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Agenda Item 4: Any other business

Analysis of recent developments at global and regional level relevant to EcAp and IMAP

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Executive summary

1. The analysis of recent developments at global and regional level relevant to EcAp Roadmap 2008-2021 and the Integrated Monitoring and Assessment Programme (IMAP), underline that some topics have been well covered by EcAp Roadmap 2008-2021 whereas others are not, or not sufficiently, considering also that many of these developments have been realised following the time of the adoption of the EcAp Roadmap and IMAP. These should be considered as elements that could enrich a renewed EcAp policy. The analysis mainly focuses on the topics that should be considered in view of developing a renewed EcAp policy.

2. **Climate change issues** are of global concern and are targeted in Mediterranean, regional and global policies. Yet, these are not taken in consideration in the EcAp Roadmap 2008-2021 nor in IMAP although it is a human induced pressure that impacts the Mediterranean Sea and its ecosystems and will presumably also affect Good Environmental Status (GES). This issue could be integrated at different levels of the future EcAp policy (vision, objectives and IMAP) to acknowledge the impact of climate change on marine ecosystems and participate to reduce the lack of basic data. Acquiring data and information on climate change evolution and climate change impacts on marine ecosystems would contribute to better manage and conserve marine and coastal Mediterranean ecosystems but also contribute increase resilience of littoral societies.

3. **Marine and coastal ecosystem protection and management** are part of EcAp Roadmap 2008-2021 objectives. Through IMAP, the environmental state of the Mediterranean Sea is evaluated with the objective of attaining and maintaining Good Environmental Status (GES). It is noticed that some habitats such as deep-sea benthic habitats and pelagic ecosystems are not yet sufficiently assessed though IMAP and could be further included in EO 1. Also, to be efficient for ecosystem management, IMAP needs to be effectively implemented at national level. Much progress has been done with support from the Secretariat, but effective implementation of IMAP at national scale still needs to be supported and developed. In parallel, efforts should be maintained and enhanced to carry on acquisition of **scientific knowledge** on marine Mediterranean ecosystems, especially on habitat spatial distribution, on climate change impacts, on ecosystem functioning, on vulnerable marine ecosystems (especially deep-sea), but also on the cumulative human pressures they undergo. Such knowledge is essential to protect and manage marine and coastal ecosystems.

4. Scientific finding and comprehension of the environment need also to be shared in a largely comprehensive way and bridging between research and policy-relevant recommendations appears not sufficiently developed. Although some **Science-Policy Interface (SPI)** actions were developed under EcAp Roadmap 2008-2021, SPI could be further developed in a more integrative way in a renewed EcAp policy. This would also support IMAP implementation at national level.

5. **Data acquisition and management** is a crucial point for IMAP. Searching for interoperability with other data producing policies is also essential. Solutions should be searched for to acquire homogeneous data, to treat a large quantity and variety of data and to be able to communicate on the information/knowledge acquired.

6. **Ecosystem restoration** is a global priority concern that could be further implemented at Mediterranean and national scale. In a renewed EcAp policy, IMAP should be used to measure the efficiency of restoration actions. Using IMAP indicators to do so, could be encouraged and supported.

7. To achieve or maintain GES, the Contracting Parties (CPs) have to establish/update Programmes of Measures (PoM)/National Action Plans (NAP) to be frequently updated and reconsidered. A renewed EcAp policy could further support coherent programmes of measures by inciting and assisting measures that further integrate aspects of **circular economy, green/blue economy, innovative solutions, nature-based solutions, sustainable use and management, sustainable consumption and production and ecosystem restoration**. Such solutions and approaches

would participate in further rooting the ecosystem approach at national scale in the Mediterranean Sea area.

8. **Policy coherence**, cooperation and interoperability with other policies such as Marine Spatial Planning (MSP), Integrated Coastal Zone Management (ICZM) and Land-Sea Interactions (LSI) are fundamental for EcAp and IMAP success, as well as coordination with other relevant regional and global processes. Difficulties and lack of harmonisation appear in the procedures to monitor indicators and in the reporting phase. Through programmes and work of the CORMONs, progress is on way to increase harmonisation throughout the Mediterranean Sea. The reporting efforts of the CPs should be minimised, efficient and useful to the most environmental policies possible. Also, it appears that the **ecosystem approach and IMAP, could be further integrated in MSPs, as also indicated into the UNEP/MAP MSP Conceptual Framework**. IMAP assessments on different ecosystem aspects, should inform MSPs. In parallel IMAP should be used as much as possible in MSPs and Environmental Impact Assessments (EIA) and monitoring. It appears pertinent to reinforce the inter-linkage between EcAp, IMAP and MSP.

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List of abbreviations and acronyms

AP	Action Plan
CBD	Convention on Biological Diversity
CEMP	OSPAR's Coordinated Environmental Monitoring Programme
CP	Contracting Party
CRF	Common Regional Framework
EC	European Commission
EcAp	Ecosystem Approach
EcRes	Ecosystem Restoration
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EO	Ecological Objective (used for IMAP)
EU	European Union
FAO	Food and Agriculture Organisation
GES	Good Environmental Status
GEOSS	Global Earth Observation System of Systems
GFCM	General Fisheries Commission for the Mediterranean
HD	Habitat Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora)
ICZM	Integrated Coastal Zone Management (EU or UNEP/Map Protocol)
IMAP	Integrated Monitoring and Assessment Programme
IUCN/CEM	International Union for Conservation of Nature/Commission on Ecological Management
JAMP	Joint Assessment and Monitoring Programme
MCPA	Marine and Coastal Protected Area
MEA	Multilateral Environmental Agreements
MSFD	Marine Strategy Framework Directive
MSP	Marine/Maritime Spatial Planning
MSSD	Mediterranean Strategy for Sustainable Development
MTS	Mid-Term strategy
NAP	National Action Plan
NEAES	North-East Atlantic Environment Strategy
NIS	Non Indigenous Species
OECM	Other Effective area-based Conservation Measures
OO	Operational Objective
RSCAP	Regional Seas Conventions and Action Plans
SAPBIO	Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region
SEA	Strategic Environmental Assessment
SEIS	Shared Environmental Information System
SER	Society for Ecological Restoration
SDG	Sustainable Development Goal
SME	Small and medium-sized enterprise
SPA/BD	Specially Protected Areas and Biological Diversity
SPI	Science-Policy Interface
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEA	United Nations Environment Assembly
UNEP/Map	United Nations Environment Programme/Mediterranean Action Plan
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
WFD	Water Framework Directive (EU)
WWTP	Waste Water Treatment Plants

Introduction

9. Within the UNEP/MAP-Barcelona Convention, the Ecosystem Approach is an overarching principal and process, with an implementation roadmap (EcAp Roadmap 2008-2021) that was adopted by the Contracting Parties (CPs) in 2008 (Decision IG.17/6, COP 15, 2008) and progressively implemented since then in the Mediterranean region.

10. The EcAp Roadmap (2008-2021) is currently undergoing an evaluation process, in line with the Programme of Work and Budget for 2022-2023 (Decision IG.25/19), in view of proposing elements and recommendations for a renewed UNEP/MAP EcAp policy mandate.

11. In a first phase, the implementation of the seven steps of the EcAp Roadmap 2008-2021 was evaluated to measure progress against the expected accomplishments (see document UNEP/MED WG.550/Inf.9 Independent evaluation of the implementation of the EcAp Roadmap 2008-2021).

12. The second phase consists of preparing this report (UNEP/MED WG.550/Inf.10) on the analysis of recent developments at global and regional level relevant to Ecosystem Approach and IMAP.

Methodology

13. A list of regional and global processes/documents relative to EcAp policy was identified. The main processes/documents analysed and taken in consideration were the following:

At global level

- UN 2030 Agenda for Sustainable Development and UN Decade of Action for the SDGs
- UN Decade on Ecosystem restoration (2021-2030).
- UN Decade of Ocean Science for Sustainable Development (2021-2030)
- The United Nations Framework Convention on Climate Change (UNFCCC)
- UNEP Regional Seas Strategic Directions 2022-2025
- The Ecosystem Approach: Towards a practical application across Regional Seas Conventions and Action Plans
- UNEP Marine and Coastal Strategy 2020-2030
- UNEP MTS 2022-2025
- Strategic Plan for Biodiversity (2011-2020) and Post-2020 global biodiversity framework (CBD). First draft.
- UNEA 5 Resolutions

At Mediterranean level

- Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management
- Updated Regional Plan on Marine Litter Management in the Mediterranean
- MAP Data Policy
- Post-2020 SAPBIO
- Post-2020 Regional Strategy for marine and coastal protected areas and other effective area based conservation measures in the Mediterranean.
- Action Plans for the conservation of species and habitats
- Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides
- Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)
- Ballast Water Management (BWM) Strategy for the Mediterranean Sea (2022-2027)
- Set of Regional Measures to Support the Development of Green and Circular Businesses and to strengthen the demand for more sustainable products.

- Regional Action Plan on sustainable consumption and production in the Mediterranean (2016-2027)
- Integrated Coastal Zone Management (ICZM) Protocol, its Action Plan and Common Regional Framework (CRF)
- Conceptual framework for the MSP
- Mediterranean Strategy for Sustainable Development MSSD 2016-2025
- UNEP/MAP MTS 2022-2027
- UNEP/MAP - EEA Joint Work Plan 2022-2030
- Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas
- Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report

European level

- European Marine Strategy Framework Directive (MSFD).
- EU Green Deal
- EU Sustainable blue economy, new approach (see Commission document 2021)
- EU Biodiversity strategy for 2030
- The EU Nature restoration Law proposal
- EU Circular economy action plan
- EU MSP Directive and implementation
- Ecosystem-based approach in MSP in Finland (case study)

Other regional processes

- OSPAR North-East Atlantic Environment Strategy (NEAES) 2010-2020 and NEAES 2030
- The EcApRHA project (Applying an Ecosystem Approach to (sub) Regional Habitat Assessment) (2015-2017)
- OSPAR Joint Assessment and Monitoring Programme (JAMP) 2014 – 2023
- HELCOM and the Baltic Sea Action Plan (BSAP) 2021 update and HELCOM Monitoring and Assessment Strategy

14. For each process/document, relevant objectives, goals and directions were selected as well as main topics (see Annex 1).

15. 17 General topics were identified and the number of processes/documents relating to these topics was assessed. Thirteen topics most frequently referred to (in at least 6 documents), were analysed and the Mediterranean policy context as well as the adequacy and gaps of EcAp Roadmap 2008-2021 in relation with these main topics were assessed.

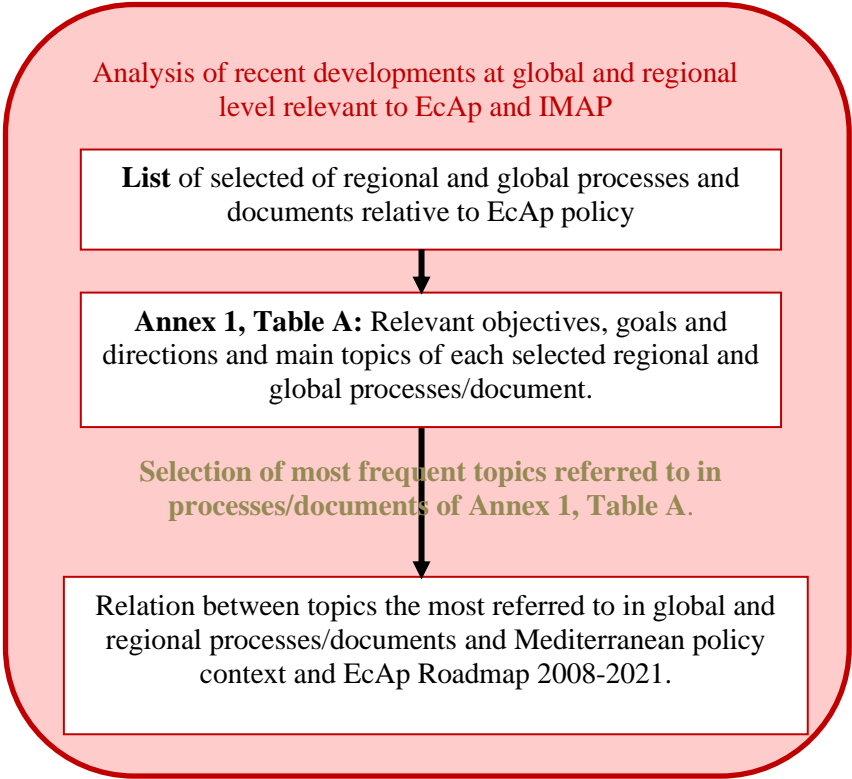


Figure 1. Process leading to the main topics selected

Topics most referred to in global and regional processes/documents (from Annex 1, Table A)

a. Climate change and ocean acidification

Main points resulting from the analysis of the documents

16. **More than half** the processes or documents analysed refer to climate change concerns. More precisely the main objectives proposed are to:

- Develop knowledge and data acquisition needed inter alia to refine models
- Minimise ocean acidification
- Mitigate climate change impacts
- Increase adaptation to climate change
- Develop resilience of marine ecosystems to climate change impacts
- Develop societal adaptation to climate change
- Integrate climate change measures into policies and strategies and address climate change as a priority issue for the Mediterranean
- 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
- Policy strengthening to efficiently address climate change impacts
- Improve awareness
- Develop decarbonisation, dematerialisation and resilience pathways towards sustainable oceans, including use of nature-based solutions, adopted by decision-makers at all levels
- Develop nature-based and ocean-based solutions for climate change mitigation
- Promote and support the development and implementation of innovative global solutions from ships to mitigate and respond to climate change
- Work on climate change and carbon budgets, facilitating the transition towards a low carbon economy and a renewable “blue” energy generation to address the acidification of oceans and pH decrease (CO₂ cycle); and enhance blue carbon cycles or carbon sequestration cycles, linked to the damage of coastal habitats such as mangroves, seagrass meadows or salt marshes
- Increase scientific knowledge, raise awareness, and develop technical capacities to deal with climate change and ensure informed decision-making at all levels, recognizing and protecting the climate adaptation and mitigation services of natural ecosystems
- Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors
- Reduce anthropogenic pressure on coastal and marine ecosystems to maintain their contribution to adapt to and mitigate the effects of climate change

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

17. Climate change issues are of **global** concern and are present in the main general global policies such as the UN 2030 Agenda for sustainable development, UN Decade on ecosystem restoration, UNEP Regional Seas Strategic Directions 2022-2025, UNEP Marine and Coastal Strategy 2020-2030, UNEP MTS 2022-2025 and others.

18. The United Nations Framework Convention on Climate Change (UNFCCC) sets a legal framework and principals to stabilize atmospheric concentrations of greenhouse gases.

19. **OSPAR** has integrated the objective to achieve seas resilient to the impacts of climate change and ocean acidification in NEAES 2030 and has established an Intersessional Correspondence Group on ocean acidification (ICG-OA). The ICG’s mandate is to lead the monitoring and assessment for ocean acidification.

20. **At European level**, the climate law aims to cut greenhouse gas emissions by at least 55% by 2030 and a legally binding target of net zero carbon emissions 2050 that applies collectively to EU.

21. **At Mediterranean level**, the Mediterranean Strategy for Sustainable Development (MSSD 2016-2025) has six main objectives, one of them being “**Addressing climate change as a priority issue for the Mediterranean**”.

22. Consequently, in 2016, the Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas was adopted through Decision IG.22/6. It defines a regional strategic approach to increase the resilience of the Mediterranean marine and coastal natural and socioeconomic systems to the impacts of climate change. Several policies at Mediterranean level underline the need to mitigate climate change impacts on society and ecosystems and increase ecosystem resilience but also, as underlined by the document MAR11 produced by MedECC, they highlight the need of monitoring programmes producing regular quality data even in northern countries of the Mediterranean Sea.

23. Climate change concerns are not addressed in the EcAp Roadmap 2008-2021 nor in IMAP. This issue could be integrated at different levels of the future EcAp policy (vision, objectives and IMAP) to acknowledge the impact of climate change on marine ecosystems and participate to the lack of basic data that could allow to better understand climate change evolution and impacts.

b. Marine and coastal ecosystem protection and conservation

Main points resulting from the analysis of the documents

24. **Over a third** of the processes analysed promote actions to protection and conservation marine ecosystems such as:

- Enhance and increase effectiveness of protection measures
- Enhance effectiveness of Marine and Coastal Protected Areas (MCPAs) and Other Effective area-based Conservation Measures (OECMs)
- Reinforce governance
- Increase legally protected sea (30% by 2030 for EU countries and Mediterranean countries)
- Enhance vulnerable groups and species conservation
- Reduce introduction of NIS
- Secure ecosystem functions and biodiversity as well as connectivity
- Assess ecosystem health and quality
- Address drivers of biodiversity loss
- Increase knowledge acquisition on ecosystems and ecosystem functioning to better adapt protection measures
- All habitats need to be considered for conservation including pelagic habitats and other vulnerable habitats (e.g. in deep-sea)
- Better manage fisheries and mitigate environmental effects of fisheries on biodiversity and ecosystems.

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

25. **In the Mediterranean Sea**, several regional strategies and action plans have been developed and adopted, aiming specifically at the protection of threatened or endangered species and habitats (e.g. Post-2020 SAPBIO, Post-2020 Regional Strategy for marine and coastal protected areas and other

¹ MedECC 2020 Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer W, Guiot J, Marini K (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/ MAP, Marseille, France, pp 11-40. See Annex I of [Decision IG.25/4](#)

effective area-based conservation measures in the Mediterranean, species and habitats Action Plans etc.).

26. **At the EcAp Roadmap 2008-2021 level**, the first of the three strategic objectives is to protect the structures and function of marine and coastal ecosystems. It is based on a set of measurements of environmental and anthropogenic impacts (IMAP) to regularly evaluate the state of the environment with the objective of adopting and adapting measures to attain and maintain Good Environmental Status. Therefore the essence of the EcAp Roadmap is to protect and conserve the marine and coastal ecosystems.

27. To be in the capacity of protecting the ecosystems, EcAp Roadmap and IMAP must be an efficient tool to evaluate the state of the environment. This means proposing a set of appropriate indicators/parameters to follow, which informs on the status of the environment and marine ecosystems as well as measurable targets. Defining measurable targets and target scales for indicators is a real challenge but is necessary to evaluate the status of the environment and act, if needed, in consequence by adopting measures to protect the ecosystems.

28. IMAP implementation on biodiversity and NIS cluster has progress significantly in the last years, yet it needs to be further supported to be efficient, and allow the assessment of GES to play its ecosystem conservation role.

c. Marine pollution

Main points resulting from the analysis of the documents

29. **Over a third** of the processes analysed promote actions to combat marine pollution such as:

- Acquire knowledge on human impacts and cumulative effects
- Reduce pollutants
- Improve sound management of chemicals and wastes
- Scale-up actions to reduce nitrogen waste
- Address impact of pesticides and fertilizers
- Promote actions to end plastic pollution
- Develop international legally binding instruments on plastic pollution
- Implement wastewater and sludge norms and reuse systems
- Prevent marine litter generation
- Consider cumulative effects of pollutants and climate change impacts
- Adopt an integrated approach in order to address combined pressures and cumulative impacts in coastal and marine areas
- Develop threshold values for marine litter
- Reduce and monitor ship emissions
- Reduce litter from ships
- Tackle single use plastic
- Reduce microplastics
- Address Land-Based Interactions
- Decarbonise maritime transport

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

30. Several **regional strategies** and action plans have been developed and adopted, aiming specifically at a marine pollution reduction in the Mediterranean Sea (e.g. SAP MED, Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships, Regional Plan on Marine Litter Management in the Mediterranean, Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management, Updated Regional Plan on Marine Litter Management etc.).

31. **At the EcAp Roadmap 2008-2021 level**, one of the three strategic objectives is to “to reduce pollution in the marine and coastal environment”. Specific indicators of IMAP relative to eutrophication (EO 5), contaminants (EO 9), marine litter (EO 10) and energy including underwater noise (EO 11) have been developed to assess different marine pollutions. Actions have been adopted to reduce these pollutions but pollution is continuous. Therefore, monitoring and measuring needs to be continued and implemented but IMAP and MED POL cover well these concerns. Support in circular economy would also participate in reducing marine pollution.

d. Data acquisition and management

Main points resulting from the analysis of the documents

32. **A third** of the processes analysed require actions in data acquisition and management such as:
- Increase data collection and develop efficient sharing platforms
 - Increase monitoring programmes producing regular quality data on biotic and abiotic components of the marine ecosystems
 - Open and equitable access to data
 - Strengthen data management
 - Maintenance of long term series and regular monitoring
 - Increase traceability
 - Recognition of data providers
 - Implementation of INSPIRE, SEIS principles, Copernicus and GEOSS data sharing principles
 - Use of international standards
 - Publication of relevant metadata
 - Increase harmonisation
 - Promote interoperability, homogeneity and comparability of data
 - Availability of quality assured and quality-controlled data
 - Assemble existing data
 - Increase data submission and reporting to IMAP Info system
 - Fill data gaps
 - Update data
 - Develop data mapping on ecosystems and pressures and better understand the impacts of cumulative pressures.

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

33. **At Mediterranean level**, UNEP/MAP Decision IG.25/10 defines the Data Policy adopted by the CPs of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols.

34. Acquisition of quality data, long term datasets and data management and use, is globally problematic for regional and European data producing policies.

35. **At EcAp Roadmap level**, the rate of CPs reporting adequate IMAP data reflects that much progress can be done on the subject. Data management will have to be a key concern for a successful development of EcAp and IMAP to be able to assess GES.

e. Ecosystem restoration

Main points resulting from the analysis of the documents

36. **Nearly a third** of the processes analysed call for restoration of degraded priority ecosystems actions such as:

- Restore degraded ecosystems by addressing causes of degradation, integrate knowledge in the action, monitor and measure against the baseline condition
- Restore 20% of degraded priority ecosystems by 2030
- Enhance biodiversity restoration
- Enhance ecosystem restoration

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

37. **UN** has declared 2021-2030 the “decade of ecosystem restoration” and has detailed an Action Plan for the UN decade of ecosystem restoration. **At European level**, the Nature restoration Law proposal will require national restoration plans and identify binding targets. Within specific targets proposed, one can read “restoring marine habitats such as seagrass beds or sediment bottoms ...”.

38. **At Mediterranean level** enhancing restoration is mentioned in the Post-2020 SAP BIO, and is part of the EcAp Roadmap strategic goals.

39. No specific Regional Plan on restoration in the Mediterranean Sea exists although it is recognized as a priority concern. Restoration objectives have been integrated into the MAP medium Term Strategy 2022-2027 and in activities of the biennial Programmes of Work. The Post 2020 SAP BIO also integrates considerations on restoration, and a specific Target (T 1.6.) is focused on “ecosystem restoration, most of those with the highest relevance and potential”.

40. Global and regional restoration policies and targets need to be further transposed and implemented at the Mediterranean level and eventually national levels and the future EcAp policy and IMAP can probably have a role to play in restoring Mediterranean marine ecosystems. Measurable goals and monitoring are needed to attain the UN Decade on restoration overarching goal of restoring 20% of degraded priority ecosystems by 2030.

f. Circular economy, green/blue economy and innovative solutions

Main points resulting from the analysis of the documents

41. **Over a quarter** of the processes analysed call to resort to circular economy, and innovative solutions and sustainably develop green and blue economy. Actions are suggested such as:

- Enhance circular processes
- Improve waste management through circular economy
- Enhancing circular economy as a contribution to achieving sustainable consumption and production
- Implement wastewater and sludge reuse
- Develop knowledge and capacity building in circular economy
- Move towards better use of innovative solutions integrating nature-based solutions for supporting sustainable development and green/blue economy development
- Facilitate green/blue economy transition by enhancing nature-based solutions
- Acknowledge challenges of blue economy
- Achieve a transition towards a true sustainable blue economy in the Mediterranean
- Be vigilant that blue economy does not develop at the cost of eroding marine ecosystem resilience.
- Develop the role of MSP in the development of sustainable blue economy

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

42. **At a global level**, the UNEP Regional Seas Strategic Directions 2022-2025, the UNEP Marine and Coastal Strategy 2020-2030, UNEP MTS 2022-2025 and UNEA resolution 5/11 Enhancing circular economy as a contribution to achieving sustainable consumption and production, call to resort and develop circular economy.

43. At **Mediterranean level** the Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management, updated Regional Plan on Marine Litter Management in the Mediterranean, a set of Regional Measures to Support the Development of Green and Circular Businesses and to strengthen the demand for more sustainable products, the Regional Action Plan on sustainable consumption and production in the Mediterranean (2016-2027), the Mediterranean Strategy for Sustainable Development MSSD 2016-2025 and the UNEP/MAP MTS 2022-2027 transpose these points at the Mediterranean level.

44. These topics concern less the assessment of the marine environment although innovative solutions should be searched to facilitate monitoring of parameters. These topics further concern the measures taken to maintain or attain GES. They should be at the heart of such programmes of measures.

g. Policy coherence, cooperation and efficiency

Main points resulting from the analysis of the documents

45. **A quarter** of the processes analysed call for increased coherence between policies, cooperation and policy implementation. More specifically these call for:

- Increase coherence, cooperation, integration between policies
- Cross-sectorial integration
- Institutional and transboundary cooperation
- Increased policy implementation

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

46. Policy coherence, cooperation and increased policy implementation is required mainly at **Mediterranean, regional and European level**.

47. To be successful, the ecosystem approach needs to better enforce these matters and develop coherence and harmonisation with other Mediterranean, European and national policies to gain in efficiency.

48. **Under the EcAp Roadmap and IMAP** significant efforts have already been made and have succeeded in strengthening coherence and cooperation with other relevant global and regional processes, including with the European Directives such as MSFD, and WFD which is particularly important for the Contracting Parties which are EU Member States. Also, interrelations are being established in the development of national MSPs, and ICZM implementation.

49. It is advised that future steps of EcAp Roadmap consider working further on policy coherence and interoperability to enforce efficiency of assessment, monitoring and reporting of marine environmental status.

h. Scientific knowledge

Main points resulting from the analysis of the documents

50. **A quarter** of the processes analysed call for increased scientific knowledge on ecosystems and human impacts, by:

- Improving knowledge acquisition on distribution and status of species protected under SPA/BD Protocol and vulnerable ecosystems and species
- Expanding observing systems
- Acquiring knowledge on marine ecosystems and human impacts
- Increasing scientific knowledge on climate change processes and impacts
- Enhancing knowledge and understanding on marine litter and its impacts
- Integrating knowledge for ecosystem restoration
- Enhancing research capacity
- Transferring marine technology
- Developing technical capacities
- Increasing partnerships between scientific institutions and private sectors
- Supporting knowledge management at all levels to strengthen science- policy dialogue on marine and coastal issues
- Increasing knowledge availability and knowledge sharing
- Regularly updating on ecosystem knowledge and research

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

51. Within UNEP/MAP programmes in the framework of the ecosystem approach, much effort has been made to transfer scientific knowledge and enhance exchanges. In the framework of IMAP, one edition of the Mediterranean Quality Status Report (MED QSR) was published in 2017, while the second edition is expected to be published in 2023. Many other assessment reports are published by UNEP/MAP and contribute to the dissemination of scientific knowledge. In addition, the Symposia on marine habitats (seagrass meadows, coralligenous habitats, dark habitats and NIS) regularly organised develop exchange of knowledge and experiences throughout the Mediterranean on these habitats. Also, many.

52. **For EcAp Roadmap**, basic knowledge of habitat spatial distribution at national level is still lacking and should be a priority for the future. Scientific knowledge also needs data acquisition and monitoring which are the backbone of the EcAp Roadmap and IMAP. Improving the assessment and monitoring of IMAP and sharing data with scientists will improve scientific knowledge and comprehension of the Mediterranean ecosystems and their functioning. This point is also to link with SPI.

i. Ecosystem approach in spatial planning including MSP

Main points resulting from the analysis of the documents

53. **A quarter** of the processes analysed call for increased ecosystem approach in spatial planning procedures. More specifically these call for:

- Reinforce spatial planning taking in account ecosystem approach
- Achieve a well-managed safe and pollution free Mediterranean, with integrated marine spatial planning and designation of special areas, where shipping activity has a limited impact upon the marine environment
- Develop sustainable management and planning through ICZM and MSP
- Application of the ecosystem approach in MSP
- Develop comprehensive marine/maritime spatial planning that can effectively mitigate the adverse effects of human activities
- Integrated ICZM/MSP for better protection of ecosystems from human impacts

- Use MSP as a tool to implement the ecosystem approach
- Coordinate activities through MSP with a strong focus on LSI
- Build science-based solid bridges and increased coherence between MSP and monitoring programmes
- Using MSP as a key tool to achieve GES and help preserve biodiversity
- Use the anticipatory approach of MSP to better manage ecosystem conservation
- Use SEA and EIA at operational level as tools to achieve GES and sustainable development

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

54. **At Mediterranean level**, the Conceptual Framework for the MSP was annexed to the Decision IG.23/7 adopted by COP 20. According to the Conceptual Framework, although MSP is not expressly mentioned in the Protocol on ICZM in the Mediterranean, spatial planning of the coastal zone is considered an essential instrument of the implementation of the same Protocol. The Conceptual Framework defines common principals with a step by step methodology to implement MSP and the ecosystem approach for a sustainable development.

55. As mentioned before, **EcAp Roadmap and IMAP** could improve interoperability with certain policies including spatial planning and ICZM. Many Mediterranean countries are in the process of developing MSP. It is advised to integrate the ecosystem approach and IMAP as early as possible in this planning development. Synergies with other global and regional instruments and processes should be ensured in supporting the application of MSP in the Mediterranean, including inter alia, the EU MSP Directive as appropriate, taking into consideration progress made in its application at national level for Contracting Parties which are EU Member States.

j. Nature-based solutions

Main points resulting from the analysis of the documents

56. **About a fifth** of the processes analysed call to resort to nature-based solutions. Actions are suggested such as:

- Move towards better use of innovative solutions integrating nature-based solutions for supporting sustainable development and green/blue economy development
- Promote ecosystem approach and nature-based solutions to maintain or restore the natural capacity of the coast to adapt to changes
- Use nature-based solutions to reduce climate change impacts
- Facilitate green/blue economy transition by enhancing nature-based solutions

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

57. **At a global level**, the UNEP Regional Seas Strategic Directions 2022-2025, the UNEP Marine and Coastal Strategy 2020-2030 and UNEA resolutions 5/5 Nature-based solutions for supporting sustainable development call to resort to nature-based solutions.

58. **At Mediterranean level**, the Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management, the UNEP/MAP MTS 2022-2027, the Post-2020 SAPBIO, and the ICZM Protocol and its action plan and CRF transpose these points at the Mediterranean level.

59. Nature-based solutions concern mainly the measures taken for biodiversity and ecosystem conservation, sustainable development and climate change mitigation and resilience in favour of ecosystem and society wellbeing. Nature-based solutions should be part of the national Programme of Measures. Enhancing sustainable coastal urbanisation, restoring degraded ecosystems, developing climate change adaptation and mitigation and improving risk management and resilience are part of nature-based solutions.

k. Sustainable use and management of marine and coastal ecosystems and resources

Main points resulting from the analysis of the documents

60. **About a fifth** of the processes analysed call for sustainable use and management of marine and coastal ecosystems and resources. More specifically these call for:

- Sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework
- Increase the economic benefits to least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
- Increase sustainable practices
- Develop a sustainable and equitable ocean economy
- Sustainable management of nature is adopted and implemented in development frameworks
- Sustainable use of biodiversity
- Encourage Member States to mainstream and coordinate the sustainable use, conservation and restoration of biodiversity into sectoral policies and programmes to enhance **ecosystem resilience**, halt and reverse biodiversity loss, monitor and control invasive alien species, and promote food safety
- Better manage fisheries
- Food security, focusing on development of sustainable fisheries or exploitation of wild fish stocks, and sustainable and efficient aquaculture industries
- Achieve a transition towards a true sustainable blue economy in the Mediterranean that does not erode ecosystem resilience
- Use ICZM, MSP and the ecosystem-based management for reaching GES and to ensure sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

61. **At global level**, UN 2030 Agenda for Sustainable Development and UN Decade of Action for the SDGs, UNEP Regional Seas Strategic Directions 2022-2025, UNEP MTS 2022-2025 and UNEA 5/5 Nature-based solutions for supporting sustainable development and 5/11 Enhancing circular economy as a contribution to achieving sustainable consumption and production, request to use sustainably marine and coastal ecosystems.

62. **At the Mediterranean level** it is also the case of: Post-2020 SAPBIO, the Set of Regional Measures to Support the Development of Green and Circular Businesses and to strengthen the demand for more sustainable products, the [Conceptual framework for the MSP](#) and UNEP/MAP MTS 2022-2027.

63. **In the EcAp Roadmap 2008-2021**, sustainable use of marine and coastal ecosystems is part of the strategic goals. EcAp and IMAP play a key role in the sustainable use and management of the Mediterranean Sea by assessing human impacts on ecosystems and assessing GES.

l. Sustainable consumption and production

Main points resulting from the analysis of the documents

64. **About a fifth** of the processes analysed call for sustainable consumption and production. More specifically these call for:

- Encourage sustainable consumption

- Promote sustainable consumption through circular economies
- Support policies enabling integrated management and sustainable use of ecosystem services
- Encourage towards sustainable patterns of consumption and production
- Current unsustainable patterns of consumption and production must be transformed to sustainable ones that decouple human development from environmental degradation
- Support awareness-raising campaign on sustainable/circular practices among consumers
- Tackling Single-Use Plastic Items to reduce marine litter and stimulate sustainable alternatives
- Develop and implement sustainable consumption and production Operational Objectives in the Mediterranean in order to promote and strengthen circular and green economy
- Engage key stakeholders in sustainable consumption and production models and circular economy measures leading to high resource efficiency and preservation, reduced pollution, and decoupling the development process from environmental degradation and promoting sustainable lifestyles

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

65. **At global level** the UN 2030 Agenda for Sustainable Development and UN Decade of Action for the SDGs, UNEP Marine and Coastal Strategy 2020-2030 and UNEP MTS 2022-2025 promote sustainable consumption and production.

66. **At Mediterranean level** several plans promote sustainable consumption and production and the Regional Action Plan on sustainable consumption and production in the Mediterranean (2016-2027) focuses on the subject. In addition, recently adopted regional measures, in particular the 2021 updated Regional Plan on Marine Litter Management, adopted with Decision IG.25/9 (COP 22, Antalya, Türkiye, December 2021) integrate considerations of circular economy and SCP.

67. Sustainable consumption and production will decrease anthropogenic impacts such as litter in marine ecosystems and environment and increase resource efficiency. It is therefore totally in the framework of ecosystem approach and constitutes already measures to be taken to limit anthropogenic impacts on environment.

68. In a future EcAp policy, measures taken to develop sustainable consumption and production and promote circular economy should be supported in the preparation of National Action Plans/Programmes of Measures, linked with various Ecological Objectives.

m. Communication and Science-Policy Interface (SPI)

Main points resulting from the analysis of the documents

69. **About a fifth** of the processes analysed call for a development of communication and SPI such as:

- Strengthen information, data and knowledge management and SPI
- Encourage and develop SPI
- SPI to contribute to sound management of chemicals and waste and to prevent pollution
- Dissemination and communication of actual knowledge on **climate change impacts** is needed

Mediterranean policy context and adequacy of EcAp Roadmap 2008-2021 in front of the main points

70. **At global and Mediterranean level**, the UNEP Regional Seas Strategic Directions 2022-2025, UNEP MTS 2022-2025, UNEP/MAP MTS 2022-2027 encourage communication and SPI.

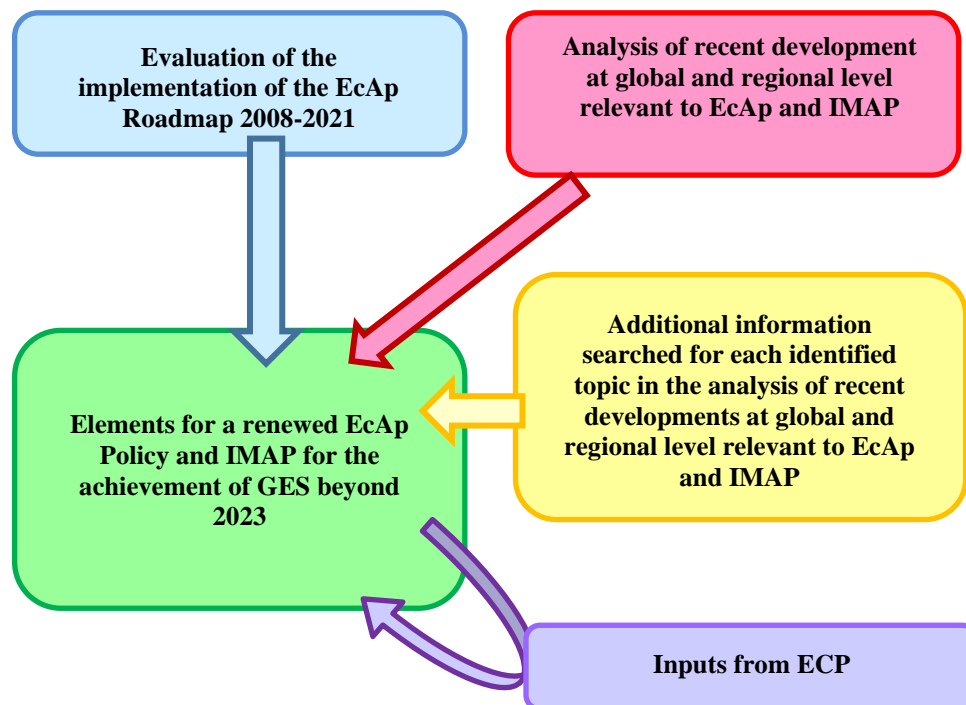
71. **At Mediterranean level**, dissemination and communication of scientific knowledge in a broadly comprehensive way needs to be strengthened. Data exists, but is often inaccessible and/or dispersed and bridging between research and policy-relevant recommendations is not sufficiently developed. SPI actions within the **EcAp Roadmap framework** were undertaken but SPI could be developed in a more integrative way in a renewed EcAp policy which would also support IMAP implementation at national level.

Next steps

72. These topics, stemming from global and regional processes (UNEP/MED WG.550/Inf.10) together with the evaluation of the EcAp Roadmap implementation (UNEP/MED WG.550/Inf.9), will contribute to the elaboration of proposed elements for consideration in a renewed EcAp Roadmap and an IMAP development (UNEP/MED WG.550/Inf.11) (see Figure 2).

73. The next step will be to acquire additional information on the main topics of interest for a renewed EcAp policy.

Figure 2 Relation between the different documents produced within the global EcAp Roadmap evaluation.



ANNEX 1

Recent global and regional process and documents analysed and relevant points for Mediterranean EcAp policy

Table A. Recent global and regional process and relevant points for Mediterranean EcAp policy.

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>UN 2030 Agenda for Sustainable Development and UN Decade of Action for the SDGs</p>	<p>The UN 2030 Agenda for Sustainable Development is a plan to be implemented by countries and stakeholders, with 17 Sustainable Development Goals (SDG) and 169 targets. SDG 14 relates directly to oceans (<i>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</i>), but SDG 12 (<i>Ensure sustainable consumption and production patterns</i>) and SDG 13 (<i>Take urgent action to combat climate change and its impacts</i>) should also be taken in consideration.</p>	<ul style="list-style-type: none"> - Reduction of marine pollution - Sustainable management of marine and coastal ecosystems - Enhance and increase protection and conservation marine and coastal ecosystems - Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework - Conserve at least 10% of coastal and marine areas - Take action for restoration - Minimize ocean acidification (mitigate climate change) - Better manage fisheries (end overfishing, illegal and unreported and unregulated fishing and destructing fishing practices, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing) - Provide access for small-scale artisanal fishers to marine resources and markets - Increase the economic benefits to least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism - Increase scientific knowledge,

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
		<ul style="list-style-type: none"> - Develop research capacity and transfer marine technology -Develop sustainable consumption -Limit food waste -Reduce waste generation through prevention, reduction and reuse -Increase awareness for sustainable development and practices -Rationalize inefficient fossil-fuel subsidies -Integrate climate change measures into policies, strategies and planning -Improve education and awareness on climate change mitigation
<p>UN Decade on Ecosystem restoration (2021-2030). See:</p> <ul style="list-style-type: none"> - Document FAO, IUCN CEM and SER. 2021. Principles for ecosystem restoration to guide the United Nations Decade 2021–2030. Rome, FAO. - Action Plan for the UN decade 	<p>Aware of the critical need to halt, prevent and reverse ecosystem degradation, and to effectively restore degraded terrestrial, freshwater and marine ecosystems across the globe, through Resolution 73/284, the United Nations General Assembly declared 2021–2030 as the United Nations Decade on Ecosystem Restoration.</p> <p>The UN Decade on Ecosystem Restoration 2021-2030 calls to action across the world to everyone.</p> <p>Restoration is complementary to, not a replacement for, conservation and climate action.</p> <p>Overarching goal: restore 20% of degraded priority ecosystems by 2030.</p> <p>Three main goals</p> <p>Goal 1: Enhancing global, regional, national, and local commitments and actions to prevent, halt and reverse the degradation of ecosystems.</p> <p>Goal 2: Increasing our understanding of the multiple benefits of successful ecosystem restoration.</p> <p>Goal 3: Applying this knowledge in our education systems and within all public and private sector decision-making.</p>	<p>-Restore 20% of degraded priority ecosystems by 2030</p> <p>-Restore degraded ecosystems by addressing causes of degradation, integrate knowledge in the action, monitor and measure against the baseline condition, adapt measures and be enabled by policy and adaptable measures.</p> <p>No Mediterranean Sea initiatives is currently in this framework see here</p>

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
on ecosystem restoration, 2021-2030 (version August, 2022)	<p>10 principals underpin ecosystem restoration. The most relevant for EcAp Roadmap are:</p> <ul style="list-style-type: none"> - Address causes of degradation. All restorative activities should concurrently address the direct and indirect causes of ecosystem degradation and fragmentation, and the loss of biodiversity and ecosystem goods and services. If the causes are not addressed, restorative activities may fail over the long term. - Knowledge integration. EcRes incorporates all types of knowledge and promotes their exchange and integration throughout the process. - Measurable goals. EcRes is based on well-defined short-, medium-, and long-term ecological, cultural and socio-economic objectives and goals. They should include targets and indicators that are measurable against the baseline condition, and that specify the direction (e.g. increase or decrease) and magnitude of change desired, and are time-bound, where appropriate. - Local and land/seascape contexts. EcRes is tailored to the local ecological, cultural and socio-economic contexts, while considering the larger landscape or seascape. - Monitoring and management. EcRes includes monitoring, evaluation and adaptive management throughout and beyond the lifetime of the project or programme. - Policy integration. EcRes is enabled by policies and measures that promote its long-term progress, fostering replication and scaling-up. <p>Restoration challenges are detailed in the document Action Plan for the UN decade on ecosystem restoration, 2021-2030 (version August, 2022).</p>	
UN Decade of Ocean Science for Sustainable Development (2021-2030)	<p>This common framework is intended to ensure that ocean science can fully support countries to achieve the 2030 Agenda of Sustainable Development.</p> <p>Vision: The science we need for the ocean we want.</p> <p>Mission: Transformative ocean science solutions for sustainable development, connecting people and ocean. On the occasion of the One Ocean Summit, UNESCO announced that at least 80% of the seabed will be mapped by 2030,</p>	<p>-Sustainable development</p> <p>-Pollution reduction</p> <p>-Protect and restore ecosystems and biodiversity</p> <p>-Develop a sustainable ocean economy</p>

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<p>compared to 20% currently, in collaboration with other UN bodies and with the support of its Member States and the private sector.</p> <p>10 challenges:</p> <ol style="list-style-type: none"> 1: Understand and beat marine pollution 2: Protect and restore ecosystems and biodiversity 3: Sustainably feed the global population 4: Develop a sustainable and equitable ocean economy 5: Unlock ocean-based solutions to climate change 6: Increase community resilience to ocean hazards 7: Expand the Global Ocean Observing System 8: Create a digital representation of the Ocean 9: Skills, knowledge, and technology for all 10: Change humanity’s relationship with the ocean <p>7 outcomes:</p> <ul style="list-style-type: none"> - A clean ocean where sources of pollution are identified and reduced or removed. - A healthy and resilient ocean where marine ecosystems are understood, protected, restored and managed. - A productive ocean supporting sustainable food supply and a sustainable ocean economy. - A predicted ocean where society understands and can respond to changing ocean conditions. - A safe ocean where life and livelihoods are protected from ocean-related hazards. - An accessible ocean with open and equitable access to data, information and technology and innovation. - An inspiring and engaging ocean where society understands and values the ocean in relation to human wellbeing and sustainable development. 	<p>-Develop ocean-based solutions to climate change</p> <p>-Expand the Global Ocean Observing System</p>

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>The United Nations Framework Convention on Climate Change (UNFCCC)</p>	<p>The UN Framework Convention on Climate Change (UNFCCC) sets out the basic legal framework and principles for international climate change cooperation with the aim of stabilizing atmospheric concentrations of greenhouse gases. In this framework the Paris Agreement was signed in 2015 which requires all parties to determine, plan, and regularly report on the nationally determined contribution that it undertakes to mitigate climate change. Parties also submit aggregate progress on mitigation, adaptation, and means of implementation, which are reviewed every five years through a Global Stocktake.</p>	<p>-Climate change mitigation (greenhouse gas reduction) -Climate change adaptation</p>
<p>UNEP Regional Seas Strategic Directions 2022-2025: Guiding the Regional Seas Towards Global Ocean-related Goals for the Period 2022-2025.</p>	<p>Strategic goals and medium term outcomes (to 2025): Goal 1: Secure diverse, resilient, and productive marine and coastal ecosystems.</p> <ul style="list-style-type: none"> ✓ Economically and socially sustainable pathway established to halt and reverse the loss of marine and coastal biodiversity and ecosystem integrity through conservation, restoration, sustainable use of oceans, coastal and marine resources, ensuring connectivity of marine protected areas within and between Regional Seas Conventions and Action Plans (RSCAPs). ✓ Climate change mitigation and adaptation goals incorporated in all ocean-related decision-making for Regional Seas Programme target audiences: decarbonisation, dematerialisation and resilience pathways towards sustainable oceans, including use of nature-based solutions, adopted by decision-makers at all levels. ✓ Reduced pollutants to ocean and coastal ecosystems. ✓ Collective action to address sound management of chemicals and waste achieved, building on the implementation of related regulatory instruments of the RSCAPs leading to integrated policies at regional and national levels. ✓ Marine environmental quality improved by pollution prevention and action. <p>Goal 2: Support assessment, information and knowledge management at all levels to strengthen science-policy dialogue on marine and coastal issues and their interactions.</p> <ul style="list-style-type: none"> ✓ Countries and stakeholders have increased capacity, finance and access to technologies to deliver on the adaptation and mitigation goals of the Paris Agreement and other relevant MEAs. 	<p>-Secure marine ecosystem functions and biodiversity through conservation, restoration, sustainable use of resources and ensuring connectivity. -Better use of innovative solutions, move towards circular economy, integrating nature-based solutions -Address drivers of ocean health degradation resulting from climate change, loss of marine and coastal biodiversity and pollution. -Strengthen information, data and knowledge management and SPI -Increase awareness and cooperation -Climate change mitigation and adaptation -Pollution prevention</p>

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<ul style="list-style-type: none"> ✓ Policy/decision-making for ocean action is informed by the latest science-based analysis and data generation. ✓ RSCAPs have promoted cooperation and coherence in countries in mainstreaming and delivering on the marine environmental dimensions of the 2030 Agenda. <p>Goal 3: Increase reach and mainstreaming of the Regional Seas Programme, including advocacy, political support and dialogue for furthering action.</p> <ul style="list-style-type: none"> ✓ Human health and marine environment outcomes optimised through enhanced capacity and leadership, including through enhanced cooperation between RSCAPs. ✓ The Regional Seas Programme informs the UN Environment Assembly for setting the global marine environmental policy agenda. ✓ National legislation and policies to prevent, halt and reverse the degradation of marine ecosystems adopted. ✓ Institutional capacity enhanced to adopt and act on national and international ocean-related commitments towards addressing climate change, biodiversity loss and pollution. ✓ State and non-state actors adopt national action plans covering oceans under relevant MEAs. 	
<p>The Ecosystem Approach: Towards a practical application across Regional Seas Conventions and Action Plans (see draft report The ecosystem Approach: towards a practical application across</p>	<p>Nine types of practical activities were identified from existing literature and expert opinion as having potential to embody and deliver an ecosystem approach. These nine activities are:</p> <ol style="list-style-type: none"> 1. Ecosystem mapping 2. Problem scoping activities 3. Stakeholder mapping, analysis and engagement 4. Assessment of ecosystem health and quality 5. Ecosystem service assessment 6. Regional-scale ecosystem monitoring 7. Establishing ecological (quality) objectives, indicators and thresholds 8. Action plan or management plan with roles and responsibilities 	<ul style="list-style-type: none"> -Ecosystem mapping -Assessment of ecosystem health and quality -Ecosystem service assessment -Regional-scale ecosystem monitoring

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
Regional Seas Conventions and Action Plans)	9. Agreed management responses in response to ecological objectives	
<p>UNEP Marine and Coastal Strategy 2020-2030 Update here</p>	<p><u>Vision</u>, “Healthy and climate-resilient marine and coastal ecosystems underpin human well-being and benefit present and future generations”.</p> <p>Four strategic objectives are defined to deliver this overall vision:</p> <ul style="list-style-type: none"> • Strategic Objective 1: Establish knowledge-base on marine and coastal ecosystems to inform policies on human activities affecting their functions • Strategic Objective 2: Build circularity in economies and promote sustainable consumption & production approaches to address marine pollution and resource use • Strategic Objective 3: Support policies and strategies enabling integrated management and sustainable use of marine and coastal ecosystem services • Strategic Objective 4: Innovate financing instruments and initiatives facilitating Sustainable Blue Economy transition 	<ul style="list-style-type: none"> -Acquire knowledge on ecosystems -Acquire knowledge on human impacts -Promote sustainable consumption and circular economies -Support policies enabling integrated management and sustainable use of ecosystem services -Facilitate blue economy transition by enhancing nature-based solutions -Increase effectiveness of protected areas -Mitigate environmental effects of fisheries on biodiversity and ecosystems
<p>UNEP MTS 2022-2025</p>	<p>In the four-year period covered by this strategy, UNEP will articulate its vision, including the 2030 Agenda, the Decade of Action and beyond through developing responses and deploying solutions that aspire to achieve three interlinked and mutually reinforcing strategic objectives:</p> <ol style="list-style-type: none"> 1. “Climate stability”, where net zero greenhouse gas emissions and resilience towards climate change are achieved; 2. “Living in harmony with nature”, where humanity prospers in harmony with nature; 3. “Towards a pollution-free planet”, where pollution is prevented and controlled, while ensuring good environmental quality and improved health and well-being for all. <p><u>Thematic Sub-programmes</u> - A clear focus on the Paris Agreement.</p>	<ul style="list-style-type: none"> -Increase adaptation to climate change -Increase climate change mitigation actions -Enhance nature conservation and restoration -Reduce release of pollutants -Improve sound management of chemicals and waste -Enhance circular processes -Encourage towards sustainable patterns of consumption and production

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<p>Outcome 1: Decision makers at all levels adopt decarbonization, dematerialization and resilience pathways</p> <p>Outcome 2: Countries and stakeholders have increased capacity, finance and access to technologies to deliver on the adaptation and mitigation goals of the Paris Agreement.</p> <p>Outcome 3: State and non-state actors adopt the enhanced transparency framework arrangements under the Paris Agreement.</p> <p>-Nature underpins the functions and health of the planet and thereby the existence and health of humankind.</p> <p>Outcome 1: Economically and socially sustainable pathway to halt and reverse the loss of biodiversity and ecosystem integrity established.</p> <p>Outcome 2: Sustainable management of nature is adopted and implemented in development frameworks.</p> <p>Outcome 3: Nature conservation and restoration are enhanced.</p> <p>-Preventing, controlling and managing pollution is central to improving health, human well-being and prosperity for all.</p> <p>Outcome 1: Human health and environmental outcomes are optimized through enhanced capacity and leadership on the sound management of chemicals and waste.</p> <p>Outcome 2: Waste management improved including through circular processes, safe recovery of secondary raw materials and progressive reduction of open burning and dump sites.</p> <p>Outcome 3: Reduced releases of pollutants to air, water, soil and the ocean.</p>	<p>-Encourage SPI</p> <p>-Develop inclusive, equitable or sustainable digital transformation applied to sectors and systems that address climate change, protect biodiversity and bolster human well-being</p>
Strategic Plan for Biodiversity (2011-2020) and Post-2020	The post-2020 global biodiversity framework builds on the Strategic Plan for Biodiversity 2011-2020 and sets out an ambitious plan to implement broad-based action to bring about a transformation in society’s relationship with biodiversity	-Biodiversity conservation (target of protecting 30% of the global ocean by 2030 is being negotiated)

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>global biodiversity framework (CBD). First draft.</p>	<p>and to ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled. The framework aims to facilitate implementation, which will be primarily through activities at the national level, with supporting action at the subnational, regional and global levels.</p> <p>The vision of the framework is a world of living in harmony with nature where: “By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”</p> <p>The mission of the framework for the period up to 2030, towards the 2050 vision is: “To take urgent action across society to conserve and sustainably use biodiversity and ensure the fair and equitable sharing of benefits from the use of genetics resources, to put biodiversity on a path to recovery by 2030 for the benefit of planet and people”.</p> <p>21 action oriented targets are grouped under three themes:</p> <ol style="list-style-type: none"> 1. Reducing threats to biodiversity 2. Meeting people’s needs through sustainable use and benefit-sharing 3. Tools and solutions for implementation and mainstreaming 	<p>-Reduction of threats to biodiversity</p> <p>-Biodiversity restoration</p> <p>-Sustainable use of biodiversity</p>
<p>UNEA 5 Resolutions</p>	<p>Theme: Strengthening Actions for Nature to Achieve the Sustainable Development Goals.</p> <p>Fourteen resolutions were taken:</p> <ol style="list-style-type: none"> 5/1 Animal welfare-environment-sustainable development nexus 5/2 Sustainable nitrogen management 5/3 Future of the Global Environment Outlook 5/4 Sustainable lake management 5/5 Nature-based solutions for supporting sustainable development 5/6 Biodiversity and health 5/7 Sound management of chemicals and waste 5/8 Science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution 5/9 Sustainable and resilient infrastructure 5/10 The environmental dimension of a sustainable, resilient and 	<p>-Scale-up actions to reduce nitrogen waste globally by 2030 (reduction of pollution)</p> <p>-Increase implementation of nature-based solutions</p> <p>-Encourage Member States to mainstream and coordinate the sustainable use, conservation and restoration of biodiversity into sectoral policies and programmes to enhance ecosystem resilience, halt and reverse biodiversity loss, monitor and control invasive alien species, and promote food safety, with a view to preventing current and future health risks, including disease outbreaks with epidemic and pandemic potential</p>

Global level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<p>inclusive post-COVID-19 recovery</p> <p>5/11 Enhancing circular economy as a contribution to achieving sustainable consumption and production</p> <p>5/12 Environmental aspects of minerals and metals management</p> <p>5/13 Due regard to the principle of equitable geographical distribution, in accordance with paragraph 3 of Article 101 of the Charter of the United Nations</p> <p>5/14 End plastic pollution: towards an international legally binding instrument</p>	<p>-Sound management of chemicals and waste and address impact of pesticides and fertilizers</p> <p>-SPI to contribute to sound management of chemicals and waste and to prevent pollution</p> <p>-Conduct strategic and environmental impact assessments to go towards sustainable infrastructures and promote natural infrastructures</p> <p>-Enhance circular economy to achieve sustainable consumption and production</p> <p>-Promote effective and progressive action to end plastic pollution.</p> <p>-Development of an international legally binding instrument on plastic pollution, including in the marine environment.</p>

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management in the Framework of Article 15 of the Land Based Sources Protocol. (Decision IG.25/8.)</p>	<ul style="list-style-type: none"> ○ <u>Regional Plan on Urban Wastewater Treatment.</u> The objective is to protect the coastal and marine environment and human health from the adverse effects of the above-mentioned wastewater 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 water and energy efficiency. For the purpose of this Regional Plan, WEFE (Water-Energy-Food-Ecosystem) nexus is incorporated into the design phase of WWTPs with the aim to promote energy efficiency and reuse of reclaimed wastewater. ○ <u>Regional Plan on Sewage Sludge Management.</u> The objective of the Regional Plan is to ensure effective reuse of beneficial substances and exploitation of energy potential of sewage sludge, while preventing harmful effects on human health and the environment. 	<ul style="list-style-type: none"> - Decrease marine pollution - Promote nature-based solutions. - Promote energy efficiency and water savings, and integrate renewable energy alternatives - Implement wastewater and sludge reuse systems (circular economy see Giakoumis et al., 2020²) - Ensure regular monitoring. - Value sewage sludge (circular economy)
<p>Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol. (Amended by Decision IG.25/9)</p>	<p><u>Among the main objectives of the Regional Plan:</u></p> <ul style="list-style-type: none"> ✓ 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, as well as reduction of the socioeconomic costs it causes; ✓ Remove to the extent possible already existent marine litter by using environmentally sound methods; ✓ Enhance knowledge and understanding on marine litter and its impacts; ✓ Support Contracting Parties in the development, implementation, and coordination of programmes for litter reduction, including National Action Plans (NAPs). <p>In implementing the Regional Plan, the Contracting Parties shall be guided by:</p> <ul style="list-style-type: none"> - Integration by virtue of which marine litter management shall be an integral part of the solid waste management and other relevant strategies; 	<ul style="list-style-type: none"> - Prevent marine litter generation - Polluter-pays principal - Ecosystem based approach, take cumulative effects with other pollutants and climate change effects - Sustainable consumption and production. Current production and consumption patterns must be transformed to sustainable ones. - Threshold values indicated - Best practices and initiatives given - Enhance public awareness and education

² Giakoumis, T., Vaghela, C., & Voulvoulis, N. (2020). Chapter Six. The role of water reuse in the circular economy. In P. Verlicchi (Ed.), *Advances in Chemical Pollution, Environmental Management and Protection* (pp. 227–252). Elsevier. doi: [10.1016/bs.apmp.2020.07.013](https://doi.org/10.1016/bs.apmp.2020.07.013)

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<ul style="list-style-type: none"> - Prevention by virtue of which any marine litter management measure should aim at addressing the prevention of marine litter generation at the source; - Precautionary principle 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; - Polluter-pays principle by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter, with due regard to the public interest; - Ecosystem-based approach by virtue of which the cumulative effects of marine litter on marine and coastal ecosystem, habitats and species with other contaminants and substances that are present in the marine environment should be fully taken into account; - Public participation and stakeholder involvement; - 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, in particular through the use of systemic approaches addressing environmental impacts along the entire value chain, including circular economy. <p>The work plan is given until 2030. This Regional Plan is legally binding. The Contracting Parties agreed in 2016 to reduce beach litter of 20% by 2024. This goal requires concrete engagement and effective partnerships at all levels.</p>	<ul style="list-style-type: none"> - Support research on relative subjects.
<p>MAP Data Policy (Decision IG.25/10)</p>	<p>Within the framework of the Barcelona Convention the main objectives of the MAP data policy are to support, promote and enable:</p> <ul style="list-style-type: none"> - the continuing availability of latest data and the maintenance of long-term series of observations, 	<ul style="list-style-type: none"> - Availability of quality assured and quality controlled data - Long-term series maintenance - Publication of relevant metadata

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<ul style="list-style-type: none"> - wider exploitation, re-use and re-combination of data from different sources in different frameworks and media than those for which they were originally commissioned, - full, free and open access to all kinds of data, where possible, whilst recognizing and respecting the variety of business models and data ownerships that enable these data to be created, - protection of integrity, transparency, and traceability in environmental data, analysis and forecasts, - recognition of data providers and of their intellectual property rights through citation and data licenses, - meeting relevant national legislations and government guidance on the management and distribution of environmental information, - implementation of INSPIRE, SEIS principles, Copernicus and GEOSS data sharing principles, - interoperability and use of European or international standards, - use of crowd sourced and citizen science data, - recognition of the quality of data through quality assurance and quality control procedures, - publication of relevant metadata, - stewardship and sharing of data from research projects. - As a standard approach, all data held by UNEP/MAP shall be made available with minimum time delay and at no cost. 	<ul style="list-style-type: none"> - Sharing data from research projects - Promote interoperability
<p>Post-2020 SAPBIO (Decision IG.25/11)</p>	<p>Long term vision: “By 2050, marine and coastal biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy Mediterranean Sea and coast, and delivering benefits essential for nature and people”</p> <p>Medium-term vision: “By 2030 start to reverse the loss of biodiversity and put the Mediterranean marine and coastal biodiversity on the path to recovery for the benefit of nature and people”</p> <ul style="list-style-type: none"> - Goal 1 Reduce the threats to biodiversity. - Goal 2 Ensure that biodiversity is preserved and maintained or enhanced in order to meet people’s needs. 	<ul style="list-style-type: none"> - Underlines knowledge, data availability and sharing is insufficient and patchy. - Enhance effectiveness of Marine and Coastal Protected Areas (MCPAs) and Other Effective area-based Conservation Measures (OECMs). - Enhance ecosystem restoration - Climate change mitigation, adaptation and nature-based solutions

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<ul style="list-style-type: none"> - Goal 3 Enable the necessary transformative change, putting in place tools and nature-based solutions for implementation and mainstreaming 	<ul style="list-style-type: none"> - Improve knowledge on distribution and status of species protected under SPA/BD Protocol - Improve cartography especially of threatened of habitats - Improve knowledge sharing - Sustainable fisheries and aquacultures - Reinforce governance - Reinforce cross-sectorial integration - Reinforce spatial planning taking in account ecosystem approach - A refined and fully compliant IMAP - Develop capacity building and networking - Increase international cooperation - Mobilize resources
<p>Post-2020 Regional Strategy for marine and coastal protected areas and other effective area-based conservation measures in the Mediterranean. (Decision IG.25/12.)</p>	<p><u>Targets:</u></p> <ul style="list-style-type: none"> - By 2030, at least 30 percent of the Mediterranean Sea is protected and conserved through well connected, ecologically representative and effective systems of marine and coastal protected areas and other effective area-based conservation measures, ensuring adequate geographical balance, with the focus on areas particularly important for biodiversity. - By 2030, the number and coverage of marine and coastal protected areas with enhanced protection levels is increased, contributing to the recovery of marine ecosystems. 	<p>Post-2020 target for the Mediterranean Sea as a whole:</p> <ul style="list-style-type: none"> - Protect 30% of the Mediterranean Sea by 2030, - Increase protection levels by 2030.
<p>Action Plans for the conservation of species and habitats under the Protocol</p>	<ul style="list-style-type: none"> - Monk Seal Action Plan - Action Plan for the Conservation of Mediterranean Marine Turtles - Action Plan for the Conservation of Cetaceans in the Mediterranean Sea 	<ul style="list-style-type: none"> - Enhance vulnerable groups and species conservation - Evaluate populations and biodiversity within habitats

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
concerning Specially Protected Areas and Biological Diversity in the Mediterranean	<ul style="list-style-type: none"> - Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea - Action Plan for the Conservation of Bird Species inventoried in the annexe II of the SPA Protocol - Action Plan on Cartilaginous Fishes in the Mediterranean Sea - Action Plan on Introduction of Species and Invasive Species in the Mediterranean Sea - Action Plan on Coralligenous & other Calcareous Bio-concretions in the Mediterranean - Dark Habitats Action Plan <p>APs on cetaceans and Dark habitats have been adopted in Decision IG.25/13</p>	<ul style="list-style-type: none"> - Assemble data - Evaluate progress in implementation of the APs at national level (in relation with IMAP) - Revision/development of directory of experts and organisms in relation with the AP concerns - Proposition of regional networks - Need to define list of pelagic habitats for IMAP - Need to evaluate the impact of NIS on biodiversity and ecosystem integrity. - Increase knowledge acquisition - Support effective implementation and reporting of the CPs on the APs
Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides (Med SO _x ECA) pursuant to MARPOL Annex VI. (Decision IG.25/14)	<p>This proposal supports designation of an ECA to control SO_x and PM emissions from ships.</p> <p>Ship emissions contribute significantly to air pollution, adverse human health outcomes and ecosystem damage in the Mediterranean Sea area. The designation of the proposed Med SO_x Emission Control Area will reduce these effects and improve public health and the environment within the Mediterranean coastal States. The Mediterranean coastal States have already implemented emission controls on land-based sources of air pollution. Applying SECA standards to vessels engaged in international shipping in the Mediterranean Sea area will achieve substantial benefits at comparable, and reasonable, costs.</p>	<ul style="list-style-type: none"> - Ocean acidification and pollution mitigation
Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine	<p><u>Vision</u>: "A clean and healthy Mediterranean marine and coastal environment with a sustainable and pollution free maritime sector, supported by a rigorous enforcement system and strengthened multi-sectoral cooperation, for the benefit of present and future generations"</p> <p><u>Common Strategic Objectives</u>:</p>	<ul style="list-style-type: none"> - Promote innovative global solutions to mitigate and respond to climate change - Reduce and monitor ship emissions - Prevent and reduce litter from ships

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>Pollution from Ships (2022-2031) (Decision IG.25/16)</p>	<ul style="list-style-type: none"> - Prevent, prepare for, and respond to operational, illegal and accidental oil and HNS pollution from ships - Promote and support the development and implementation of innovative global solutions to mitigate and respond to climate change - Reduce and monitor air emissions from ships to a level that is not harmful to the marine environment, or the health of the coastal population of the Mediterranean - Prevent and reduce litter (in particular plastic) entering the marine environment from ships, in order to limit the environmental, health, and socio-economic impact of marine litter in the Mediterranean - Eliminate the introduction of non-indigenous species by shipping activities - Achieve a well-managed safe and pollution free Mediterranean, with integrated marine spatial planning and designation of special areas, where shipping activity has a limited impact upon the marine environment - Identify and understand collectively emerging issues related to pollution from ships in the Mediterranean, and define required actions to address issues identified 	<ul style="list-style-type: none"> - Limit introduction of NIS by ships - Recognize regulation to protect sensitive areas from operation or accident pollution - Integrated ICZM/MSP for better protection
<p>Ballast Water Management (BWM) Strategy for the Mediterranean Sea (2022-2027). (Decision IG.25/17)</p>	<p>Overall objectives:</p> <ul style="list-style-type: none"> - establish a framework for a regional harmonised approach in the Mediterranean on ships' ballast water control and management which is consistent with the requirements and standards of the BWM Convention, as outlined in its Article 13.3; - initiate some preliminary activities related to the management of ships' biofouling in the Mediterranean region; and - contribute to the achievement of GES with respect to NIS as defined in IMAP. 	<ul style="list-style-type: none"> - Contribute to the achievement of GES with respect to NIS as defined in IMAP
<p>Set of Regional Measures to Support the Development of Green and Circular Businesses and to</p>	<p>It includes measures to tackle identified challenges and to preserve healthy marine and coastal ecosystems in the Mediterranean, while enabling the development of green and circular business opportunities in key socioeconomic activities of the Blue Economy. It includes regional measures targeting (i) entrepreneurs, start-ups and SMEs, (ii) Policy makers/public authorities, (iii) Business Support Organisation, (iv)</p>	<ul style="list-style-type: none"> - Development of sustainable practices and green economy <ul style="list-style-type: none"> - Support circular economy - Sustainably manage marine and coastal tourism development

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>strengthen the demand for more sustainable products. (Decision IG.25/18)</p>	<p>Financial actors and (v) economic sectors having a particular impact on the marine and coastal development.</p> <p>Among the policy recommendations:</p> <ul style="list-style-type: none"> - Promote the development of municipal reuse centres - Establish clear end-of-waste and by-product criteria - Support awareness-raising campaign on sustainable/circular practices among consumers (Stimulate Consumer Demand) <p>Within the regional measures:</p> <ul style="list-style-type: none"> - Tackling Single-Use Plastic Items to reduce marine litter and stimulate sustainable alternatives - Creating an enabling framework for sustainable and inclusive businesses within sectors of the Blue Economy. Among the main challenges for the achievement of a true sustainable Blue Economy in the Mediterranean are: <ul style="list-style-type: none"> ✓ Sustainable use of natural resources and the conservation of marine biodiversity, linked to food and livelihood provision; ✓ Food security, focusing on development of sustainable fisheries or exploitation of wild fish stocks, and sustainable and efficient aquaculture industries; ✓ Climate change and carbon budgets, facilitating the transition towards a low carbon economy and a renewable “blue” energy generation to address the acidification of oceans and pH decrease (CO₂ cycle); and enhance blue carbon cycles or carbon sequestration cycles, linked to the damage of coastal habitats such as mangroves, seagrass meadows or salt marshes; ✓ Marine and coastal tourism, which have consistently shown growing patterns over the past few years, increases the greenhouse gas emissions, water demand, sewage, waste generation, loss and degradation of coastal habitat, biodiversity and ecosystem services. These need to be addressed; ✓ Pollution and marine debris: a growing human population, the intensification of agriculture and urbanization of coastal areas are at the 	<p>and reduce the impacts on ecosystems</p> <ul style="list-style-type: none"> - Manage blue economy - Tackle single-use plastic - Develop knowledge and capacity building in circular economy <p>- Acknowledge the challenges of blue economy (tourism, climate change, food security, sustainable use of natural resources, pollution)</p>

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	land-origin of increasing marine pollution, while shipping and marine resource exploitation (hydrocarbon or mining) are sea-based pollution sources.	
Regional Action Plan on sustainable consumption and production in the Mediterranean (2016-2027)	<p><u>Vision:</u> By 2027 a prosperous Mediterranean region is established, with non-pollutant, circular, socially inclusive economies based on sustainable consumption and production patterns, preserving 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.</p> <p>The three strategic objectives are:</p> <ul style="list-style-type: none"> - Establish a regional sustainable consumption and production framework to ensure coherence, coordination and implementation of sustainable consumption and production activities at the regional and national levels, and thus translate the global commitments on sustainable consumption and production to the Mediterranean Region. - Develop and implement sustainable consumption and production Operational Objectives in the Mediterranean in order to promote and strengthen circular and green economy and support the Barcelona Convention, its Protocols and Regional Plans, the Mediterranean Strategy for Sustainable Development (MSSD), and other regional policy frameworks for sustainable development. - Engage key stakeholders (international organisations, national and local public authorities, business sector, consumers, civil society, universities and research institutions) in sustainable consumption and production models and circular economy measures leading to high resource efficiency and preservation, reduced pollution, and decoupling the development process from environmental degradation and promoting sustainable lifestyles <p>Corresponding operational objectives and actions are proposed to attain the vision</p>	<ul style="list-style-type: none"> - Develop sustainable consumption - Develop sustainable production - Strengthen green and circular economy
Integrated Coastal Zone Management (ICZM) Protocol, its Action Plan and	<p>Methodological guidance for reaching GES through ICZM is given in the CRF.</p> <p>The CRF's objectives are to:</p>	<ul style="list-style-type: none"> - Monitor in an integrated way marine environment taking into account the assessment of anthropogenic pressures of

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>Common Regional Framework (CRF) (Decision IG. 24/5)</p>	<p>a) Use the ecosystem-based management to ensure sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes;</p> <p>b) Address natural hazards and the effects of natural disasters, in particular coastal erosion and climate change; and</p> <p>c) Achieve good governance among actors involved in and/or related to coastal zones.</p> <p>The CRF introduces Marine Spatial Planning (MSP) as 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. The Conceptual framework for the MSP (Decision IG.23/7) defines the Ecosystem Approach as a guiding principal for MSP.</p> <p>CRF includes an action plan (AP) from 2020 up to 2027, which has been designed to provide concrete support and guidance for joint implementation of the ICZM Protocol through the CRF. The AP defines the main outputs to be delivered, associated with estimated costs, key actors and corresponding progress indicators.</p> <p>The methodological guidance for reaching GES through ICZM is given in an Appendix. A matrix of interactions between elements of the ICZM Protocol and Ecological Objectives is proposed. It refers to a tool elaborated by MED POL the Table of cross-cutting IMAP Ecological Objectives (EOs) and Common Indicators (CIs) along the Drivers-Pressures-State-Impacts-Responses (DPSIR) model in the coastal and marine environment (2019). The tool is based on semi-quantitative score-card methodology</p>	<p>human activities and their impacts that prevent to achieve or maintain GES.</p> <ul style="list-style-type: none"> - Address cumulative impacts - Use MSP as a tool - Use Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) at operational level as tools to achieve GES and sustainable development. - Transboundary SEA process should be activated when appropriate - Cooperation between CPs in EIA procedures related to activities likely to have impacts on other CPs - Climate resilience - Promote ecosystem approach and nature-based solutions to maintain or restore the natural capacity of the coast to adapt to changes - Awareness rising and capacity building for coastal risks - Promote best practices - Enhance cross-sectorial and multi-level institutional coordination

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
		<ul style="list-style-type: none"> - Ensuring coherence and complementarity of all strategies, policies, plans, initiatives, planning processes and funding at all levels affecting coastal zones - Use Shared Environmental Information System (SEIS) principles - Enhance transboundary cooperation - Ensure cooperation with all relevant/competent international and regional organizations - Integrated approach in order to address combined pressures and cumulative impacts in coastal and marine areas - Address Land-Sea Interactions (LSI) at various scales from local to Mediterranean level - Coordinate activities through MSP with a strong focus on LSI
<p><u>Conceptual framework for the MSP</u></p>	<p>It is a guiding document for the implementation of MSP based on common principals with step-by-step methodology. MSP is considered as one of the tools to implement the EcAp as a strategic approach towards sustainable development that integrates the environmental component as well as the social and economic components.</p>	<ul style="list-style-type: none"> - Introduces MSP in the framework of the Barcelona convention - Links MSP to ICZM - Gives a common context for MSP implementation

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p><u>Mediterranean Strategy for Sustainable Development MSSD 2016-2025</u></p>	<p>It was developed by the Mediterranean Commission on Sustainable Development (MCSD) with the assistance of the Secretariat to the Barcelona Convention (Coordinating Unit of the Mediterranean Action Plan -UNEP/MAP) through its Plan Bleu Regional Activity Centre (PB/RAC) and the support of the other MAP components (RACs). MSSD 2016-2025 aims to contribute significantly to the long-term sustainable development vision of the Mediterranean region.</p> <p><u>Vision:</u> 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.</p> <p><u>Six main objectives:</u></p> <ol style="list-style-type: none"> 1. Ensuring sustainable development in marine and coastal areas; 2. Promoting resource management, food production and food security through sustainable forms of rural development; 3. Planning and managing sustainable Mediterranean cities. 4. Addressing climate change as a priority issue for the Mediterranean; 5. Transition towards a green and blue economy; 6. Improving governance in support of sustainable development <p>For each objectives, strategic direction are developed.</p>	<p>- Sustainable development</p> <p>- Food security</p> <p>- Climate change as a priority</p> <p>- Transition towards blue and green economy</p> <p>The six objectives of the MSSD correspond closely to the UN Sustainable Development Goals. For each objective strategic directions have been identified.</p> <p>Four concern climate change issues:</p> <ol style="list-style-type: none"> 1. Increase scientific knowledge, raise awareness, and 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 2. Accelerate the uptake of climate smart and climate resilient responses 3. Leverage existing and emerging climate finance mechanisms, including international and domestic instruments, and enhance the engagement of the private and finance sectors 4. Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP development frameworks, particularly in the energy sector
<p><u>UNEP/MAP MTS 2022-2027 contributing to the Decade of Action for the SDGs</u></p>	<p>The UNEP/MAP MTS 2022-2027 is aligned with the international and regional context.</p> <p><u>Vision:</u> “Progress towards a healthy, clean, sustainable and climate resilient Mediterranean Sea and Coast with productive and biologically diverse marine and coastal ecosystems, where the 2030 Agenda for sustainable development and its SDGs are achieved through the effective implementation of the Barcelona Convention, its Protocols and the Mediterranean Strategy for Sustainable Development for the benefit of people and nature.”</p> <p>Four thematic programmes are identified:</p> <ul style="list-style-type: none"> ✓ Pollution and marine litter (relevant ecological objectives: EO5, EO9, EO10, EO11) ✓ Biodiversity and Ecosystems (relevant ecological objectives: EO1, EO2, EO3, EO4, EO6, EO8) ✓ Climate change (relevant ecological objective: EO7) ✓ Sustainable use of coastal and marine resources including circular and blue economy (relevant ecological objectives: EO6, EO7, EO8) <p>A fundamental programme on governance and two enabling programmes one on monitoring, assessment, knowledge and vision and one on advocacy and communication.</p> <p>Within the thematic programme on climate change, the targets are:</p> <ul style="list-style-type: none"> - Outcome 3.1. Legal, policy and institutional framework strengthened at the regional and national level to efficiently address climate change related challenges (flooding, erosion, land degradation, pollution, disasters etc.) 	<p>-Reduce pollution</p> <p>-Increase protection</p> <ul style="list-style-type: none"> -Progress towards GES -Develop and implement climate change mitigation actions <p>-Reduce anthropogenic pressure on coastal and marine ecosystems to maintain their contribution to adapt to and mitigate the effects of climate change</p> <p>-Policy strengthening to efficiently address climate change impacts</p> <p>-Better understand and knowledge acquisition needed of climate change processes</p> <ul style="list-style-type: none"> - Develop and implement nature-based solution actions -Support green and circular businesses -Reinforce ICZM Protocol implementation -Increase partnerships between scientific institutions and private sector

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<ul style="list-style-type: none"> - Outcome 3.2. Nature-based, technical solutions promoting prevention or reduction of the impact of climate change on coastal and marine ecosystems and increase resilience to climatic variability and change. - Outcome 3.3. Better understanding and knowledge of climate change and its impacts on environment and development. - Outcome 3.4. Mitigation of Climate Change progressed through Circular Economy, increased resource efficiency and carbon neutrality business strategies 	<ul style="list-style-type: none"> -Develop SPI -Develop IMAP Info System -Increase data submission to IMAP Info system -Increase data collection and sharing platforms -Develop communication and awareness
<p>Cooperation between UNEP/MAP and EEA for the period beyond 2021. See document UNEP/MAP – EEA Joint Work Plan 2022-2030</p>	<p><u>Strategic priorities:</u></p> <ul style="list-style-type: none"> - Building strengthened knowledge base - Responding to political priorities - Supporting digital transformation - Ensuring coordinated networking, communication and stakeholder interaction <p>A timeline of major products of the strategic priorities (implementation table), is resented in the document.</p>	<ul style="list-style-type: none"> -Coordination with EEA -Network -Digital transformation
<p>Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (Decision IG.22/6)</p>	<p>The main objective of the Framework is to define a regional strategic approach to increase the resilience of the Mediterranean marine and coastal natural and socioeconomic systems to the impacts of climate change, assisting policy makers and stakeholders at all levels across the Mediterranean in the development and implementation of coherent and effective policies and measures.</p> <p><u>Vision:</u> By 2025 the Marine and Coastal Areas of the Mediterranean countries and their communities have increased their resilience to the adverse impacts of climate variability and change, in the context of Sustainable Development. This is achieved through common objectives, cooperation, solidarity, equity and participatory governance.</p> <p><u>Four strategic objectives</u> have been identified:</p>	<p>The framework is oriented towards increasing resilience of human societies to the impacts of climate change.</p> <p>With regard to climate change impacts this framework suggests number of priorities for consideration, some of which are potentially of interest for a future EcAp Roadmap:</p> <ul style="list-style-type: none"> - Regional policy instruments to promote adaptation to the impacts of climate change. Assessment on how the

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<ol style="list-style-type: none"> 1. Appropriate institutional and policy frameworks, increased awareness and stakeholder engagement, and enhanced capacity building and cooperation 2. Development of best practices (including low regret measures) for effective and sustainable adaptation to climate change impacts 3. Access to existing and emerging finance mechanisms relevant to climate change adaptation, including international and domestic instruments 4. Better informed decision-making through research and scientific cooperation and availability and use of reliable data, information and tools <p>Each Strategic Objective has several Strategic directions with priority lists.</p> <p>As for other policies, monitoring programmes producing regular quality data are lacking. The countries of the Mediterranean have national observation and monitoring systems of varying data quality and availability, with northern countries enjoying more long-term and high-quality climate data than southern ones. Nevertheless, monitoring systems related to marine ecosystems (biotic and abiotic components) in the coastal and open waters are still lacking. Infrastructure, spatial coverage and data issues at the national level are challenges that need to be addressed.</p>	<p>Barcelona Convention can be a tool to assist countries build coastal resilience, and on the future implementation of its protocols and action plans in the light of climate change.</p> <ul style="list-style-type: none"> - Support and guidance on best practices and integrated approaches to mainstream climate change considerations in developmental and environmental plans and strategies. - Integrated approach for the reduction of non-climate related threats that have a strong influence on risk and undermine the capacities of communities and ecosystems to adapt to climate change (water pollution, overfishing, sand mining, damming) - Risk and Impacts assessment in relation to climate change prior to major infrastructure investments in coastal and marine areas - Marine/Maritime planning process, taking into account

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
		<p>land-sea interactions, including climate change effects.</p> <ul style="list-style-type: none"> - Lack of monitoring programmes producing regular quality data on biotic and abiotic components of the marine ecosystems - Identification of areas of special interest (such as heritage sites, nature reserves, biodiversity and other kinds of hotspots, coastal mega-cities, river deltas etc.) and undertaking of risk assessment for various climate change scenarios - Ecosystem based Adaptation approaches, the ICZM Protocol and the SAPBIO as priority policy tools for encouraging adaptation efforts - Sensitivity and adaptive capacity of marine species and ecosystem responses to changes and cumulative impacts in oceanic conditions, including the introduction of alien species - Mapping of coastal and marine ecosystems and assessment of the role of services they provide to climate resilience

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
		<ul style="list-style-type: none"> - Environmental and socio-economic vulnerability of Marine Protected Areas - Current and wave patterns, and sediment movement affecting shoreline dynamics - Subsidence of certain coasts.
<p>MedECC 2020 prepared MAR1: Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer W, Guiot J, Marini K (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/ MAP, Marseille, France. Endorsed by Decision IG.25/4</p>	<p>MAR1³ states :</p> <ul style="list-style-type: none"> - <i>The main challenges for the Mediterranean are to fill data and knowledge gaps across countries, and to foster the development of high-level climate services, including early warning systems. More research is needed for short- and medium-term projections, as well as large scale programs at the Mediterranean scale to address pressing challenges. (Section 1.1.2). (p.16)</i> - <i>The current list of NIS provides a reliable updated database and basis to continue monitoring the arrival and spread of NIS in the Mediterranean, as well as to provide counsel to governmental agencies with respect to management and control. The current geographical, taxonomical and impact data gaps can be reduced only by instituting harmonized standards and methodologies for monitoring alien populations in all countries bordering the Mediterranean Sea. (p. 373)</i> - <i>The available knowledge concerning the risks studied by MedECC has significant certain gaps, often due to limited monitoring systems or scientific research capacity – these have been indicated as clearly as possible. (p.632/IV)</i> - <i>Seagrass meadows in the Mediterranean Sea cover 1.35 to 5 million hectares, between 5 and 17% of the worldwide seagrass habitat. The</i> 	<ul style="list-style-type: none"> - Dissemination and communication of actual knowledge on climate change impacts is needed - Need to increase data acquisition and data quality of variables in relation with climate change. The report underlines the lack of data to support good modelling. - -Need to increase georeferenced data and information on seagrass

³ MedECC 2020 Summary for Policymakers. In: Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer W, Guiot J, Marini K (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/ MAP, Marseille, France, pp 11-40. See Annex I of [Decision IG.25/4](#)

Mediterranean level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
	<i>current loss rate of seagrass is approx. 5% in the Mediterranean. Even in the remaining Posidonia meadows, almost half of the surveyed sites have suffered net density losses of over 20% in 10 years (medium confidence). (Section 4.2.1.1) (p.30).</i>	

European level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<p>European Marine Strategy Framework Directive (MSFD). Documents and meetings:</p> <ul style="list-style-type: none"> • Directive 2008/56/EC, Decision (EU) 2017/848, • Report from the commission to the European parliament and the council on the implementation of the Marine Strategy Framework Directive (2020) 	<p>The objective of the MSFD is to protect the marine environment as well as attain and maintain Good Environmental Status. As for IMAP, the overarching framework and operational principal of MSFD, is the Ecosystem Approach.</p> <p>The Commission Decision (EU) 2017/848 is the latest EU decision relative to MSFD that completes Directive 2008/56/EC, amends its Annex III and repeals Decision 2010/477/EU. It lays down criteria and methodological standards on GES of marine waters and specifications and standardised methods for monitoring and assessment corresponding to the Descriptors listed in 2008/56/EC Annex I.</p> <p>The 2020 report of the Commission on the implementation of the MSFD focuses on the key policy messages and lessons learnt from the first cycle of implementation and the 2018 reporting. It underlines the progress made and the efforts to be done.</p> <p>Lack of knowledge, need of improving data collections, harmonization of monitoring methods remain important issues to evaluate the environmental status of the seas. Moreover, the report underlines that the determinations of good environmental status (GES) have to be more measurable, regionally coherent and ambitious. Several challenges and suggestions are of interest:</p> <ul style="list-style-type: none"> - There is still not a shared regional understanding of what constitutes GES. - Not all countries had reported and delays were underlined in reporting of the Member States. - There is a need to streamline the implementation process of the complex framework. 	<p>-Increase knowledge and data collections</p> <p>-Improve comparability of datasets and assessments by establishing robust methodologies, unified list of elements (e.g. contaminants, nutrients, species) or threshold values for determining and assessing GES.</p> <p>-GES have to be more measurable and regionally coherent.</p> <p>-Need of streamlining the implementation of process of the framework.</p> <p>-Need to smoothen reporting</p> <p>- Need to increase coordination with other sectoral policies</p> <p>-Need to build science-based solid bridges with MSP, fisheries policy, energy related policies etc.</p> <p>-Blue economy is in development but increase of wind parks and aquaculture for</p>

European level		
Process or document	Relevant objectives, goals, directions and commitments	Main points relevant to marine and coastal ecosystems, EcAp and IMAP
<ul style="list-style-type: none"> • DG ENV Workshop on the Review of the Marine Strategy Framework Directive, 15 November 2022. • Meeting between UNEP/MAP and DG ENV Policy Officer 16/01/23 	<ul style="list-style-type: none"> - MSFD is in the process of being reviewed. The evaluation is being finalised in parallel with an Impact Assessment Report. If there is a review proposed for the MSFD it will not be before 2025. - Work on modelling MSFD descriptors in support of the review is being done by JRC focusing on anthropogenic pressures. - MS have underlined the need of resources to implement correctly MSFD. - Efforts are needed to smoothen reporting. - There is a need to increase policy integration, streamline and coordinate with other sectoral policies, both at national and EU levels (e.g. RCSs, WFD, HD etc) - Blue economy development must come at the cost of eroding marine ecosystem resilience. It must be sustainable and not be in contradiction with MSFD measures. - More solid bridges are needed between MSFD and policies that regulate maritime activities such as MSP Directive, common fisheries policy, energy-related initiatives, maritime transport and other activities (e.g. aquaculture, desalination, waste management) - Despite its relevance, links between MSFD and climate change both at monitoring and policy level are not obvious. Climate change impacts and acidification are transboundary issues that are directly or indirectly addressed through MSFD monitoring programmes. - The regional coherence of the EU monitoring programmes is considered rather low in the Mediterranean Sea. - Challenges remain for the acquisition of data and the comparability of assessments. - The development of electronic reporting tools has improved comparability across borders, but there is still room for improvement in their design and in the variability of the information reported. 	<p>example need to be done in a sustainable way and cannot come at the cost of eroding marine ecosystem resilience.</p> <p>-Climate change and ocean acidification cause important transboundary impacts. How can these be taken in account?</p>

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	<p>Following the critical areas of improvement underlined in the report, the MSFD is being reviewed mainly through 5 large themes:</p> <ul style="list-style-type: none"> 1/Facilitate and simplify reporting. Make GES more measurable and regionally coherent with defined targets. 2/Streamline and enforce implementation 3/Increase policy coherence with other policies such as MSP, fisheries policy etc. 4/ Increase cooperation with RCSs. 5/Work on data management especially collection, process, comparability of data. <p>Member State need to report on their Programme of Measures also but it is not done by all the MS and measures are considered not always adequate. Clarifying the environmental targets and GES should help MSs in taking more appropriate measures to attain GES.</p>	
<u>EU Green Deal</u>	<p>It is a framework for a set of policy initiatives approved in 2020 by the European Commission that aim to make EU climate neutral by 2050 by adopting a set of proposals to make the EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.</p> <p>Strategies and action plans that aim to contribute to the objectives:</p> <ul style="list-style-type: none"> -Biodiversity strategy for 2030 (see hereafter) -Chemicals strategy -Circular economy action plan -Environment action programme to 2030 -Forest strategy -Plastics strategy -Soil strategy -Textiles strategy -Zero pollution action plan for air, water and soil 	- Climate change mitigation by reducing greenhouse gas emissions

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<p>EU Sustainable blue economy, new approach (see Commission document 2021)</p>	<p>Importance of a sustainable blue economy that will play a major role to achieve European Green Deal's Objectives.</p>	<p>-Blue economy will create new jobs especially in coastal and insular areas but needs to be sustainably developed.</p> <p>-Development of renewable energy will participate to reduce green-house effects</p> <p>- Decarbonise maritime transport</p>
<p>EU Biodiversity strategy for 2030</p>	<p>The strategy contains specific commitments and actions to be delivered by 2030.</p> <p>Establishing a larger EU-wide network of protected areas on land and at sea</p> <ul style="list-style-type: none"> • The EU will enlarge existing Natura 2000 areas, with strict protection for areas of very high biodiversity and climate value <p>Launching an EU nature restoration plan (see Nature restoration Law to restore Europe's nature by 2050 adopted by the Commission in 2022)</p> <p>Introducing measures to enable the necessary transformative change</p> <p>The strategy highlights unlocking funding for biodiversity, and setting in motion a new, strengthened governance framework to</p> <ul style="list-style-type: none"> • ensure better implementation and track progress • improve knowledge, financing and investments • better respecting nature in public and business decision-making <p>Introducing measures to tackle the global biodiversity challenge</p> <p>These measures will demonstrate that the EU is ready to lead by example to address the global biodiversity crisis. In particular, working towards the successful adoption of an ambitious global biodiversity framework under the Convention on Biological Diversity.</p>	<p>-Increase legally protection to attain a minimum of 30% of the EU's sea area by 2030. Concerning Mediterranean EU countries, there is still much progress to be done</p> <p>-Enhance restoration</p> <p>-Ensure better implementation</p> <p>-Improve knowledge</p> <p>-Improve societies' resilience to climate change impacts, forest fires, food security and disease outbreaks</p>
<p>The EU Nature restoration Law proposal</p>	<p>Through this Law, Natural restoration Plans will be required for each member state. The proposal aims to restore ecosystems, habitats and species across the EU's land and sea areas through binding targets in order to:</p> <ul style="list-style-type: none"> • enable the long-term and sustained recovery of biodiverse and resilient nature • contribute to achieving the EU's climate mitigation and climate adaptation objectives 	<p>-Restoration of 20% of EU's land and sea areas by 2030 including by removing pollution to allow nature recover</p> <p>-Increase biodiversity recovery</p>

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	<ul style="list-style-type: none"> meet international commitments <p>The proposal combines an overarching restoration objective for the long-term recovery of nature in the EU's land and sea areas with binding restoration targets for specific habitats and species. These measures should cover at least 20% of the EU's land and sea areas by 2030, and ultimately all ecosystems in need of restoration by 2050.</p> <p>The proposal contains the following specific targets for the seas: marine ecosystems – restoring marine habitats such as seagrass beds or sediment bottoms that deliver significant benefits, including for climate change mitigation, and restoring the habitats of iconic marine species such as dolphins and porpoises, sharks and seabirds.</p> <p>The Law also contains proposals to reduce the use and risk of chemical pesticides by 50% by 2030.</p>	<p>-Reduce chemical pesticides</p> <p>-Climate change mitigation</p>
EU Circular economy action plan	<p>Adopted in 2020, it is one of the European Green Deal blocks. It is planned to reduce pressure on natural resources and create sustainable growth and to participate to climate neutrality and biodiversity loss. It targets how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented and the resources used are kept in the EU economy for as long as possible.</p>	<p>-Sustainable production and consumption</p> <p>-Ensure less waste</p> <p>-Reduce microplastics</p>
EU MSP Directive and implementation	<p>The directive, requires the implementation of national MSPs in Member states before 2021. One of the requirements for the implementation of national MSPs is to adopt an ecosystem-based approach, and gives the opportunity to integrate the MSFD in MSP implementation.</p> <p>A European MSP platform was created to help MS establish their MSP and create cooperation between them.</p> <p>The report on the implementation of MSP Directive states that the Directive has now been transposed and competent authorities have been designated in all EU states. Still one Mediterranean EU country did not comply with the requirement to establish MSP by 31 March 2021 but the plan is at an advanced stage. Also it appears that in terms of content, the most significant challenges were implementing the ecosystem-based approach, prioritising maritime space uses and providing space at sea to enable</p>	<p>-Coherence of plans across neighbouring countries is a challenge.</p> <p>-MSP has an important role in the development of sustainable blue economy (e.g. planning areas for future development of offshore wind farms).</p> <p>-MSP is a key tool to achieve good environmental status (GES) and help preserve biodiversity.</p>

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	<p>various economic activities and achieve various policy objectives, while at the same time protecting the environment or leaving space for future uses.</p> <p>In 2021, the Commission issued Guidelines for implementing an ecosystem-based approach in MSP, which underline the need to integrate MSFD objectives in MSP.</p> <p>The EU Technical Experts Group on MSP data published in 2021 the “Proposal for making harmonized MSP plan data available across Europe”. It suggests the use of three data models: BASEMAPS, MSP INSPIRE data model and EMODnet MSP model, highly recommending the latest. Currently, several EU countries of the Baltic and North Sea have their MSP available and easily visible through EMODnet Human Activities portal.</p>	<p>-MSP should participate in scaling up protected areas.</p> <p>-MSP has a role in anticipating changes and possible conflicts and in insuring synergies</p> <p>-It is fundamental for transboundary cooperation to go towards harmonised MSP plan data and to make data available, visible and visible through a geoportal.</p>
<p>Ecosystem-based approach in MSP in Finland (case study)</p>	<p>An example of good practice is given in the Report of the implementation of MSP Directive, with the approach of Finland using scenarios for the future of the maritime area considering potential risks and opportunities and using ecosystem-based approach: Application of the ecosystem-based approach in Maritime Spatial Planning, 2020. The theoretical background is based on the nine principals or key elements for applying ecosystem-based maritime spatial planning listed in the Guideline for the implementation of ecosystem-based approach in MSP in the Baltic Sea area. Figures linking EU Directives to MSFD Descriptors and pressures to descriptors are of interest in this Finnish report. Equally interesting is the table that presents examples of planning solutions and other measures with regard of each MSFD Descriptor.</p>	<p>This document brings up a certain number of questions and key elements in ecosystem-based MSP. With regard to EcAp Roadmap and IMAP the following could be studied:</p> <p>-What types of environmental problems can be solved through planning solutions implemented in marine areas (e.g. eutrophication needs measures and action taken on land) to contribute to GES?</p> <p>-Can planning directions (or solutions) be defined with regard to the IMAP EOs and OOs? At what scale?</p> <p>-What is the place of precautionary principal to reduce the risk of causing significant adverse effects?</p>

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		<p>- In the course of the planning process, when should drafting alternative planning options be necessary?</p> <p>-Can MSP be based on the marine ecosystem's carrying capacity? If so, how to define marine ecosystem's carrying capacity and at what scale?</p> <p>-MSP should also take in account the impact of Land-Based Activities on the sea.</p> <p>-Defining marine ecosystem services and their value should also support the production of sustainable MSPs.</p>

Other regional processes		
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<p>OSPAR North-East Atlantic Environment Strategy (NEAES) 2010-2020 and NEAES 2030</p>	<p>OSPAR's vision: "a clean, healthy and biologically diverse North East Atlantic Ocean, which is productive, used sustainably and resilient to climate change and ocean acidification"</p> <p>OSPAR's principals and strategic approach are guided by the ecosystem approach that takes into consideration cumulative effects and is implemented through a continuous cycle of:</p> <ul style="list-style-type: none"> (i) Setting and coordinating ecological objectives and associated targets and indicators (ii) Ongoing management (iii) Regular updates of ecosystem knowledge, research and advice. 	<p>In addition to concerns covered by EcAp Roadmap and IMAP, climate change impacts and ocean acidification issues were first a cross-cutting issue in NEAES 2010-2020 (with inorganic carbon system parameters in seawater for acidification assessment) and are now integrated and considered through the theme "To achieve seas resilient to the impacts of climate change and ocean acidification" and 11 operational objectives in NEAES 2030. An Intersessional Correspondence Group is</p>

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	<p>6 principals comparable to IMAP principals are applied: precautionary principle; the polluter pays principle; the use of best available techniques and best environmental practices, the principle that preventive action should be taken; the principle of sustainable development, including circular economy approaches; the principle that priority is given to environmental damage being rectified at source. Strategic approach is based on adaptive management, regional approach, risk-based approach, knowledge and science.</p> <p>NEAES 2010-2020 focused on the implementation of the Ecosystem Approach and five thematic strategies which were</p> <ul style="list-style-type: none"> (i) biodiversity and ecosystems, (ii) eutrophication, (iii) hazardous substances, (iv) the offshore industry and (v) radioactive substances. <p>An additional cross-cutting components was ocean acidification which is also monitored.</p> <p>The new NEAES 2030 strategy builds on the evaluation of NEAES 2010-2020 and is based on four themes: clean seas, biologically diverse seas, productive and sustainably used seas and seas resilient to climate change and ocean acidification. NEAES 2030 is articulated around 12 strategic objectives to attain GES grouped under 4 themes</p> <p><u>To achieve clean seas</u></p> <ul style="list-style-type: none"> - SO1 tackle eutrophication (6 Operational Objectives) - SO 2 prevent pollution by hazardous substances (4 Operational Objectives) - SO 3 prevent pollution by radioactive substances (4 Operational Objectives) - SO 4 prevent inputs of and significantly reduce marine litter (8 Operational Objectives) <p><u>To achieve biologically diverse and healthy seas</u></p>	<p>charge of leading the monitoring and assessment for ocean acidification.</p>

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	<ul style="list-style-type: none"> - SO 5 protect and conserve marine biodiversity and ecosystems and their services (6 Operational Objectives) - SO 6 restore degraded habitats in the NE Atlantic (2 Operational Objectives) <p><u>To achieve productive and sustainably used seas</u></p> <ul style="list-style-type: none"> - SO 7 ensure that uses of the marine environment are sustainable, through the integrated management of current and emerging human activities, including addressing their cumulative impacts (6 Operational Objectives) - SO 8 reduce anthropogenic underwater noise (2 Operational Objectives) - SO 9 safeguard the structure and function of seabed/marine ecosystems (3 Operational Objectives) <p><u>To achieve seas resilient to the impacts of climate change and ocean acidification</u></p> <ul style="list-style-type: none"> - SO 10 raise awareness of climate change and ocean acidification by monitoring, analysing and communicating their effects (3 Operational Objectives) - SO 11 facilitate adaptation to the impacts of climate change and ocean acidification (4 Operational Objectives) - SO 12 mitigate climate change and ocean acidification by contributing to global efforts (4 Operational Objectives) <p>The strategic objectives will be achieved through the delivery of the operational objectives. Cross-cutting issues such as Hazardous Substances, Offshore industry and Radioactive substances are covered by Strategies. The Measures and Actions Programme supports and assesses CPs implementation and effectiveness of national and collective OSPAR measures.</p> <p>The strategy will be put into effect through an implementation plan.</p> <p>An <u>Intersessional Correspondence Group (ICG) on ocean acidification</u> was established. The ICG's remit is to lead the monitoring and assessment for ocean acidification.</p> <p>OSPAR's Coordinated Environmental Monitoring Programme (CEMP) aims to deliver comparable data from across the OSPAR Maritime Area and makes</p>	

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	available CEMP Appendices that set out details of the agreed monitoring and assessment approaches to be applied. In parallel, CEMP Guidelines provide detailed documentation of agreed monitoring and assessment methods.	
The EcApRHA project (Applying an Ecosystem Approach to (sub) Regional Habitat Assessment) (2015-2017)	The project co-financed by EU focused on addressing gaps in the development of biodiversity (pelagic, benthic and food web) indicators for the OSPAR regions. Much work was done on plankton with several reports available here .	Development of indicators and guidelines relative to plankton that could be of interest for including pelagic habitats in IMAP.
OSPAR Joint Assessment and Monitoring Programme (JAMP) 2014 – 2023	JAMP provides strategic directions to the preparation of integrated environmental assessments of the status of the marine environment of the OSPAR maritime area or its regions, including the exploration of new or emerging problems in the marine environment of the North East Atlantic and the preparation of assessments of the implementation of the North East Atlantic Environment Strategy, based on the assessment of the effects of relevant measures on the improvement of the quality of the marine environment.	Effect of measures are assessed in addition to monitoring the status of the marine environment and QSRs are embedded in the programme
HELCOM and the Baltic Sea Action Plan (BSAP) 2021 update and HELCOM Monitoring and Assessment Strategy	<p>The Baltic Sea Action Plan was renewed in 2021. It is a strategic programme of measures and actions for achieving good environmental status of the Baltic Sea.</p> <p>Vision: “a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities”</p> <p>Four specific segments contain concrete measures and actions to be implemented by 2030.</p> <p>The segments are:</p> <ul style="list-style-type: none"> ✓ Biodiversity ✓ Eutrophication ✓ Hazardous substances and litter ✓ Sea-based activities 	<p>Matters covered by HELCOM and its monitoring and assessment Strategy are similar to EcAp Roadmap and IMAP.</p> <p>Monitoring manuals and guidelines for monitoring different indicators are easily accessible through a synthetic table that relates also to MSFD Descriptors. The manuals are comprehensible and have a common structure which facilitates understanding. Links to different topics and ecological objectives are indicated for each parameter/indicator.</p>

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	<p>The implementation of the actions of the updated BSAP are to be reported by the countries.</p> <p>For each segment a certain number of pressures and activities are addressed and effects of climate change impacts are identified.</p> <p>Seven horizontal topics are identified as potentially affecting the implementation of the BSAP. These are:</p> <ul style="list-style-type: none"> ✓ Climate change ✓ Monitoring ✓ MSP ✓ Economic and social analysis ✓ Hot spots ✓ Knowledge exchange and awareness raising ✓ Financing <p>Actions are defined also for these topics.</p> <p><u>HELCOM Monitoring and assessment Strategy</u></p> <p>The overall objectives of the HELCOM Monitoring and Assessment Strategy are to:</p> <ul style="list-style-type: none"> • lay out a system which enables showing how visions, goals and objectives set for the Baltic Sea marine environment are being met; • provide a system that enables linking the quality of the environment to its management; • facilitate the implementation of the ecosystem approach covering the whole Baltic Sea, including coastal and open waters; • enable the provision of data and information that links pressures on land, from the atmosphere, in coastal areas and at sea to their impacts on the marine environment; • describe the system for coordination of monitoring activities for Baltic Sea specific issues of concern; • set out the structure and time frame for the production of region-specific assessments such as comprehensive thematic and holistic assessments and more concise and more timely indicator reports and other assessment products; 	<p>Considering horizontal topics potentially affecting/concerning all ecological objectives</p>

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	<ul style="list-style-type: none"> • create a system which enables raising also general public awareness of the Baltic Sea and HELCOM actions. • design a system for producing targeted assessment products for region-specific management purposes by also making use of data and information produced by Contracting Parties for other fora <p>The general principles of the Strategy that relate to coordinated monitoring have been translated into concrete specifications and requirements through the HELCOM Monitoring Manual.</p>	