

10th Meeting of the Ecosystem Approach Coordination Group

Istanbul, Türkiye, 11 September 2023

Agenda Item 3: Ecosystem Approach Roadmap Evaluation of Implementation and Renewal

Independent Evaluation of the Implementation of the Ecosystem Approach Roadmap

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List of abbreviations and acronyms

ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area
BC/BAC	Background (Assessment) Concentrations
BV	Baseline values
CBD	Convention on Biological Diversity
CCI	Candidate Common Indicators (relatively to IMAP)
CI	Common Indicator (relatively to IMAP)
COP	Conference of the Parties
COR ESA	Correspondence Group on Economic and Social Analysis
CORMON	Correspondence Group on Monitoring
CP	Contracting Party
CRF	Common Regional Framework
DD/DS	Data Dictionaries /Data Standards
DPSIR	Drivers-Pressures-State-Impacts-Responses
EcAp	Ecosystem Approach
EcAp CG	Ecosystem Approach Coordination Group
EAC	Environmental Assessment Criteria
EC	European Commission
EEA	European Environmental Agency
EIA	Environmental Impact Assessment
ENI SEIS	European Neighbourhood Instrument Shared Environmental Information System
EO	Ecological Objective (used for IMAP)
EU	European Union
GEF	Global Environment Facility
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
ICZM	Integrated Coastal Zone Management (EU or UNEP/Map Protocol)
IMAP	Integrated Monitoring and Assessment Programme
INFO/RAC	Information and Communication Regional Activity Centre
LBS Protocol	Land-Based Sources Protocol
MAP	Mediterranean Action Plan
MED POL	Mediterranean Pollution Assessment and Control and Control Programme
MED QSR	Mediterranean Quality Status Report
MCPAs	Marine and Coastal Protected Areas
MSFD	Marine Strategy Framework Directive
MSP	Marine/Maritime Spatial Planning
MSSD	Mediterranean Strategy for Sustainable Development
MTF	Mediterranean Trust Funds
MTS	Mid-Term strategy
NAP	National Action Plan
NIS	Non-indigenous species
OECMs	Other Effective area—based Conservation Measures
OO	Operational Objectives (Relative to IMAP)
OWG	Online Working Groups
PAP/RAC	Priority Actions Programme Regional Activity Centre
Post-2020 SAPBIO	Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (2021)

PoW	Programme of Work
REMPEC	Regional Marine Pollution Emergency Response Centre
SAP	Strategic Action Plan
SAPBIO	Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (2003)
SoED	State of the Environment and Development in the Mediterranean
SoER	State of the Mediterranean marine and coastal Environment
SPA/RAC	Specially Protected Areas Regional Activity Centre also RAC/SPA
SPI	Science-Policy Interface
SSFA	Small Scale Funding Agreements
TDA	Trans-boundary Diagnostic Analysis
ToR	Terms of Reference
TV	Threshold values
UN	United Nations
UNEP/MAP	United Nations Environment Programme/Mediterranean Action Plan
WFD	Water Framework Directive (EU)

Evaluation of the implementation of the EcAp Roadmap 2008-2021 step by step

1. Table 1 below presents the evaluation of the implementation of the UNEP/MAP EcAp Roadmap (2008-2021) with evidence-based achievements and gaps, as well as first recommendations the evaluated status of implementation for each of the seven EcAp Roadmap steps. Colour codes indicate the status of implementation: **completed**, **majority completed (>50%)**, **partially completed (<50%)**. The evaluation has been carried out at a regional, as well as sub-regional and national level when possible.

2. It is in agreement with the Midterm review (UNEP(DEPI)/MED WG.444/4), the concept note on evaluating implementation and renewing UNEP/MAP's Ecosystem Approach (UNEP/MED WG.521/3). The evaluation is based on the documents listed in Annex I, Table A.

Table 1. Evaluation of the seven EcAp Roadmap steps as of October 2022 including achievements, gaps and first recommendations.

I. Definition of an ecological vision for the Mediterranean	Regional
<u>Achievements</u>	
3. The ecological vision for the Mediterranean was defined and endorsed by the CPs in the very first UNEP/MAP decision concerning the implementation of the ecosystem approach.	
4. <u>During COP 15 the Decision IG.17/6 (COP 15) endorsed by the CPs in 2008</u> , the vision is defined as “ <i>A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations</i> ”.	
5. The definition of the ecological vision is recalled in the <u>Decision IG. 20/4 (COP 17, 2012)</u>	
6. Following the Decision IG.17/6, the COP decisions relative to action plans, regional plans, frameworks, strategies, programmes, protocols, guidelines as well as projects in relation with conservation and management of the Mediterranean Sea involving UNEP/MAP or one of its components, are in line with this vision. See Table 2.	
<u>Gaps</u>	
7. The actual vision does not refer to climate change issues as the new MTS (2022-2027) does (see table 2)	
8. The sustainability aspect is discreet	
9. A time span could be integrated in the EcAp Roadmap vision as in Post-2020 SAPBIO “ <i>By 2050, marine and coastal biodiversity is valued,....</i> ”	
<u>Remarks</u>	
10. Document <u>UNEP/MED IG.24/22</u> (2019 Report on the State of the environment and development in the Mediterranean. Key messages) underlines p. 210 that to reach such a vision, transformative changes need to be done in current trajectories.	
11. It is considered that the evaluation of Step 1 is only relevant at the regional level.	
<u>Recommendations</u>	
12. This vision is still applicable but could be revised taking into consideration climate change context and sustainable development as in the MTS 2022-2027.	
13. Today, one of the greatest challenges of the Mediterranean populations and ecosystems is facing rapid and impacting climate change processes induced by past and actual human activities. The Mediterranean is one of the regions where climate change is the most acute. The CPs during COP 19	

endorsed as a contribution to the Mid-Terms Strategy, the *Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas*, recognising by this decision the impacts of Climate Change in the Mediterranean area (Decision IG. 22/6). Increasing the chances for ecosystems to deal with climate change could be better underlined in the “vision for the Mediterranean” definition.

14. Sustainability is evoked in the definition by “...for the benefit of present and future generations”. However, this does not recognise the fact that present benefits may compromise or reduce future benefits. Future benefits should be comparable to the actual.

15. Other strategies and action plans focusing on the Mediterranean Sea and region have defined their “vision of the Mediterranean” (see Table 1 hereafter). In the process of reviewing the EcAp Roadmap “vision”, these could be kept in mind.

16. The integration of a horizon in terms of time/date could be discussed.

17. If the ecological vision for the Mediterranean corresponds to the definition of GES at regional level, then it could be of interest to clearly present it as such.

Table 1. Definitions of “visions” in different Mediterranean strategies and action plans.

Strategies/Action Plans	Vision	Difference with EcAp Roadmap vision
EcAp Roadmap 2008-2021	<i>“A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations”</i> (p. 179, <u>Decision IG.17/6</u> , COP 15, 2008)	
MTS 2016-2021	<i>“A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse <u>contributing to sustainable development</u> for the benefit of present and future generations”</i> (p. 114, <u>Decision IG.22/1</u> , COP 19, 2016)	Adds the notion of sustainability
MTS 2022-2027	<i>“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.”</i> (p. 126, <u>Decision IG. 25/01</u> , COP 22, 2021)	It takes into consideration previous MTS vision, EcAp vision, 2016-2025 MSSD vision and SCP (Sustainable Consumption and Production) Regional Plan vision. It also reflects UNEP 2050, CBD Post-2020 Global Biodiversity Framework and European Green Deal vision. The concept of “ climate resilient ” is added and the marine and coastal ecosystems are underlined compared to the previous MTS vision.
2016-2025 MSSD	<i>“A prosperous and peaceful Mediterranean Region, in which people enjoy a high quality of life and where</i>	This vision is comparable to EcAp Roadmap vision but more centred on a

	<i>sustainable development takes place within the carrying capacity of healthy ecosystems. This is achieved through common objectives, cooperation, solidarity, equity and participatory governance.</i> ” (p. 142, <u>Decision IG.22/2, COP 19, 2016</u>)	societal point of view. It also adds a sustainable development concept that underlines the link between human activities and ecosystems’ health.
Regional Action Plan on Sustainable Consumption and Production in the Mediterranean (SCR Regional Plan)	<i>“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.”</i> (p. 346, <u>Decision IG.22/5, COP 19, 2016</u>)	It is a larger vision more oriented towards consumption and the use of natural resources.
Common Regional Framework (CRF) for Integrated Coastal Zone Management (ICZM)(From IG.24/5 (2019))	Contribute to the vision for the Mediterranean Sea and coast as: <i>“A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse, contributing to sustainable development for the benefit of present and future generations”</i> . (p. 266, <u>Decision IG.24/5, COP 21, 2019</u>)	This is the vision of UNEP/MAP Mid-Term Strategy 2016-2021 which is out of date. UNEP/MAP MTS has now adopted a new vision for 2022-2027 (see above).
Post-2020 SAPBIO	<i>“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”</i> (p372, <u>Decision IG. 25/11, COP 22, 2021</u>)	Ecosystem services and health of the ecosystems are considered.
Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	<i>“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”</i> (p. 709, <u>Decision IG. 25/16, COP 22, 2021</u>)	It emphasizes the enforcement and cooperation to free the Mediterranean from pollution.

II. Setting of common Mediterranean strategic goals

Regional

Achievements

18. The strategic goals have been defined and endorsed by the CPs in the very first UNEP/MAP decision concerning the implementation of the ecosystem approach.

19. Strategic goals have been defined in Decision IG.17/6 (COP 15, 2008) and are the following:

- a. To protect, allow recovery and, where practicable, restore the structure and function of marine and coastal ecosystems thus also protecting biodiversity, in order to achieve and maintain good ecological status and allow for their sustainable use.
- b. To reduce pollution in the marine and coastal environment so as to minimise impacts

- on and risks to human and/or ecosystem health and/or uses of the sea and the coasts.
- c. To prevent, reduce and manage the vulnerability of the sea and the coasts to risks induced by human activities and natural events.

20. EcAp strategic goals have been taken in consideration in new or updated protocols, action plans and frameworks adopted during COPs 15 to 22 (see Annex I, Table A). Some of the most prominent are :

- ✓ The **Integrated Coastal Zone Management (ICZM) Protocol** Decision IG.18/04 adopted in 2008 takes in consideration the ecosystem approach goals in particular through the articles 8, 9 and 13. The associated **ICZM Action Plan** (2012-2019) (Decision IG.20/2), the Conceptual Framework for Marine Spatial Planning (Decision IG.23/7), as well as the Common Regional Framework (CRF) for Integrated Coastal Zone Management (Decision IG.24/5) are synergetic with the EcAp Roadmap and have developed actions which contribute to attain the EcAp Roadmap goals.
- ✓ In the framework of Article 15 of the LBS Protocol, the **Regional Plan on Marine Litter Management in the Mediterranean** (Decision IG.21/7) was adopted in 2013. It significantly contributes to attain strategic goal (b). The adoption of IG.21/7 by the CPs in 2013 made the Mediterranean the first regional sea committed to legally binding measures, programmes, and related implementation timetables on marine litter management at regional and national levels.
- ✓ In the framework of Article 15 of the LBS Protocol, the **Regional plans on Urban Wastewater Treatment and Sewage Sludge Management and on Marine Litter Management in the Mediterranean** (Decision IG.25/8 and Decision IG.25/9) were adopted in 2021 during COP 22. These Regional Plans are designed to contribute to the reduction of pollution in the marine and costal environment (strategic goal b)
- ✓ The Strategic Action Programme **Post-2020 SAPBIO** Decision IG.25/11 defines goals to 2030 that encompass the EcAp Roadmap strategic goals especially strategic goal (a).
- ✓ Core themes and programmes included in the MTS (2016-2021) (Decision IG.22/1) and MTS (2022-2027) (Decision IG.25/1) contribute to approach EcAp strategic goals.

Gaps

21. GES is not mentioned in the strategic goals
22. Mitigation of climate change impacts is not mentioned in the strategic goals

Remarks

23. It is considered that the evaluation of Step 2 is only relevant at regional level.

Recommendations

24. The strategic goals are still applicable. However, some suggestions can be proposed to update these goals.
25. Proposed elements for revision of the strategic goals:
- For the EU countries, “ecological status” refers to the Water Framework Directive with a determined 5 category classification of water bodies based on specific elements to be measured. It may therefore be of interest to replace “ecological status” by “good environmental status” (in coherence with GES) or “ecological functions and services in good state”.

<ul style="list-style-type: none"> • The strategic goals could be expressed in a clearer and more direct way and the objective of attaining and maintaining GES could be more clearly formulated. • Climate change mitigation could be present in the objectives. • The term “allow recovery” could be replaced by “enhance environmental conditions allowing natural recovery” to include passive or active ecosystem restoration actions. 	
III. Identification of important ecosystem properties and assessment of ecological status and pressures	Regional
	Sub-regional
	National
<p><u>Achievements</u></p> <ul style="list-style-type: none"> • In Decision IG. 20/4, this step was further defined as “<i>undertaking an initial assessment to determine priority issues, information availability as well as gaps that need to be filled</i>”. At regional and sub-regional level this step has been achieved and regularly updated by documents prepared by the Secretariat and UNEP/MAPs components with the support of EcAp Coordination Group, CORMONs and thematic Focal Points and the contribution of the Contracting Parties and other contributors. The following documents have contributed to complete this third step of the EcAp Roadmap: • Although it was not directly prepared to answer EcAp requests, <u>The Mediterranean Sea Biodiversity: state of the ecosystems, pressures, impacts and future priorities (2010)</u>¹ prepared by UNEP/MAP-SPA/RAC presents in a clear way the status of important ecosystems and the main pressures and impacts at the Mediterranean level. • The UNEP/MAP-RAC/SPA document <u>Fisheries conservation and vulnerable ecosystems in the Mediterranean open seas, including the deep seas (2010)</u>² presents vulnerable ecosystems and habitats in relation with fishing impacts on sensitive deep-sea habitats and essential fish habitats. • The UNEP/MAP Regional Activity Center Plan Bleu published, in 2010, a first attempt to assess benefits rendered by marine ecosystems in the Mediterranean in economic terms, <u>The economic value of sustainable benefits rendered by the Mediterranean marine ecosystems</u>³. This initial evaluation revealed the need for further studies as a result of gaps observed in relevant data for the basin as a whole, but also in terms of backup from additional studies, which would allow the micro-economic processes to be better reflected. • Specifically prepared to answer step 3 of the EcAp Roadmap, <u>The Initial Integrated Assessment of the Mediterranean Sea and Coastal Areas</u> was finalized in 2011. The summary for decision makers was endorsed by COP 17 with Decision IG. 20/4. This document collates available knowledge and information on the nature of major ecosystems in the Mediterranean, as well as drivers and pressures that affect the state of the marine environment and ecosystems at regional and sub-regional level. The goal was to define the major basin-wide priority issues to be addressed by the EcAp Roadmap and determine where gaps existed so as to provide an adequate foundation for effective and efficient ecosystem-based management going forward. 	

¹ UNEP-MAP RAC/SPA (2010). The Mediterranean Sea Biodiversity: state of the ecosystems, pressures, impacts and future priorities. By Bazairi, H., Ben Haj, S., Boero, F., Cebrian, D., De Juan, S., Limam, A., Lleonart, J., Torchia, G., and Rais, C., Ed. RAC/SPA, Tunis; 100 pages.

² UNEP-MAP RAC/SPA (2010). Fisheries conservation and vulnerable ecosystems in the Mediterranean open seas, including the deep seas. By de Juan, S. and Lleonart, J. Ed. RAC/SPA, Tunis: 103 pages.

³ Mangos, A., Bassino, J-P., Sauzade, D. (2010). The economic value of sustainable benefits rendered by the Mediterranean marine ecosystems. Plan Bleu, Valbonne. (Blue Plan Papers 8)

- In these first documents, a certain number of gaps had been identified and UNEP/MAP worked to fill-in key knowledge gaps that had been identified concerning the lack of knowledge on marine and coastal biodiversity in the following documents:
- UNEP/MAP prepared The State of the Mediterranean Marine and Coastal Environment 2012⁴ (SoER MED 2012) that was published in 2012. Part 2 covers human pressure, state and impacts on Mediterranean ecosystems and is presented through 11 chapters corresponding to the 11 Ecological Objectives completed by a chapter on cumulative and concurrent impacts. Its last part presents synthetic tables of regional regulatory framework. Analysis is carried out at the regional level and multiple maps illustrate comprehensively the geographic variability.
- Plan Bleu published in 2014 Scoping study for the assessment of the costs of degradation of the Mediterranean marine ecosystems⁵, with the objective of identifying possible options for assessing the costs of degradation of marine and coastal ecosystems in the Mediterranean Sea, that could be implemented in the context of the EcAp process at a regional level. The work for this report also led to the development of the following report published by plan Bleu the same year.
- Economic and social analysis of the coastal and marine waters in the Mediterranean, characterization and impacts of the Fisheries, Aquaculture, Tourism and recreational activities, Maritime transport and Offshore extraction of oil and gas sectors⁶ was published by Plan Bleu in 2014 as part of the initial economic and social analysis of the EcAp Roadmap at a regional and sub-regional level.
- The UNEP/MAP document Marine Litter assessment in the Mediterranean (2015)⁷ published in the framework of the EcAp MED project (2012-2015) contributes to the identification and description of marine litter, an important pressure on the ecosystems of the Mediterranean Sea. The sources of marine litter, marine litter distribution, the typology, the impacts on ecosystems as well as the baseline knowledge and monitoring programmes are detailed for the Mediterranean Sea at regional, sub-regional and when possible at national level.
- Based on integrated efforts of the Contracting Parties, Secretariat, MAP components and Partners, the UNEP/MAP system delivered the first ***Quality status Report for the Mediterranean in 2017***, the 2017 Med QSR was endorsed by Decision IG .23/6 (COP 20). The review process involved relevant MAP component Focal Points, the CORMON experts, the Ecosystem Approach Coordination Group and partners such as GFCM and ACCOBAMS. It is presented also as an online interactive report. The report is based on the Ecological Objectives that have been defined and the IMA Common Indicators building on existing data and contributions from CPs, organized in three clusters (i) Pollution and Litter, (ii) Biodiversity and Fisheries, (iii) Coast and Hydrography. Cross-cutting issues constitute the last part of the report and national case studies are presented in the Annex I. Decision IG. 23/6 pointed out several gaps and recommendations to successfully deliver the following 2023 MED QSR.
- UNEP/MAP and Plan Bleu published in 2020 the ***State of the Environment and Development in the Mediterranean⁸***, SoED 2020. UNEP/MAP components and more than 150 contributors made possible this publication. Two documents supplement the report *The Summary for*

⁴ UNEP/MAP– Barcelona Convention (2012). State of the Mediterranean Marine and Coastal Environment, UNEP/MAP, Athens.

⁵ Plan Bleu, ACTeon (2014). Scoping study for the assessment of the costs of degradation of the Mediterranean marine ecosystems, Technical Report, Plan Bleu, Valbonne.

⁶ Plan Bleu (2014). Economic and social analysis of the coastal and marine waters in the Mediterranean, characterization and impacts of the Fisheries, Aquaculture, Tourism and recreational activities, Maritime transport and Offshore extraction of oil and gas sectors, Technical Report, Plan Bleu, Valbonne

⁷ UNEP/MAP (2015). Marine Litter Assessment in the Mediterranean, Athens

⁸ UNEP/MAP and Plan Bleu (2020). State of the Environment and Development in the Mediterranean. Nairobi

Decision Makers and The Key Messages. The first provides a comprehensive overview intended for a large audience. The second compiles evidence from the various chapters most closely connected to marine and coastal environmental issues. They highlight interactions and combined impacts according to the Drivers-Pressures-State-Impacts-Responses analytical framework (DPSIR). *The Key Messages* expand on the larger significance of the findings, conveying policy-relevant suggestions in the context of the UNEP/MAP - Barcelona Convention system, and identifying priority areas for further policy-oriented research. The Key Messages and Summary for Decision Makers were endorsed by the CPs during COP 21 in 2019 (Decision IG.24/4). By covering terrestrial coastal, marine and fresh water status of the Mediterranean area, the SoED, 2020, represents an excellent Ecosystem Approach product. It is one of the most integrative documents for the Mediterranean Region that develops at the regional scale socioeconomic drivers and trends, climate change impacts, biodiversity and ecosystem services, economic activities and linked pressures, coastal zone dynamics and related impacts, food and water security, health and environment and governance at regional level.

- The document prepared by REMPEC, Study on trends and outlook of marine pollution from ships and activities and of maritime traffic and offshore activities in the Mediterranean⁹ (2021) compiles knowledge on maritime traffic and offshore oil and gas activities and their impacts on the marine environment, focusing on five main aspects: pollution from oil and chemicals, marine litter, air pollution, non-indigenous species (NIS) and underwater noise.
- In line with the 6 year ecosystem approach cycle and the IMAP implementation timeline, the **Mediterranean 2023 Quality Status Report** is in preparation by UNEP/MAP Secretariat and components in collaboration with the Contracting Parties. Following Decision IG.23/6 of COP 20 and the recommendations of the Regional Meeting on IMAP Best practices, Gaps and Common Challenges (10-12 July 2018, see document UNEP/MED WG.450/3), the Secretariat prepared the 2023 MED QSR Roadmap and Needs Assessment which after being reviewed by the EcAp CG was endorsed by Decision IG. 24/4 (COP 21, 2019). The Roadmap outputs were integrated into the Programme of Work for 2020-2021 and proposed Programme of Work for 2022-2023 as well as in the new UNEP/MAP MTS 2022-2027. As requested in Decision IG. 24/4, supported by the PoW (2020-2021), PoW (2021-2023) and externally funded projects (EU-funded EcAp MED III, IMAP-MPA, Marine Litter Med II and GEF Adriatic Projects), operational objectives and activities per each MED QSR Roadmap milestone were defined in document UNEP/MED WG.514/Inf.7, (8th EcAp CG meeting, September 2021). A call for mandatory data submission into the IMAP Info system has been launched in June 2020, renewed in October 2021 and again in September 2022, requesting Contracting Parties to systematically report all 2020 monitoring data, as well as data collected prior to 2020, which will be both used for the purposes of the 2023 MED QSR assessment. In document UNEP/MED WG.514/5 the methodology, outline, structure and contents of the 2023 MED QSR have been defined. The 9th meeting of the EcAp CG (5th of July 2022) approved the document UNEP/MED WG.521/Inf.5 presenting the draft table of contents of the socio-economic and assessment chapters of the 2023 MED QSR as well as the document UNEP/MED WG.521/Inf.6 presenting the Ecological Objective-Common indicator structure and outline template. A scaled grid pressure/impact approach with the GES assessment results is planned by sub-region and by country for each CI. An outline of contents for the socio-economic chapter is proposed that has been developed in terms of the anticipated outcomes of the trans-boundary diagnostic analysis (TDA). This work is taking place in the framework of the Global Environment Facility (GEF) funded Mediterranean Sea Programme (MedProgramme). It will provide an update to the 2005 TDA baseline regarding transboundary issues that affect the state of countries' marine and coastal environments, analysing causes and impacts of identified/ prioritised issues, to recommend areas where adequate responses are needed to ensure attainment of good environmental status (GES).

⁹ Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (2021). Study on trends and outlook of marine pollution from ships and activities and of maritime traffic and offshore activities in the Mediterranean, Floriana

- The thematic assessments and chapters per Cluster for the 2023 Med QSR were reviewed by dedicated meetings of the Correspondence Groups on Monitoring (CORMON) for Pollution, Marine Litter, Biodiversity and Coast and Hydrography, as well as the integrated CORMONs, in March and June 2023 respectively. The Correspondence Group on Economic-Social Analysis (COR ESA) also held a dedicated meeting to develop and finalize the socioeconomic characteristics chapter of the QSR. An Integrated CORMONs meeting (27-28 June 2023) provided a final review of the assessment chapters for the three IMAP clusters and the cross-cutting chapters of the QSR. The 2023 Med QSR will be presented to MAP Focal Points and COP 23 in December 2023 for consideration and endorsement.
- Accordingly, the Correspondence Groups on Monitoring (CORMON) per each cluster and the Correspondence Group on GES and Targets (CORGEST) groups, with the overall guidance of the Ecosystem Approach Coordination Group and with technical support of the Secretariat and the MAP components, supervised preparation of the assessment chapters per IMAP Clusters within the 2023 MED QSR.
- Specific collaborative projects have contributed to better identify important ecosystem properties, status and identify pressures at regional, sub-regional and national scales to fill in thematic or geographic. These are:
 - ✓ Deep Sea Lebanon Project (2016-2018)
 - ✓ EcAp-MED I (2012-2015) Implementation of the Ecosystem Approach (EcAp) in the Mediterranean by the Contracting parties in the context of the Barcelona Convention for the Protection of the Marine Environment and the Coastal region of the Mediterranean and its Protocols.
 - ✓ EcAp MED II (2015-2019). Mediterranean implementation of the Ecosystem Approach, in coherence with the EU MSFD. Beneficiaries were Southern Mediterranean Contracting Parties to the BC. One of the outcomes was to strengthen capacities in the Southern Mediterranean for IMAP implementation.
 - ✓ EcAp MED III (2020-2023). Its overall aim is to further assist the Southern Mediterranean Contracting Parties to implement the Integrated Monitoring and Assessment Programme (IMAP), adopted in 2016, as part of the implementation of the Ecosystem Approach Roadmap. One of the objectives is to support harmonized assessment of the status of the sea and coast at national level.
 - ✓ IMAP-MPA (2019-2023). The overall objective is to further assist the Southern Mediterranean countries by contributing towards the achievement of the Good Environmental Status (GES) in the Mediterranean Sea and coast through the consolidation of the Ecosystem Approach (EcAp) process for MPAs management and sustainable development. This will be achieved through the monitoring and assessment of the IMAP common indicators, in MPAs and high-pressure areas, in a comparative and integrated manner.
 - ✓ MedKeyHabitats (2013-2016). One of the objectives aims at establishing cartographic inventories of key marine habitats in 8 Mediterranean riparian countries (Albania, Algeria, Croatia, Egypt, Libya, Morocco, Montenegro and Tunisia). Brochure.
 - ✓ MedKeyHabitats II Project (2017-2019). One of the objectives aims to establish a mapping inventory of marine key habitats on six pilot sites in Mediterranean countries and to assess their sensitivity to fishing activities in Algeria, Cyprus, Malta, Tunisia, Türkiye and Morocco.
 - ✓ The GEF MedProgramme (2020-2024) in particular child project CP 1.1 (GEF ID 9684)

with its second component focused on updating the Transboundary Diagnostic Analysis (TDA) for the Mediterranean Sea in the countries participating (Albania, Algeria, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco, Tunisia and Türkiye).

- An inventory of all the spatial information available and accessible at Mediterranean level on Posidonia meadows, coralligenous and cave habitats at national level was undertaken by SPA/RAC. The collection of available data and its aggregation following established criteria (scale, habitat types following the updated Reference List of Marine Habitat Types for the Selection of Sites to be Included in the National Inventories of Natural Sites of Conservation Interest in the Mediterranean) was finalised. A national consultation will be organized soon to get feedback from the Contracting Parties to the Barcelona Convention and to validate the data. The Production of the distribution maps of Posidonia meadows, coralligenous and cave habitats will be ready and available on the Mediterranean biodiversity platform by the end of 2023. A paper on the elaboration and available maps and the distribution of the marine key habitats is being prepared to be submitted to peer journal.

At sub-regional level

- Four reports on the “Identification of important ecosystem properties and assessment of ecological status and pressures to the Mediterranean marine and coastal biodiversity” for each sub-region, namely, the Adriatic Sea, the Ionian Sea and Central Mediterranean, the Aegean Sea-Levant Sea and Western Mediterranean were presented at the 10th meeting of the Focal Points for SPAs in Marseille, France, in 2011 (UNEP(DEPI)/MED WG 359/Inf.10; Inf.11; Inf.12; Inf.13). These reports summarize the knowledge transmitted by the national focal points and experts concerning their country.

Gaps

- The Mediterranean Sea is one of the most studied seas in the world (UNEP-MAP RAC/SPA, 2010)¹⁰, with multiple valuable ecosystems, but also one of the seas under highest pressure (IOC-UNESCO and UNEP, 2016)¹¹. Seagrass meadows, coralligenous assemblages and dark ecosystems are representative of Mediterranean marine ecosystems and are recognized as such by UNEP/MAP throughout the development of specific Action Plans. Nevertheless, *there is still a strong need to map and inventory habitats, particularly coralligenous, seagrasses, and dark ecosystem to ascertain their status* (see Post-2020 SAPBIO and p 381, UNEP/MED IG.25/27, 2021).
- The Mediterranean Sea Biodiversity: state of the ecosystems, pressures, impacts and future priorities (UNEP-MAP, RAC/SPA, 2010) identified gaps and needs that still are pertinent today:
 - ✓ Lack of national systematic inventories of marine and coastal biodiversity
 - ✓ Many ecosystems remain little studied and knowledge is uneven for taxa and regions
 - ✓ Lack of national taxonomic skills for many groups in certain countries
 - ✓ Little sharing of knowledge

¹⁰ UNEP-MAP RAC/SPA (2010). The Mediterranean Sea Biodiversity: state of the ecosystems, pressures, impacts and future priorities. By Bazairi, H., Ben Haj, S., Boero, F., Cebrian, D., De Juan, S., Limam, A., Leonart, J., Torchia, G., and Rais, C., Ed. RAC/SPA, Tunis; 100 pages.

¹¹ IOC-UNESCO, & UNEP (2016). Large Marine Ecosystems: Status and Trends, Summary for Policy Makers. (No. Volume 4). United Nations Environment Programme (UNEP), Nairobi. Retrieved from United Nations Environment Programme (UNEP), Nairobi website: http://onsharedocean.org/public_store/publications/lmes-spm.pdf

- ✓ Limited knowledge about levels of biological organization, work at ecosystem levels is rare and trophic interactions and energy flows in ecosystems is little explored limiting knowledge on ecosystem functioning
- ✓ Patchy mapping of marine and coastal species and biogenesis
- ✓ Research is compartmentalized lacking interdisciplinary collaboration
- ✓ Absence of coordinated and cross-border scientific research
- Important gaps had been identified in MED QSR 2017 concerning identification of important ecosystem properties and assessment of ecological status and pressures. These gaps pointed out the way forward for MED QSR 2023 are still relevant:
 - ✓ Improve data accessibility with the view to improve knowledge on the Mediterranean marine environment.
 - ✓ Improve knowledge on distributional range, extent and condition of habitats, as well as on the pressures affecting them, their spatial distribution and potential cumulative effects, leading to structured data-led assessments of environmental status of the Mediterranean's marine habitats.
 - ✓ Define the reference state of habitats and species as well as a target threshold value to achieve at the national and sub-regional levels.
 - ✓ Improve information on distribution, population abundance and demographic characteristics of key species (marine birds, mammals, reptiles, fish and cephalopods) and on the condition of their habitats, as well as on the pressures affecting them, leading to structured data-led assessments of environmental status of the Mediterranean's marine species.
 - ✓ Work to further improve the develop assessment criteria, when feasible, for those habitats and species based on adequate data availability.
 - ✓ Enhance human and technical capacities for monitoring and assessment of the coast and hydrography.
 - ✓ Develop region-wide harmonized criteria for reference condition and threshold/boundaries values for key nutrients in water column, taking account of available standards for coastal waters.
 - ✓ Continue the work on underwater noise and its impact on marine fauna, in close collaboration with the relevant bodies, especially ACCOBAMS
 - ✓ Sea-based sources of litter should be further analysed and specified, given the fact that Mediterranean is a global hotspot for maritime transport and sea-based tourism such as cruises.
- SoER MED 2012 and SoED 2020 underline the progress that has been accomplished regarding important ecosystem properties, assessment of ecological status and pressures. Nevertheless, important gaps still remain that represent real challenges for an in-depth implementation of the Ecosystem Approach in the Mediterranean Sea, especially at national level. In relation with step 3 of the EcAp Roadmap on the *identification of important ecosystem properties and assessment of ecological status and pressures*, difficulties and gaps that have been underlined are the following:

- ✓ Datasets are still dispersed, not consistent enough and with varying levels of reliability
 - ✓ The information generated is often insufficiently or ineffectively transmitted to public or private decision-makers
 - ✓ The information needs to be more organised effectively to feed into commonly agreed observatories, as well as monitoring and surveillance frameworks at the regional and national level
 - ✓ The marine and coastal biodiversity and ecosystem functioning still need knowledge acquisition especially for offshore pelagic and deep-sea ecosystems
 - ✓ There are also gaps in understanding of the impacts of human activity on marine and coastal biodiversity. The gaps exist at several levels: scientific knowledge, availability of legal tools, and enforcement of existing laws, public awareness, concrete action and operative plan implementation.
 - ✓ Mapping available data is an important step in assessing the state of the environment. Currently, such mapping is inadequate in the Mediterranean region. A Mediterranean-wide inventory of critical habitats—sea grass beds, intact rocky shorelines, persistent frontal systems, estuaries, deep-water coral assemblages and sea mounts—could provide basic information on areas associated with high delivery of ecosystem services. Much of the information already exists or is currently being collected through national reporting or regional projects.
- At sub-regional level, the tentative to identify important ecosystem properties and assessment of ecological status and pressures of the sub-regional documents of 2011, led to very general and non-spatialized information. This is most probably due to the lack of knowledge concerning these ecosystems as underlined in the Ionian Sea and Central Mediterranean report: *“Overall, the coastal and marine biodiversity as well as the pressures and impacts exerted on of the Mediterranean Sea remains relatively little known despite the increasingly considerable efforts made by the international scientific community to grasp it”*.

Within the needs and gaps underlined in 2011, some are still relevant today:

- ✓ Lack of taxonomic knowledge for some groups
- ✓ Mapping capacities need to be developed especially for habitats and pressures
- ✓ Link biodiversity to ecosystem functioning

Remarks

- **Assessing the ecosystem properties** includes defining the attributes that characterize the ecosystems such as geographic and bathymetric extension, biodiversity and degree of organization of the ecosystem, identifying functions and processes within the ecosystem. The acquisition of national homogeneous data through IMAP, should progressively build an image of the important ecosystem properties throughout the Mediterranean Sea with more precision.
- **The Initial Integrated Assessment of the Mediterranean Sea and Coastal Areas** finalized in 2011 is presented as answering to the expectations of step 3. It appears therefore that step 3 was not expected to be implemented at national level. National monitoring and assessment programmes have assessed protected sensitive or specific species and groups but rarely ecosystem properties. Yet, it is an essential step for a country to identify important ecosystem properties and assess their status and pressures before implementing an integrated monitoring and assessment programme.
- The recent reports delivered by the UNEP/MAP system answer this step at regional, sub-regional and to some extent to national level. The 2023 MED QSR that is in preparation should bring more

evidence concerning the identification of important ecosystems and pressures at regional or sub-regional level through the IMAP inputs from the Contracting Parties.

Recommendations

- It can be considered that important ecosystem properties have been identified and ecological status and pressures have been assessed at regional and sub-regional levels through numerous documents. It could be recommended to consider establishing a mapping system with the capacity of overlaying important ecosystem properties, ecosystem condition and pressures, using perhaps also modelling methods, which would give a holistic and analytic approach at various levels integrating different existing MAP managed platforms, such as the Mediterranean Biodiversity Platform developed by SPA/RAC into a unique comprehensive Information System, as an integral part of the UNEP/MAP Ecosystem Approach. Collaborations with partners in data network could be considered to minimize the investment in mapping technologies and resources.

IV. Development of a set of ecological objectives corresponding to the vision and strategic goals

Regional

Achievements

26. COP 17 adopted a set of 11 Ecological Objectives based on Article 18 of the Barcelona Convention and in line with the agreed ecological vision and strategic goals for the Mediterranean under the ecosystem approach (Decision IG. 20/4). The development of these ecological objectives were based on the initial assessment report (UNEP(DEPI)/MED WG.363/Inf.21) and are in line with the 11 descriptors of EU MSFD.

27. The following 11 Ecological Objectives with operational objectives and proposed indicators were defined in Decision IG. 20/4:

EO 1. Biodiversity, EO 2. Non-indigenous species, EO 3. Harvest of commercially exploited fish and shellfish, EO 4. Marine food webs, EO 5. Eutrophication, EO 6. Sea-floor integrity, EO 7. Hydrography, EO 8. Coastal ecosystems and landscapes. EO 9. Pollution, EO 10. Marine litter, EO 11. Energy including underwater noise.

28. COP 18 adopted Decision IG. 21/3 that includes definitions of GES and proposed targets for the indicators corresponding to the Ecological Objectives: EO 1. Biodiversity, EO 2. Non-indigenous species, EO 5. Eutrophication, EO 7. Hydrography, EO 8. Coastal ecosystems and landscapes. EO 9. Pollution, EO 10. Marine litter.

29. During COP 19, the CPs adopted Decision IG.22/7 that defines the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment criteria. 27 Common Indicators (CIs) including 4 Candidate Indicators were defined belonging to 9 of the 11 Ecological Indicators. Indicators proposed in Decision IG. 20/4 for EO 4 and EO 6 were considered not enough mature to be included.

30. Correspondence between Strategic Goals and Ecological Objectives can be proposed as follows:

UNEP/MAP Ecosystem Approach strategic goals	UNEP/MAP Ecosystem Approach Ecological objectives as defined in COP 17
<p>To protect, allow recovery and, where practicable, restore the structure and function of marine and coastal ecosystems thus also protecting biodiversity, in order to achieve and maintain good ecological status and allow for their sustainable use.</p>	<p>EO 1 Biological diversity is maintained or enhanced.</p>
	<p>EO 2 Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem</p>
	<p>EO 3 Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock</p>
	<p>EO 4 Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and related viability</p>
<p>To reduce pollution in the marine and coastal environment so as to minimise impacts on and risks to human and/or ecosystem health and/or uses of the sea and the coasts.</p>	<p>EO 5 Human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters</p>
	<p>EO 6 Sea-floor integrity is maintained, especially in priority benthic habitats</p>
	<p>EO 7 Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems</p>
<p>To prevent, reduce and manage the vulnerability of the sea and the coasts to risks induced by human activities and natural events.</p>	<p>EO 8 The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved</p>
	<p>EO 9 Contaminants cause no significant impact on coastal and marine ecosystems and human health</p>
	<p>EO 10 Marine and coastal litter do not adversely affect coastal and marine environment</p>
	<p>EO 11 Noise from human activities cause no significant impact on marine and coastal ecosystems</p>

Figure 1 Relations between EcAp Strategic Goals and Ecological Objectives

Gaps

31. Common Indicators have not yet been defined for EO 4 and EO 6 although work is ongoing by SPA/RAC to propose indicators for EO 6 in the following months.

32. EO 11's indicators are still candidate indicators.

Remarks

33. It is considered that the evaluation of Step 4 is only relevant at regional level.

Recommendations

34. Ecological Objectives have been defined taking in consideration 11 Descriptors of EU MSFD. The IMAP Ecological Objectives are in great majority comparable to the 11 EU MSFD Descriptors. New EOs could be developed in IMAP not necessarily existing in MSFD in coordination as appropriate with MSFD implementation and potential review.

35. If, in the future, consistent changes are operated in the EcAp Roadmap vision or Strategic Goals, these need to be in agreement with the Ecological Objectives and *vice versa*.

36. Interrelations between EOs could be developed (e.g., EO 1 and EO 6, EO 1 and EO 3) by developing CI useful for both.

37. ECAP and IMAP currently do not consider climate change while many descriptors are likely to be impacted by climate change (biodiversity, NIS and others). Studying the impact of climate change and ocean acidification on GES and threshold values already defined could help understand marine and coastal biodiversity resilience in front of climate change impacts.

V. Derivation of operational objectives with indicators and target levels

Regional

Achievements

38. UNEP/MAP and its components in synergy with the EcAp governance bodies have further defined Ecological Objectives (EOs) by determining operational objectives, indicators, GES definitions and targets for 9 EOs, the 3 remaining EOs are at various stages of development. Successive decisions have been agreed on with the CPs to implement progressively the Ecosystem Approach and implement the monitoring and assessment programme (IMAP) supported by specific actions and programmes as well as guiding documents.

39. COP 17 endorsed Decision IG. 20/4, adopting 11 Ecological Objectives (EOs) each with a set of Operational Objectives (OO) and indicators. Therefore, operational objectives have been defined for all 11 EOs

40. COP18, adopted through Decision IG. 21/3, an integrated list of indicators, Mediterranean Good Environmental Status definitions and related targets for Operational Objectives corresponding to 7 of the 11 Ecological Objectives: EO 1, EO 2, EO 5, EO 7, EO 8, EO 9, EO 10. Indeed, although COP 17 (Decision IG.20/4) adopted indicators for all the Operational Objectives, it was decided to focus, during the initial phase of Ecosystem Approach Roadmap implementation, on those ecological objectives for which data availability and methodological advancements would allow their effective monitoring. Therefore, it was considered that the definitions of GES, indicators and related targets for EO 3, EO 4, EO 6 and EO 11, were then not yet ready for effective monitoring.

41. Cooperation with other regional bodies was developed to ensure common monitoring and assessment procedures in relation with EO 1, EO 3 and EO 11. For EO 1, cooperation was developed with GFCM for commercial species and ACCOBAMS for cetaceans. The development of EO 2 on NIS was done in collaboration with the Joint Research Centre (European Commission's science and knowledge service). Cooperation is developing for EO 1 with GFCM for commercial species and ACCOBAMS for cetaceans. The EO 3, common indicators, GES and targets have been developed by GFCM and the assessment results are to be provided to UNEP/MAP for the integrated assessment. The development of EO 11 through EU funded QUIETMED 2 project is followed by UNEP/MAP, SPA/RAC and ACCOBAMS and pilot monitoring activities have taken place to validate the two Candidate Common Indicators (CCI).

42. The Correspondence Group on Monitoring (CORMON) per each cluster and the Correspondence Group on GES and Targets (COR GEST) groups, with the overall guidance of the Ecosystem Approach Coordination Group and with technical support of the Secretariat and the MAP components, concluded a list of IMAP Common and Candidate Indicators (23 Common Indicators and 4 additional Candidate Common Indicators to be tested) covering most of the Ecological Objectives (with the exception of EO 4 and EO 6 for which conditions were not mature enough to ensure monitoring feasibility), with the aim to serve as the basis for the integrated monitoring and assessment at regional and national levels. This list of IMAP indicators was adopted by COP 19 through the Decision IG. 22/7.

43. Common Indicator guidance factsheets have been prepared for the CIs of EO 1 (Biodiversity), EO 2 (Non-Indigenous Species) and EO 3 (Fisheries). They were reviewed by CORMON Biodiversity and Non-Indigenous Species and SPA/RAC Focal Points and approved by the EcAp CG during their 6th Meeting in Athens in 2017. The factsheets give for each CI the relevant GES definition, the Operational Objective and the associated targets. The latest guidance factsheets are listed and accessible through Table B (Annex II of this document).

44. Based on the Decision IG.25/13, a multidisciplinary group of experts nominated by the Contracting Parties has been established to define parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators and to elaborate the List of Reference of Pelagic Habitat Types in the Mediterranean Sea so that it can be used, where necessary, as a basis for identifying reference pelagic habitats to be monitored and assessed at the national level under the IMAP. The outcomes of this group will be presented to MAP Focal Points meeting in September 2023 and COP 23 for consideration.

45. The proposed UNEP/MAP Programme of Work 2022/2023 and the SPA/RAC Programme of Work of 2022-2023, include the development of Common Indicators for EO 4 (marine food webs) and EO 6 (seafloor integrity) led by SPA/RAC. The development of these two EOs is expected to be finalized by end 2023. They will be developed with the support of the EU funded projects "Support coherent and coordinated assessment of biodiversity and measures across Mediterranean for the next 6-year cycle of MSFD implementation" (ABIOMMED) and "Support to efficient implementation of the Ecosystem Approach-based Integrated Monitoring and Assessment of the Mediterranean Sea and Coasts and to delivery of data-based 2023 Quality Status Report in synergy with the EU MSFD" (EcAp MED III) as well as the MASE funds (Ministry of Environment and Energy Security of Italy).

46. An analysis of the implementation status of IMAP common indicators (CI1 and CI2) related to benthic habitats was elaborated to evaluate the possibility to propose monitoring and assessment scales, assessment criteria, thresholds and baseline values. This document was prepared with the support of the Biodiversity Online Working Group (OWG) on benthic habitats and was submitted to the CORMON meeting on biodiversity and fisheries (Athens, Greece, 9-10 March 2023) for review and consideration for the way forward in the new IMAP cycle to enhance the implementation of the monitoring and assessment of the benthic habitats towards achieving the Good Environmental Status (GES) in the Mediterranean Sea and coasts.

47. The process of the elaboration of a Mediterranean NIS baseline aimed to collect the available material on the presence of marine NIS in the Mediterranean countries in the form of existing national inventories combined with new and up-to-date information on new species records, the taxonomy and biogeography of the registered species and agreed methodological standards, to arrive at refined NIS baselines at the national, sub-regional and regional levels. This work was developed in synergy with the EU Marine Strategy Framework Directive (MSFD), where a common template was agreed to be used in close collaboration with the Joint Research Centre (JRC) of the European Commission to avoid duplication of work. The outcome is the result of a collaborative process between national and regional experts, involving detailed exchange of information and the building of consensus on the final lists.

48. The national, sub-regional and regional NIS baselines were discussed with the experts of the OWG on NIS and reviewed by the CORMON meeting on biodiversity and fisheries (videoconference,

28-29 March 2022). Several comments were provided by the Contracting Parties and were included in the final version of the document that was endorsed by the 9th EcAp Coordination Group meeting (videoconference, 5 July 2022) for its use for the purpose of the 2023 MED QSR.

49. Regarding Ecological Objective 4 on marine food webs, an ongoing desk review is being conducted to assess available data sources, best practices, and methodologies in the Mediterranean region. The purpose of this review is to inform the development of EO4 and provide insights into monitoring and assessment of marine food webs. The review is expected to be completed by the end of 2023.

50. Currently GES definitions, related targets and common indicators are being developed by SPA/RAC for EO 6. Within SPA/RAC Programme of work (2022-2023) and with the support of the ABIOMMED EU-funded project and the MASE funds, the first draft of the EO6 proposal was delivered in September 2022 and was reviewed by the experts of the biodiversity OWG on benthic habitats and discussed during an online meeting (9 December 2022). The updated version was submitted to the CORMON meeting on biodiversity and fisheries (Athens, Greece, 9-10 March 2023) for their review. The 10th Meeting of the Ecosystem Approach Coordination Group will review and should endorse the EO6 proposal.

51. Common Indicator guidance factsheets have been prepared for the CIs of EO 5, EO 9 and EO 10. They were prepared within the MED POL programme and reviewed by CORMON on Pollution, CORMON on Marine Litter and MED POL Focal Points and approved by the EcAp CG during their 6th Meeting in Athens in 2017. The factsheets give for each CI the relevant GES definition, the Operational Objective and the associated targets.

52. Substantial efforts have been made by MED POL to determine the appropriate tools (CHASE+, traffic light and NEAT methodologies) and GES/ non-GES threshold values for the Adriatic, the North-Western Mediterranean and the Levantine Sea sub-region (see documents of CORMON on Pollution, 27-30 May 2022, UNEP/MED WG.533/5 and recent technical reports from UNEP/MAP MED POL on the subject).

53. Selected methodologies and threshold values for CI 17 and CI 21 will be available in MED QSR 2023.

54. For marine litter EO 10, assessment criteria for IMAP CI 22 (beach macro-litter) have been approved during COP 22 in Dec. 2021, and for IMAP CI 23 (seafloor macro-litter and floating microplastics) during the Integrated CORMON Meeting in June 2023.

55. Common Indicator guidance factsheets have been prepared for the Common Indicators of EO 7 and EO 8. They were reviewed by CORMON on Coast and Hydrography, and PAP/ RAC National Focal Points and approved by the EcAp CG during their 6th Meeting in Athens in 2017. However, due to the difficulties that countries had with the monitoring of the CI 15 on hydrographic alterations following the guidance factsheet, it was concluded during CORMON meeting in March 2023, that further simplification of the Guiding Factsheet is needed or perhaps even merging CI 15 with the ongoing work on the indicator for the sea-floor integrity EO6, should be considered.

56. The Candidate Common Indicator 25 *Land use change* has been tested in the Adriatic sub-region with the support of SIDA Adriatic project and results will be presented in the MED QSR 2023. Also, PAP/RAC has been testing the methodology in the frame of GEF Medprogramme in some of the eligible countries (work is ongoing). Here, a reference to some climate change parameters will be included as well, such as areas prone to coastal flooding. The next CORMON meeting will discuss and revise the upgraded guiding factsheet with a view to be adopted by the next COP as a Common Indicator.

57. SPA/RAC has been involved in the EU co-funded project “Joint Programme for GES assessment on D11-noise in the Mediterranean Marine Region” (QUIETMED 2) (2019-2021) which

aimed to come up with a joint proposal of a candidate for an impulsive noise indicator in the Mediterranean Region and a common methodology for competent authorities to establish thresholds values, together with associated lists of elements and integration rules. In this framework, a 2-day training took place on Data reporting/Data Call, tools development, use of collected noise data, held back-to-back to the Summit on the underwater noise management latest updates (Fuente Álamo (Spain) 14th – 16th March 2023). This will support the development of EO 11 in coherence with EU MSFD.

Gaps

58. Operational Objectives, GES definitions, Common Indicators and related targets have not yet been adopted for EO 4 and EO 6. The two candidate indicators of EO 11, are still at an initial phase of development (countries invited to test the two CCIs by developing pilot monitoring of these CCIs).

59. Within EO 1 (Biodiversity), CI 1 and 2 concern Mediterranean marine habitats. In the actual state, the development (factsheets and monitoring guidance) of these indicators concerns only some specific benthic habitats (Coralligenous, maerl/rhodolith habitats and seagrass meadows). No deep-sea habitats are for the moment covered (e.g., deep-sea coral gardens or cold water gardens).

60. Indicators for pelagic habitats are not easy to develop and GES determination appears also to be a difficult task for the MSFD¹². Work is ongoing to define parameters allowing the use of phyto and zooplankton for relevant IMAP biodiversity indicators and to define pelagic habitats. It is important that pelagic habitats be taken in consideration in the EcAp monitoring and assessment of the Mediterranean Sea since they have an important role in food webs.

61. Within EO 1 (Biodiversity), CIs 3 to CI 5 are related to seabirds, mammals and reptiles. Further work with GFCM is needed to develop indicators for e.g., fish or cephalopods.

62. The templates used for the factsheets for the Ecological Objectives are heterogeneous not underlining the same information. The template used for EO 7 and EO 8 is different from the others and does not give the associated Operational Objectives.

63. Operational Objectives, GES definitions, Common Indicators and related targets for the IMAP Ecological Objectives are dispersed. No synthetic updated document regrouping these elements was found.

64. Threshold values still need to be defined for many CIs.

Recommendations

65. Assessment criteria and information relative to the IMAP Common Indicators exist but tend to be dispersed. It could be recommended that the document Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria UN Environment/MAP Athens, Greece (2017) be updated although common indicators and target levels for EO 4 and EO 6 have not yet been adopted. It could contain in Annex the actual factsheets for each indicator in a homogeneous presentation. An interesting alternative is to create a practical online centralised information platform (perhaps on the model of the online MED QSR 2017) that would regroup all the current operational objectives, targets for EOs and also data dictionaries and data standards, threshold values, assessment criteria, guidance factsheets and guidelines and monitoring protocols for the indicators of all EOs (including EO 3).

¹² Varkitzi, I., Francé, J., Basset, A., Cozzoli, F., Stanca, E., Zervoudaki, S., ... Pagou, K. (2018). Pelagic habitats in the Mediterranean Sea: A review of Good Environmental Status (GES) determination for plankton components and identification of gaps and priority needs to improve coherence for the MSFD implementation. *Ecological Indicators*, 95, 203–218. doi: [10.1016/j.ecolind.2018.07.036](https://doi.org/10.1016/j.ecolind.2018.07.036)

66. It is recommended to finalize as soon as possible the development of indicators, target levels, threshold values and factsheets for EO 6 and target levels and factsheets for Candidate Common Indicators of EO 11 in coherence with EU MSFD Descriptors (see outputs of QUIETMED2 project).
67. Indicators developed for EO 6 could perhaps be at least partly common or in relation with indicators of EO 1. The actual proposition for EO 6 goes in this direction.
68. For EO 1 it could be considered to add specific pelagic habitats (upwelling areas, fronts and gyres) and pelagic ecosystems (phyto and zooplankton as currently worked on by SPA/RAC) as well as a limited number of fish and cephalopods species. These are important components of marine food webs (EO 4) and common indicators could be considered between EO 1 and EO 4.
69. EO 4 on food webs is a complex subject. The development of operational objectives indicators and targets for EO 4 may benefit of some additional time.
70. For EO 8, for CI 16, GES needs to be defined at national level and it is recommended by PAP/RAC that countries agree on their specific GES before the next QSR preparation so that the assessment can be properly made.
71. Threshold values need to be agreed on for many CIs. This is a difficult task that needs to progress so that GES can be assessed.

VI. Revision of existing monitoring programmes for ongoing assessment and regular updating of targets	In relation with defined EOs
	Regional
	Sub-regional
	National

Achievements

72. Based on Ecological Objectives and proposed indicators, UNEP/MAP Secretariat and components defined and developed the Integrated Monitoring and Assessment Programme (IMAP) in collaboration with GFCM and ACCOBAMS for specific EOs. This was achieved with governance set-up to support the development and implementation of the ecosystem approach that includes specific correspondence groups COR GEST (GES and targets), COR ESA (economic and social analysis) and especially CORMONs on monitoring, the EcAp Task Force and the EcAp Coordination Group to review and validate different outputs.
73. COP19 adopted the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and related Assessment Criteria, IMAP, (Decision IG. 22/7). The IMAP implementation covers the period from 2016 to 2021.
74. IMAP is a key achievement for the Mediterranean region, as it will enable integrated analysis of the state of the marine and coastal environment, covering pollution, marine litter, biodiversity, non-indigenous species, coast, and hydrography, based on common regional indicators, targets and Good Environmental Status (GES) descriptions throughout all the UNEP/MAP contracting parties.
75. The development of such an ambitious monitoring programme was progressive to ensure feasible and validated indicators and define appropriate target levels. In addition, UNEP/MAP components in collaboration with GFCM and ACCOBAMS and EU Joint Research Centre (JRC) as well as EcAp governance, have defined and pursue definitions of: Data Dictionaries and Data Standards, monitoring and assessment scales, assessment criteria, threshold and baseline values as well as guidance factsheets and guidelines and monitoring protocols for many Common Indicators. Work is ongoing to refine, adapt and update these standards and develop new ones for other CIs and test Candidate Common Indicators. In line with Decision IG. 21/3, IMAP was first to be implemented in an initial phase between 2016-2019, during which the existing national monitoring and assessment programmes were to be integrated, in line with the IMAP structure and principles and based on the agreed common indicators. This implied in practice that the existing national monitoring and

assessment programmes be reviewed and revised as appropriate so that national implementation of IMAP could be fulfilled in a sufficient manner (see [Decision IG. 22/7](#)). During the initial phase of IMAP (2016-2019), Contracting Parties were requested to:

76. Elaborate/update their existing monitoring programmes in order to cover the IMAP areas, common indicators in line with the IMAP, and, based on the Integrated Monitoring and Assessment Guidance, Common Indicator Factsheets.

77. Continue reporting based on their existing national monitoring programmes until they were updated into a national Integrated Monitoring Programme.

78. Following the update of their existing monitoring programmes, report quality assured data following a common regional monitoring reporting template.

79. Considerable efforts (technical, capacity building and financial support) have been developed by the UNEP/MAP Coordinating Unit and Components to implement (update or develop) IMAP at national level through the support of the EU-funded EcAp MED II, EcAp MED III, GEF Adriatic, Marine Litter MED II, IMAP MPA projects and GEF MedProgramme child project 1.1 and MASE funds (Ministry of Environment and Energy Security of Italy). The Progress Report on activities carried out during the 2020-2021 biennium ([Decision IG. 25/3](#)) informed on the coordination of the activities avoiding any possible overlap and the progress made in IMAP implementation through these sub-regional projects.

80. Through the EU funded projects EcAp MED II, III, and IMAP-MPA, SPA/RAC UNEP/MAP components and other partners in collaboration with the CPs, supported the development of national monitoring programmes on Biodiversity and NIS based on IMAP (EO 1 and 2) in 7 Contracting Parties. Capacity building was developed through sub-regional training workshops on NIS and cetaceans between 2017 and 2019 and national training sessions between 2018 and 2019 (see [SPA/RAC site](#)). With the support of SPA/RAC, national monitoring programmes based on IMAP were defined for [Algeria](#), [Egypt](#), [Israel](#), [Lebanon](#), [Libya](#), [Morocco](#) and [Tunisia in pilot sites \(MPAs and high pressure areas\)](#). Memoranda of agreements (MoAs) were signed with the national institutions designated by the Contracting Parties for IMAP implementation. Field work and data collection was finalized in Israel and Morocco and is ongoing in Egypt, Lebanon, Libya and Tunisia. Data submission of new and historical data into the IMAP Info System is ongoing. These activities should be finalized by all the beneficiary countries by the end of June 2023 for the IMAP-MPA project and by the end of November 2023 for the EcAp-MED III.

81. The Progress Report on the implementation of [Decision IG.22/7](#) on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) ([UNEP/MED WG.450/3](#), 2018) gives an overview of the progress of national IMAP implementation by cluster:

- a. [Biodiversity and NIS cluster](#). SPA/RAC supported the Contracting Parties towards successful implementation of their national monitoring programmes on biodiversity through pilot projects. The ongoing activities include implementation of specific Memoranda of Understanding with relevant national authorities, with the aim to develop monitoring programmes on biodiversity and NIS-related IMAP Common Indicators.
- b. [Pollution and litter cluster](#). In accordance with Article 12 of the Barcelona Convention which stipulates that all Contracting Parties shall establish pollution monitoring programmes and designate the competent authorities responsible for pollution monitoring, and Article 8 of the Land-Based Sources Protocol, the Secretariat/ MED POL continues to support the Contracting Parties to the Barcelona Convention in implementing the National Marine Pollution Monitoring Programmes. Small-Scale Funding Agreements (SSFAs) were concluded with

Egypt, Israel, Lebanon, Libya and Morocco, and financed through the Mediterranean Trust Fund (MTF) and EcAp MED II and Marine Litter MED Projects. Capacity building workshops to support national implementation of IMAP and related criteria for eutrophication and marine litter were organized in Egypt in 2018, Morocco in 2018 and Libya in 2018. The workshops addressed the methodological and practical aspects related to monitoring and assessment of marine environment with regards to pollution and marine litter clusters of IMAP Common Indicators: 13, 14, 22 and 23. The IMAP monitoring protocols and assessment methods, sample processing, metadata, reporting templates, as well as the examples of existing national monitoring schemes and capacities compared to IMAP requirements and the guidance factsheets were presented and extensively discussed.

- c. Coast and hydrography cluster. A training workshop on coast and hydrography IMAP Common Indicators was held on 26-27 October 2016, in Rabat, Morocco, dedicated to the precise definition of monitoring requirements. A second training workshop on coast and hydrography IMAP Common Indicators was held in 24-25 April 2017, in Rome, Italy, which allowed experts to exchange state-of-the-art information regarding the development of national IMAP-based monitoring and assessment programmes.

82. Within Post-2020 SAPBIO, goal 3 includes updating national monitoring programmes in light of the new elements of IMAP and achieve regular reporting and identifying the gaps that hinder the good environmental status evaluation, and in case needed, support countries to fill them out.

83. Within the framework of MTF and the MASE funds, SPA/RAC is supporting Montenegro to implement their national IMAP for biodiversity and NIS. A Memorandum of Agreement was signed with the Institute of marine biology in Montenegro. A complete monitoring plan for the field surveys of the selected CIs in the selected monitoring sites in line with the national monitoring programme was prepared and agreed on. The fieldwork has already started and will be finalized by December 2023.

84. SPA/RAC is assisting Bosnia and Herzegovina and Turkey to implement their national IMAP for biodiversity. Official contacts have been made to identify the national institutional partners for the implementation. In Bosnia and Herzegovina, the monitoring of sea birds will be implemented, while in Foça SEPA in Türkiye, the monitoring of *Posidonia oceanica* meadows will be conducted. These activities will be finalized by December 2023.

85. Through EcAp MED II and III projects, PAP/RAC supported the implementation of national monitoring programmes on Hydrography and Coastal Ecosystems and Landscapes based on IMAP (EO 7 and 8) in 7 Contracting Parties. Implementation of national monitoring relative to hydrography and coastline: Algeria, Israel, Lebanon, Libya, Morocco, Tunisia. Also, reports are available for baseline state of Common Indicator 15 (EO 7) and for Common Indicator 16 (EO 8): Algeria, Egypt, Israel, Libya, Lebanon, Morocco and Tunisia. All these reports are available on the UNEP/MAP PAP/RAC ICZM Platform. Independently from these projects, PAP/RAC supported the monitoring of CI 15 (EO 7) and CI 16 (EO 8) in several other Mediterranean countries not eligible for EcAp MED projects.

86. Working sessions on data reporting to IMAP Info System for CIs related to Biodiversity and Pollution are taking place through the IMAP-MPA and EcAp MED III projects and organised by SPA/RAC and INFO/RAC. A working session was organised for Libyan experts (11-13 October 2022).

87. All the national experts involved in the implementation of IMAP in Egypt, Israel, Lebanon, Libya, Morocco and Tunisia participated in the sub-regional workshops for pollution, marine litter, biodiversity and hydrography monitoring and GES assessment organized by the UNEP/MAP

Coordinating Unit and with the support of the SPA/RAC (Athens, 7-8 March 2023 and 20-21 March 2023) and facilitated by the regional experts on biodiversity, pollution and hydrography.

88. In coordination with the EU-funded EcAp MED III Project (2020-2023) and the IMAP-MPA Project (2019-2023), MED POL provided support to concluding and implementing Small Scale Funding Agreements (SSFAs) with 7 project participating countries (Lebanon, Israel, Egypt, Libya, Tunisia, Algeria and Morocco). Support included content of the SSFAs and ToRs-activities and outputs; coaching and guidelines regarding implementation of activities within the monitoring and assessment efforts for IMAP Pollution and Marine Litter Cluster at national level; providing training modalities for national counterparts and contributing to training workshops; providing advice on knowledge transfer to national counterparts regarding the developments achieved within MED POL activities at regional level.

89. Support to strengthening implementation of national monitoring programmes on pollution and marine litter is provided by MED POL to Montenegro with the support of the Italian Ministry of Environment and Energy Security, and Bosnia and Herzegovina (using MTF funds), which is planned in the 2nd half of 2023. Specifically, support is provided in relation to IMAP Common Indicators 13 & 14, 17, 18, 22 and 23.

90. Through Marine Litter MED projects, I (2016-2019) and II (2020-2023), Candidate Common Indicator 24 “Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO 10)” is in progress of validation and tested at national level in Tunisia and Lebanon (see Report of the Marine Litter MED II Project 1st Steering Committee Meeting, November 2021) but also in Morocco and Israel.

91. According to UNEP/MED WG 514/3 and as reported in the Joint Meeting of the EcAp Correspondence Group on Marine Litter Monitoring and ENI SEIS II Assessment of Horizon 2020/National Action Plans of Waste Indicators, April 2019 (see UNEP/MED WG.464/3), MED POL has supported the preparation and/or the update and implementation of national IMAPs with regard to EO 5, EO 9 and EO 10 for Albania, Bosnia and Herzegovina, Egypt, Israel, Montenegro, Libya, Morocco and Türkiye.

92. Türkiye has been also progressing on IMAP implementation, with most recent efforts to strengthen the integration of IMAP provisions into the national monitoring programmes through the implementation of the EU-funded Project entitled “Technical Assistance for capacity building on Marine Strategy Framework Directive in Türkiye (2015-2017)” (see UNEP/MED WG.450/3, 2018).

93. The sub-regional GEF Adriatic project allowed the first integrated monitoring programmes fully based on IMAP taking in consideration all the adopted EOs for Albania and Montenegro as well as two baseline state surveys based on IMAP one in Montenegro and one in Albania. GES has also been assessed in Albania and Montenegro throughout the GEF Adriatic project. Summary of results for Montenegro are available here. Other documents of interest have been produced by the project concerning hard bottom habitats in Boka Kotorska Bay (Montenegro), results of the Marine Survey in Patok-Rodoni Bay (Albania) and summary report The GEF Adriatic project (synthesis, infographic) has had a powerful demonstrative impact expected to reverberate well beyond the Adriatic, particularly in promoting Marine Spatial Planning processes based on the Ecosystem Approach, and it demonstrated the use of IMAP indicators for MSP in particular.

94. The GEF MedProgramme (2020-2024) child project 1.1 titled: “Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hotspots and Measuring Progress to Impacts” has an important component on IMAP Implementation including a section for the preparation of the Offshore monitoring strategy. This includes the definition of minimum 20 locations for offshore reference monitoring stations in beneficiary countries (Albania, Algeria, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco, Tunisia and Türkiye). Progress has been made primarily to engagement with national authorities.

95. The document Methodologic approaches for mapping the interrelations between Pressures-Impacts and the Status of Marine Ecosystem Components for Biodiversity Cluster has been agreed on ([UNEP/MED WG.500/10](#)). This document reviews the suitable tools to show the environmental status of the Biodiversity Ecological Objectives across the Mediterranean Sea and Coasts, and pressures/impacts/state interactions. It specifically provides inputs on identifying most significant economic sectors as sources of pressures and addressing interrelations of pressures and impacts on the biodiversity cluster, covering the Common Indicators of the IMAP's EO1 Biodiversity and EO2 Non-indigenous species.

96. With regard to IMAP Pollution-Marine Litter Cluster, significant achievements have been attained: new and upgraded assessment criteria have been approved (CI 17 and CI 20), baseline and threshold values for CI 22 (beach macro-litter) and 23(seafloor macro-litter, floating microplastics) have been defined, defining IMAP spatial assessment units (SAUs) from the areas of monitoring by applying IMAP nested approach have been defined, and IMAP Pollution assessment methodologies have been prepared and implemented. These assessment criteria, baseline and threshold values related to contaminants, nutrients and marine litter were approved by the CORMON Pollution meeting (27 and 30 May 2022), the Integrated CPRMONS (27-28 June 2023) and endorsed by the meeting of MED POL Focal Points (24 to 25 may 2023).

97. A methodological document is also in preparation and agreement between MED POL Focal points and the CORMON on Pollution for the IMAP cluster on Pollution and Marine Litter: *Integration and Aggregation Rules for Monitoring and Assessment of (IMAP Pollution and Marine Litter Cluster)* (document [UNEP/MED WG.509/10](#) not available).

98. With regard to the Coast and Hydrography cluster, the work on assessment criteria and a guiding document for the application of the assessment criteria for CI 16 *Length of coastline subject to physical disturbance due to the influence of man-made structures* (EO 8) has been completed, updated and successfully tested in Morocco in the context of the EcAp MED III project and the final draft was presented to the CORMON meeting end of March 2023.

99. Work is ongoing to establish specific cooperation with GFCM with the objective of sharing common data sets relevant for the implementation of IMAP Common Indicators of Ecological Objective 3. This partnership will facilitate the inclusion of data and information from Fishery associated Common Indicators into the IMAP Info system. Terms of Reference for a bilateral agreement have been drafted together with a draft Roadmap to facilitate close cooperation with GFCM.

100. The Fourth Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) Sub-Group on Environmental Impact, held in Floriana, Malta on 23-24 May 2023, endorsed the list of five (5) IMAP Common Indicators (CI 1, 2, 15, 17, and 18) to be monitored for offshore activities, which would reflect the effects of oil and gas activities on the Mediterranean marine environment.

101. In the framework of the Programme of Work and Budget for 2018–2019 of UNEP/MAP ([Decision IG.23/14](#)) and supported by the EU funded EcAp MED II project, INFO/RAC has developed the "**IMAP Info System**" platform (initially as IMAP Pilot Info System) to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public. Currently, it enables the Contracting Parties to report data for **18 IMAP Common Indicators** and laying down the basis for building a fully operational IMAP Info System as requested by the Integrated Monitoring and Assessment Programme adopted by COP 19 (Decision IG. 22/7). The [IMAP Info System](#) is operational since the 1st July 2019. A [User Guide](#) has been developed to provide general assistance to users and support to CPs during the data upload is proposed.

102. Accessible through the IMAP Info System, Data Standards and Data Dictionaries are available for the 11 Common Indicators from the three clusters, for which data may be uploaded by

the CPs. These have been agreed on by the CORMONs, the MED POL Focal Points and the SPA/BD Thematic Focal Points and updated in 2020-2021 taking in account the remarks from the CPs.

103. New Data Standards (DS) and Data Dictionaries (DD) for an additional 7 Common Indicators have been/ are going to be integrated into the IMAP Info system, extending the initial reporting of 11 selected CIs to a total of 18 CIs. (CIs 3, 4, 5, 18, 19, 20 and 24).

104. The final implementation of the new data flows for CIs 3, 4, 5, 18, 19, 20 and 24 into the IMAP Info System took place during the first semester of 2023. Nevertheless the revision of the initial set of 11 CIs (12 modules) has been ensured to improve the reporting by the Contracting Parties.

105. DSs & DDs for IMAP Common Indicators 3, 4 & 5 have been developed and revised with support of the online working groups (OWGs) on marine mammals, marine reptiles, and marine birds.

106. The new indicators have an implemented data flow that allow the CPs to ensure the related reporting, except for CI 19 whose DS and DD approval was pending. DSs & DDs for CI 19 developed by INFO/RAC in close cooperation with REMPEC have been submitted to the 15th Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (13-15 June 2023 - Kappara, Malta) who invited the Contracting Parties to provide data using the revised DS and DD, allowing INFO/RAC to start the implementation of the correspondent data flow that will be concluded in the second semester.

107. For the candidate CI 24 a "pre-Data Standard" template developed by INFO/RAC in close cooperation with SPA/RAC and MED POL and was approved during the Integrated CORMON (27-28 June 2023). Although the CI 24 is a candidate indicator, the DSs have been already implemented as data flow into the IMAP Info System and the testing phase has been performed. As candidate indicator is not yet included into official IMAP reporting but the collection of the relative data by a group of selected countries will be started on voluntary basis in 2023. Within the 2nd phase of the EU funded Marine Litter MED project, SPA/RAC supported the implementation of the national monitoring programme of CI 24 in Lebanon and Tunisia.

108. During the biennium 2022-23 support to reporting activities has been made available for all CPs through the INFO/RAC help desk. Assistance for the CPs has included: contacts with the IMAP Users network; support in IMAP Info System access; comprehension of data reporting; capacity to fill in DSs and perform the quality checks; complete validation process and replace corrected files.

109. INFO/RAC has also organized national workshops for technical assistance and training in order to present the IMAP Info system, explain the DSs and DDs, their use and the modalities of reporting, provide support for the data policy implementation, in particular for the following beneficiary countries: Algeria, Egypt, Israel, Libya, Lebanon, Morocco and Tunisia. Workshops for technical assistance and training have been organized also in the framework of IMAP-MPA Project, involving also project focal points of the same beneficiary countries, strengthening the cooperation of these representatives and the official IMAP Users appointed by the Contracting Parties.

110. Request to all the CPs to enlarge and update the network of IMAP Users in view of new data flows for the other Common Indicators recently included in the IMAP reporting has been made by INFO/RAC during the INFO/RAC Focal Point Meeting in order to complete the official appointment for all the countries.

111. Work on technical documents concerning scales of assessment, assessment criteria, thresholds and baseline values for IMAP implementation and the preparation of the 2023 MED QSR was and is performed in the context of UNEP/MAP PoW 2020-2021 and PoW 2022-2023 and the EU-funded EcAp MED III and IMAP MPA Projects. The proposals are discussed by Online Working Groups (OWG) and cluster related CORMON. EcAp CG integrates, coordinates and gives guidance. Annex II, Table B presents the available documents on data dictionaries/data standards, monitoring and assessment scales, assessment criteria, thresholds values, baseline values, factsheets and guidance

documents for the IMAP Common Indicators. Many have been updated and others are in validation process or discussion. All Common Indicators (even candidate) have factsheets, many have guidelines and monitoring protocols and data dictionaries and data standards defined or currently being defined.

112. Five Science-Policy Interface workshops (SPI workshops) have been organized by Plan Bleu between 2015 and 2017 and have contributed to IMAP implementation with the overall aim to enhance interaction across scientists and between them and policy-makers (practitioners and the ones who develop marine policies) on the ecosystem approach implementation, with focus on the specific IMAP requirements.

113. Science Policy Interface (SPI) is a crucial element for the effective implementation of the Integrated Monitoring and Assessment Programme (IMAP). SPI activities are increasing to support IMAP implementation at all levels. The document [UNEP/MED WG.482/24](#) provides a number of proposals in view of promoting SPI for IMAP implementation.

114. The EcAp MED III project also contributes to strengthening of the Science-Policy interface (SPI) at national and regional levels for IMAP implementation. Two reports have been drafted during the period: (1) State of the art (identification of barriers and opportunities) about SPI frameworks and processes to monitor IMAP Common Indicators 1 & 15 in Morocco; (2) Practical solutions to strengthen and sustain Science-Policy Interface mechanism to support IMAP implementation in Morocco, especially CI 15. . SPI networks of scientists and policy makers will be strengthened for the IMAP implementation including by designing and implementing 1-2 SPI pilots at country level.

115. Two publications on Science Policy Interface in relation to EcAp and IMAP have been edited by Plan Bleu. A brochure "[Science-Policy Interface \(SPI\) to support monitoring implementation plans as well as sub-regional and regional policy developments regarding EcAp clusters on pollution, contaminants & eutrophication, marine biodiversity & fisheries, coast & hydrography¹³](#)" and a technical report "[Strengthen, structure and sustain a Science Policy Interface \(SPI\) for IMAP implementation in the Mediterranean](#)" provide recommendations for all IMAP clusters.

Gaps

116. The document [Study on trends and outlook of marine pollution¹⁴](#) underlines that in 2021 implementation of national IMAPs concerning marine pollution is still partial and limited and that full implementation of IMAP and related reporting is needed. Also, there is a need for better coordination at national and sub-regional level on NIS monitoring. Further the document indicates, p. 181, that despite the effort of the Secretariat to facilitate reporting obligation, the majority of the 22 CPs, are still in non-compliance with their reporting obligation under Article 9 of the 2002 Prevention Protocol. This has an impact on the monitoring of the CI 19 and on the assessment of the progress made regarding EO 9.

117. The Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) (Decision IG. 25/11) states that "*despite notable progress, the environmental status of the Mediterranean Sea is in 2020 far from where expected to be; countries are not on the track to achieve and fully implement the agreed upon goals, including the SDGs and the Ecological Objectives for GES. Most trends show some progress towards the set targets, but at an insufficient rate, unequally across the countries, or even moving away from the targets. For the time being, knowledge, data availability and sharing, were found insufficient and very patchy. National reports note a great*

¹³ Plan Bleu (2019). Science-Policy Interface (SPI) to support monitoring implementation plans as well as sub-regional and regional policy-developments regarding EcAp clusters on pollution, contaminants and eutrophication, marine biodiversity and fisheries, coast and hydrography

¹⁴ Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (2021). Study on trends and outlook of marine pollution from ships and activities and of maritime traffic and offshore activities in the Mediterranean, Floriana

disparity between the northern and the southern shores of the Mediterranean in terms of inventories, mapping and ecological monitoring”. Assessment and mapping efforts, before even monitoring biodiversity (EO 1) at national level, is uneven throughout the Mediterranean countries.

118. **Implementation of IMAP at national level is not satisfactory.** The document presented at the 8th Meeting of the EcAp CG the 9th of September 2021 UNEP/MED WG. 514/Inf. 8, presents the status of IMAP implementation per Common Indicator and per Contracting Party (December 2020 - February 2021) as declared by the countries.

119. The following figure presents the situation relatively to IMAP national implementation as indicated in the document UNEP/MED WG. 514/Inf. 8 based on a survey addressed to the CPs.



Figure 2 Status of IMAP implementation at national level (Dec 2020-Feb 2021 according to UNEP/MED WG.514/Inf.

120. In 2021, the most implemented IMAP indicators at national level concern Eutrophication (EO 5), Pollution (EO 9) and Marine Litter (EO 10). EO 7 and 8 on Hydrography and Coastal ecosystems and landscapes indicators follow closely.

121. Indicators of EO 1 Biodiversity appear as little implemented totally at national level but 4 to 6 CPs had partly implemented these indicators in 2021. These could possibly be totally implemented today.

122. Despite the efforts of the UNEP/MAP Secretariat, in 2021 only 4 CPs had answered that national IMAP was totally or partially in place and operational for all Common Indicators (excluding candidate common indicators).

123. The national monitoring programmes reports based on IMAP are of unequal pertinence, some are more a state of the art concerning biodiversity and NIS, rather than a monitoring programme.

124. The General Status of the progress in the implementation of the Barcelona Convention and its Protocols: Analysis of the Information Mentioned in the National Reports for the 2018-2019 Biennium (UNEP/MED IG.25/Inf.8) reports:

- a. Concerning implementation of quality status monitoring and Integrated Monitoring and Assessment (IMAP), with focus on monitoring of biodiversity-related Ecological Objectives (EO) (i.e., EO-1 biodiversity, EO-2 non-indigenous species, EO-3 harvest of commercially exploited fish and shellfish, EO-6 sea floor integrity). Only some reporting Contracting Parties (4 out of 11) indicated having monitoring activities in place, and others noted ongoing work in this area.
- b. More generally, monitoring of the Biodiversity related Ecological Objectives within the framework of the Integrated Monitoring Assessment Programme (IMAP) requires strengthening collective and national efforts.

125. IMAP Info System is regularly being updated and currently DS and DD for 18 Common Indicators are available or will be by end 2023 extending the reporting to 18 CIs. Future development of tools to visualise and eventually extract the data will be essential for end-users.

126. MED POL has supported the preparation and/or the update and implementation of national IMAPs with regard to EO 5, EO 9 and EO 10 for Albania, Bosnia and Herzegovina, Egypt, Israel, Montenegro, Libya, Morocco and Türkiye. Recent reports were not found concerning these implementations.

127. Data acquired through GEF Adriatic for Montenegro and Albania is to date, not uploaded to IMAP Info System.

Remarks

128. The important number of dataset submitted by the CPs for pollution and marine litter cluster, i.e. EO 5, EO 9 and EO 10 relatively to the other EOs, is in relation with the early and long-term implementation of SAP MED, the early development and updating of related National Action Plans (NAPs) and the legally binding associated 10 Regional Plans that bear fruit.

Recommendations

129. It is recommended to continue resource mobilization, capacity building and technical assistance at national level, as well as through regional and sub-regional collaboration, to implement IMAP at national level and enhance IMAP data acquisition and submissions by the CPs. Efforts are still needed to revise or implement monitoring programmes at national level in accordance with IMAP indicators.

130. National monitoring data submission needs to be improved.

131. It is recommended to work towards harmonizing and standardizing monitoring protocols and assessment elements and methods.

132. Science-Policy Interface could be strengthened, structured and sustained, by being integrated into the national monitoring programmes, to ensure that ongoing scientific projects can address IMAP national implementation needs, as proposed in UNEP/MED WG.450/3.

133. Cooperation should be strengthened at sub-regional level for Common Indicators, as appropriate, to share best practices and to address specific gaps within national monitoring programmes, as proposed in UNEP/MED WG.450/3.

134. IMAP generates information, documents, products and data provided by the CPs monitoring programmes that need to be compliant with defined standards to ensure interoperability and to be stored and consistently managed. End users should easily have access to sortable data with the possibility to visualise a spatial distribution. Info web systems and GIS applications enable the storage, access and reporting of data collections and are appropriate for displaying geographical distribution of data. Therefore, the online IMAP Info System is an essential tool that should allow CPs to upload monitoring and assessment data relative to IMAP CIs easily while it should also in the future integrate assessment tools, and further facilitate spatial visualization at least of some metadata, which is currently not the case. IMAP Info System is in the actual configuration a repository of national data files. Data cannot be searched by queries since it is not assembled in a database (it is the individual files that are in a database). For end-users (that are UNEP/MAP components but could also be national Focal Points that need to assemble data from their country for communication purposes) data files need to be individually downloaded and processed. INFO/RAC is actually working on ways to improve IMAP Info System but development of this essential tool needs to be urgently boosted in terms of efficiency and accessibility. This would also probably encourage contracting parties to upload data more regularly.

135. IMAP Info system was developed with the financial support of the EU Project EcAp MED II that ended in 2019. The EcAp Med III provided additional funds to ensure that all mandatory Common Indicators are part of the IMAP Info System. Such a system is a core piece of a monitoring programme such as IMAP, and its development and maintenance needs to be ensured by long-term financial and human resources.

136. The Grid/Table and the scoreboards methods approach proposed in the document *State of play of IMAP Implementation related to Marine Litter (EO 10) and its further development (UNEP/MED WG. 464/3)* as a way of mapping pressures/impacts interactions, is of interest for EO 10 as proposed here, and could be studied for other IMAP Ecological Objectives. A nested approach is proposed at the sub-regional and sub-area scale but could be of interest at national level to help implement appropriate monitoring and assessment programmes.

137. Experience from the demonstration projects on how to use IMAP indicators in an integrated way for the preparation of the MSP should be promoted and supported. This will allow the achievement of GES through MSP as a strong policy-related measure. As the land and marine ecosystems are interdependent, the Land-Sea Interaction (LSI), as a tool that enables such correlations, should be promoted. It is worth mentioning that the Pan Adriatic Scope Report on Adriatic-Ionian cooperation towards MSP gives indicative information on the needs and opportunities for the harmonised implementation of MSP in the region.

VII. Development and review of relevant action plans and programmes	In relation with defined EOs
	Regional
	Sub-regional
	National

Achievements

- Streamlining of the Ecosystem Approach principles, IMAP and GES targets into relevant instruments, strategies, action plans and guidelines at a regional level has been undertaken with success. The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership) (2009 – 2015) contributed significantly by leading environmental institutions and organizations together with countries sharing the Mediterranean Sea to address the main environmental challenges that Mediterranean marine and coastal ecosystems face. The programme assisted countries in the implementation of the SAPs and NAPs to reduce pollution from land-based sources, and preserve the biodiversity and ecosystems of the Mediterranean from

degradation, and in the implementation of the Integrated Coastal Zone Management ICZM Protocol. The National Action Plans concerning land-based sources pollution, updated in 2015 (UNEP(DEPI)/MED WG.426/3), have developed the monitoring and assessment of EO 5, EO 9 and EO 10 indicators for which datasets or more reported than for other EOs (see in previous step the number of dataset submitted for IMAP indicators by EO).

- The following Protocols and associated action plans and frameworks have been updated and include EcAp, IMAP, indicators and GES targets.
- The Protocol for the prevention and elimination of pollution of the Mediterranean Sea by dumping from ships and aircraft or incineration at sea (Dumping Protocol). The Annex to the protocol amended and adopted in December 2021 (Decision IG.25/6, COP 22) takes in consideration the ecosystem approach for achieving good environmental status (GES) of the Mediterranean Sea and coast and integrates Ecological Objectives (e.g., levels of underwater noise for the characteristics of dumping).
- **The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol). Annexes I, II and IV amended and adopted in December 2021 (Decision IG. 25/5, COP 22)** takes in consideration the ecosystem approach: “...with particular focus on those developments related to the implementation of the ecosystem approach for achieving good environmental status (GES) of the Mediterranean Sea and coast, and to the enhanced integration of the sustainable consumption and production and circular economy approaches”.
 - ✓ The Decision IG.24/10 on **Main elements of the six Regional Plans to Reduce/Prevent marine pollution from Land-based Sources; Updating the Annexes to the LBS and Dumping Protocols of the Barcelona Convention**, was adopted by the Contracting Parties at their 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019). It specified the structure and further details of the scope and objective of six Regional Plans (Municipal Wastewater Treatment, Sewage Sludge Management, Agriculture Nutrients Management, Aquaculture Nutrients Management, Urban Storm Water Management and an upgrade on Marine Litter), and requested the Secretariat to establish Working Groups of designated Experts. An objective of the Working Groups is to deliver the new Regional Plans on Agriculture and Aquaculture Nutrients, and Urban Storm Water Management for consideration to MED POL and MAP Focal Points Meetings and to COP 23 for adoption. MED POL has undertaken a study (UNEP/MED WG.563/Inf.15) to enable the CPs to assess the costs of implementation and associated socioeconomic benefits of the main regional and national measures proposed in these three Regional Plans. MED POL is also providing support in boosting the implementation of the updated Regional Plan on Marine Litter Management in the Mediterranean through the Cooperation Agreement between UNEP/MAP and the Italian Ministry of Environment and Energy Security.
 - ✓ **Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol (Decision IG. 21/7)** and amendments (see Decision IG. 25/9) integrate the ecosystem approach and specifically the IMAP Ecological Objective 10. It was enforced by Decision IG. 22/10 *Implementing the Marine Litter Regional Plan in the Mediterranean (Fishing for Litter Guidelines, Assessment Report, Baselines Values, and Reduction Targets)*. The CPs by amending the Regional Plan on Marine Litter Management in the Mediterranean, have agreed to increase efforts to reduce to the minimum marine litter pollution in the Mediterranean and its impacts. Marine litter measures are to be integrated in LBS National Action Plans (NAPs) including timetables for their implementation.

- ✓ The **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)** endorsed by COP 22 also streamline elements of EcAp, IMAP and links with the achievement of GES.
- ✓ **Strategic Action Programme to address pollution from land based activities (SAP MED)** and related National Action Plans. Targets defined in SAP MED are to be addressed through 10 legally binding Regional Plans for the reduction of pollutants. Updated NAPs are in accordance with the pollution-related Ecological Objectives (EO 5, EO 9 and EO 10), with the aim to achieve/maintain GES on pollution and litter. The NAPs are regularly evaluated, identifying gaps and updated as in documents [UNEP\(DEPI\)/MED WG.426/3](#), [UNEP\(DEPI\)/MED WG.439/Inf.3](#) and [UNEP\(DEPI\)/MED WG.426/3*1](#). SAP MED implementation between 2000 and 2015 is evaluated in the document: [Strategic Action Programme to Address Pollution from Land Based Activities \(SAP-MED\) and related National Action Plans \(NAP\). Implementation Status 2000-2015](#). The majority of the Contracting Parties updated their NAPs during the period 2015-2016, based on NAP Update Guidelines, prepared by the Secretariat. The updated NAPs have been endorsed by the COP 19 (Decision IG 22/8).
- The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (**SPA BD Protocol**). **Annexes II (List of endangered species) and II (List of species whose exploitation is regulated) were amended four times since the EcAp roadmap was adopted enriching the list of species. The following Strategies and Regional Action Plans under this protocol have been updated integrating the ecosystem approach, IMAP in particular ecological objective 1 with associated common indicators and GES targets:**
 - ✓ Action Plan for the conservation of coralligenous and other calcareous bioconstructions (updates in [Decision IG. 22/12](#))
 - ✓ Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea (Annex III, [Decision IG.22/12](#)). This Regional Action Plan has been updated taking in consideration the *Ballast water management strategy for the Mediterranean Sea (2022-2027)* and will be submitted to MAP Focal Points meeting in September 2023 and COP 23 in December 2023.
 - ✓ Following the Pilot Study (supported by the EcAp-MED II, EU-financed project, and jointly implemented with the GFCM and UN Environment/MAP), that led to elaboration of pilot sub-regional monitoring plan on NIS/Fisheries for the eastern sub-region, SPA/RAC will develop a sub-regional Action Plan on non-indigenous species and species introduction for the eastern sub-region in collaboration with GFCM Secretariat and IUCN-Med. A preparatory online meeting will be organised to coordinate the implementation of this activity taking into account the GFCM research programme to advance on NIS interactions with fisheries in Eastern Mediterranean. The Sub-regional Action Plan on non-indigenous species and species introduction will be ready by the end of 2023.
 - ✓ The updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (Decision IG. 21/4 updated by [Decision IG. 23/8](#) and currently updated again in view of submission to MAP Focal Points meeting in September 2023 and COP 23 in December 2023.

- ✓ Regional strategy for the conservation of monk seal in the Mediterranean (updated in [Decision IG. 24/7, Annex II](#))
- ✓ Action Plan for the conservation of marine turtles in the Mediterranean (updated in [Decision IG. 24/7, Annex III](#)). In this framework, SPA/RAC has supported: (i) the “Monitoring of known sites and new sporadic Marine turtles nesting sites”, in Algeria, Libya, Morocco and Tunisia during 2021 / 2022, and (ii) the elaboration of the National Action plans in Morocco and Algeria; (iii) the organisation of the fourth Mediterranean conference on Marine turtles (Tetouan, Morocco, 18-21 October 2022). See the [MAVA Marine turtles Project: Final Evaluation](#).
- ✓ Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea (updated in [Decision IG.24/7 Annex IV](#))
- ✓ Action Plan for the conservation of marine vegetation in the Mediterranean Sea (updated in [Decision IG. 24/7, Annex V](#))
- ✓ Action Plan for the conservation of cetaceans in the Mediterranean Sea (updated in [Decision IG. 22/12](#) and [Decision IG. 25/13, Annex I](#))
- ✓ The Action Plan for the conservation of habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena in the Mediterranean Sea (Dark Habitats Action Plan) ([Decision IG. 25/13, Annex II](#))
- ✓ In 2021, SPA/RAC submitted to the 15th meeting of SPA/BD Focal Points the *First elements to elaborate the List of Reference of Pelagic Habitat Types in the Mediterranean Sea* ([UNEP/MED WG.502/7](#)). This document will help develop the assessment and monitoring of pelagic habitats in the context of IMAP EO 1.
- ✓ **Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)** ([Decision IG. 25/11](#)) was elaborated taking into account the conclusions and recommendations of the evaluation of SAPBIO on the period 2004-2018 and the [guidance elements](#) developed by SPA/RAC. Post-2020 SAPBIO integrates the EcAp and IMAP requirements especially relative to EO 1 (see outcome 2, 3 and 4) and EO 2, 4 to 11 (see outcomes 1 and 5). The planned actions cover many needs for a better implementation of IMAP at national level including inventories and cartography of key marine habitats and assessing their status in coastal and offshore waters, update national monitoring programmes and achieve regular reporting.
- ✓ **National Action Plans** on NIS, biodiversity and marine habitats are prepared considering the IMAP priorities in some CPs. In 2018-2019 and 2020-2021, SPA/RAC supported the elaboration of the NAPs concerning species introduction and invasive species in Libya, Türkiye, Lebanon, Cyprus, Malta and the preparation of the NAPs for the conservation of Marine Turtles in Algeria, Morocco, Libya, Lebanon, Spain and Tunisia. National strategy to reduce illegal trade of marine turtles in Tunisia has been elaborated and adopted since 2019. With the assistance of SPA/RAC, Montenegro elaborated a NAP on coralligenous species, Morocco, Tunisia and Türkiye elaborated NAPs on marine vegetation and coralligenous. The NAP for the conservation of the coralligenous species in Lebanon was prepared and nationally adopted with the SPA/RAC assistance.

- ✓ SPA/RAC has supported the bird winter census implemented by Libyan Society for Birds under the coordination of the Ministry of Environment during January - February 2023 and in line with the IMAP national Monitoring programme. Moreover, in order to reinforce national capacity on seabird monitoring, SPA/RAC contributed to the organization of the bird winter census implemented by the AAO (Birlife Partner in Tunisia), and Tour du Valat, in a training format where participants from Mediterranean countries took part.
- ✓ SPA/RAC has joined the INTERMED Project and has coordinated, in synergy with IMAP process, the species distributional range (CI3) of cetacean species in the Northern Tunisian coast including the MPA of ZEMBRA, the higher-pressure area of the Gulf of Tunis and the gulf of Hammamet.
- ✓ The UNEP/MAP PoW (2022-2023) plans to implement targeted NAPs measures on NIS supported in coordination with IMAP implementation in at least 2 CPs.
- The [Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil](#) (Offshore Protocol).
 - ✓ **Mediterranean Offshore Action Plan** in the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil ([Decision IG. 22/3](#)) integrates the ecosystem approach, IMAP ecological objectives, associates indicators and GES targets and further development of the Offshore Monitoring Programme under the framework of IMAP is planned in biennium 2022-2023 and beyond (see [EP/MED WG.498/6](#))
- The **Protocol on Integrated coastal zone management in the Mediterranean (ICZM Protocol)** was adopted in 2008 and refers to the ecosystem approach. The Ecosystem Approach is especially pertinent and necessary in the management of coastal zones where multiple human activities and pressures on ecosystems cumulate. As such, EcAp appears as the guiding principal to the **ICZM Protocol** and the related planning of land and sea based marine activities, therefore including MSP implementation. An Action plan and a Common Regional Framework were adopted respectively in 2012 and 2019 totally integrating the ecosystem approach, IMAP ecological objectives, indicators and GES targets. ICZM is an essential tool for EcAp implementation in coastal areas.
 - ✓ **Action Plan for the implementation of the ICZM Protocol** for the Mediterranean (2012-2019) ([Decision IG. 20/2](#))
 - ✓ **Implementation of the Integrated Coastal Zone Management Protocol: Annotated Structure of the Common Regional Framework for Integrated Coastal Zone Management and Conceptual Framework for Marine Spatial Planning** ([Decision IG. 23/7](#)) prepares the future CRF ICZM.
 - ✓ **Common Regional Framework for Integrated Coastal Zone Management** ([Decision IG. 24/5](#)) is a strategic instrument meant to facilitate the implementation of ICZM Protocol. It underlines the integrated approach of the ecosystem approach on which ICZM is based: *Achieving Ecological Objectives (EOs) and GES requires an integrated approach in order to address combined pressures and cumulative impacts in coastal and marine areas. This approach is actually embedded in the ICZM Protocol, which provides for reaching GES with regard to the targets of all three clusters of EOs: Pollution and*

eutrophication; Biodiversity and fisheries; and Coast and hydrography. These are all crucial for achieving GES, and tools used by ICZM contribute to a more comprehensive approach looking at the integrity of coastal ecosystems. The document highlights the interrelations between EcAp, ICZM and MSP. A certain number of actions are planned to take place before 2027 including preparation of Guidelines to help implement ICZM at national level, development of additional coastal indicators to complete EO 8, highlighting the interaction between terrestrial and marine ecosystems and developing training sessions.

- ✓ **The methodological guidance in three phases presented in CRF for ICZM** is of special interest and proposes a methodology towards the identification of a set of operational recommendations, if needed and as appropriate, which shall be calibrated on the specific considered geographic and temporal context, as well as on the cumulative impact integration rules, and regularly updated. The tool provides a basis for identifying the interrelation among drivers, pressures and responses. Given the fact that monitoring and assessment scales of IMAP must still be updated/agreed and tested, the semi-quantitative scorecards methodology is considered useful to address driver-pressure state-impact assessments of complex processes, such as those occurring in the coastal zone.
- ✓ **MedOpen** implemented for several years by PAP/RAC are virtual courses that aim to assist Mediterranean countries in building capacities for coastal and sea management and is in line with the ecosystem approach.
- Other Strategic Frameworks that have been developed or reviewed integrating the ecosystem approach and IMAP when pertinent:
- The **Conceptual Framework for the implementation of Marine Spatial Planning (MSP)** was adopted at COP 20, Tirana 2017 (Decision IG.23/7); it provides the methodology to consider IMAP indicators in the MSP planning process in an integrated and coordinated way. A platform “**MSP Workspace**” has been prepared and several webinars were organised on how to implement MSP in the region and in particular on how to integrate IMAP/EcAp in the MSP process, as well as climate change and land-sea interactions (LSI) considerations. The Decision “Marine Spatial Planning in the Mediterranean” is being prepared for the consideration at MAP FPs meeting in September 2023 with a view to be adopted by the CPs at their COP 23 in December 2023. **Regional strategy addressing ship’s ballast water management and invasive species (Decision IG. 20/11)** for EO 2 (NIS) updated with the **Ballast Water Management Strategy for the Mediterranean Sea (2022-2027) (Decision IG. 25/17)** which specifically has an objective to “contribute to the achievement of GES with respect to NIS as defined in IMAP”. Based on the Guidance Document for the preparation of National Action Plans (NAPs) for the implementation of the Regional Strategy for the Prevention of and Response to Marine Pollution from Ship (2016-2021) agreed upon by the Twelfth Meeting of the Focal Points of REMPEC, addressing Ecological Objectives (EO 2, EO 9, EO 10 and EO 11), with the aim to achieve/maintain GES on non-indigenous species, pollution, litter and underwater energy/noise respectively. In the biennium 2020-2021, the National Action Plan for the implementation of the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021) was completed by Egypt; similar plans had been developed by Albania, Montenegro, Morocco, Tunisia, and Türkiye.
- **Mediterranean Strategy for Sustainable Development 2016-2025 [MSSD]** (Decision IG. 22/2). The action 1.1.2 specifically targets the implementation of the EcAp Roadmap to achieve healthy marine ecosystems and conserve marine biodiversity.

- **Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021)** (Decision IG. 22/4) updated with the **Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)** (Decision IG. 25/16) is in relation with EO 2, EO 9 and EO 10 referred to in the guiding principles and streamlines ecosystem approach implementation at all levels. In the biennium 2020-2021, the National Action Plan for the implementation of the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021) was completed by Egypt; similar plans had been developed by Albania, Montenegro, Morocco, Tunisia, and Türkiye. Further, by Decision IG.25/14 of COP 22 (Antalya, Türkiye, 7-10 December 2021) the Mediterranean Sea, as a whole, was designated as an Emission Control Area for Sulphur Oxides (Med SOX ECA) pursuant to Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL).
- **Regional Action Plan on Sustainable Consumption and Production in the Mediterranean (2016-2021)** (Decision IG. 22/5) followed the previous Regional Action Plan of the name (2005-2015) and specifically refers to IMAP ecological objectives EO 2, EO 9, EO 10 and EO 11.
- A **Memorandum of Understanding between UNEP/MAP and GFCM** was signed in 2012. Within the activities related to the areas of cooperation, there is the contribution to the implementation of a regional framework strategy based on the ecosystem approach and on agreed indicators and reference points, to monitor the status of marine environment and coastal ecosystems and that of marine living natural resources. This MoU is being regularly reviewed.
- The large majority of the relevant action plans and programmes have been updated at regional and sub-regional level and concern the three clusters Biodiversity and fisheries, Pollution and marine litter, and Coast and hydrography. IMAP operational objectives and indicators for Pollution and marine litter cluster are well represented in National Action Plans.
- **The implementation of the Barcelona Convention and its Protocols is facilitated by technical Guidelines, prepared in close coordination with the Contracting Parties.** These guidelines clarify and provide guidance on technical aspects of the implementation of the Protocols and Regional Plans and streamline the ecological objectives and GES targets. Guidelines for NAPs are also pertinent to implement national IMAPs. These guidelines are regularly updated. Some of these are the following:
 - ✓ Numerous guidelines and tools have been developed by UNEP/MAP Components in line with the IMAP requirements. Concerning EO 1 and EO 2 many can be found on SPA/RAC website publication page.
 - ✓ Global guidance for the implementation of the ecosystem approach through IMAP for EO 1, EO 2, EO 5, EO 7, EO 8, EO 9, EO 10 and EO 11 can be found in the Integrated Monitoring and Assessment Guide
 - ✓ Guidelines for updating National Action Plans for the implementation of the LBS Protocol and its Regional Plans in the framework of SAP MED to achieve Good Environmental Status for pollution related ECAP ecological objectives
 - ✓ Revised Guidelines for the Conduct of Environmental Impact Assessment (EIA) under the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil

- ✓ Guidelines: Adopt-a-Beach; Phase-out of Single Use Plastic Bags; Provision of Reception Facilities in Ports and the Delivery of Ship-Generated Wastes; Application of Charges at Reasonable Costs for the Use of Port Reception Facilities
- ✓ Guidelines for Implementing the Marine Litter Regional Plan in the Mediterranean (Fishing for Litter Guidelines, Assessment Report, Baselines Values, and Reduction Targets)
- ✓ Guidelines for Dumping of Inert Uncontaminated Geological Materials which were adopted by in COP14 have been updated (UNEP/MED 23WG.563/10) in line with the requirements of Articles 4.2 and 6.2 of the Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration (Dumping Protocol). These will be submitted to the next MAP Focal Points meeting for approval and COP 23 for adoption.
- ✓ A Compendium of Best Practices for Implementation of Dumping Protocol (2023) (UNEP/MED WG.554/4) has been updated and shared with the CPs.

Participation to other relevant publications:

- Monitoring the incidental catch of vulnerable species in the Mediterranean and Black Sea fisheries. Methodology for data collection¹⁵.
- Identification guide of vulnerable species incidentally caught in Mediterranean fisheries¹⁶.

Gaps

- The implementation of operational objectives, GES targets and indicators for the Biodiversity and fisheries cluster at national level are difficult to evaluate.
- Implementation of National Action Plans still needs to be supported.
- Regulation needs to be enforced at national level.
- In the Secretariat's Initial Gap Analysis on existing measures under the Barcelona Convention relevant to achieving or maintaining good environmental status of the Mediterranean Sea, in line with the Ecosystem Approach, 2014, it is stated that regarding coordinating and developing common tools to implement the biodiversity related NAPs, the SAP/BIO Analysis concluded that this priority action has not been implemented mainly because of the non-availability of financial resources. Although there has been recent progress (see Progress Report on Activities Carried Out during the 2020-2021 Biennium, UNEP/MED IG.25/3), implementation of biodiversity conservation policies, strategies and legislation measures needs strengthening at national level.
- The Action Plans for the conservation of coralligenous and other calcareous bioconstructions, of Marine and Coastal Bird Species, of the monk seal, of marine turtles, of Cartilaginous Fishes (Chondrichthyans), of marine vegetation and dark habitats in the Mediterranean and concerning Species Introductions and Invasive Species, seem to be not fully transposed and implemented at national level. Work is being done to implement or update NAPs on Biodiversity and NIS for some species such as sea turtles.

¹⁵ FAO. 2019. Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: Methodology for data collection. FAO Fisheries and Aquaculture Technical Paper No. 640. Rome, FAO.

¹⁶ Otero, M., Serena F., Gerovasileiou, V., Barone, M., Bo, M., Arcos, J.M., Vulcano A., Xavier, J. (2019). Identification guide of vulnerable species incidentally caught in Mediterranean fisheries. IUCN, Malaga, Spain, 204 pages.

- The Regional Action Plans refer to the ecosystem approach and take in consideration IMAP indicators. Nevertheless interrelations between specific Regional Action Plans could be reinforced for a more integrated and coherent approach.
- The implementation of operational objectives, GES targets and indicators related to fisheries (EO 3) at national level, depends on the GFCM. No updated document relating to the national state of implementation of EO 3 was found.

Recommendations

- It could be recommended to strengthen exchanges and increase cooperation between UNEP/MAP and other key partners, especially GFCM regarding fisheries. Cooperation between SAPBIO and GFCM is strong concerning main aspects, i.e. bycatch of vulnerable species (see UNEP(DEPI)/MED WG.401/5), but there is room for strengthening this cooperation.
- There has been an effort in assessing and strengthening interrelations between relevant Regional Action Plans and Guidelines, and such interrelations should be further reinforced to increase an ecosystem and integrated approach.
- The Symposia organised by SPA/RAC on key habitats and NIS brings together scientists and stakeholders on the subjects and creates important exchanges. But there are very few presentations concerning APs such as monk seals, turtles, birds and sharks. Encouraging the participation of scientists from these groups could increase the comprehension of Mediterranean ecosystem functioning.

ANNEX I

**References used for the evidenced-based evaluation of the EcAp roadmap (2008-2021)
and contribution of the references to the implementation of each EcAp step**

Table A: References used for the evidenced-based evaluation of the EcAp roadmap (2008-2021) and contribution of the references to the implementation of each EcAp step.

The implementation of the Ecosystem Approach Roadmap was evaluated by reviewing UNEP/MAP documents many of which were accessed through [the UNEP/MAP search meeting documents](#) and the [SPA/RAC list of main meetings page](#).

First, all COP decision were reviewed since COP 15, 2008, date at which the Contracting Parties of the Barcelona Convention committed to the EcAp Roadmap ([Decision IG.17/6](#)).

The contextual introductions of the decisions were read and keywords were searched for in the documents. The keywords were: “EcAp”, “Ecosystem approach”, “IMAP”, “ecological objective”, “GES”, “indicators”, “monitoring”, and “gaps”.

The section of the decision including the keywords was read to evaluate if it concerned the Ecosystem Approach, which of the seven steps of the EcAp roadmap were concerned and to what degree. The decisions were then classified as:

- (i) not relevant to the EcAp roadmap and were not retained,
- (ii) compliant and in line with the EcAp roadmap,
- (iii) to contribute to the definition of part of the EcAp roadmap,
- (iv) or to contribute to the EcAp roadmap implementation.

The documents (ii) to (iv) were listed in the Annex I, Table A, and the relation to the specific EcAp roadmap steps indicated in the corresponding cell.

Secondly, documents and reports from CORMON, thematic Focal Points and EcAp Coordination Groups meetings since 2012 were assessed (since the adoption of UNEP/MED IG. 24/4 during COP 17). All documents relating to the implementation of the EcAp roadmap, of IMAP including Ecological Objectives and Common Indicators were listed in Annex I, Table A with associated information.

Other reports relative to the state of the Mediterranean Sea were searched for through [UNEP/MAP monitoring and assessment page](#) and considered in the evaluation.

To evaluate the implementation at a sub-regional and national level, the programmes and projects relevant to EcAp and to IMAP implementation were searched for through the [UNEP/MAP project page](#), and the Compilation of Projects Fiches from 2017 to 2022 available on the same page was considered. All projects and programmes relative to EcAp implementation actions and especially to IMAP implementation were listed also under Annex I, Table A and the relation to the specific EcAp roadmap steps indicated.

Supplementary important reports that were consulted are also listed at the end of the table.

Table A: References used as evidence base in the evaluation of the EcAp roadmap (2008-2021) and their contribution in the implementation of each EcAp step. The relevance of the references to an EcAp roadmap step is indicated in the corresponding cell. (BC/BAC: Background (Assessment) Concentrations; BV: Baseline values, CI: Common Indicator, CCI: Candidate Common Indicator, CRF: Common Regional Framework, EAC: Environmental Assessment Criteria; EO: Ecological objective, GES: Good Environmental Status, ICZM: Integrated Coastal Zone Management, MSP: Marine Spatial Planning; TV: Threshold values)

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
COP Decisions							
COP 15, 2008 (UNEP(DEPI)/MED IG.17)							
IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment	Definition	Definition					
Conference of Plenipotentiaries on the Protocol on Integrated Coastal Zone Management (ICZM) in the Mediterranean, 2008 (UNEP(DEPI)/MED IG.18)							
IG.18/04 - Final Act (incl. Protocol) Protocol on Integrated Coastal Zone Management (ICZM) in the Mediterranean	In line	In line					In line with EcAp
COP 16, 2009 (UNEP(DEPI)/MED IG.19)							
IG.19/17 - Decision on the adoption of the Five-Year Programme of Work and Programme Budget for the 2010-2011 biennium	In line	In line					In line with EcAp
COP 17, 2012 (UNEP(DEPI)/MED IG.20)							
IG.20/2 - Adoption of the Action Plan for the implementation of the ICZM Protocol for the Mediterranean (2012-2019)	In line	Contribution					In line with EcAp
IG.20/4 - Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap	Definition	Definition		Definition	Definition and timetables for GES, targets and monitoring programmes		
IG.20/6 - Adoption of the Work Programme and Implementation Timetable of the Action Plan for the conservation of marine vegetation in the Mediterranean Sea for the period 2012-2017			(state of the art for marine vegetation)				In line with EcAp
IG.20/10 - Adoption of the Strategic Framework for Marine Litter management	In line	Contribution					EO 10
IG.20/11 - Regional strategy addressing ship's ballast water management and invasive species	In line	Contribution					EO 2
IG.20/14 - MAP Programme of Work and Budget for the 2012-2013 biennium							Planned
COP 18, 2013 (UNEP(DEPI)/MED IG.21)							
IG.21/3 - Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets	In line	In line		Further definition	Definition of targets and GES for the CI		
IG.21/4 - Action Plans under the Specially Protected Areas and Biological Diversity Protocol including Monk Seal, Marine Turtles, Birds, Cartilaginous Fishes, and Dark Habitats	In line	Contribution	Contribution				In line
IG.21/7 - Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol	In line	Contribution					In line with EO 10
COP 19, 2016 (UNEP(DEPI)/MED IG.22)							
IG.22/1 - UNEP/MAP Mid-Term Strategy 2016-2021	In line	Contribution					In line with EcAp Roadmap

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
IG.22/2 - Mediterranean Strategy for Sustainable Development 2016-2025 [MSSD]	In line	In line					In line with EcAp
IG.22/3 - Mediterranean Offshore Action Plan in the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil	In line	Contribution					In line with EcAp Roadmap
IG.22/4 - Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021)	In line	Contribution					In line with EcAp Roadmap
IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean	In line	Contribution					In line with EcAp Roadmap
IG.22/6 - Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas	In line	Contribution					
IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	In line	In line		Further definition of EOs	Definition of IMAP indicators		
IG.22/10 - Implementing the Marine Litter Regional Plan in the Mediterranean (Fishing for Litter Guidelines, Assessment Report, Baselines Values, and Reduction Targets)	In line	In line				Contribution for EO 10	Marine litter
IG.22/11 - Mid-term Evaluation of the Action Plan for the Implementation of the ICZM Protocol for the Mediterranean (2012-2019)						Evaluation of EO 7 and 8, CI 15, 16 and CCI 25	
IG.22/12 - Updated Action Plans Concerning "Cetaceans", "Coralligenous and Other Calcareous Bioconcretions", and "Species Introductions and Invasive Species"; Mandate for update of the "Action Plan on Marine and Coastal Birds" and revision of the "Reference List of Marine and Coastal Habitat Types in the Mediterranean"	In line	Contribution					Updated in line with EO 1
IG.22/13 - Roadmap for a Comprehensive Coherent Network of Well-Managed Marine Protected Areas (MPAs) to Achieve Aichi Target 11 in the Mediterranean							In line with EcAp Roadmap
IG.22/20 - Programme of Work and Budget 2016-2017	Integrates regional needs for IMAP implementation						
IG.22/Inf.7 - Integrated Monitoring and Assessment Guidance	In line	In line			Monitoring and assessment guidelines for all EOs except EO 3, EO 4, EO 6	Monitoring and assessment guidelines	
COP 20, 2017 (UNEP(DEPI)/MED IG.23)							
IG.23/6: 2017 Mediterranean Quality Status Report			Contribution		Contribution to CI validation, achievements and gaps		
IG.23/7: Implementation of the Integrated Coastal Zone Management Protocol: Annotated Structure of the Common Regional Framework for Integrated Coastal Zone Management and Conceptual Framework for Marine Spatial Planning	In line	In line				Contribution for EO 5, 7, 8, 9, and 10	In line with EcAp Roadmap. Links with EOs and CRF for ICZM and MSP
IG.23/8 - Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean -	In line	In line					Updated in line with EcAp Roadmap

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean							
IG.23/9 - Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance	In line	In line					In line with EcAp Roadmap
IG.23/14 - Programme of Work and Budget for 2018–2019	Integrates regional needs for IMAP implementation						
COP 21, 2019 (UNEP(DEPI)/MED IG.25)							
IG.24/4 - Assessment Studies. 2019 Report on the State of the Environment and Development in the Mediterranean SoED (2019) Key messages and summary for decision makers			General state, main pressures and impact			Gaps in implementation	
IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	In line	Contribution					Links between EcAp, MSP and CRF for ICZM
IG.24/7 - Strategies and Action Plans under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, including the SAPBIO, the Strategy on Monk Seal, and the Action Plans concerning Marine Turtles, Cartilaginous Fishes and Marine Vegetation; Classification of Benthic Marine Habitat Types for the Mediterranean Region, and Reference List of Marine and Coastal Habitat Types in the Mediterranean	In line	Contribution				Contribute to enforce implementation of CI 1, 2, 3, 4, 5	Updated for EO 1
IG.24/11 - Guidelines: Adopt-a-Beach; Phase-out of Single Use Plastic Bags; Provision of Reception Facilities in Ports and the Delivery of Ship-Generated Wastes; Application of Charges at Reasonable Costs for the Use of Port Reception Facilities		Contribution		In line with EO 10 Marine litter			
IG.24/12 - Updated Guidelines Regulating the Placement of Artificial Reefs at Sea		In line		In line			EcAp referred to
IG.24/14 - Programme of Work and Budget 2020-2021	Integrates regional needs for IMAP implementation						
COP 22, 2021 (UNEP(DEPI)/MED IG.25)							
IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027	In line	Contribution	In line			Through the strategy objectives the implementation of all CI will be enhanced	
IG.25/3 - Progress Report on Activities Carried Out during the 2020-2021 Biennium						Progress on IMAP implementation at national level including Steering Committees through IMAP-MPA and other projects	
IG.25/5 - Amendments to Annexes I, II, and IV to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities	In line	Contribution					Updated taking EcAp in consideration
IG.25/6 - Amendments to the Annex to the Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea	In line	In line					Updated taking EcAp in consideration
IG.25/8 - Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management in the Framework of Article 15 of the Land Based Sources Protocol	In line	Contribution					
IG.25/9 - Amendments to the Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol	In line	In line				Contributes to implement EO 10, CI 22	Update for EO 10, CI 22
IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of	In line	Contribution				Refinement and enforcement of EO	In line with EO 1 and 2

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)						1 and 2, CI 1-6 through goal 3	
<u>IG.25/12 - Protecting and conserving the Mediterranean through well connected and effective systems of marine and coastal protected areas and other effective area-based conservation measures, including Specially Protected Areas and Specially Protected Areas of Mediterranean Importance</u>	In line	In line					
<u>IG.25/13 - Action Plans for the conservation of species and habitats under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean</u>	In line	In line					In line with EO 1
<u>IG.25/15 - Guidelines for the Conduct of Environmental Impact Assessment (EIA) under the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil</u>	In line	In line					In line with EO 9
<u>IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)</u>	In line	In line					In line with EO 9
<u>IG.25/17 - Ballast Water Management Strategy for the Mediterranean Sea (2022-2027)</u>	In line	In line					In line with EO 2, CI 6
<u>IG.25/18 - Set of Regional Measures to Support the Development of Green and Circular Businesses and to Strengthen the Demand for more Sustainable Products</u>	In line	In line					
<u>IG.25/19 - Programme of Work and Budget for 2022-2023</u>	Integrates regional needs for IMAP implementation						
<u>IG.25/26 - Overall Findings from the General Status of the Progress in the Implementation of the Barcelona Convention and its Protocols: Analysis of the Information Mentioned in the National Reports for the 2018-2019 Biennium</u>						General information on the BC Protocols and IMAP implementation at national level	
<u>IG.25/Inf.8 - General Status of the Progress in the Implementation of the Barcelona Convention and its Protocols: Analysis of the Information Mentioned in the National Reports for the 2018-2019 Biennium</u>						Assessment of national monitoring programmes relative to IMAP and BC Protocols' requirements	
CORMON meetings							
<u>Meeting of the Integrated Monitoring Correspondence Group. Athens, Greece, 30 March - 1 April 2015. UNEP(DEPI)/MED WG.411 especially UNEP(DEPI)/MED WG 411/3)</u>				Elements for IMAP	Main elements for IMAP, clusters Biodiversity and Fisheries, Pollution and Litter, Coast and Hydrography		
<u>Meeting of the Ecosystem Approach Correspondence Group on Pollution Monitoring Marseille (France), 19-21 October 2016. All documents UNEP(DEPI)/MED WG.427</u>						Draft guidance factsheets for EO 5 and 9, CI 13, 14, 17, 18, 19, 20, 21 and state of the art of MEDPOL indicators related to IMAP	
<u>Meeting of the Ecosystem Approach Correspondence Group on Biodiversity and Fisheries Madrid (Spain), 28 February-1 March 2017. All documents UNEP(DEPI)/MED WG.430</u>						Concerns EO 1, 2 and 3. Draft factsheets and guidelines for the preparation of the country specific EcAp monitoring	

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
						programme for biodiversity and NIS	
<u>Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring Madrid (Spain), 28 February-2 March 2017. All documents UNEP(DEPI)/MED WG.429</u>						Guidance factsheets for EO 10, CI 22, 23 CCI 24	
<u>Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) on Coast and Hydrography Madrid (Spain), 3 March 2017. All documents UNEP(DEPI)/MED WG.433</u>						Preparations of EO 7 and 8, CI 15, 16, CCI 25	
<u>Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries Marseille, France, 12-13 February 2019. All documents UNEP/MED WG.458</u>						Gaps, monitoring protocols for EO 1 and 2, CI 3,4,5 and 6; DD/DS for CI 1, 2	
<u>Meeting of the Ecosystem Approach Correspondence Group on Pollution Monitoring, Podgorica, Montenegro, 2-3 April 2019 UNEP/MED WG.463</u>						Factsheets, monitoring protocols and approach on scales for CI 13, 14, 17, 18, 20 and 21; proposal of factsheets on CI 26 and 27; DD/DS for CI 13, 14, 17 and 21. Methodological approach for mapping interrelations between sectors EO 5, EO 9	
<u>Joint Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring and ENI SEIS II Assessment of Horizon 2020/National Action Plans of Waste Indicators Podgorica (Montenegro), 4-5 April 2019. All documents UNEP/MED WG.464</u>						Progress of implementation of EO 10, CI 22, 23, CCI 24, proposed DD/DS and grid/table template for mapping pressure/impacts interactions for CI 22, 23	
<u>Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries Rome (Italy), 21-May 2019. All documents UNEP/MED WG.474</u>						Monitoring protocols for EO 1, CI 1, 2 related to benthic habitats, 3, 4, 5 and 6 (EO 2); DD/DS for CI 1 and 2 benthic habitats and CI 6	
<u>PAP/RAC Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) on Coast and Hydrography, Rome, Italy, 21-22 May 2019. (See UNEP/MED WG.471/6) also UNEP/MED WG.471/Inf.3</u>						Status of implementation at national level of EO 7 and 8, CI 15, 16	
<u>Integrated Meetings of the Ecosystem Approach Correspondence Groups on IMAP Implementation (CORMONs) (Meeting 1-3 December 2020). All meeting documents UNEP/MED WG. 482 and in particular UNEP/MED WG 482/25 on the Comparative Analysis Undertaken with regard to IMAP and the European Commission GES Decision 2017/848/EU for Biodiversity</u>						Concerns EO 1, 2, 5, 9 and 10. Monitoring guidelines for CI 1, 2, 6, 13, 14, 17, 20, 23. Revised guidance factsheets for CI 6 and 19; DD/DS for CI 3,4 and 5 for marine mammals, turtles and birds (draft); Baseline values CI 22. Also gaps underlined for EO 1 in comparison	

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
						with MSFD in document WG.482/25)	
Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON), Marine Litter (Meeting 30 March 2021) (see UNEP/MED WG.514/Inf.4 and documents UNEP/MED WG.490/3, UNEP/MED WG.490/4, UNEP/MED WG.490/5, UNEP/MED WG.490/6)				EO 10	BV and proposed TV for CI 22	Monitoring guidelines for CI 23 for floating microplastics, Pressure analysis for CI 22 and 23, Comparative Analysis Undertaken with regards to IMAP and the EC New GES Decision 2017/848/EU for Marine Litter	Regional Operational Strategy for Monitoring CCI 24, Addendum to the MED POL Beach Marine Litter Item List and their DS and DD to include Two New COVID-19 Related Items (Single-Use Plastic Masks & Gloves)
Meeting of the Ecosystem Approach Correspondence Groups on Monitoring (CORMON), Pollution (Meeting 26-28 April 2021), see UNEP/MED WG.492/9, UNEP/MED WG.492/10 and UNEP/MED WG.492/Inf.9						Review of Monitoring Guidelines/Protocols for IMAP for CIs 13, 14, 17, 18 and 20; laboratory practices for EO 5 and 9, rules for integration of monitoring and assessment areas for EO 5, EO 9, EO 10. Assessment of the Capacities of National Laboratories responsible for Monitoring of IMAP Common Indicators 13, 14, 17, 18 and 20. State of Play of Inter-laboratory Testing and Good Laboratory Practice related to IMAP Ecological Objectives 5 and 9	
Meeting of the Ecosystem Approach Correspondence Groups on Monitoring (CORMON), Biodiversity and Fisheries (Meeting 10-11 June 2021) (see UNEP/MED WG.514/Inf.06) and also UNEP/MED WG.500/10 on methodological approach of mapping interaction Pressures/Impacts/Status of ecosystems						Concerning EO 1 and 2. Monitoring guidelines for CI 1, 2 on benthic habitats; Assessment scales and criteria, thresholds and baseline values for CI 3, 4 and 5 for marine mammals; revised guidance factsheets, assessment scales and criteria, threshold values and proposed baseline values for CI 6; DD/DS for CI 3,4 and 5) Also relation Pressures/ CI 1-5 and methodology	
Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries (Meeting 28-29 March 2022). All meeting documents UNEP/MED WG.520					Concerning EO 1 and 2. Assessment	Concerning EO 1 and 2. DD and DS for CI 3, CI 4, CI 5 related to marine mammals, turtles	

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
					t scales, criteria, threshold and baseline values for CI 3, CI 4, CI 5, related to birds	and birds; baseline values for CI 6	
Meeting of the Ecosystem Approach Correspondence Group on Pollution Monitoring (Videoconference, 27 and 30 May 2022) (see documents UNEP/MED WG.533/3 , UNEP/MED WG.533/4 , UNEP/MED WG.533/5 , UNEP/MED WG.533/6 , UNEP/MED WG.533/7 and UNEP/MED WG.533/8)					Assessment criteria (BC/BAC) for CI 13 (Adriatic sub-region) and 17 and (EAC) for CI 17, 18 and 20, Threshold values for CI 13 Adriatic sub-region. Threshold GES/nonGES values for CI 17 (Adriatic subregion) use of NEAT approach. Proposition of threshold values for Levantine basin using CHASE+ and traffic light approach.	DS and DD for CI 18 and CI 20	
Meeting of the MED POL Focal Points (Videoconference, 27-28 May and 6-7 October 2021)					Proposed monitoring guidelines for CI 13, 14, 17, 18 and 20		
Thematic Focal Point and other thematic meetings							
Tenth Meeting of Focal Points for SPAs (Marseilles, France, 17 - 20 May 2011)			Sub-regional reports for the 4 sub-regions				
Integrated Correspondence Groups of GES and Targets Meeting Athens (Greece), 17-19 February 2014. UNEP(DEPI)/MED WG.390				Development of EOs' CI	Identification and definition of Common Indicators		
MED POL Focal Points Meeting Malta, 16-19 June 2015 especially UNEP(DEPI)/MED WG.417/06				Elements and guidance for EO 5, EO 9, EO 10	Elements for CI 7, 8, 11, 12, 13, 14, 15, 16, 17, CCI 24		
Twelfth Meeting of Focal Points for Specially Protected Areas, Athens (Greece), 25-29 May 2015. Especially UNEP(DEPI)/MED WG.408/5 on initial gap analysis on existing measures under the				Relations between EOs and existing measure and	Relations between operational objectives		

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Barcelona Convention relevant to achieving or maintaining good environmental status of the Mediterranean Sea, in line with the Ecosystem Approach				assessment of gaps	and existing measure and assessment of gaps		
<u>Regional Meeting on NAPs Implementation – Lessons learned and the way forward Marseille (France), 17-18 October 2016. UNEP(DEPI)/MED WG.426 especially UNEP(DEPI)/MED WG.426/3</u>			Identification of national hotspots with regard to EO 5, EO 9 and EO 10		Progress in implementing common operational targets in NAPs for EO 5, EO 9 and EO 10		Progress in implementing common operational targets in NAPs for EO 5, EO 9 and EO 10
<u>Meeting of the MED POL Focal Points, 2017. IMAP Common Indicator Guidance Facts Sheets (Pollution and Marine Litter) (UNEP(DEPI)/MED WG.439/12)</u>						Concerning EO 5, 9 and 10. Guidance factsheets for CI 13, CI 14, CI 17, CI 18, CI 19, CI 20, CI 21, CI 22, CI 23, CCI 24	
<u>Regional Meeting on IMAP Implementation: Best Practices, Gaps and Common Challenges Rome (Italy), 10-12 July 2018 and especially UNEP/MED WG.450/3 and UNEP/MED WG.450/7</u>						Progress of IMAP national implementation	
<u>Meeting of the MED POL Focal Points Istanbul (Turkey), 29-31 May 2019. UNEP/MED WG.473</u>						Concerning EO 5, 9, 10. Updated guidance factsheets for CI 13, CI 14, CI 17, CI 18, CI 20, CI 21, new proposals for CI 26, CI 27 ; DD/DS for CI 13, 14, 17, 21, 22, 23	
<u>Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) Malta, 11-13 June 2019. REMPEC/WG.45/08</u>					Draft Guidance factsheet for EO 9, CI 19		
<u>Fourteenth Meeting of SPA/BD Thematic Focal Points, Portorož, Slovenia, 18-21 June 2019. All document UNEP/MED WG.461</u>						For EO 1, 2, 10. CI 1, CI 2, CCI 24; regional and national implementation of CI 6; Guidelines for monitoring CI 1, 2, 3, 4, 5, 6; DD/DS for CI 6	
<u>Meeting of the MAP Focal Points Athens, Greece, 10-13 September 2019. Document UNEP/MED WG.468/3</u>						Progress report and projects on IMAP implementation at sub-regional and national level	
<u>Fourteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) 31 May - 2 June 2021 ; Document REMPEC/WG.51/6</u>						EO 2, CI 6, revision of FS for CI 6 and 19	
<u>15th Meeting of SPA/BD Thematic Focal Points 23-25 June 2021; and especially UNEP/MED WG.502/16Rev.1, UNEP/MED WG.502/Inf.10 and UNEP/MED WG.502/Inf.4</u>						Support of implementation at national level and gaps related to the implementation of CI 1-4.	Comparison of CI 1-5 to MSFD descriptors
EcAp Coordination Group							
<u>4th Meeting of the EcAp Coordination Group Athens (Greece), 9-10 October 2014. Documents UNEP(DEPI)/MED WG.401/3</u>			Scoping study of the assessment of marine			Draft monitoring and assessment methodological guidance and	

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and UNEP(DEPI)/MED WG.401/5 and UNEP(DEPI)/MED WG.401/7			environmental degradation costs (WG. 401/7)			relations with other existing measures	
<u>6th Meeting of the Ecosystem Approach Coordination Group (Meeting 11 September 2017). All documents UNEP(DEPI)/MED WG.444</u>						Concerning EO 1, EO 5, EO 7, EO 8, EO 9. Guidance Factsheets for CI 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and CCI 24, 25	
<u>Midterm review of the implementation of the Ecosystem Approach Roadmap, 2017. UNEP(DEPI)/MED WG.444/04</u>			Review	Review	Review	Review	Review
<u>7th Meeting of the Ecosystem Approach Coordination Group (Meeting 9 September 2019). UNEP/MED WG.467</u>					Information for CCI 24, new proposal for CCI 26 and 27	Concerning EO 1, EO 5, EO 6, EO 7, EO 8, EO 9, EO 10, EO 11. Guidance Factsheets updates for CI 13, 14, 17, 18, 20 and 21;; Guidance Factsheets for CI 15, 16 and 25; DD/DS for CI 1, 2, 6, 13, 14, 15, 16, 17, 21, 22, 23;; Monitoring protocols for CI 1, 2, 3, 4, 5, 6. IMAP SPI development	
<u>8th Meeting of the Ecosystem Approach Coordination Group (Meeting 9 September 2021). All documents UNEP/MED WG. 514</u>						Concerning EO 1, EO 2, EO 5, EO 9, EO 10. Assessment scales and criteria, thresholds and baseline values for CI 3, 4 and 5 for marine mammals, turtles; baseline values and proposed threshold values for CI 22; BC/BAC for CI 17, 18 and 20; assessment criteria for CI 13 (pilot application Adriatic); revised guidance factsheets for CI 6; DS and DD for CI 18, 20.	
<u>Status of IMAP implementation per Common Indicator and per Contracting Party (December 2020 – February 2021). (See UNEP/MED WG.514/Inf.08).</u>						CI status of implementation national level	
<u>9th Meeting of the Ecosystem Approach Coordination Group (Videoconference). 5-Jul-22 especially UNEP/MED WG.521/3</u>	Concept note on evaluating implementation and renewing UNEP/MAP's Ecosystem Approach						
Main projects involving UNEP/MAP or MAP components							
MAP Coastal Area Management Programmes (CAMPs)	In line	Contribution					
<u>MedKeyHabitats Project : Project on Mapping of key marine habitats in the Mediterranean and promoting their conservation through the establishment of Specially Protected Areas of Mediterranean Importance (SPAMIs) (2013-2016)</u>	In line	In line	Knowledge acquisition			Contributed to implement CI 1 for key habitats in specific areas of Algeria, Libya, Montenegro, Morocco and Tunisia	

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
<u>MedKeyHabitats II Project : Mapping of marine Key habitats and assessing their vulnerability to fishing activities in the Mediterranean (2017-2019)</u>	In line	In line	Knowledge acquisition			Contributed to implement CI 1 for key habitats in specific areas of Algeria, Cyprus, Malta, Tunisia, Türkiye and Morocco	
<u>MedPartnership (2009-2015)</u>	In line	Contribution				Contributed to implement CI 1 for key habitats in specific areas of Albania, Croatia, Libya, Morocco, Lebanon and Tunisia.	
<u>Deep Sea Lebanon project (2016-2018)</u>			Knowledge acquisition in Lebanese deep sea			Contributed to implement OE 6 in Lebanon	
<u>SIMWESTMED: Supporting Implementation of Maritime Spatial Planning in the Western Mediterranean Region (2017-2018)</u>	In line	In line				Contributed to feed work on EcAp for Western Mediterranean Region (France, Italy, Malta, Spain)	
<u>SUPREME: Supporting maritime spatial Planning in the Eastern Mediterranean (2017-2018)</u>	In line	In line				Contributed to feed work on EcAp for Eastern Mediterranean Region (Croatia, Greece, Italy and Slovenia)	
<u>CO-EVOLVE : Promoting the Co-evolution of Human Activities and Natural Systems for the Development of Sustainable Coastal and Maritime Tourism (2016-2019)</u>	In line	In line			Contributed to feed coastal indicators		
<u>Towards an ecologically representative and efficiently managed network of Mediterranean Marine Protected Areas MedMPA Network project (2016-2019)</u>	In line	Contribution	In MPAs in Algeria, Egypt, Lebanon, Morocco and Tunisia			Contributed to implement CI 1 for key habitats in specific areas of Lebanon and Egypt	
<u>Marine Litter MED project (2016-2019)</u>		Contribution			Progress for defining CCI 24	Indirect implementation for EO 10 in Algeria, Egypt, Israel, Lebanon, Libya, Morocco and Tunisia	
<u>Kuriat Project : Supporting the management of the marine and coastal protected area of the Kuriat Islands (Tunisia) (2017-2019)</u>	In line	In line				Implementation for EO 1 indicators in the Kuriat islands MPA	
<u>ODYSSEA Project : Operating a network of integrated observatory systems in the Mediterranean Sea (2017-2021)</u>	In line	In line				Cooperation in North African countries for EO 1 and EO 2	
<u>QUIETMED2 Project : Joint Programme for GES assessment on D11-noise in the Mediterranean Marine Region (2019-2021)</u>				Contribution to define EO 11 in parallel with MSFD D11	Contribution to define EO 11 indicators in parallel with MSFD D11		
<u>The GEF-UNEP "Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security" (2020-2025)</u>	Contribution	Contribution					
<u>GEF Adriatic: implementation of Ecosystem Approach in the Adriatic Sea through</u>						Integrated monitoring	

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<u>Marine Spatial Planning (GEF Adriatic) (2017-2020), see also Results and achievements of GEF Adriatic Project, and publications on Ecosystem approach and Marine Spatial Planning, Integrated Monitoring Programme for Albania and Montenegro, the Pan Adriatic Scope Report and other publication available at https://www.adriatic.eco/publications/</u>						programme in Montenegro and Albania	
<u>EcAp MED I: An economic and social analysis of uses, prior to their better management (2012-2015)</u>	In line				Definition of targets, GES and indicators		
<u>EcAp MED II: Implementation of the Ecosystem Approach in the Mediterranean, in coherence with the EU MSFD (2015-2019)</u>	In line	In line				National monitoring programmes developed for IC 1, 2, 3, 4, 5 and 6 for <u>Algeria, Egypt, Israel, Libya, Lebanon, Morocco and Tunisia</u> (Support and capacity building through output 1 and 2 for the implementation process of EO 1, EO 2, EO 7, EO 10 in Algeria, Egypt, Israel, Libya, Lebanon, Morocco and Tunisia)	
<u>EcAp-MED III: Support to Efficient Implementation of the Ecosystem Approach-based Integrated Monitoring and Assessment of the Mediterranean Sea and Coasts and to delivery of data-based 2023 Quality Status Report in synergy with the EU MSFD” (2020-2023)</u>	In line	In line	Contribution			Boost implementation, help define scale, harmonized methods at regional, sub regional and national level	
<u>MEDREGION project. Support Mediterranean Member States towards the implementation of the Marine Strategy Framework Directive Good Environmental Status (GES) Decision and programmes of measures and contribute to regional/subregional cooperation</u>	In line	In line					Development of cooperation and coordination with EU countries through MSFD
<u>IMAP-MPA project “Towards achieving the Good Environmental Status of the Mediterranean Sea and Coast through an Ecologically Representative and Efficiently Managed and Monitored Network of Marine Protected Areas” (2019-2023) (also see document UNEP/MED WG.482/Inf.3, 2020 and UNEP/MED WG. 524/2)</u>	In line	In line				Gap identification, supporting and implementation of IMAP through Component 1 for MPA management at regional, sub regional and national level for beneficiary countries: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia.	
<u>The GEF MedProgramme, enhancing environmental security. Seven child programmes (2020-2024)</u>	In line	In line				Transboundary approach for EO 9 CIs for Child Project 1.1	
<u>Marine Litter MED II project phase I (2016-2019) and phase II (2020-2023) (EU funded project)</u>	In line	In line			Development of EO 10	Development of CCI 24	

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
<u>Bycatch Project. Understanding Mediterranean multi-taxa 'bycatch' of vulnerable species and testing mitigation- a collaborative approach</u>					Development of EO 1 and 3	Contributed to implement CI 3,4,5,12	
<u>Conservation of Marine Turtle in the Mediterranean (MAVA funded project)</u>						Contributed to implement CI 3, 4, 5.	
Other relevant documents							
<u>Mangos, A., Bassino, J-P., Sauzade, D. (2010). The economic value of sustainable benefits rendered by the Mediterranean marine ecosystems. Plan Bleu, Valbonne. (Blue Plan Papers 8).</u>			Contribution				
<u>The Mediterranean Sea Biodiversity: state of the ecosystems, pressures, impacts and future priorities (UNEP-MAP, RAC/SPA, 2010)</u>			Contribution				
<u>Initial integrated assessment of the Mediterranean Sea: fulfilling step 3 of the ecosystem approach process, 2011. (UNEP(DEPD)/MED WG.363/Inf.21)</u>			Contribution				
<u>State of the Mediterranean Marine and Coastal Environment (UNEP/MAP – Barcelona Convention, 2012)</u>			Contribution				
<u>Plan Bleu, ACTeon (2014). Scoping study for the assessment of the costs of degradation of the Mediterranean marine ecosystems. Technical Report, Plan Bleu, Valbonne.</u>	In line	In line	Evaluation of the costs of pressures				
<u>Plan Bleu (2014). Economic and social analysis of the coastal and marine waters in the Mediterranean, characterization and impacts of the Fisheries, Aquaculture, Tourism and recreational activities, Maritime transport and Offshore extraction of oil and gas sectors, Technical Report, Plan Bleu, Valbonne</u>	In line	In line	Economic and social analysis contributing to the Initial Integrated Assessment				
<u>Marine Litter Assessment in the Mediterranean 2015</u>			Impact of marine litter		Proposed baseline values for EO 10		
<u>UNEP/MAP (2015). Strategic Action Programme to Address Pollution from Land Based Activities in the Mediterranean region (SAP-MED) and National Action Plans' (NAP) implementation 2000 – 2015. Athens.</u>							NAPs implementation concern EO 5, 9 and 10
<u>Plan Bleu (2016). Economic assessment of ecosystem services provided by Mediterranean wetlands in terms of climate regulation. Plan Bleu, Valbonne</u>			Ecosystem services				
<u>Joint Workshop on Science Policy Interface (SPD) strengthening and Ecosystem Approach Coordination Group Meeting on IMAP scales of monitoring and assessment, including the next QSR. Report, 2017</u>						Work on geographical and temporal scales of monitoring and assessment of indicators and relation to SPI/IMAP, underlined science gaps and policy needs in implementation	
<u>2017 Mediterranean Quality Status Report</u>			Contribution		Contribution to CI validation, identification of achievements and gaps		

References	Step I	Step II	Step III	Step IV	Step V	Step VI	Step VII
Reports on national monitoring programmes for biodiversity and NIS in Algeria, Egypt, Israel, Lebanon, Libya, Morocco and Tunisia						NAP for EO 1 and EO 2 for Egypt, Israel, Lebanon, Libya, Morocco and Tunisia	
Evolution of built-up area in coastal zones of Mediterranean countries between 1975 to 2015 document presented during the EcAp CORMON meeting on hydrography, May 2019 (UNEP/MED WG.471/Inf.3)			Contribution		Information for CCI 28		
PAP/RAC - Institute of Water of the Republic of Slovenia (2019), EO8 Coastal Ecosystems and Landscapes Common Indicator 16 - Length of coastline subject to physical disturbance due to the influence of manmade structures – Slovenia.						Implementation of CI 16	
Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report (MedECC, 2020)			Contribution				
Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (2021). Study on trends and outlook of marine pollution from ships and activities and of maritime traffic and offshore activities in the Mediterranean. Floriana			Contribution for EO 2, EO 10, EO 11		Information for EO 2, 10 and 11: CI 6, CI22, CCI 26 and CCI 27		
Integrated Monitoring Programme – Montenegro (UNEP/MAP-PAP/RAC-SPA/RAC and MESPU, 2021).						Defining the national monitoring programme in Montenegro	
Integrated Monitoring Programme – Albania (UNEP/MAP-PAP/RAC-SPA/RAC, MET and NAPA, 2021).						Defining the national monitoring programme in Albania	
Pan Adriatic Scope. Adriatic-Ionian cooperation towards MSP (no date)						Transboundary cooperation for harmonised MSPs	
FAO. (2019). Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: Methodology for data collection (p. 81) [FAO Fisheries and Aquaculture Technical Paper N°640]. Rome: FAO.						CI 12	
Guidelines for the assessment of environmental impact on coralligenous and maërl assemblages							Synthesis of regulation in Mediterranean countries and protocol
Guidelines for inventorying and monitoring of Dark Habitats (UNEP(DEPI)/MED WG.431/Inf.12					Guidelines for EO 1		

ANNEX II

Data Dictionaries/Data Standards, Assessment Criteria, Threshold Values, Baseline Values, Guidance Factsheets, Guidelines and Monitoring Protocols available or in progress for each IMAP Common Indicator (CI) or Candidate Common Indicator (CCI)

Table B: Data Dictionaries/Data Standards, Assessment Criteria, Threshold Values, Baseline Values, Guidance Factsheets, Guidelines and Monitoring Protocols available or in progress for each IMAP Common Indicator (CI) or Candidate Common Indicator (CCI).

EO	Common Indicators and CCIs	Data Dictionaries/ Data standards	Monitoring and Assessment Scales	Assessment Criteria	Thresholds Values	Baseline Values	Guidance Factsheets	Guidelines and Monitoring Protocols
EO 1	1	UNEP/MED WG.467/9					UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16 ; UNEP/MED WG.482/20 (updated for marine veg. And other calcareous bioconstructions); UNEP/MED WG.500/3 (benthic habitats review); UNEP/MED WG.502/Inf.4 (Interpretation Manual of Marine Habitat Types in the Mediterranean Sea)
	2	UNEP/MED WG.467/9					UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16 ; UNEP/MED WG.500/3 (benthic habitats review); UNEP/MED WG.502/Inf.3 (Guidelines for the assessment of environmental impact on coralligenous and maërl assemblages); UNEP/MED WG.502/Inf.4 (Interpretation Manual of Marine Habitat Types in the Mediterranean Sea)
	3 marine mammals	UNEP/MED WG.482/22 ; UNEP/MED WG.520/6 (updated)	UNEP/MED WG.500/4 ; UNEP/MED WG.514/Inf.1	UNEP/MED WG.500/4 ; UNEP/MED WG.514/Inf.1	UNEP/MED WG.500/4 ; UNEP/MED WG.514/Inf.1	UNEP/MED WG.500/4 ; UNEP/MED WG.514/Inf.1	UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16
	3 marine birds	UNEP/MED WG.482/22 ; UNEP/MED WG.520/8 (updated)	UNEP/MED WG.521/Inf.7	UNEP/MED WG.521/Inf.7	UNEP/MED WG.521/Inf.7	UNEP/MED WG.521/Inf.7	UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16
	3 marine reptiles	UNEP/MED WG.482/22 ; UNEP/MED WG.520/7 (updated)	UNEP/MED WG.500/5 ; UNEP/MED WG.514/Inf.12	UNEP/MED WG.500/5 ; UNEP/MED WG.514/Inf.12	UNEP/MED WG.500/5 ; UNEP/MED WG.514/Inf.12	UNEP/MED WG.500/5 ; UNEP/MED WG.514/Inf.12	UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16
EO 1	4 marine mammals	UNEP/MED WG.482/22 ; UNEP/MED WG.520/6 (updated)	UNEP/MED WG.500/4 ; UNEP/MED WG.502/16 Appendix B	UNEP/MED WG.500/4 ; UNEP/MED WG.502/16 Appendix B	UNEP/MED WG.500/4 ; UNEP/MED WG.502/16 Appendix B	UNEP/MED WG.500/4 ; UNEP/MED WG.502/16 Appendix B	UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16
	4 marine birds	UNEP/MED WG.482/22 ; UNEP/MED WG.520/8 (updated)	UNEP/MED WG.467/16 ; UNEP/MED WG.520/4	UNEP/MED WG.520/4	UNEP/MED WG.520/4	UNEP/MED WG.520/4	UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16
	4 marine reptiles	UNEP/MED WG.482/22 ; UNEP/MED WG.520/7 (updated)	UNEP/MED WG.500/5 ; UNEP/MED WG.502/16 Rev.1.Appendi	UNEP/MED WG.500/5 ; UNEP/MED WG.502/16 Rev.1.Appendi	UNEP/MED WG.500/5 ; UNEP/MED WG.502/16 Rev.1.Appen	UNEP/MED WG.500/5 ; UNEP/MED WG.502/16 Rev.1.Appen	UNEP(DEPI)/MED WG.444/6/R ev.1	UNEP/MED WG.467/16

EO	Common Indicators and CCIs	Data Dictionaries/ Data standards	Monitoring and Assessment Scales	Assessment Criteria	Thresholds Values	Baseline Values	Guidance Factsheets	Guidelines and Monitoring Protocols
			<u>x C. Rev.1 (Refinement)</u>	<u>x C. Rev.1 (Refinement)</u>	<u>dix C. Rev.1 (Refinement)</u>	<u>dix C. Rev.1 (Refinement)</u>		
	5 marine mammals	UNEP/MED WG.482/22 (DD/DS); <u>UNEP/MED WG.520/6 (updated)</u>	UNEP/MED WG.467/16; UNEP/MED WG.500/4; <u>UNEP/MED WG.502/16 Appendix B</u>	UNEP/MED WG.500/4; <u>UNEP/MED WG.502/16 Appendix B</u>	UNEP/MED WG.500/4; <u>UNEP/MED WG.502/16 Appendix B</u>	UNEP/MED WG.500/4; <u>UNEP/MED WG.502/16 Appendix B</u>	<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	<u>UNEP/MED WG.467/16</u>
	5 marine birds	UNEP/MED WG.482/22; <u>UNEP/MED WG.520/8 (updated)</u>	<u>UNEP/MED WG.520/4</u>	<u>UNEP/MED WG.520/4</u>	<u>UNEP/MED WG.520/4</u>	<u>UNEP/MED WG.520/4</u>	<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	<u>UNEP/MED WG.467/16</u>
	5 marine reptiles	UNEP/MED WG.482/22; <u>UNEP/MED WG.520/7 (updated)</u>	UNEP/MED WG.500/5 (Refinement); <u>UNEP/MED WG.502/16 Rev.1.Appendi x C. Rev.1 (Refinement)</u>	UNEP/MED WG.500/5 (Refinement); <u>UNEP/MED WG.502/16 Rev.1.Appendi x C. Rev.1 (Refinement)</u>	UNEP/MED WG.500/5 (Refinement); <u>UNEP/MED WG.502/16 Rev.1.Appendi x C. Rev.1 (Refinement)</u>	UNEP/MED WG.500/5 (Refinement); <u>UNEP/MED WG.502/16 Rev.1.Appendi x C. Rev.1 (Refinement)</u>	<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	<u>UNEP/MED WG.467/16</u>
EO 2	6	<u>UNEP/MED WG.467/9</u>	UNEP/MED WG.500/7; UNEP/MED WG.502/16. Appendix E; <u>UNEP/MED WG.520/Inf.3</u>	UNEP/MED WG.500/7; UNEP/MED WG.502/16. Appendix E; <u>UNEP/MED WG.520/Inf.3</u>	UNEP/MED WG.500/7; UNEP/MED WG.502/16. Appendix E; <u>UNEP/MED WG.520/Inf.3</u>	UNEP/MED WG.500/8; UNEP/MED WG.520/6; <u>UNEP/MED WG.520/Inf.3</u> Also see <u>Baseline for the IMAP CI 6</u> <u>UNEP/MED WG.521/Inf.8</u>	UNEP(DEPI)/MED WG.444/6/R ev.1 ; UNEP/MED WG.482/21; UNEP/MED WG.500/6 (revised); <u>UNEP/MED WG.514/10</u>	<u>UNEP/MED WG.467/16</u>
EO 3	7						<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	
	8						<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	
	9						<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	
	10						<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	
	11						<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	
	12						<u>UNEP(DEPI)/MED WG.444/6/R ev.1</u>	

EO	Common Indicators and CCIs	Data Dictionaries/ Data standards	Monitoring and Assessment Scales	Assessment Criteria	Thresholds Values	Baseline Values	Guidance Factsheets	Guidelines and Monitoring Protocols
EO 4								
EO 5	13	<u>UNEP/MED WG.467/8</u> ; <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9 ; UNEP/MED WG.533/4 (for Adriatic sub-region)	UNEP/MED WG.533/4 (for Adriatic sub-region)		UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5</u> ; <u>UNEP/MED WG.473/07</u> (updated);	UNEP/MED WG.463/6; <u>UNEP/MED WG.482/05 (sampling)</u> ; <u>UNEP/MED WG.482/08 (key nutrients in seawater-Nitrogen compounds)</u> ; <u>UNEP/MED WG.482/09 (Phosphorus and silica compounds)</u> ; <u>UNEP/MED WG.509/32</u> and <u>UNEP/MED WG.509/33</u>
	14	<u>UNEP/MED WG.467/8</u> ; <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9			UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5</u> ; <u>UNEP/MED WG.473/07</u> (updated)	UNEP/MED WG.463/6; <u>UNEP/MED WG.482/05 (sampling)</u> ; <u>UNEP/MED WG.482/10 (Chlorophyll a in seawater)</u> ; <u>UNEP/MED WG.509/32</u> and <u>UNEP/MED WG.509/33</u>
EO 6								
EO 7	15	<u>UNEP/MED WG.467/10</u>		<u>Guidance document on how to reflect changes in hydrographical conditions in relevant assessments</u>			<u>UNEP(DEPI)/MED WG.444/07</u> ; <u>UNEP/MED WG.467/6</u>	UNEP/MED WG.482/06 (physical); <u>UNEP/MED WG.482/07 (chemical)</u>
EO 8	16	<u>UNEP/MED WG.467/10</u>		<u>Assessment Criteria and Guiding document for application of assessment criteria for the IMAP Common Indicator 16 on coastline</u>			<u>UNEP(DEPI)/MED WG.444/07</u> ; <u>UNEP/MED WG.467/6</u>	
EO 9	17 sediment	<u>UNEP/MED WG.467/8</u> ; <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9, UNEP/MED WG.533/3 (BC/BAC/EAC)	UNEP/MED WG.533/5 (proposition for Adriatic subregion and use of NEAT approach); UNEP/MED WG.533/6 (proposition for Levantine basin using CHASE+ and traffic light approach)		UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5</u> ; <u>UNEP/MED WG.473/07</u> (updated)	UNEP/MED WG.463/6; <u>UNEP/MED WG.482/11 (sampling)</u> ; <u>UNEP/MED WG.482/12 (sample prep. and analysis)</u> ; <u>UNEP/MED WG.509/32</u> and <u>UNEP/MED WG.509/33</u>

EO	Common Indicators and CCIs	Data Dictionaries/ Data standards	Monitoring and Assessment Scales	Assessment Criteria	Thresholds Values	Baseline Values	Guidance Factsheets	Guidelines and Monitoring Protocols
	17 marine biota	<u>UNEP/MED WG.467/8;</u> <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9, UNEP/MED WG.533/3 (BC/BAC/EAC)	UNEP/MED WG.533/5 (proposition for Adriatic subregion and use of NEAT approach); UNEP/MED WG.533/6 (proposition for Levantine basin using CHASE+ and traffic light approach)		UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5;</u> <u>UNEP/MED WG.473/07 (updated)</u>	<u>UNEP/MED WG.482/13 (sampling);</u> <u>UNEP/MED WG.482/14 (sample prep. and analysis);</u> <u>UNEP/MED WG.509/32 and UNEP/MED WG.509/33</u>
	17 seawater	<u>UNEP/MED WG.467/8;</u> <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9, UNEP/MED WG.533/3 (BC/BAC/EAC)			UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5;</u> <u>UNEP/MED WG.473/07 (updated)</u>	UNEP/MED WG.463/6; <u>UNEP/MED WG.482/15 (sampling);</u> <u>UNEP/MED WG.482/16 (sampling prep. and analysis);</u> <u>UNEP/MED WG.509/32 and UNEP/MED WG.509/33</u>
	18	UNEP/MED WG.533/7		UNEP/MED WG.492/Inf.9, UNEP/MED WG.533/3 (EAC)			UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5;</u> <u>UNEP/MED WG.473/07 (updated)</u>	<u>UNEP/MED WG.463/6;</u> <u>UNEP/MED WG.492/6 (Biomonitoring);</u> <u>UNEP/MED WG.509/28 and UNEP/MED WG.509/29 (for biomarkers);</u> <u>UNEP/MED WG.509/32 and UNEP/MED WG.509/33</u>
	19			UNEP/MED WG.492/Inf.9			UNEP(DEPI)/MED WG.444/5; <u>UNEP/MED WG.482/21 (revision)</u>	<u>UNEP/MED WG.463/6</u>
EO 9	20	UNEP/MED WG.533/7		UNEP/MED WG.492/Inf.9, UNEP/MED WG.533/3 (EAC)			UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5;</u> <u>UNEP/MED WG.473/07 (updated)</u>	UNEP/MED WG.463/6; <u>UNEP/MED WG.482/17 (sampling);</u> <u>UNEP/MED WG.482/18 (analysis);</u> <u>UNEP/MED WG.509/30 and UNEP/MED WG.509/31 for sampling and sampling analysis;</u> <u>UNEP/MED WG.509/32 and UNEP/MED WG.509/33</u>
	21	<u>UNEP/MED WG.467/8;</u> <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9			UNEP(DEPI)/MED WG.444/5; UNEP/MED WG.463/04; <u>UNEP/MED WG.467/5;</u> <u>UNEP/MED WG.473/07 (updated)</u>	<u>UNEP/MED WG.463/6</u>

EO	Common Indicators and CCIs	Data Dictionaries/ Data standards	Monitoring and Assessment Scales	Assessment Criteria	Thresholds Values	Baseline Values	Guidance Factsheets	Guidelines and Monitoring Protocols
EO 10	22	<u>UNEP/MED WG.467/8;</u> <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9	<u>UNEP/MED WG.482/23 (proposals);</u> <u>UNEP/MED IG. 25/27 Annex IV;</u> <u>UNEP/MED WG.514/7 (proposal)</u>	<u>UNEP/MED WG.482/23 (updated);</u> <u>UNEP/MED IG. 25/27 Annex IV;</u> <u>UNEP/MED WG.514/7 (updated)</u>	<u>UNEP(DEPI)/MED WG.444/5</u>	
	23 A. seafloor Marine litter	<u>UNEP/MED WG.467/8;</u> <u>UNEP/MED WG.473/8</u>		UNEP/MED WG.492/Inf.9			<u>UNEP(DEPI)/MED WG.444/5</u>	
	23 B. Floating Marine litter	<u>UNEP/MED WG.467/8;</u> <u>UNEP/MED WG.473/8;</u> <u>UNEP/MED WG.490/6 (Addendum)</u>		UNEP/MED WG.492/Inf.9			<u>UNEP(DEPI)/MED WG.444/5</u>	<u>UNEP/MED WG.482/19 (microplastics);</u> <u>UNEP/MED WG.509/34</u>
	CCI 24						<u>UNEP(DEPI)/MED WG.444/5</u>	<u>UNEP/MED WG.461/8</u>
EO 8	CCI 25		<u>Monitoring and Assessment Methodological Guidance on Land Use Change</u>				<u>UNEP(DEPI)/MED WG.444/07;</u> <u>UNEP/MED WG.467/6</u>	<u>Pilot project tested</u> <u>Pilot project in the Adriatic on testing the candidate common indicator “Land use change” in the Mediterranean</u>
EO 11	CCI 26						<u>UNEP/MED WG.463/04 (proposal);</u> <u>UNEP/MED WG.467/5 (proposal);</u> <u>UNEP/MED WG.473/07 (proposal)</u>	
	CCI 27						<u>UNEP/MED WG.463/04 (proposal);</u> <u>UNEP/MED WG.467/5 (proposal);</u> <u>UNEP/MED WG.473/07 (proposal)</u>	

ANNEX III
Working method

Collection of documents

1. The implementation of the Ecosystem Approach Roadmap was evaluated by reviewing UNEP/MAP documents many of which were accessed through [the UNEP/MAP search meeting documents](#) and the [SPA/RAC list of main meetings page](#).
2. First, all COP decisions were reviewed since COP 15, 2008, date at which the Contracting Parties of the Barcelona Convention committed to the EcAp Roadmap ([Decision IG.17/6](#)).
3. The contextual introductions of each decision were read and the following keywords were searched for in the documents: “EcAp”, “Ecosystem approach”, “IMAP”, “ecological objective”, “GES”, “indicators”, “monitoring”, and “gaps”.
4. The section of the decision including the keywords was read to evaluate the relevance of the document with regard to the Ecosystem Approach, which of the seven steps of the EcAp roadmap was concerned and to what degree. The decisions were then classified as:
 - (i) not relevant to the EcAp roadmap and were not retained,
 - (ii) compliant and in line with the EcAp roadmap,
 - (iii) contributing to the definition of part of the EcAp roadmap,
 - (iv) or contributing to the EcAp roadmap implementation.
5. The documents (ii) to (iv) are listed in the Table A, and the relation to the specific EcAp roadmap steps indicated in the corresponding cell.
6. Secondly, documents and reports from CORMON, thematic Focal Points and EcAp Coordination Groups meetings since 2012 were assessed (since the adoption of UNEP/MED IG. 24/4 during COP 17). All documents relating to the implementation of the EcAp roadmap, of IMAP including Ecological Objectives and Common Indicators were added to the Annex I, Table A with associated information.
7. Other reports relative to the state of the Mediterranean Sea were searched for through [UNEP/MAP monitoring and assessment page](#) and considered in the evaluation.
8. To evaluate the implementation at a sub-regional and national level, the programmes and projects relevant to EcAp and to IMAP implementation were searched for through the [UNEP/MAP project page](#), and the Compilation of Projects Fiches from 2017 to 2022 available on the same page was also considered. All projects and programmes relative to EcAp implementation actions and especially to IMAP implementation were listed additionally under Annex I, Table A and the relation to the specific EcAp roadmap steps indicated. Supplementary important reports that were consulted are also listed at the end of the table.
9. To assess the degree of development and definition of IMAP’s CI and CCIs, documents relative to Data Dictionaries/Data Standards, Assessment Criteria, Threshold Values, Baseline Values, Guidance Factsheets, Guidelines and Monitoring Protocols were collected and are categorized in Table B.
10. Table A and Table B list the documents used in the evaluation presented in **Error! Reference source not found.** as shown in **Error! Reference source not found.** hereafter.

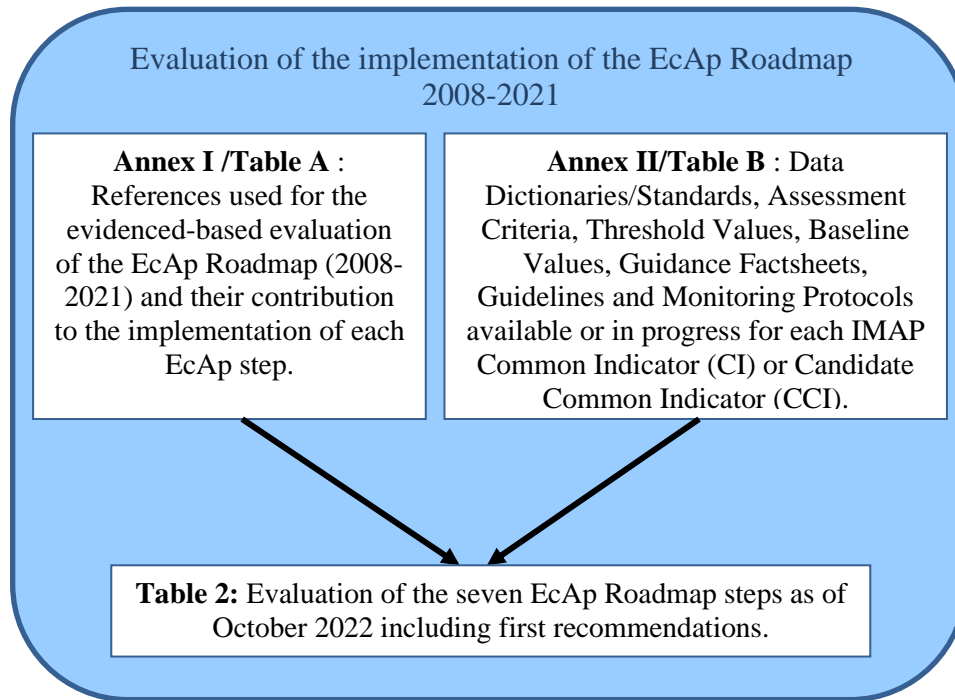


Figure 3 Relations between tables of this document

Evaluation process

11. Assessment of the each EcAp roadmap step status was based on the list of documents (COP decisions, CORMON thematic Focal Points and EcAp CG documents and project documents) relevant to each step compared with the objectives of the step as defined in the decisions **IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment** and **IG.20/4 - Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap**.

12. The evaluation process follows the concept note *Evaluation of Implementation of Ecosystem Approach Roadmap 2008-2021* ([UNEP/MED WG.521/3](#)).

13. The status was considered either “completed”, “majority completed” when it was considered that over 50% of the step’s objectives were implemented, or “partially completed” when it was considered that less than 50% of the objective of the step was implemented.