litter removal/reduction and prevention (SCP) pilot projects (particularly focused on plastics and microplastics).	In-house expertise, consultancies, implementing partner(s), meeting(s)	MED POL	SPA/RAC	CPs, GFCM, Members of the Regional Cooperation Platform on Marine Litter in the Mediterranean	a) Small-scale projects to apply the provisions of the FAO guidelines regarding reduction of amounts of ALDFG and "Fishing-for-litter" guidelines are implemented in 7 Mediterranean countries; b) Marine litter reduction targets approved by COP 19 achieved at pilot project sites; c) FAO guidelines applied to reduce ALDFG;	0 €	0 €	0 €		600,000 €	Non-secured external funding under negotiation.
		SCP/RAC	MED POL	CPs, UN Environment Economy Division, BeMed Club	d) 2 pilot activities developed, supporting the further development of innovative circular economy solutions to plastic pollution.			0 €		60,000 €	Non-secured external funding under negotiation.
2. Launch pilot projects on PCB and new POPs reduction and prevention and site decontamination based on updated NAP hotspots/ sensitive areas.	In-house expertise, consultancies, implementing partner(s), meeting(s)	MED POL	SCP/RAC	CPs, GEF, BRSC, UN Environment (including Chemicals Branch), Economy Division	a) Pilot project designed and initiated; b) Disposal of approximately 600 tons of PCBs and PCB wastes from Algeria and Lebanon completed; c) Detailed inventories of PCBs stocks principally in Albania and Algeria developed;			0 €	400,000 €		Secured external funding from GEF MED Programme CP 1.1
	In-house expertise, consultancies, technical assistance, national meeting(s)	SCP/RAC	CU, MEDPOL		d) Sampling and analysis of fire-fighting foams, soil and groundwater for PFOS/PFOA on fire incident sites, EPS XPS pellets being used by the companies and of SCCP and MCCP imported for PVC production used by companies prepared in 3 countries (Lebanon, Morocco and Tunisia) e) Pilot Demonstrations, substitution of PFOS foams and of HBCD in pellet of EPS XPS by environmentally sound alternatives done in 3 countries; f) Capacities on "New POPs management" enhanced in 3 countries.			0 €	90,000 €		Secured external funding from GEF MED Programme CP 1.2
3.Launch pilot projects on mercury reduction and prevention and site decontamination based on updated NAP hotspots/ sensitive areas.	In-house expertise, consultancies, implementing partner(s), meeting(s)	MED POL	SCP/RAC	CPs, GEF, BRSC, UN Environment (including Chemicals Branch), Economy Division, Minamata Convention, WHO	a) Preparatory work undertaken to dispose 30 tons of mercury by 2022 in an environmentally sound manner; b) Detailed inventories of mercury developed;			0 €	1,600,000 €		Secured external funding from GEF MED Programme CP 1.1
	In-house expertise, consultancies, technical assistance, national meeting(s)	SCP/RAC	CU, MEDPOL		c) Audits-inventory in public hospitals realised in 2 countries (Tunisia and Lebanon); d) Capacities on mercury management enhanced in 2 countries; e) Substitution of mercury containing medical devices in particular thermometers by Environmentally Sound Alternatives done in 2 countries.			0 €	270,000 €		Secured external funding from GEF MED Programme CP 1.2
2.5.3: Marine pollution prevention and control measures and assessments integrated in ICZM Protocol implementation projects, CAMPs and related Strategic Environment Impact Assessments						**10,000 €**	**5,000 €**	**15,000 €**	**0 €**	**0 €**	
1. Contribute to new CAMPs to consider litter and pollution prevention and reduction measures (including offshore activities).	In-house expertise, consultancies, national workshop(s), meeting(s)	MED POL	PAP/RAC		a) MED POL related actions with regards to monitoring and assessment implemented within planned CAMPs; b) Assessment findings based on IMAP integrated within transboundary CAMPs.	10,000 €	5,000 €	15,000 €			CAMP to be decided.
2.6 Enhanced cooperation at regional, sub- regional and national levels to prevent and control marine pollution.						**0 €**	**0 €**	**0 €**	**276,000 €**	**30,000 €**	
2.6.2 Networks and initiatives of businesses, entrepreneurs and civil society providing SCP solutions contributing to alternatives to POPs and toxic chemicals and to reduce upstream sources of marine litter supported and coordinated.						**0 €**	**0 €**	**0 €**	**276,000 €**	**30,000 €**	
1. Undertake training and support programme to support SMEs and CSOs to implement innovative solutions to prevent the generation of waste ending up as marine litter and the shift to safe alternatives to POPs and toxic chemicals.	In-house expertise, consultancies, regional event, national meeting(s)	SCP/RAC	CU	UNIDO, UN Environment, Economy Division	a) 1 Mediterranean Business Award with a special emphasis on businesses led by women developed; b) 1 strategy for the long-term sustainability of the award prepared.			0 €	276,000 €		Secured external funding through SwitchMed II (EU DG NEAR)
	In-house expertise, consultancies, regional event, national meeting(s), peer-to-peer exchanges, Business to Business (B2B) workshop	SCP/RAC		Beyond Plastic Med Initiative (BeMed)	a) Technical assistance provided and national capacities on innovative solutions to prevent plastic pollution, including microplastics intentionally added in products or production processes, enhanced.			0 €		30,000 €	Non-secured external funding possibly through WES (Water and Environment Support) Project.
2.7 Identifying and tackling new and emerging issues, as appropriate.						**46,400 €**	**2,000 €**	**48,400 €**	**0 €**	**210,000 €**	
2.7.1 Reviews/policy briefs developed and submitted to Contracting Parties on emerging pollutants, ocean acidification, climate change and linkages with relevant global processes.						**46,400 €**	**2,000 €**	**48,400 €**	**0 €**	**210,000 €**	
1. Review toxic chemicals of concern used for the plastic production.	In-house expertise, consultancies	SCP/RAC	MEDPOL	BRSC, IMO	1 review brief on the toxic chemicals, used in plastics, and that are of concern for the implementation of a circular economy in the Mediterranean produced.	10,000 €	2,000 €	12,000 €			
2. Examine the possibility of designating the Mediterranean Sea, or parts thereof, as SOx Emission Control Area(s) under MARPOL Annex VI and effectively implement the existing energy efficiency measures.	In-house expertise, consultancies, translation	REMPEC	CU	IMO	a) Roadmap for the preparation of a submission to the IMO to designate the Mediterranean Sea Area as Emission Control Area (ECA) for sulphur oxides (SOx) pursuant to MARPOL Annex VI implemented. b) The following studies prepared and overseen by the SOx ECA Technical Committee of Experts: i) analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean ii) analyses of the impacts on short sea shipping activity as well on the social and economic development for islands, insular and remote areas iii) additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies). c) Main technical elements of a draft submission to the IMO developed by the SOx ECA Technical Committee of Experts.	36,400 €		36,400 €		195,000 €	Non-secured external funds possibly from IMO ITCP 2020-2021 (€ 45,000) and resource mobilisation required up to € 150,000 from other donors for studies.
3. Review solutions to fight against plastic pollution.	In-house expertise, consultancies	SCP/RAC	Plan Bleu, MEDPOL, CU	CSIC, zero waste network, ICLEI	3 policy papers prepared on the innovative solutions to plastic pollution.			0 €		15,000 €	
TOTAL THEME 2: LAND AND SEA BASED POLLUTION						***699,791 €***	***479,870 €***	***1,179,661 €***	***2,932,540 €***	***2,355,000 €***	

THEME 2: LAND AND SEA BASED POLLUTION	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			0 €		
MED POL	472,000 €	470,014 €	942,014 €	2,105,000 €	1,625,000 €
REMPEC	172,085 €	1,000 €	173,085 €	161,540 €	425,000 €
PB/RAC			0 €		
SPA/RAC			0 €		
PAP/RAC			0 €		
INFO/RAC			0 €		
SCP/RAC	55,706 €	8,856 €	64,562 €	666,000 €	305,000 €
TOTAL	*699,791 €*	*479,870 €*	*1,179,661 €*	*2,932,540 €*	*2,355,000 €*
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	**699,791 €**	**479,870 €**	**1,179,661 €**	**2,932,540 €**	**2,355,000 €**
Sum of Outputs Subtotals	**699,791 €**	**479,870 €**	**1,179,661 €**	**2,932,540**	**2,355,000 €**

THEME 3. Biodiversity & Ecosystems

Ecological Objectives / Long-Term Targeted Impacts:
1. Biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic, and climatic conditions;
2. Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem;
3. Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock;
4. Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and -related viability;
5. Sea-floor integrity is maintained, especially in priority benthic habitats.

Strategic objectives:
1. To strengthen the management, including socio-economic aspects, and extend the network of Coastal and Marine Protected Areas including SPAMIs;
2. To strengthen the implementation of action plans on endangered and threatened species key habitats and Non-Indigenous Species;
3. To promote Coastal and Marine Protected Areas as a contribution to Blue Economy;
4. To strengthen the resilience of Mediterranean natural and socioeconomic systems to the impacts of climate change.

2020-2021 Indicators:
1. Number of countries implementing the Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats as well as the Action Plan on Species Introductions and Invasive Species;
2. Number of regional strategies/ plans developed/ updated;
3. Number of guidelines and other tools elaborated/updated and disseminated;
4. Number of CPs supported to implement a monitoring programme on endangered species and key habitats
5. Number of NAPs developed or updated in line with SAP BIO, EcAp, Aichi Targets and the Nagoya Protocol, including streamlining of climate change and SCP Regional Action Plan;
6. (a) Number of regulatory measures developed and agreed at national levels;
(b) Number of MPAs having an operational management plan elaborated with SPA/RAC support;
7. Number of biodiversity-related actions implemented within national CAMPs;
8. Number of convened scientific meetings on Mediterranean marine biodiversity;
9. Number of joint strategies and/or working programmes developed with Partners;
10. Number of trainings on marine biodiversity conservation;
11. Number of SPAMI reviewed, to assess their management effectiveness;
12. (a) Number of pilot projects on marine litter in MPA/ SPAMIs;
(b) Number of MPA/SPAMIs with a management plan in place addressing marine litter.

2020-2021 Targets:
1. 11 countries;
2. 3 regional strategies/ plans developed/ updated;
3. 5 Guidelines/ tools;
4. 5 CPs
5. 6 NAPs;
6. (a) 6 national regulatory measures;
(b) 3 MPAs;
7. 1 action;
8. 9 meetings;
9. 1 joint strategy further strengthened;
10. 10 trainings; at least 100 national experts trained;
11. 11 SPAMI reviewed;
12. (a) 8 pilot projects;
(b) 8 MPA/SPAMIs with a management plan addressing marine litter in place.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
3.1. Strengthening regional implementation of the obligations under the Barcelona Convention, and its relevant Protocols and other instruments.						**30,000 €**	**5,000 €**	**35,000 €**	**60,000 €**	**500,000 €**	
3.1.1. A comprehensive coherent network of well managed MPAs, including SPAMIs, to achieve Aichi Target 11 in the Mediterranean set up and implemented.						**23,000 €**	**2,000 €**	**25,000 €**	**60,000 €**	**500,000 €**	
1. Develop and strengthen effective SPAMI/MPA management.	In-house coordination and expertise, consultations, meeting(s)	SPA/RAC	CU and other Components as relevant	ACCOBAMS, CBD, EEA, GFCM, IUCN, MedPAN, OCEANA, WWF	a) Ad hoc Group of experts on MPAs (AGEM) operational; (if continued by the 14th Meeting of SPA/BD thematic Focal Points); b) Scientific and technical advice delivered to SPA/RAC by AGEM) on i) future orientations in MPA planning and governance, and ii) development of a regional strategy for MPAs for the Mediterranean in line with the CBD post-2020 global biodiversity framework (contribution to activity 3.2.1.1);			0 €			
	In-house coordination and expertise, consultancies, services, field surveys, coordination meetings, national workshops, exchange visits	SPA/RAC		SPAMI managers, concerned SPA/RAC Focal Points, national and local stakeholders, national and local civil society organizations	c) Twinning programmes developed and implemented among partner SPAMIs (8 MPAs/SPAMIs involved in the twinning programme); experience shared on best practices and lesson learnt; d) Management, monitoring and enforcement activities harmonized and improved; e) Capacity-building activities, training workshops and exchange visits implemented; f) Local stakeholders and civil society involved in SPAMI management; g) The SPAMI label recognition and visibility improved.			0 €		480,000 €	These deliverables are in continuation to the ones implemented in 2018-2019 biennium (8 MPAs/SPAMIs involved in the twinning programme) with support through the Cooperation Agreement with IMELS.
2. Organize the 2020 Forum of Marine Protected Areas in the Mediterranean.	In-house coordination and expertise, regional event, consultancies, services, organizing committee meeting(s)	SPA/RAC	CU and other Components as relevant	MedPAN (co-organizer), host country authorities, ACCOBAMS, CBD, GFCM, IUCN, MedWet/Tour du Valat, Plan Bleu, WWF, Europarc Federation, AFB, Conservatoire du littoral, etc.	a) 2020 Forum of Marine Protected Areas in the Mediterranean organized; b) The 2020 Status Report on Mediterranean MPAs elaborated and disseminated during the forum; c) Declaration of the 2020 MPA Forum developed; d) Proceedings of the 2020 MPA Forum put online. The 2020 MPA Forum recommendations will feed into the process for development of post-2020 strategic document on MPAs and other effective area-based conservation measures in the Mediterranean (3.2.1.1).	15,000 €		15,000 €	60,000 €		Secured external funding through the IMAP/MPA project (EU).
3. Draft the SPAMI Day and SPAMI Award (Mediterranean Diploma) concepts and criteria.	In-house coordination and expertise, consultancies	SPA/RAC	CU and other Components as relevant	SPA/RAC Focal Points, SPAMI managers, regional partners, donors	SPAMI Day and SPAMI Award (Mediterranean Diploma) concepts and criteria prepared, reviewed by SPA/BD Focal Points and submitted to COP 22.	8,000 €	2,000 €	10,000 €		20,000 €	Non-secured external funding under negotiation.
3.1.2. Most relevant area-based management measures are identified and implemented in cooperation with relevant global and regional organizations, through global and regional tools (SPAMIs, FRAs, PSSAs, etc.), including for the conservation of ABNJ, taking into consideration the information on Mediterranean EBSAs.						**7,000 €**	**3,000 €**	**10,000 €**	**0 €**	**0 €**	
1. Support deep sea and deep seabed vulnerable marine ecosystems identification and conservation in areas within and beyond national jurisdiction, in collaboration with respective countries and relevant bodies and promote their conservation through appropriate tools and measures, including spatial ones.	In-house coordination and expertise, consultancies, services, coordination meetings with GFCM and CBD, sub-regional/regional workshop(s), implementation agreement(s)	SPA/RAC	CU and other Components as relevant	CPs, FAO, GFCM, CBD, ACCOBAMS, IUCN, OCEANA, EEA	a) A number of deep sea and deep seabed vulnerable marine ecosystems identified in areas within and beyond national jurisdiction; b) Supporting documents prepared, in collaboration with concerned CPs, GFCM and other relevant bodies; c) Their conservation through appropriate tools and measures including Other Effective area-based Conservation Measures (OECMs), precautionary ones comprised, notably spatial ones, promoted in official institutional events (FAO, GFCM and CBD meetings and workshops, etc.).	7,000 €	3,000 €	10,000 €			
3.2. Development of new action plans, programmes and measures, common standards and criteria, guidelines for the conservation of Coastal and Marine biodiversity and ecosystems.						**62,000 €**	**58,000 €**	**120,000 €**	**519,000 €**	**25,000 €**	
3.2.1. Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats, on species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management are updated to achieve GES.						**40,000 €**	**50,000 €**	**90,000 €**	**495,000 €**	**25,000 €**	
1. Elaborate a post-2020 strategic document on MPAs and other effective area-based conservation measures in the Mediterranean, in line with the CBD post-2020 global biodiversity framework.	In-house coordination and expertise, consultancy, coordination meeting(s)	SPA/RAC	CU and other Components as relevant	SPA/RAC Focal Points, AGEM members, ACCOBAMS, CBD, GFCM, IUCN, MedPAN, MedWet/Tour du Valat, Plan Bleu, WWF, Europarc Federation, AFB, Conservatoire du littoral, 2020 MPA Forum participants	A strategic document on MPAs and other effective area-based conservation measures (OECMs) in the Mediterranean, in line with the CBD post-2020 global biodiversity framework, the SAP BIO 2021-2035 and other global and regional processes, elaborated and submitted to COP 22 through the SPA/BD Focal Points, EcAp CG and MAP Focal Points meetings.	10,000 €	10,000 €	20,000 €	80,000 €		Secured external funding through the IMAP/MPA project (EU).

2. Implement/ update the regional action plans/strategy for the conservation of Mediterranean endangered and threatened species, key Habitats and species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management to mainstream GES.	In house coordination and expertise, external expertise, field work, workshop, expert Meeting(s) (External Expertise & Meeting of Expert designated by countries)	SPA/RAC	CU, REMPEC and other Components as relevant	Action Plan Associates and Partners, ACCOBAMS, CGPM, IUCN-Med, WWF Med Initiative, MAVA Marine turtles and Species projects Partners, NGOs, SPA focal points, RAMOGE	a) The action plans concerning cetaceans and dark habitats updated; b) Relevant scientific documentation contributing to update knowledge and to enhance conservation actions towards the conservation of Mediterranean endangered and threatened species and key habitats elaborated such as: - important nesting areas for marine turtles identified; - distribution of vulnerable megafauna (marine mammals, birds, elasmobranch and marine turtles) elaborated; - distribution and characterization of marine key habitats (marine vegetation, coralligenous and marine caves) elaborated; c) Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats implementation supported through pilot actions at national and regional levels: implementation of the national/ monitoring programmes for biodiversity and NIS (monitoring of the interaction between fisheries activities and cetaceans as well as bird species); d) Implementation of Regional Action Plans for Dark Habitats and cetaceans assessed; e) Joint programme based on the update of the Action Plan on the Conservation of Cetaceans (2016-2020) (under preparation) between SPA/RAC and ACCOBAMS Secretariat implemented; f) First elements to elaborate the list of Reference of Pelagic Habitat Types in the Mediterranean Sea identified.	30,000 €	40,000 €	70,000 €	415,000 €		Secured external funding through Mava and EU.
3. Support the implementation of the Mediterranean Strategy on Ships' Ballast Water Management and Action Plan and provide assistance to control and manage ships' biofouling to minimise the transfer of invasive aquatic species.	In-House expertise, consultancy, meeting(s), travel, interpretation, translation	REMPEC, SPA/RAC	CU	IMO, CU, GEF, UNDP	a) Mediterranean Strategy and Action Plan on Ships' Ballast Water Management updated to achieve GES; b) Technical support provided to CPs, which so request, to ratify and implement the AFS Convention and the Biofouling Guidelines.			0 €		25,000 €	Non-secured external funding through IMO ITCP 2020-2021.
3.2.2. Guidelines and other tools for the conservation of endangered and threatened Mediterranean coastal and marine species, key habitats, for non-indigenous species control and prevention as well as the management of marine and coastal protected areas developed/updated and disseminated						**22,000 €**	**8,000 €**	**30,000 €**	**24,000 €**	**0 €**	
1. Elaborate guidelines and technical tools for improving MPA management and the conservation of threatened or endangered species and key habitats in the Mediterranean.	In-house coordination and expertise, consultancy, coordination meeting(s)	SPA/RAC	CU and other Components as relevant	Regional Action Plans Associates and Partners, MedPAN, IUCN, WWF	a) MPA management effectiveness tool for the Mediterranean region developed and made available to the MPA managers and planners; b) Guidelines on monk seal, marine turtles, cartilaginous fishes and marine vegetation elaborated (based on the results of the updating of relevant Regional Action Plans and Strategy); c) "Interpretation Manual" of the new reference list of marine benthic habitats types in the Mediterranean elaborated;	22,000 €	8,000 €	30,000 €	10,000 €		Secured external funding through MAVA.
		SPA/RAC		BirdLife International, GFCM, ACCOBAMS, IUCN, MEDASSET	d) Draft 2020-2030 Mediterranean Strategy/ Action Plan for reduced incidental catches of vulnerable species jointly elaborated by the bycatch and the species projects partners; e) GFCM "manual on standardized monitoring data collection on incidental catch of vulnerable species in the Mediterranean and the Black Sea" elaborated with SPA/RAC contribution for alignment with the vulnerable species and habitat regional Action Plans implementation needs; f) The GFCM online Mediterranean database portal on bycatch data collection implemented with SPA/RAC contribution for alignment with the vulnerable species and habitat Regional Action Plans implementation needs			0 €	14,000 €		Secured external funding through MAVA.
3.3. Strengthening national implementation of biodiversity conservation policies, strategies and legislation measures.						**23,000 €**	**22,000 €**	**45,000 €**	**495,500 €**	**80,000 €**	
3.3.1. NAPs for the conservation of Mediterranean endangered and threatened species and key habitats and on species introductions and invasive species developed/updated.						**15,000 €**	**15,000 €**	**30,000 €**	**85,500 €**	**80,000 €**	
1. Support countries to update/develop new SAP BIO NAPs on biodiversity including for the conservation of Mediterranean threatened and endangered species and key habitats.	In house coordination and expertise, external expertise, consultancies, workshop(s)	SPA/RAC	MAP Components as appropriate	National experts and organizations, NGOs, SPA Focal Points, Action Plans Partners	New NAPs for the conservation of Mediterranean threatened and endangered species and key habitats elaborated (or existing ones updated) (e.g. 3 NAPs on coralligenous for Lebanon, Morocco & Algeria, 2 NAPs on Vegetation Tunisia & Montenegro, NAP on NIS for Malta).	10,000 €	10,000 €	20,000 €			
2. Support the Contracting Parties and partners in producing and publishing relevant scientific documentation contributing to update knowledge and enhance conservation actions taken towards the conservation of species listed in Annex II to the SPA/BD Protocol.	In house coordination and expertise, external expertise, consultancies, workshop(s)	SPA/RAC	MAP Components as appropriate	National experts and organizations, NGOs, SPA Focal Points, Action Plans Partners; BirdLife International, GFCM, ACCOBAMS, IUCN, MEDASSET	a) Relevant scientific documentations production and publishing relating to species listed in Annex II of the SPA/DB Protocol supported; b) Scientific documents related to incidental catches of vulnerable species elaborated; c) Multitaxa observation programme to collect data on incidental catch of vulnerable species in Tunisia implementation supported.	5,000 €	5,000 €	10,000 €	85,500 €	80,000 €	External funding through MAVA.
3.3.2. National measures developed and implemented to strengthen the protection and the management of relevant marine and coastal sites, especially those containing threatened habitats and species (including deep-sea habitats).						**8,000 €**	**7,000 €**	**15,000 €**	**410,000 €**	**0 €**	
1. Provide support at country level through elaboration of focused studies and surveys including management plans for the declaration, establishment, and extension of MPAs.	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national workshop(s)	SPA/RAC	CU and relevant Component as appropriate	MEER, CNL (Algeria), MoE (Lebanon), EGA (Libya), Tyre Coast managers	a) 3 complementary ecological studies, including GIS-based maps for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya); b) 3 complementary socio-economic/fisheries studies for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya); c) 3 management plans for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya); d) 3 business plans for the Cap de Garde-Edough future MPA (Algeria), Tyre Coast Nature Reserve/SPAMI (Lebanon), and Gulf of Sirte (Libya);			0 €	130,000 €		Secured external funding through IMAP/MPA project (EU).
		SPA/RAC		Concerned SPA/RAC Focal Points and MPA managers, national and local stakeholders	e) Ecological/socio-economic diagnosis studies, to support 1 or 2 Mediterranean countries (e.g. Syria) in declaring new MPAs, implemented/elaborated;	8,000 €	7,000 €	15,000 €			
		SPA/RAC		HCEFLCD (Morocco), APAL (Tunisia)	f) Capacity building workshops organized, local management units strengthened, and best practices developed and applied for an effective management of the Jbel Moussa (Morocco) and North-Eastern Islets of Kerkennah Archipelago future MPAs (Tunisia);			0 €	180,000 €		Secured external funding through IMAP/MPA project (EU).
		SPA/RAC		EGA (Libya), IUCN-Med, WWF	g) A national inventory of marine and coastal sites of conservation interest in Libya elaborated; h) MPA management plans elaborated; i) A Civil Society Organization (CSO) participatory platform prepared and initiated; j) Marine key habitats mapped and marine mega fauna (mammals, seabirds, turtles and cartilaginous fishes) monitored; k) Libyan national staff trained on MPA network planning and management; l) Awareness and communication campaigns and material, on the value and importance of MPAs, elaborated and their implementation initiated.			0 €	100,000 €		Secured external funding through GEF MedProgramme.
3.3.3. Biodiversity and ecosystem protection actions integrated in CAMPs, other ICZM Protocol implementation projects and Strategic Environment Impact Assessments.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Undertake the implementation of the marine and coastal biodiversity component within CAMP programmes.	In-house coordination and expertise, services, field surveys, coordination meeting(s), national workshop(s)	SPA/RAC	PAP/RAC, CU and other Components as relevant	SPA/RAC Focal Point, Bosnia & Herzegovina environmental authorities	Gap analysis and rapid assessment survey needed for the identification, characterization, conservation and management of marine biodiversity in Bosnia & Herzegovina territorial waters, undertaken.			0 €			

3.4. Monitoring, inventory and assessment of biodiversity with focus on endangered and threatened species, nonindigenous species and key habitats.						**50,000 €**	**56,000 €**	**106,000 €**	**820,000 €**	**0 €**	
3.4.1. Monitoring programmes for key species and habitats as well as invasive species, as provided for in the IMAP are developed and implemented, including on the effectiveness of marine and coastal protected areas, and on climate change impacts.						**35,000 €**	**56,000 €**	**91,000 €**	**230,000 €**	**0 €**	
	In house expertise and coordination, external expertise, workshop organization, field work, conference facilities, CorMon meeting on Biodiversity and NIS	SPA/RAC	CU, IMAP Task Force	Action Plan Associates and Partners, ACCOBAMS, CGPM, IUCN-Med, WWF Med Initiative, MAVA Marine turtles project Partners, NGOs	National Monitoring Programmes for threatened and endangered species and key habitats carried out within the implementation of the Regional Action Plans for the conservation of threatened and endangered species and marine key habitats in the Mediterranean (i.e. NAP Vegetation in Egypt & Algeria) considering the IMAP, the indicator fact sheets and the monitoring protocols. The above deliverables will be submitted to the CorMon meeting on Biodiversity and NIS.	5,000 €	10,000 €	15,000 €			

1. Support the development and implementation of National/Sub-regional Monitoring Programme(s) in line with biodiversity cluster of IMAP.	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national workshop(s), CorMon meeting on Biodiversity and NIS	SPA/RAC		SPA/RAC Focal Points, concerned Contracting Parties' environmental authorities	a) IMAP implementation at national level supported; best practices shared; b) IMAP implemented in MPAs and high pressure areas by Contracting Parties; c) Set of data on biodiversity common indicators reported and uploaded to the UNEP/MAP InfoMAP platform and quality assurance performed; d) Guidance fact sheets on IMAP common indicators on biodiversity updated; e) Guidance fact sheets on fisheries-related IMAP common indicators updated; f) CorMon meeting on Biodiversity and NIS held annually. The above deliverables will be submitted to the CorMon meeting on Biodiversity and NIS and its outcomes will be further submitted to the ECAP Coordination Group meeting.	10,000 €	30,000 €	40,000 €	210,000 €		Secured external funding through IMAP/MPA project (EU).
	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national and regional workshop(s),	SPA/RAC	CU, PAP/RAC, MEDPOL	Concerned Contracting Parties and SPA/RAC Focal Points and GEF Adriatic project National coordinators	A Sub-regional monitoring programme on common indicators for biodiversity implemented at a sub-regional level in the Adriatic Sea in line with IMAP cluster on biodiversity and fisheries to support MSP and ICZM.			0 €	20,000 €		Secured external funding through GEF Adriatic project.
2. Run the ordinary periodic review of SPAMIs.	In-house coordination and expertise, consultancies (2 independent experts per SPAMI), field visits, technical advisory commission meeting(s)	SPA/RAC	CU as relevant	Concerned SPA/RAC Focal Points, SPAMI managers	a) The ordinary periodic review aimed at making an in-depth assessment of SPAMI management effectiveness undertaken for the 11 concerned SPAMIs: 5 SPAMIs in 2020 (Lara-Toxeftra (CY), Torre Guaceto (IT), Tavolara-Punta Coda Cavallo (IT), Miramare (IT), Plemmirio (IT)) and 6 SPAMIs in 2021 (Archipelago of Cabrera (ES), Maro-Cerro Gordo Cliffs (ES), Bouches de Bonifacio (FR), Capo Caccia-Isola Piana (IT), Punta Campanella (IT), Al Hoceima (MA); b) The report, main findings and recommendations submitted to SPA/BD Focal Point meeting in 2021.	20,000 €	16,000 €	36,000 €			
3.4.2. Biodiversity conservation assessment tools (in-depth thematic assessment, maps and indicator fact sheets) developed and updated to show trends at national, sub-regional and regional levels, and measure the effectiveness of the SAP BIO NAPs and Regional Action Plans implementation.						**15,000 €**	**0 €**	**15,000 €**	**0 €**	**0 €**	
1. Elaborate the 2020 Status Report on Mediterranean MPAs.	In-house coordination and expertise, consultancies, services	SPA/RAC	CU	MedPAN, GFCM, ACCOBAMS, IUCN, WWF	a) The 2020 Status Report on Mediterranean MPAs elaborated, disseminated and submitted to the meeting of the SPA/RAC Focal Points;	15,000 €		15,000 €			
		SPA/RAC			b) State of play of MPA and other area-based conservation measures in the Mediterranean developed.			0 €			
3.4.3. Common indicators on biodiversity and non-indigenous species monitored through IMAP in MPAs and SPAMIs, and relevant data sets established.						**0 €**	**0 €**	**0 €**	**490,000 €**	**0 €**	
1. Cooperate at sub-regional level to test joint monitoring activities in (a) selected area(s), thus supporting countries to implement joint monitoring programmes in line with the IMAP recommendations in MPAs/SPAMIs.	In-house coordination and expertise, consultancies, services, coordination meeting(s), national and regional workshop(s), CorMon meetings	SPA/RAC	CU, MED POL and other Components as relevant, IMAP Task Force	SPA/RAC Focal Points, MED POL Focal Points, concerned Contracting Parties' environmental authorities	a) IMAP implemented on a comparable basis; b) Set of data on IMAP common indicators reported to the UNEP/MAP Info/MAP platform. All deliverables above will be submitted to CorMon meetings on all IMAP Clusters.			0 €	490,000 €		Secured external funding through IMAP/MPA project (EU)
3.4.4. Inventory of vulnerable and fragile coastal and marine ecosystems and assessment of sensitivity and adaptive capacities of coastal and marine ecosystems to changes in sea conditions as well as of the role of services they provide developed.						**0 €**	**0 €**	**0 €**	**100,000 €**	**0 €**	
1. Support CPs to develop distribution and sensitivity maps of the main marine habitats.	In-house coordination and expertise, consultancies, services, field surveys, coordination meeting(s), national workshop(s)	SPA/RAC	CU	Concerned SPA/RAC Focal Points, National experts and organizations, NGOs, Action Plans Partners	Distribution and sensitivity maps of the main marine habitats, in Malta and Turkey, and dedicated data bases developed and available on the Mediterranean Biodiversity Platform and other relevant platforms.			0 €	100,000 €		Secured external funding through MAVA Project.
3.5. Technical assistance and capacity building at regional, sub-regional and national levels to strengthen policy implementation and compliance with biodiversity -related national legislation.						**29,922 €**	**30,000 €**	**59,922 €**	**635,000 €**	**60,000 €**	
3.5.1. Capacity-building programmes related to the development and management of marine and coastal protected areas, to the conservation and monitoring of endangered and threatened coastal and marine species and key habitats, and to monitoring issues dealing with climate change and biodiversity developed and implemented, including pilots to support efforts aimed at MPA/SPAMI establishment and implementation.						**29,922 €**	**30,000 €**	**59,922 €**	**475,000 €**	**0 €**	
1. Organize specific training courses, workshops, symposia related to the conservation and monitoring of threatened and endangered Mediterranean marine species, key habitats and non-indigenous species.	In house expertise and coordination, contractual services, consultants, partners	SPA/RAC	CU, INFO/RAC and other Components as relevant	ACCOBAMS, MAVA Marine turtles project partners, MAVA species Project partners, Berne convention, IUCN Marine turtles' specialists Group for the Mediterranean, NGOs, Universities, SPA focal Points, Mediterranean Action plans partners and Associates	a) 7th Mediterranean Conference on marine turtles (Morocco) organized; b) Cetaceans biannual Conference for south Mediterranean countries organized; c) Regional training session on the identification of marine key habitats (Common Indicator CI-1, EO1 & CI-2,EO1of IMAP) and the use of SDF web application organized; d) Workshop on important areas for marine turtles, (MAVA Marine turtle project) organized; e) Technical workshops to identify important areas for vulnerable species based on the collected data within the Species MAVA project organized; f) Sub-regional trainings on the threatened and endangered species organized; g) Regional training session on the use of the Mediterranean Platform for biodiversity organized.	20,000 €	25,000 €	45,000 €	70,000 €		Secured external funding through MAVA and EU Projects.
2. Organize training of practitioners to follow IMAP implementation and observatories of the Mediterranean related to biodiversity and human activities and related impacts in marine and coastal areas.	In-house coordination and expertise, consultancies, services, coordination meeting(s), regional training workshop, implementation agreement(s)	SPA/RAC	CU, and other Components as relevant	Concerned SPA/RAC Focal Points, concerned Contracting Parties' environmental authorities	National capacities reinforcement events elaborated (i.e. monitoring, assessment and reporting quality assured data related to IMAP common indicators) through "Train the trainers" workshops for biodiversity and non-indigenous species.			0 €	70,000 €		Secured external funding through IMAP/MPA project (EU)
3. Strengthen and enhance capacity building activities on the conservation of Mediterranean marine biodiversity.	In-house coordination and expertise, consultancies, services, coordination meeting(s), training workshop(s)	SPA/RAC	CU, MED POL and other Components as relevant	Concerned SPA/RAC Focal Points, concerned MED POL Focal Points, concerned Contracting Parties' environmental authorities	a) National team of experts set up; b) Training workshops on GES and vulnerability assessment organized; c) Complementary studies to the IMAP implementation elaborated (in MPAs and high-pressure areas) in order to ensure submitting quality assured data to regional data platforms.			0 €	70,000 €		Secured external funding through IMAP/MPA project (EU)
4. Develop and implement training and capacity building programmes on MPA planning and management, including socio-economic aspects, as well as on fundraising and innovative funding for MPAs.	In-house coordination and expertise, consultancies, services, coordination meetings, training workshops, field and exchange visits, implementation agreements,	SPA/RAC	Plan Bleu, PAP/RAC	Concerned SPA/RAC Focal Points, MPA managers; AGEM members	a) Capacity building programme on MPA planning and management including socio-economic aspects for the Jbel Moussa (Morocco) and North-Eastern Islets of Kerkennah Archipelago future MPAs (Tunisia) developed and implemented;			0 €	240,000 €		Secured external funding through IMAP/MPA project (EU)
		SPA/RAC	CU, Plan Bleu	Concerned SPA/RAC Focal Points; AGEM members; M2PA	b) Training package on fundraising and innovative funding for MPAs available; c) "Train the trainers" regional workshop on fundraising and innovative funding for MPAs organized.	9,922 €	5,000 €	14,922 €			

5. Develop capacity building programmes and training material in the frame of the implementation of 9 Mediterranean marine observatories' strategy and joint technical action among 28 European and Mediterranean partners.	In-house coordination and expertise, services, workshop(s)	SPA/RAC	CU and other Components as relevant	WCMC, relevant ODYSSEA project partners	Trainings focusing on technical (sensors implementation and maintenance, data acquisition and transmission, database management, modelling tools), managerial and marketing aspects of Oceanographic Observatories will be provided as a contribution to the implementation of a network of 9 operational marine observatories across the Mediterranean basin integrating data and numerical forecasts, with the partnership of 28 European and Mediterranean partners.			0 €	25,000 €		Secured external funding through ODYSSEA project (EU)
3.5.2. Training and awareness-raising programmes on SCP solutions contributing to the conservation of the ecosystems and biodiversity delivered to businesses, entrepreneurs, financial institutions and civil society.						**0 €**	**0 €**	**0 €**	**160,000 €**	**60,000 €**	
1. Support the implementation of SCP solutions in MPAs, with a particular focus on the issue of Marine Litter.	In-house experience, consultancies, local workshops, meeting(s)	SCP/RAC	SPA/RAC, MED POL	UNISI, ISPRA, MPAs, SPAMIs, MedPAN, MIO-ECSDE, Interreg Med Project	8 MPAs/SPAMIs supported to develop and implement measures for the management and prevention of marine litter.	0 €	0 €	0 €	160,000 €	60,000 €	Secured funds through the Interreg Med- Plastic Busters MPAs Project Funds to be secured to work with 3 MPAs from the southern Mediterranean
3.6. Enhanced cooperation at regional, sub- regional and national levels to protect and conserve biodiversity and ecosystems.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
3.6.1. Joint strategies and programmes on biodiversity and ecosystem conservation developed, by taking into account NAPs in cooperation with relevant partner organizations at global and regional levels.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Promote Joint Cooperation on spatial-based protection and management measures for marine biodiversity.	In-house coordination and expertise, coordination exchanges and meetings, implementation agreement(s)	SPA/RAC	CU and other Component as relevant	SPA/BD Thematic Focal Points, ACCOBAMS, GFCM, IUCN, MedPAN, WWF	a) A further advanced draft text agreed by Parties on a Joint Cooperation on spatial-based protection and management measures for marine biodiversity; b) Coordination supported, notably with GFCM and other relevant bodies and Parties' advise on feasible synergies regarding tools and measures for spatial conservation of the Mediterranean biodiversity and natural resources management.			0 €			
TOTAL THEME 3. BIODIVERSITY AND ECOSYSTEMS						***194,922 €***	***171,000 €***	***365,922 €***	***2,529,500 €***	***665,000 €***	
					THEME 3. BIODIVERSITY AND ECOSYSTEMS	**MTF 2020**	**MTF 2021**	**MTF TOTAL 2020-2021**	**Secured External Funding TOTAL 2020-2021**	**Non-Secured External Funding TOTAL 2020-2021**	
					Coordinating Unit			**0 €**			
					MED POL			**0 €**			
					REMPEC	**0 €**	**0 €**	**0 €**	**0 €**	**25,000 €**	
					PB/RAC			**0 €**			
					SPA/RAC	**194,922 €**	**171,000 €**	**365,922 €**	**2,369,500 €**	**580,000 €**	
					PAP/RAC			**0 €**			
					INFO/RAC			**0 €**			
					SCP/RAC	**0 €**	**0 €**	**0 €**	**160,000 €**	**60,000 €**	
					TOTAL	***194,922 €***	***171,000 €***	***365,922 €***	***2,529,500 €***	***665,000 €***	
						0 €	0 €	0 €	0 €	0 €	
Sum of Outcomes Subtotals						**194,922 €**	**171,000 €**	**365,922 €**	**2,529,500 €**	**665,000 €**	
Sum of Outputs Subtotals						**194,922 €**	**171,000 €**	**365,922 €**	**2,529,500 €**	**665,000 €**	

THEME 4. Land and Sea Interaction and Processes

Ecological Objectives / Long-Term Targeted Impacts:
1. The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved;
2. Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.

Strategic objectives:
1. To reduce anthropogenic pressure on coastal and marine areas in order to prevent or reduce their degradation;
2. To ensure preservation of the integrity of coastal ecosystems, landscapes and geomorphology;
3. To adopt measures to reduce the negative impact of natural hazards and in particular of climate change;
4. To ensure that activities on the land and the sea part of the coastal zones are compatible and mutually supportive.

2020-2021 Indicators:
1. Number of tools and methodological documents developed for implementation by the Contracting Parties and/or tested/disseminated;
2. Number of ongoing projects, including CAMPs, addressing land-sea interactions;
3. Coastal networks established and functioning;
4. Number of MSP pilots integrating LSI developed and implemented;
5. (a) Number of trainings on MSP implementation held;
   (b) Number of national experts trained.

2020-2021 Targets:
1. 5 tools/ methodological documents;
2. 1 national CAMP implemented and one transboundary CAMP launched;
3. CAMP network maintained;
4. At least one MSP pilot;
5. (a) 2 trainings held;
   (b) 50 national experts trained.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
4.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.						**8,000 €**	**0 €**	**8,000 €**	**5,000 €**	**30,000 €**	
4.1.1. Contracting Parties assisted in identifying, implementing and evaluating specific measures and tools to reduce pressures on coastal and marine areas (e.g. coastal setback, land policy measures, zoning).						**8,000 €**	**0 €**	**8,000 €**	**5,000 €**	**30,000 €**	
1. Support the socio-economic evaluation of measures in Regional Strategies and Action Plans.	In house expertise; Consultancy	Plan Bleu	CU and other components	Partners in the MEDREGION project, under HCMR coordination	Methodological guidelines developed to support CPs and stakeholders conducting socio-economic evaluations of measures in Regional Strategies and Action Plans, adapted to plastics reduction and prevention measures among others.	8,000 €	0 €	8,000 €	5,000 €	30,000 €	
4.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.						**30,000 €**	**30,000 €**	**60,000 €**	**200,000 €**	**20,000 €**	
4.2.2. Marine Spatial Planning defined in the context of the Barcelona Convention and applied, as appropriate.						**30,000 €**	**30,000 €**	**60,000 €**	**200,000 €**	**20,000 €**	
1. Support region-wide coherent application of MSP, including its links with ICZM and transboundary issues, and implementation of MSP pilot projects.	In-house expertise, coordination and management, external expertise and services, regional workshop/ meeting(s)	PAP/RAC	CU and other Components	CPs, DG MARE, IOC-UNESCO	a) Best practices shared and capacities strengthened on MSP application, through training sessions/ regional workshop, focusing on mapping of LSI and its use within the ICZM and MSP process; b) Priorities for technical support and capacity building identified;		30,000 €	30,000 €		20,000 €	
		PAP/RAC		GEF, National and local authorities and institutions of Montenegro	c) Marine spatial plan for the marine waters under the jurisdiction of Montenegro prepared;			0 €	200,000 €		Secured External Funding through GEF.
		PAP/RAC		CPs, DG MARE, HELCOM, OSPAR, BSC	d) A toolbox for the analytical phase of the MSP process defined; e) Specific guidance for its use provided to build national capacities.	30,000 €		30,000 €			
4.3 Strengthening national implementation.						**80,000 €**	**94,000 €**	**174,000 €**	**0 €**	**600,000 €**	
4.3.1. New generation of CAMPs prepared to promote land-sea interactions, also addressing trans-boundary aspects, as appropriate.						**80,000 €**	**94,000 €**	**174,000 €**	**0 €**	**600,000 €**	
1. Implement CAMP projects in a number of Contracting Parties, including as appropriate transboundary/ transnational dimension, and links between coastal and open sea areas subject to major pressures.	In-house expertise, coordination and management, external expertise and services, national/ regional meeting(s)	PAP/RAC	CU and other Components, as appropriate	CP's national and local authorities and institutions	a) CAMP kick-off meeting organised in Bosnia and Herzegovina; b) Working teams established; c) Project activities launched: the horizontal ones (capacity building; spatial data infrastructure) and the specific ones (marine habitats and protected areas; monitoring of marine and coastal environment; sustainable tourism; marine litter prevention);			0 €			Activity partly implemented during 2018-2019 biennium. It is proposed to re-phase savings of 65,000 EUR to the biennium 2020-2021.
		PAP/RAC			d) Agreement signed with the host-countries for a transboundary CAMP, based on the findings and recommendations of the Feasibility Study prepared in the biennium 2018-19, and CAMP activities launched.	80,000 €	94,000 €	174,000 €		600,000 €	Non-secured external funding under negotiation.
4.4. Monitoring and assessment.						**30,000 €**	**40,000 €**	**70,000 €**	**140,000 €**	**218,000 €**	
4.4.1. Mapping of interaction mechanisms on coastal and marine environment at regional and local levels developed, including assessment of the risks of sea level rise and coastal erosion, and their impacts on coastal environment and communities.						**30,000 €**	**10,000 €**	**40,000 €**	**0 €**	**168,000 €**	
1. Test the methodology for Land-Sea Interactions (LSI).	In-house expertise, coordination, external expertise and services, national/ regional meeting(s)	PAP/RAC	CU	CPs	a) Assistance provided to up to two CPs in testing the LSI methodology developed within the SIMWESTMED and SUPREME projects; b) Findings and lessons learned shared with all CPs; c) Priorities for further work identified.	20,000 €		20,000 €		80,000 €	
2. Implement the SDG 14 in the Mediterranean by promoting the Blue Economy.	In house expertise; Sectoral workshops; Consultancy	Plan Bleu	CU and other Components	CPs, CIHEAM, CMI/World Bank, CRPM, European Commission, FAO, UfM, WWF; private sector, NGOs and local government representatives	a) Key transitions and corresponding policy instruments to foster the Blue Economy based on local innovations, including innovations identified in case studies in the 2018-2019 PoW (in fisheries and aquaculture, maritime transport and port activities, wind energy, tourism and recreation, biological resources) identified; b) Recommendations for a transition towards a Blue Economy in the Mediterranean, including through the development of financing and economic instruments, and innovative partnerships developed.	10,000 €	10,000 €	20,000 €		48,000 €	
3. Develop / consolidate tools to facilitate climate change integration into the decision-making process.	In-house expertise; Consultancy; Publications	Plan Bleu	PAP/RAC, CU	CP, Scientific institutions including MedECC, MedSEA, World Bank or CMI or EIB (tbc)	Assessment tools to evaluate the economic and ecological stakes of sea level rise and coastal risks further developed and disseminated, building on the outcomes of the Coastal Risk Index pilot utilization among others.	0 €	0 €	0 €		40,000 €	
4.4.2. National coast and hydrography monitoring programmes developed and updated to include the relevant IMAP common indicators, interactions and processes.						**0 €**	**30,000 €**	**30,000 €**	**140,000 €**	**50,000 €**	
1. Consolidate common knowledge to inform MSP as a tool to support GES achievement and EcAp application in the Adriatic area (close link with Key Output 4.2.2).	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components	GEF, national and local authorities and institutions of the two project countries (Albania and Montenegro)	National IMAPs finalised for Albania and Montenegro.			0 €	70,000 €		Secured external funding through the GEF Adriatic Project.

2. Support the implementation of national IMAPs' Coast and Hydrology cluster.	In-house coordination and management, external expertise and services, regional meeting, regional/sub regional trainings, CorMon meetings	PAP/RAC	CU	CPs	a) Technical assistance provided and national capacities enhanced for the implementation of Coast and Hydrography components of national IMAP's; b) Minimum two sets of data (EO7, EO 8) reported by CPs; c) Country/sub-regional capacity building trainings organised, as appropriate; d) Minimum one CorMon meeting on Coast and Hydrography held;		30,000 €	30,000 €		50,000 €	Non-secured external funding under negotiation.
	In-house coordination and management, external expertise and services, national/regional meeting(s)	PAP/RAC		GEF, national and local authorities and institutions of the project countries, other CPs	e) In-depth analysis of the land-use and land-use change according to IMAP Common Indicator made in the Albania, Algeria, Egypt, Lebanon, Morocco and Tunisia; f) Generated knowledge transmitted and used by the CPs in the planning process.			0 €	70,000 €		Secured external funding through the GEF MedProgramme.
4.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.						**0 €**	**0 €**	**0 €**	**105,000 €**	**0 €**	
4.5.1. Capacity building for the application of tools for assessing interactions and integrating them in planning/management of coastal and marine environment implemented.						**0 €**	**0 €**	**0 €**	**105,000 €**	**0 €**	
1. Undertake capacity building for land-use and land-use change analysis.	In-house coordination and management, external expertise, national meeting(s)	PAP/RAC	CU	CPs, GEF	a) Training material updated for one face-to-face workshops for the GEF MedProgramme project participating countries on how to make the analysis and how to use it for planning purposes; b) Technical assistance provided and national capacities enhanced.			0 €	35,000 €		Secured external funding through the GEF MedProgramme.
2. Coordinate testing of the use of the coastal and marine Geoportal at sub-regional level.	In-house coordination and management, external expertise, (sub)regional meeting(s)	PAP/RAC	INFO/RAC	PORTODIMARE project partners: DGTEP of the Emilia-Romagna Region (Italy), CORILA (Italy), RRC Koper (Slovenia), HCMR (Greece), ZPUIZ (Croatia), JPMDCG (Montenegro), CETEOR (Bosnia-Herzegovina), CP Apulia (Italy), Service OOMM Abruzzo (Italy), Regione di Veneto (Italy)	a) Use of the Geoportal as a common platform for data, information and decision support tested in 6 pilot cases in the Adriatic-Ionian area, in full compliance with the ICZM and MSP principles and policies and supporting the implementation of the EUSAIR Action Plan; b) Transferability plan prepared.			0 €	70,000 €		
4.6 Enhanced cooperation at regional, sub-regional and national levels.						**0 €**	**0 €**	**0 €**	**0 €**	**50,000 €**	
4.6.1. Networks of CAMPs and other ICZM Protocol implementation activities established and cooperation undertaken with other partners to promote the exchange of data, experience and good practices established.						**0 €**	**0 €**	**0 €**	**0 €**	**50,000 €**	
1. Support the functioning of the network by developing guidelines and methodologies, updating information and organising on-line and face-to-face exchanges.	In-house expertise, coordination and management, external expertise, regional meeting(s)	PAP/RAC	CU and INFO/RAC	CPs and all other relevant stakeholders	a) Support to new CAMPs provided through exchange of experiences with previous CAMP and other ICZM projects, and use of tools and other material from these projects; b) Exchange of experiences and information facilitated; c) Human and knowledge base strengthened for the ICZM implementation.			0 €		50,000 €	
4.7 Identifying and tackling with new and emerging issues, as appropriate.						**0 €**	**0 €**	**0 €**	**44,000 €**	**0 €**	
4.7.1. Additional stresses relevant to the Convention on water resources due to climate change assessed in cooperation with other regional interested stakeholders.						**0 €**	**0 €**	**0 €**	**44,000 €**	**0 €**	
1. Prepare integrated coastal, watershed and aquifer management plan.	In-house expertise, coordination and management, external expertise, national meeting(s)	PAP/RAC	CU and other Components	CPs, GEF, IPH-UNESCO, GWP-Med	Integrated Management Plan (IMP) for the Damour area of Lebanon prepared according to the IMF methodology.			0 €	44,000 €		Secured external funding through the GEF MedProgramme.
TOTAL THEME 4. LAND AND SEA INTERACTION AND PROCESSES						***148,000 €***	***164,000 €***	***312,000 €***	***494,000 €***	***918,000 €***	

THEME 4. LAND AND SEA INTERACTION AND PROCESSES	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			0 €		
MED POL			0 €		
REMPEC			0 €		
PB/RAC	18,000 €	10,000 €	28,000 €	5,000 €	118,000 €
SPA/RAC			0 €		
PAP/RAC	130,000 €	154,000 €	284,000 €	489,000 €	800,000 €
INFO/RAC			0 €		
SCP/RAC			0 €		
TOTAL	***148,000 €***	***164,000 €***	***312,000 €***	***494,000 €***	***918,000 €***
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	**148,000 €**	**164,000 €**	**312,000 €**	**494,000 €**	**918,000 €**
Sum of Outputs Subtotals	**148,000 €**	**164,000 €**	**312,000 €**	**494,000 €**	**918,000 €**

THEME 5. Integrated Coastal Zone Management

Long-Term Targeted Impacts:
1. The sustainable development of coastal zones is facilitated by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development;
2. The sustainable use of natural resources is ensured, particularly with regard to water use;
3. The coherence is achieved between public and private initiatives and between all decisions by the public authorities, at the national, regional and local levels, which affect the use of the coastal zone.

Strategic objectives:
1. Support the effective implementation of the ICZM Protocol at regional, national and local levels, as stipulated in the Action Plan 2012-2019;
2. Strengthen the capacities of Contracting Parties to use in an effective manner ICZM policies, instruments, tools and processes.

2020-2021 Indicators:
2. (a) Number of MedOpen Training Courses;
(b) Number of persons trained;
3. Number of countries reporting updated/new national policies and action plans, which mainstream climate change adaptation and SCP measures;
4. Number of ICZM coordination mechanisms established;
5. (a) Number of trainings on ICZM;
(b) Number of persons trained.

2020-2021 Targets:
2. (a) 2 courses;
(b) 30 participants;
3. At least 3 countries;
4. 3 inter-ministerial coordination frameworks established;
5. (a) 3 trainings held;
(b) 50 persons trained.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
5.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.						0 €	0 €	0 €	0 €	50,000 €	
5.2.2. Methodological framework for land and sea interactions, considering in particular MSP and ICZM, developed and applied.						**0 €**	**0 €**	**0 €**	**0 €**	**50,000 €**	
1. Conceptualize links between IMAP, LSI and MSP, and provide relevant guidance.	In-house expertise, coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components	CPs	A framework linking IMAP, LSI and MSP as part of ICZM prepared and explained in details.			0 €		50,000 €	
5.3 Strengthening national implementation.						0 €	0 €	0 €	285,000 €	0 €	
5.3.1. National ICZM Strategies including streamlining pollution, biodiversity, adaptation to climate change and SCP, land and sea interaction as well as sustainable cities prepared and applied.						**0 €**	**0 €**	**0 €**	**240,000 €**	**0 €**	
1. Support the preparation of national ICZM strategies and plans.	In-house expertise, coordination and management, external expertise and services, national meetings	PAP/RAC	CU and other Components	CPs, GEF, UNDP	a) National ICZM strategies for Egypt and Lebanon prepared; b) Feedback provided on the national ICZM strategy of Tunisia;			0 €	132,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
		PAP/RAC		CPs, GEF, MAVA Foundation	c) Two ICZM plans for selected coastal areas of Montenegro and Morocco prepared; d) Management plan for a wetland in Tunisia (Ghar El Melh) prepared.			0 €	108,000 €		Secured external funding through the GEF MedProgramme and MAVA.
5.3.2. Countries assisted in carrying out gap analysis on national legal and institutional frameworks for ICZM in order to streamline as need be the ICZM Protocol provisions into national legislations.						**0 €**	**0 €**	**0 €**	**45,000 €**	**0 €**	
1. Promote ratification of the ICZM Protocol.	In-house coordination and management, external expertise and services, national meetings	PAP/RAC	CU and other Components	CPs, GEF	a) Analysis of national legal and institutional frameworks in the domains of relevance to the ICZM Protocol (for Algeria and Tunisia) undertaken; b) Recommendations provided on the basis of the analysis' findings; c) Priority actions to facilitate ratification of the ICZM Protocol identified;			0 €	35,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
		PAP/RAC			d) National consultations organised in support of the ICZM Protocol ratification; e) Feedback from national stakeholders participating in consultation obtained and used within the ratification process in Algeria, Egypt and Tunisia.			0 €	10,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
5.4 Monitoring and assessment.						0 €	0 €	0 €	0 €	30,000 €	
5.4.1. Fact sheets for ICZM indicators developed to evaluate the effectiveness of coastal and marine resources management measures.						**0 €**	**0 €**	**0 €**	**0 €**	**30,000 €**	
1. Update IMAP Common Indicators on Coast and Hydrography Cluster.	In-house coordination and management, external expertise and services	PAP/RAC	CU, IMAP Task Force	CPs, EEA, UNEP/GRID	IMAP Common Indicators of the "Coastal" cluster updated with new relevant data and information on sea level rise.			0 €		30,000 €	
5.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.						10,896 €	0 €	10,896 €	135,000 €	0 €	
5.5.1. MedOpen Training Programme on ICZM regularly updated and implemented, in coordination with the relevant NFPs.						**10,896 €**	**0 €**	**10,896 €**	**135,000 €**	**0 €**	
1. Organise MedOpen advanced training courses on ICZM.	In-house expertise, coordination and management, external expertise and services	PAP/RAC	INFO/RAC	CPs, GEF	a) MedOpen updated to include up-to-date learning material; b) One advanced training session in English and one in French delivered.	10,896 €		10,896 €	56,000 €		Secured external funding through the GEF MedProgramme and MAVA.
2. Support implementation of ICZM Protocol at sub-regional level.	In-house coordination and management, external expertise and services	PAP/RAC	CU	GEF eligible CPs	a) Three sub-regional trainings organised for the GEF eligible countries; b) Technical assistance provided and capacities enhanced in support of the ICZM Protocol implementation in a coherent manner at sub regional level.			0 €	79,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.

5.6 Enhanced cooperation at regional, sub-regional and national levels.						10,000 €	0 €	10,000 €	30,000 €	0 €	
5.6.1. ICZM coordination enhanced through: (i) Mediterranean ICZM Platform; (ii) national ICZM coordination bodies.						**10,000 €**	**0 €**	**10,000 €**	**30,000 €**	**0 €**	
1. Ensure and maintain the functioning of the Mediterranean ICZM Platform.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and INFO/RAC	CPs and all other relevant stakeholders	a) Work of the ICZM Platform coordinated and facilitated through up-to-date information and knowledge; b) National coordination bodies responsible for the implementation of the ICZM Protocol supported.	10,000 €		10,000 €			
2. Establish and/or enhance Inter-Ministerial Coordination (ICM) frameworks.	In-house expertise, coordination and management, external expertise and services, meetings	PAP/RAC	CU	GEF eligible CPs	National consultations organised and proposals for ICZM made for Bosnia and Herzegovina, Lebanon and Tunisia.			0 €	30,000 €		Secured external funding through the GEF MedProgramme resources to be spent in 2020-21.
TOTAL THEME 5. INTEGRATED COASTAL ZONE MANAGEMENT						***20,896 €***	***0 €***	***20,896 €***	***450,000 €***	***80,000 €***	

THEME 5. INTEGRATED COASTAL ZONE MANAGEMENT	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021
Coordinating Unit			**0 €**		
MED POL			**0 €**		
REMPEC			**0 €**		
PB/RAC			**0 €**		
SPA/RAC			**0 €**		
PAP/RAC	**20,896 €**	**0 €**	**20,896 €**	**450,000 €**	**80,000 €**
INFO/RAC			**0 €**		
SCP/RAC			**0 €**		
TOTAL	***20,896 €***	***0 €***	***20,896 €***	***450,000 €***	***80,000 €***
	0 €	0 €	0 €	0 €	0 €

Sum of Outcomes Subtotals	**20,896 €**	**0 €**	**20,896 €**	**450,000 €**	**80,000 €**
Sum of Outputs Subtotals	**20,896 €**	**0 €**	**20,896 €**	**450,000 €**	**80,000 €**

THEME 6: Sustainable Consumption and Production

Strategic objectives:
1. To establish prosperous Mediterranean region, with non-pollutant, circular, socially inclusive economies based on sustainable consumption and production patterns, securing the sustainable management of natural resources and energy, ensuring the well-being of societies and contributing to clean environment and healthy ecosystems that provide goods and services for present and future generations;
2. To support the effective implementation of the SCP Action Plan and its roadmap;
3. To strengthen technical capacities of businesses, entrepreneurs, financing agents, and civil society implement SCP solutions;
4. To promote SCP in key economic sectors and lifestyles which are upstream drivers of chemicals and marine litter;
5. To strengthen technical capacities of businesses, entrepreneurs, financing agents, and civil society implement SCP solutions reducing toxic chemicals and marine litter;
6. To provide innovative services and products contributing to the conservation and sustainable management of biodiversity and ecosystems;
7. To strengthen technical capacities of businesses, entrepreneurs, financing agents, and civil society to implement SCP solutions contributing to the conservation of biodiversity and ecosystems;
8. To reduce the pressure of human activities in coastal and marine areas through the implementation of SCP tools.

2020-2021 Indicators:	**2020-2021 Targets:**
1. Number of new/updated guidelines, policy documents and other implementation tools addressing SCP for key sectors and areas of consumption and production; 2. Number of training and capacity building activities in application of the SCP Action Plan; 3. Number of businesses, entrepreneurs, financial agents and civil society organizations trained and capacitated to provide SCP solutions and joining the Mediterranean SCP Action Network, the Switchers Platform and the Green Impact Investment Network; 4. Number of projects implementing the SCP Action Plan engaging different stakeholders identified by the facilitators; 5. Number of SCP NAPs developed; 6. a) Number of Switchers Support National Partnerships created; b) Number of investor-ready Switchers linked with financial actors; 7. Number of activities to stimulate demand for sustainable products and services.	1. 4 tools/guidelines/policy documents; 2. 5 activities; 3. 800 trainees; 4. 3 projects; 5. 2 SCP NAPs; 6. a) 8 partnerships; b) 80 investor-ready Switchers linked with financial actors; 7. 10 activities.

Main Activities	Means of implementation	Lead: CU and or Component	Other: CU or Component	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
6.1. Development of new action plans, programmes of measures, common standards and criteria, guidelines and implementation of current ones.						**20,000 €**	**10,000 €**	**30,000 €**	**157,000 €**	**590,000 €**	
6.1.1. Selected actions of the SCP Action Plan directly contributing to prevent, reduce and eliminate marine pollution and protect/enhance biodiversity and ecosystems as well as address climate change in the marine and coastal areas of the Mediterranean identified and implemented.						**20,000 €**	**10,000 €**	**30,000 €**	**157,000 €**	**60,000 €**	
1. Support development of National SCP/ Circular Economy Action Plans.	In-house expertise, consultancies, national/ regional meeting(s)	SCP/RAC	CU, MED POL	CPs	a) At least 2 countries supported for the development of SCP / Circular Economy plans identifying priority value chains and proposing actions for capacity building, policy instruments and partnerships; b) At least 1 country supported in the development of actions to foster sustainable consumption, eco-labelling and/or sustainable public procurement; c) At least 1 country supported in decentralizing circular economy initiatives.	20,000 €	10,000 €	30,000 €	0 €	60,000 €	
2. Conduct a Mid-term evaluation of the SCP Regional Action Plan.		SCP/RAC	CU, Plan Bleu	CPs, SwitchMed Partners	Mid-term evaluation of the SCP Action Plan, feeding the new MTS preparation process, prepared and submitted to the SCP/RAC Focal Points meeting.	0 €	0 €	0 €	0 €	0 €	Funds for the mid-term evaluation of the SCP Action Plan are included under activity 1.1.2.5. This activity includes both the mid-term evaluations of the MSSD and the SCP Action, both processes will be develop in full synergy in order to make an efficient use of available resources.
3. Assess the role of green businesses and green employment for the protection of the Mediterranean environment.		SCP/RAC	CU	UNIDO, UN Environment Economy Division	1 background document prepared, key policy measures to aknowledge and support the development of green and circular businesses identified, reviewed by key stakeholders and submitted to the SCP/RAC Focal Points meeting.	0 €	0 €	0 €	157,000 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
6.1.3. Methodological tools for SCP mainstreaming in the priority areas of consumption and production of the Regional Action Plan on SCP - tourism, food, housing and goods manufacturing implemented and new ones developed for other sectors.						**0 €**	**0 €**	**0 €**	**0 €**	**530,000 €**	
1. Develop pilot activities for the identification of circular economy opportunities within key sectors of the SCP Action Plan.	In-house expertise, consultancies, national workshop(s)	SCP/RAC	CU	UNIDO, UN Environment Economy Division	a) 1 tool for the identification of Circular Economy opportunities within the food and textile value chains developed; b) 1 Pilot test with a cluster of textile companies performed; c) 1 Pilot test of with a cluster of food companies performed;	0 €	0 €	0 €	0 €	500,000 €	
		SCP/RAC			d) Regional and national pilot informational and voluntary/procedural policy instruments developed with 2 countries (switchers Voluntary commitment...).	0 €	0 €	0 €	0 €	30,000 €	
6.2. Monitoring and assessment.						**0 €**	**0 €**	**0 €**	**113,000 €**	**0 €**	
6.2.1. SCP Action Plan indicators aligned with MSSD relevant work, identified, selected and factsheets developed.						**0 €**	**0 €**	**0 €**	**113,000 €**	**0 €**	
1. Follow-up on SCP indicators under the framework of the SCP Action Plan and MSSD implementation.	In-house expertise, consultancies	SCP/RAC	CU, Plan Bleu	UNIDO, UN Environment Economy Division	The 25 SCP indicators populated to provide a better vision of the situation and progress in the region.	0 €	0 €	0 €	83,000 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
2. Assess environmental, social and economic performance of green entrepreneurs and circular businesses, contributing to the SCP Action Plan implementation.		SCP/RAC			1 MEAL System (Monitoring, Evaluation, Accountability and Learning) to assess environmental, social and economic performance of green entrepreneurs and circular businesses consolidated.	0 €	0 €	0 €	30,000 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
6.3. Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building.						**18,000 €**	**15,000 €**	**33,000 €**	**1,852,500 €**	**0 €**	
6.3.1. Training and support programme for green entrepreneurs and civil society as SCP drivers.						**18,000 €**	**15,000 €**	**33,000 €**	**1,852,500 €**	**0 €**	
1. Undertake training and support programme for green entrepreneurs, start-ups and SMEs.	In-house expertise, consultancies, national workshop(s), training(s), coaching, mentoring	SCP/RAC	CU	UNIDO, UN Environment Economy Division	a) 1 Online Platform of Green Business Development Tools and Methodologies developed;	18,000 €	15,000 €	33,000 €	1,852,500 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
		SCP/RAC			b) Switchers Support National Partnerships, gathering Business Development Service Providers supporting Green Entrepreneurs, set up in 8 Mediterranean countries (Morocco, Algeria, Tunisia, Egypt, Jordan, Palestine, Israel and Lebanon);						
		SCP/RAC			c) Transfer of Green Business Development capacities, methodologies and tools to the Business Development Service Providers carried out;						
		SCP/RAC			d) Training and support schemes for green entrepreneurs implemented by the National Partnerships designed and facilitated;						
		SCP/RAC			e) Mentoring and replication support among Switchers performed;						
		SCP/RAC			f) Financial deals between green entrepreneurs and financial actors promoted.						
6.4. Enhanced cooperation at regional, sub- regional and national levels to prevent and control marine pollution.						**40,000 €**	**56,000 €**	**96,000 €**	**1,256,331 €**	**0 €**	
6.4.1. Establishment of networks and initiatives of businesses, entrepreneurs, civil society, providing SCP solutions promoted.						**0 €**	**0 €**	**0 €**	**517,121 €**	**0 €**	
1. Strengthen the Mediterranean Green Impact Investing Network (Switchers Fund).	In-house expertise, consultancies ,sub-regional and national meeting(s)	SCP/RAC	CU	UNIDO, UN Environment Economy Division, Organisation for Security and Co-operation in Europe (OSCE)	Access to finance for entrepreneurs in the ideation and early stages of development provided through the Switchers funds, in particular via meet-ups with regional and national financing institutions, grants, etc. Experts led roundtables with green financing institutions.	0 €	0 €	0 €	124,654 €	0 €	Secured external funding through the GIMED (ENI CBC Med).

2. Scale up SCP solutions in the Mediterranean.		SCP/RAC	CU, MED POL	UNIDO, UN Environment Economy Division, UNCTAD, Lebanon Berytech Foundation, Palestine Leaders Organisation, Tunisia Connect, Egypt Alexandria Business Association, Italy Fondazione di Communita di Messina	a) Visibility to sustainable products and services in partnership with online retailer platforms increased;	0 €	0 €	0 €	102,743 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
		SCP/RAC			b) Group coaching for access to markets, B2B business services and a value-chain integration pilot developed together with the partner organisation UNCTAD;	0 €	0 €	0 €	124,654 €	0 €	Secured external funding through the GIMED (ENI CBC Med).
		SCP/RAC			c) 1 online open innovation and matchmaking platform allowing creation of market pull by partner producer and retailer companies developed.	0 €	0 €	0 €	102,743 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
3. Establish supporting structures for green and circular businesses.		SCP/RAC	CU, MED POL	CPs, private businesses, Lebanon Berytech Foundation, Palestine Leaders Organisation, Tunisia Connect, Egypt Alexandria Business Association, Italy Fondazione di Communita di Messina	a) 1 Green and Circular Economy label/standard scheme for green and circular businesses/entrepreneurs developed; b) 1 policy paper – 'recommendations for improving green and circular markets and supporting eco-innovative ventures prepared.	0 €	0 €	0 €	62,327 €	0 €	Secured external funding through the GIMED (ENI CBC Med).
6.4.2. A Mediterranean SCP Hub for knowledge exchange and networking fully operative and performing as connector and lever for new partnerships and initiatives providing SCP solutions.						**40,000 €**	**56,000 €**	**96,000 €**	**739,210 €**	**0 €**	
1. Manage a Mediterranean Community of SCP stakeholders that is a space for the exchange of knowledge on SCP, training, and the establishment of alliances, projects and business opportunities.	In-house expertise, consultancies, regional event	SCP/RAC	CU, INFO/RAC	UNIDO, UN Environment Economy Division, Lebanon Berytech Foundation, Palestine Leaders Organisation, Tunisia Connect, Egypt Alexandria Business Association, Italy Fondazione di Communita di Messina	Dissemination of the results of the SCP and Circular Economy practices in Southern Mediterranean countries enhanced via: a) The Switchers Support Programme site, the Switchers' stories platform, the SwitchersFund site, the SwitchMed Programme website, the GIMED Project website; b) The preparation of SwitchMed Programme and GIMED Newsletters; c) The facilitation of the SwitchMed and GIMED Social Media accounts; d) The organisation of 1 SwitchMed Connect event.	40,000 €	56,000 €	96,000 €	739,210 €	0 €	Secured external funding through the SwitchMed II (EU DG NEAR).
TOTAL THEME 6: Sustainable Consumption and Production						***78,000 €***	***81,000 €***	***159,000 €***	***3,378,831 €***	***590,000 €***	

THEME 6: Sustainable Consumption and Production	**MTF 2020**	**MTF 2021**	**MTF TOTAL 2020-2021**	**2021**	**2021**
Coordinating Unit			**0 €**		
MED POL			**0 €**		
REMPEC			**0 €**		
PB/RAC			**0 €**		
SPA/RAC			**0 €**		
PAP/RAC			**0 €**		
INFO/RAC			**0 €**		
SCP/RAC	**78,000 €**	**81,000 €**	**159,000 €**	**3,378,831 €**	**590,000 €**
TOTAL	***78,000 €***	***81,000 €***	***159,000 €***	***3,378,831 €***	***590,000 €***
	0 €	0 €	0 €	0 €	0 €

Sum of Outcomes Subtotals	**78,000 €**	**81,000 €**	**159,000 €**	**3,378,831 €**	**590,000 €**
Sum of Outputs Subtotals	**78,000 €**	**81,000 €**	**159,000 €**	**3,378,831 €**	**590,000 €**

THEME 7. Climate Change Adaptation

Strategic objectives:
1. To strengthen the resilience of the Mediterranean natural and socioeconomic systems to climate change by promoting integrated adaptation approaches and better understanding of impacts.
2. To reduce anthropogenic pressure on coastal and marine biodiversity to maintain their contribution to climate change adaptation.

2020-2021 Indicators:	**2020-2021 Targets:**
1. Number of existing regional strategies and action plans streamlining climate change adaptation perspectives; 2. Number of new action plans, programmes and measures, common standards and criteria, guidelines mainstreaming climate change adaptation; 3. Number of countries adopting/updating National Climate Change Adaptation Strategies and Action Plans taking into consideration related marine and coastal environment issues; 4. Number of countries enhancing capacity at regional, sub-regional and national levels including technical assistance and capacity building on climate change adaptation issues.	1. 1 regional strategy and/or action plan; 2. 5 instruments; 3. 1 country; 4. 4 countries.

Main Activities	Means of implementation	Lead: CU or Component	Other: CU and/or Components	Partners	Expected Deliverables	CORE FUNDING: MTF			External Funding		Comments
						MTF 2020	MTF 2021	MTF TOTAL 2020-2021	Secured External Funding TOTAL 2020-2021	Non-Secured External Funding TOTAL 2020-2021	
7.1. Strengthening the regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.						**0 €**	**0 €**	**0 €**	**0 €**	**80,000 €**	
7.7.1. Climate Change Adaptation main activities identified and mainstreamed into the implementation of existing regional strategies, regional action plans and measures.						**0 €**	**0 €**	**0 €**	**0 €**	**80,000 €**	
1. Promote environmental taxation especially for fossil fuel emissions.	In house expertise, consultancy	Plan Bleu	CU and other Components	CPs, OECD	Report on environmental taxation in the Mediterranean countries developed.	0 €	0 €	0 €		40,000 €	
2. Promote the use of alternative, renewable energy resources in the Mediterranean.	In house expertise, consultancy, regional meeting(s)	Plan Bleu	CU	CPs, IRENA	a) State of play on production and use of marine renewable energies (wind power, tidal energy etc.) in the Mediterranean prepared; b) Best practices, including BAT and BEP, on marine renewable energies shared; c) Priorities for technical assistance and capacity building identified.	0 €	0 €	0 €		40,000 €	
7.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.						**12,600 €**	**0 €**	**12,600 €**	**20,000 €**	**55,000 €**	
7.2.1. Climate change adaptation, including related vulnerabilities and risks, key activites mainstreamed into the development of new/updated regional strategies, regional action plans and measures addressing biodiversity, pollution and land and sea interactions.						**0 €**	**0 €**	**0 €**	**20,000 €**	**0 €**	
1. Adapt the PAP/RAC Guidelines for adapting to climate change and variability to the Adriatic basin.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	CU	AdriAdapt project partners: CMCC (Italy), DHMZ (Croatia), IUAV Venezia (Italy), Unioni dei Communi Valle del Savio (Italia), ARPA Emilia-Romagna (Italy), Commune di Cervia (Italy), Šibenik-Knin County (Croatia), City of Vodice (Croatia)	a) Guidelines on mainstreaming adaptation into coastal management along Adriatic coasts in Croatian and Italian produced; b) Guidelines for building coastal resilience in Croatian, English and Italian produced.			0 €	20,000 €		Secured external funding from AdriAdapt (Interreg Italy-Croatia).
7.2.3. Promote integration of ecosystem-based responses in National Climate Change Adaptation Strategies.						**12,600 €**	**0 €**	**12,600 €**	**0 €**	**55,000 €**	
1. Support Contracting Parties to enhance the marine biodiversity component on their updated National Determined Contributions (NDCs), in line with the UNFCCC COP21 Paris Agreement.	In house coordination and expertise,consultancies, coordination with CBD and UNFCCC	SPA/RAC	CU, Plan Bleu and relevant Components	UNFCCC Secretariat, CBD Secretariat	Guidelines to enhance the marine biodiversity component of countries updated NDCs to increase alignment and integration of marine biodiversity concerns and SDG 14 pursuit, harmonized and coordinated with related tools and initiatives by the UNFCCC and the CBD to maximize synergies.	7,000 €		7,000 €			
2. Promote the integration of Nature Based Solutions in Climate Change Adaptation Strategies.	In house expertise, workshop(s), consultancy, contractual services, side event(s)	Plan Bleu	MED POL, SPA/RAC	CPs, AFD, Conservatoire du Littoral, IUCN, Tour du Valat, MedWET, MAVA	a) Good practices on Nature Based solutions, including innovative policy instruments identified; b) NBS promoted and disseminated, including potential Side event at IUCN 2020; c) Analyses making the case for NBS, including through economic valuation of ecosystem services identified/ developed and disseminated; d) Revised / enriched policy paper for consideration by national and regional governments prepared.	5,600 €	0 €	5,600 €		55,000 €	All activities except for participation in IUCN 2020 are dependent on external funding.
7.3 Strengthen national implementation.						**0 €**	**0 €**	**0 €**	**304,000 €**	**0 €**	
7.3.1. Climate change adaptation priority fields identified and mainstreamed into the relevant MAP policies, as appropriate.						**0 €**	**0 €**	**0 €**	**304,000 €**	**0 €**	
1. Mainstream the climate change adaptation into local ICZM plans.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	CU, Plan Bleu	CPs, GEF, GWP-Med	Recommendations provided for adaptation measures to be mainstreamed into local ICZM plans in Morocco and Montenegro prepared within the GEF Medprogramme.			0 €	15,000 €		Secured external funding through GEF SCCF Project.
2. Create a catalogue of climate change adaptation measures and mitigation policies.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	INFO/RAC	AdriAdapt project partners: CMCC (Italy), DHMZ (Croatia), IUAV Venezia (Italy), Unioni dei Communi Valle del Savio (Italia), ARPA Emilia-Romagna (Italy), Commune di Cervia (Italy), Šibenik-Knin County (Croatia), City of Vodice (Croatia)	Searchable description of measures and best practices (with priority given to Adriatic and European experiences) created and included in the Climate Adapt platform (forseeing the possibilty of its future extention to the entire Mediterranean basin).			0 €	24,000 €		Secured external funding through AdriAdapt (Interreg Italy-Croatia).
3. Support the preparation of strategies for climate change adaptation.	In-house expertise, coordination and management, external expertise and services, meeting(s)	PAP/RAC	CU	AdriAdapt project partners: CMCC (Italy), DHMZ (Croatia), IUAV Venezia (Italy), Unioni dei Communi Valle del Savio (Italia), ARPA Emilia-Romagna (Italy), Commune di Cervia (Italy), Šibenik-Knin County (Croatia), City of Vodice (Croatia)	Two strategies for climate change adaptation prepared for the municipalities of Šibenik and Vodice in Croatia.			0 €	265,000 €		
7.4 Monitoring and Assessment.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
7.4.1. Climate Change vulnerability issues considered in existing monitoring programmes.						**0 €**	**0 €**	**0 €**	**0 €**	**0 €**	
1. Develop vulnerability and impact indicators of climate change on biodiversity and natural resources, also addressing socio-economic trends.	In house expertise, workshop(s), contractual services	Plan Bleu	CU and other Components	CPs, MedECC, AE RMC, IME	a) Vulnerability and impacts indicators of climate change on natural resources, also addressing socio-economic trends. identified; b) Plan Bleu Observatory enriched with information on climate change impacts and risks, including MedECC findings; c) Related factsheets and case studies prepared; d) Policy paper developed.	0 €	0 €	0 €			
7.5 Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building.						**25,000 €**	**5,000 €**	**30,000 €**	**100,000 €**	**0 €**	
7.5.1. Awareness and engagement of key stakeholders on climate change adaptation and on its links with the core themes enhanced.						**25,000 €**	**5,000 €**	**30,000 €**	**100,000 €**	**0 €**	
1.Improve the adaptation of existing tools such as Imagine to engage stakeholders on climate change adaptation strategies.	In house expertise, workshop(s) (training of trainers), contractual services	Plan Bleu	PAP/RAC	GEF, GWP Med (Tunisia)	a) Climagine method (integrating climate change issues in the participatory approach "Imagine") developed and implemented on several coastal sites; b) Case studies published and disseminated; c) Climagine implementation guide prepared and disseminated.	5,000 €	5,000 €	10,000 €	100,000 €		Secured external funding through GEF programme.
2. Promote regional dialogue on Climate Change impacts and adaptation strategies.	In-house expertise, consultancy, networking with scientific institutions and practitioners, regional	Plan Bleu	CU, PAP/RAC and other Components	CPs, MedECC, UfM, AE RMC, ADEME	a) Regional actors better informed of the impact of climate change; b) Scientific results, lessons learned and best practices on adaptation strategies shared.	20,000 €		20,000 €			
TOTAL THEME 7. CLIMATE CHANGE ADAPTATION						***37,600 €***	***5,000 €***	***42,600 €***	***424,000 €***	***135,000 €***	

THEME 7. CLIMATE CHANGE ADAPTATION	MTF 2020	MTF 2021	MTF TOTAL 2020-2021	2021	2021
Coordinating Unit			**0 €**		
MED POL			**0 €**		
REMPEC			**0 €**		
PB/RAC	**30,600 €**	**5,000 €**	**35,600 €**	**100,000 €**	**135,000 €**
SPA/RAC	**7,000 €**	**0 €**	**7,000 €**	**0 €**	**0 €**

PAP/RAC	0 €	0 €	0 €	324,000 €	0 €
INFO/RAC			0 €		
SCP/RAC			0 €		
TOTAL	*37,600 €*	*5,000 €*	*42,600 €*	*424,000 €*	*135,000 €*
	0 €	0 €	0 €	0 €	0 €
Sum of Outcomes Subtotals	37,600 €	5,000 €	42,600 €	424,000 €	135,000 €
Sum of Outputs Subtotals	37,600 €	5,000 €	42,600 €	424,000 €	135,000 €

Appendix

Note on the RACs Operating Budget

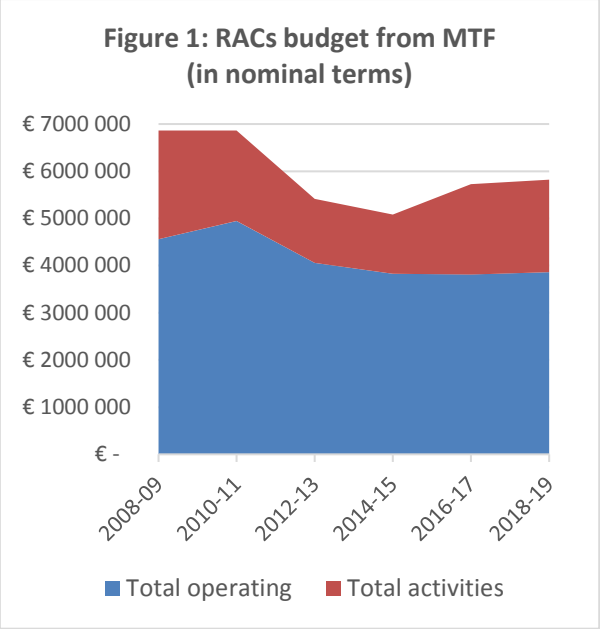
NOTE ON THE RACS OPERATING BUDGET

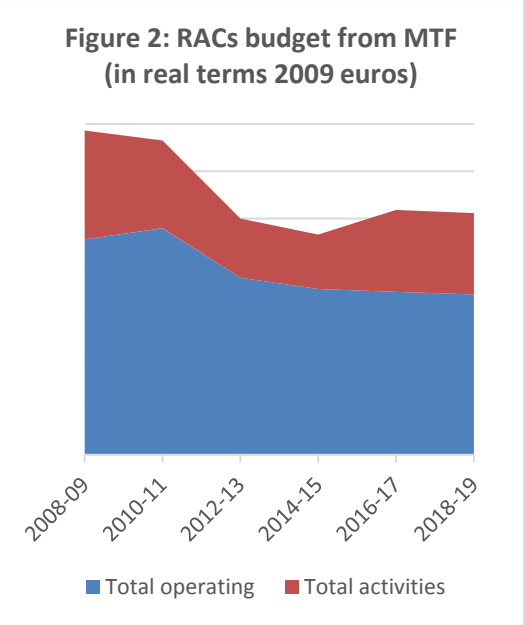
This note is based on information compiled from COP decisions and RACs contributions. It presents arguments in favour of an **increase by 5% of the RACs operating budget**.
All data is presented by biennium as per MTF funding and COP decisions.
Operating budget excludes activity-specific budgets in the PoW. Operating budget thus includes staff, travel and other running costs.
Current RACs structures are presented in Annex.

1. RACs budget evolution[6]

In nominal terms, RACs global budget has decreased by 21% from 2010-2011 to 2012-2013 to account for necessary budget savings. Since 2014-2015, RACs global budget has increased reaching a level 15% below its 2010-2011 budget in nominal terms in 2018-2019 (Figure 1).

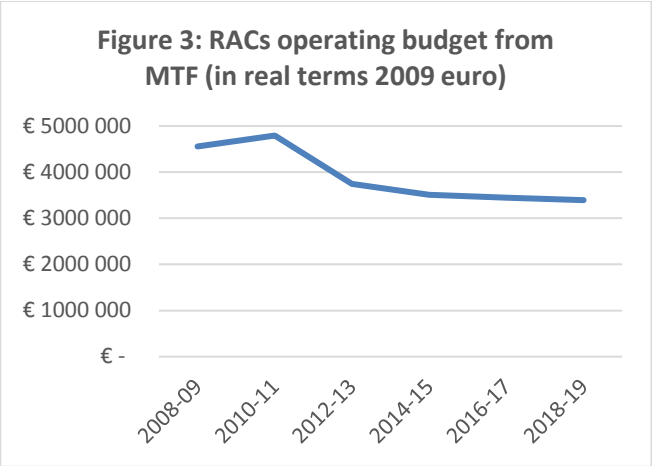
With a cumulated inflation of 13,8% in the euro zone since 2009, variations in real terms differ from nominal data, and **RACs 2018-2019 global budget is 26% below its 2008-2009 level in real terms** (Figure 2).



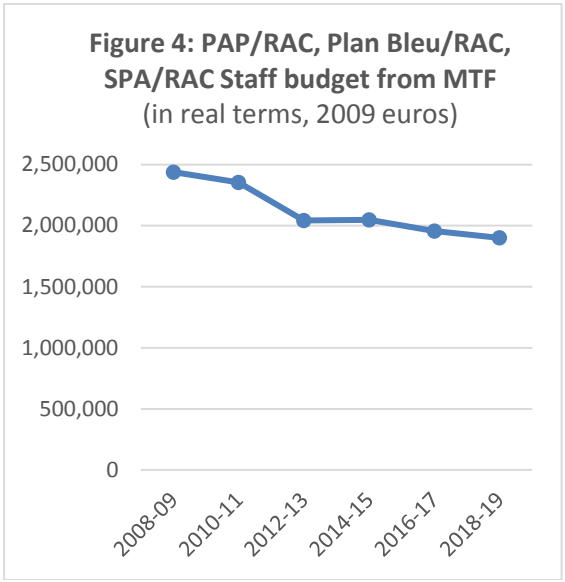


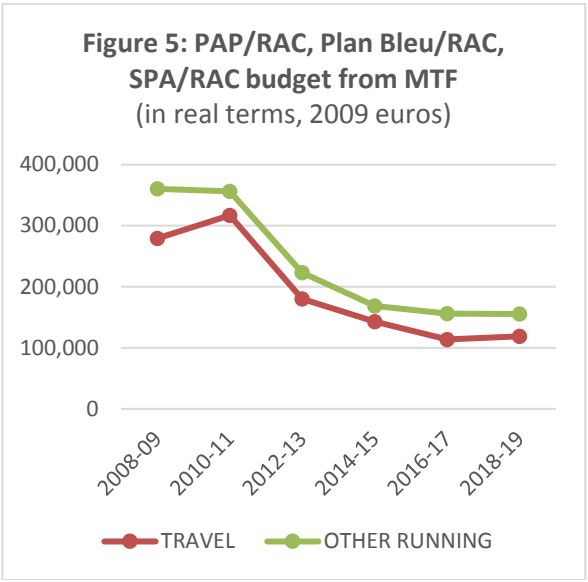
[6] RACs activity and operating budget from MTF data are based on COP decisions. More detailed data are based on RACs accounting.

RACs global **operating budget** in real terms has decreased further, with a total decrease by more than 29% in real terms since 2010-2011. Significant cuts were incurred in 2012-2013 (-22% in real terms), to account for necessary budget savings. However, **while RACs activity budget increased during the last two biennium, RACs global operating budget has continued decreasing in real terms by an additional 7.3%** since 2012-2013 (Figure 3).



Detailed information available for PAP/RAC, Plan Bleu/RAC and SPA/RAC show a joint decrease in real terms of 22% for staff costs since 2008-2009; 62% for travel costs and 56% for other running costs since 2010-2011 (Figures 4 and 5).





Operating budget cuts from MTF add-up to increasing **difficulties or uncertainties in mobilizing secondments** from governments and partner institutions (Info/RAC, Plan Bleu/RAC, SCP/RAC), even if new opportunities may arise (REMPEC).

2. RACs need for an operating budget increase

Several pressing needs justify an increase in RACs operating budget:

Fulfilling a continued, and often increasingly ambitious mandate. RACs mandates have been reaffirmed over the years by Contracting Parties in the Barcelona Convention, with all RACs mandated to implement ambitious new activities. Several RACs mention that they would have to lower their activity due to staffing constraints.

Covering salaries and bills. Along with significant cuts in operating budgets, some RACs mention difficulties in covering salaries, as well as necessary expenses like telephone, internet, GIS Web applications and website hosting bills, or equipment and material maintenance and consumables costs. Important positions have to be filled temporarily on an ad hoc basis, or not at all.

Allowing staff to progress. RACs need to offer staff opportunities to progress in their career according to the evolution of her/his skills and level of competencies and experience. To continue to perform in a rapidly evolving context, staff members also need to attend trainings to improve and develop their skills and capacities.

Responding to countries request. With reduced travel budget, RACs are limited in their capacity to respond to countries requests for in-country support. They are also limited in their capacity to disseminate policy relevant findings and recommendations in the region by participating in relevant events.

Mobilizing and managing external funding. External funding has partially compensated for decrease in global MTF funding. However, if mobilizing funding for activities is sometimes within reach, mobilizing funding for administrative functions and other operating costs is often difficult. Project proposal design and application, management, monitoring and reporting requires internal resources, as well as co-funding capacity. **Some RACs are facing difficulties in raising external funding for activities in the PoW, due to limited administrative capacity. Others, while having raised such funding, are constraint in managing them**.

3. Other specific RACs needs

In addition, to the joint application for a 5% increase in operating budgets justified in points 1 and 2 (which would only partially enable RACs to fulfil needs listed above to complete their mandates and meet Contracting Parties demands), some RACs mentioned the following specific needs:

- INFO/RAC mentions a need for additional human and financial resources for the completion of IMAP Info System by 2020, and the full implementation of the MAP Operational Communication Strategy, as proposed in the 2020-2021 programme of work. This need is not supported by an increase in financial support to its central structure, indeed, the man time dedicated to the INFO/RAC Centre of the personnel assigned is paid by the central structure only as a percentage part, therefore, to fulfill its tasks INFO/RAC must increasingly turn to temporary staff in the last years. As better specified in the annex, one temporary officer is on the MTF funds and another one temporary officer is on project funds. Only one project-funded administrative assistant provides administrative assistance for all staff.

- PAP/RAC mentions the need for an additional professional post to cover the increase in workload with the introduction of MSP and Adaptation to Climate Change through the ICZM Protocol, as detailed in the Common Regional Framework for ICZM, and for an urgent additional administrative post since only one person covers the post of secretary for all professional staff and deals with all logistics for meetings, contracts and payments.

- Plan Bleu/RAC mentions a need to secure current short-term positions on key expertise (assessment data; SIG and statistical analysis) and fill a necessary socio-economist position on sustainable development, to implement SIMPEER, blue economy activities, and sustainable tourism. An administrative position (part time?) would also be needed to more efficiently raise external funding and manage the office. Not all needs can rely on MTF budget.

- REMPEC mentions its on-going effort to mobilise external resources to ensure a sustainable implementation of the Offshore Action Plan with the required human resources and expertise.

- SCP/RAC mentions an urgent need to recruit an administrative officer to strengthen its permanent administrative structure currently limited to three staff members: Director, Deputy Director, and Director´s secretary, while management requirements increase with a sharp progression in total budget due to important external funding, and increase in MTF & IMELS funded activities. Currently only one project-funded administrative assistant provides administrative assistance for all staff.

- SPA/RAC mentions a need to fill an important position of scientific director currently vacant due to budget cuts.

Annex: Current posting in RACs (by alphabetical order)

INFO/RAC

- Director (**seconded by host country 50% FTE**)
- Deputy Director (**seconded by host country 50% FTE**)
- 1 Outreach Programme Officer (**seconded by host country 70% FTE**)
- 1 Training Programme Officer (**seconded by host country 70% FTE**)
- 1 Communication Programme Officer (**seconded by host country 70% FTE**)
- 1 InfoMAP Programme Officer (**MTF funded**)
- 1 Project officer (**seconded by host country 50% FTE**) on InfoMAP and SUPREME
- 1 Project officer (**Project funded**) on ENI-SEIS South II
- 4 ITC Officer (**seconded by host country 35% FTE**) on InfoMAP And Technical Support
- 4 Communication Officer (**seconded by host country 35% FTE**)
- 1 Administrative assistant (**Project funded**) administrative assistance for all activities and projects managed by INFO/RAC.
- 1 PRTR Expert (**seconded by host country 20% FTE**)

PAP/RAC

All staff work on the ICZM Protocol implementation. Tasks can change according to priorities and pressures of the moment.

- Director
- Deputy Director (EcAp and CAMPs, but not exclusively)
- Senior Programme Officer (CC and GEF, but not exclusively)
- Programme Officer (ICZM, but not exclusively)
- Programme Officer (MedOpen and web site, but not exclusively)
- Programme Officer (MSP and GEF, but not exclusively)
- Programme Officer (Communication and editing, but not exclusively)
- Administrative / Fund Officer (Bookkeeping and financial planning and reporting)
- Administrative Officer (Secretary, logistics, contracts, payments)
- Programme Officer EcAp (temporary post; project funded)
- PAP/RAC Consultant (not staff; project funded)
- General Assistant - Cleaning lady (not MTF funded)

Plan Bleu/RAC

No staff is exclusively funded on MTF resources. Most staff are co-funded with French subsidies or project funds. MTF accounts for less than half of staff funding. Some staff are on short-term project or activity basis.

- Director
- Deputy Secretary General - Programme Officer Indicators and Information Systems
- Programme Officer Integrated coastal zone management
- Programme Officer Water and climate change
- Programme Officer Forest and Biodiversity (fixed term)
- Programme Officer Foresight studies and environmental economics (in charge of SoED)
- Accountant, financial management
- Project officer Information-Communication-Web
- Bilingual secretary (secretary, contracts, translation, meetings, logistics)

- Project officer - Environment and development (data gathering – short term)
- Expert - Statistical and Geographic Information System (short term)
- Expert Blue Economy (short term)

REMPEC

- Head of Office (MTF)
- Programme Officer (OPRC) (MTF)
- Programme Officer (Prevention) (MTF)
- Junior Professional Officer (JPO) (Seconded)
- Junior Programme Officer (VIS) (Seconded)
- Administrative/Financial Assistant (MTF - This post is partially covered by IMO contribution paid from IMO's share of Project Support Costs).
- Assistant to the Head of Office (MTF)
- Secretary / Administrative assistant (MTF)
- Project Assistant (project funded)

SCP/RAC

Director, Deputy Director and Director's secretary seconded by hosting country. No programme or technical officers are seconded by country support nor MTF. All technical staff is project funded. MTF funds account for 5% of total staff funding.

- Director
- Deputy Director
- Executive Secretary
- Team Leader SwitchMed Green Entrepreneurship & Civil Society, project funded, (SwitchMed, but not exclusively)
- Team Leader SwitchMed Policy Area, project funded (SwitchMed, but not exclusively)
- Team Leader SwitchMed Networking Facility, project funded (SwitchMed, but not exclusively)
- Senior Expert, Chemicals Engineer, project funded (SwitchMed, but not exclusively)
- Project Manager , project funded (SwitchMed, but not exclusively)
-
- Project Manager, project funded (SwitchMed, but not exclusively)
- Project Manager , project funded (SwitchMed, but not exclusively)
- Project Manager , project funded (SwitchMed, but not exclusively))
- Project Manager , project funded (SwitchMed)
- Project Manager , project funded (SwitchMed)
- Project Manager , project funded (SwitchMed)
- Networking Facility technical officer, project funded (SwitchMed)
- Administrative assistant , project funded (SwitchMed, but not exclusively)
- Project Manager , project funded (IMELS but not exclusively)
- Project Manager , project funded (H2020)
- Project Manager , project funded (ACT4LITTER)
- Communication Assistant, MTF-founded (assistance to all center's communication activities)

SPA/RAC

- Director
- Programme Officer - Habitats and Ecosystem conservation

- Programme Officer - SAP BIO
- Programme Officer - Specially Protected Areas
- Programme Officer - Species Conservation
- Programme Officer - Data and computer management
- Project Officer - EcAp MED (project funded)
- Associate Project Officer MedMPA Network (project funded)
- Administrative & Finance Project Assistant - MedMPA Network (project funded)
- Project Officer (project funded)
- Communication Assistant (project funded)
- Associate Project Officer - Habitats / species (project funded)
- Project Officer - Habitats / Deap Sea (project funded)
- Associate Project Officer - EcAp MED (project funded)
- Project Officer - Bycatch / EcAp-Adria (project funded)
- Project Officer - Species and Project Coordinator - Tortues Marines (project funded)
- Project Officer - SPAMI twinning project (project funded)
- Scientific Unit Assistant
- Administrative Assistant
- Finance Assistant
- Clerk / Director Assistant
- Driver

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Annex V

Provisional Agenda of the 21st Meeting of the Contracting Parties

Provisional Agenda

1. Opening of the Meeting

2. Organizational Matters

2.1 Rules of Procedure

2.2 Election of Officers

2.3 Adoption of the Agenda

2.4 Organization of Work

2.5 Verification of Credentials

3. Thematic Decisions

3.1 Draft Decision: Compliance Committee

3.2 Draft Decision: Governance

3.3 Draft Decision: Implementation, Monitoring and Mid-Term Evaluation of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean

3.4 Draft Decision: Assessment Studies

3.5 Draft Decision: Common Regional Framework for Integrated Coastal Zone Management

3.6 Draft Decision: Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance

3.7 Draft Decision: Strategies and Action Plans under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, including the SAP BIO, the Strategy on Monk Seal and the Action Plans concerning Marine Turtles, Cartilaginous Fishes and Marine Vegetation; Classification of Benthic Marine Habitat Types for the Mediterranean Region and Reference List of Marine and Coastal Habitat Types in the Mediterranean

3.8 Draft Decision: Road Map for the Possible Designation of the Mediterranean Sea Area as an Emission Control Area for Sulphur Oxides pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention

3.9 Draft Decision: Mediterranean Offshore Guidelines and Standards: (a) Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings; (b) Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPAs) within the Framework of the Mediterranean Offshore Action Plan

3.10 Draft Decision: Main Elements of the Six Regional Plans to Reduce/Prevent Marine Pollution from Land-Based Sources; Updating the Annexes to the LBS and Dumping Protocols of the Barcelona Convention

3.11 Draft Decision: Guidelines: Adopt-a-Beach; Phase-out of Single Use Plastic Bags; Provision of Reception Facilities in Ports and the Delivery of Ship-Generated Wastes; Application of Charges at Reasonable Costs for the Use of Port Reception Facilities

3.12 Draft Decision: Updated Guidelines Regulating the Placement of Artificial Reefs at Sea

3.13 Draft Decision: Development of a Set of Regional Measures to Support the

Development of Green and Circular Businesses and to Strengthen the Demand for more Sustainable Products

4. Programme of Work and Budget for 2020-2021

5. Ministerial Session

5.1 Opening of the Session

5.2 Report on Activities carried out in the framework of UNEP/MAP since the 20th Meeting of the Contracting Parties (COP 20)

5.3 Interactive Ministerial Policy Review Session: *Strategic guidance for the preparation of the next UNEP/MAP Mid-Term Strategy, considering the global context of the UN 2030 Agenda for Sustainable Development, the UN Convention on Biological Diversity post-2020 Biodiversity Framework, the UN Framework Convention on Climate Change process and the implementation of the Paris Agreement, the implementation of the UN Convention to Combat Desertification Strategic Framework 2018-2030 aimed to the Land Degradation Neutrality, relevant UNEA resolutions and other relevant global processes*

5.4 Istanbul Environment Friendly City Award 2018-2019

5.5 Naples Ministerial Declaration

6. Dates and Place of the 22nd Meeting of the Contracting Parties (COP 22)

7. Any Other Business

8. Adoption of the Report

9. Closure of the Meeting