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Agenda Item 4: Ecosystem Approach Policy in the Mediterranean: Main Directions, Elements and Timeline

Revised Ecosystem Approach Policy for the Mediterranean

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1. Introduction

1. The Ecosystem Approach (EcAp) was agreed in the framework of UNEP/MAP Barcelona Convention System in 2008 and since then a number of important Decisions have been adopted by the Contracting Parties (CPs) to the Barcelona Convention as a roadmap for its implementation:

- 2008 – COP15 | [Decision IG.17/6](#): “Implementation of the Ecosystem Approach to the management of human activities that may affect the Mediterranean marine and coastal environment”.
- 2012 – COP17 | [Decision IG.20/4](#): “Implementing MAP ecosystem approach roadmap (Mediterranean Ecological and Operational Objectives, Indicators and Timetable for Implementing the Ecosystem Approach Roadmap”.
- 2013 – COP18 | [Decision IG.21/3](#): “Ecosystem Approach including adopting definitions of Good Environmental Status (GES) and Targets”.
- 2017 – COP20 | [Decision IG.23/6](#): “2017 Mediterranean Quality Status Report (MED QSR)”.
- 2019 – COP21 | [Decision IG.24/4](#): “Assessment Studies” (Annex V: Roadmap and Needs Assessment for the 2023 MED QSR)
- 2021 – COP22 | [Decision IG.25/3](#): “Governance” (Annex I: Governance Mechanism for the Implementation of the Ecosystem Approach in the Mediterranean).
- 2021 – COP22 | [Decision IG.25/10](#): “MAP Data Policy”.
- 2023 – COP23 | [Decision IG.26/3](#): “The 2023 Mediterranean Quality Status Report (MED QSR) and a Renewed Ecosystem Approach Policy in the Mediterranean”.

2. The provisions of Decision IG.17/6 (COP15) created a series of steps to be carried out, and the following seven steps have been agreed for the implementation of EcAp in the Mediterranean:

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|------------------|---|
| Step I: | Definition of an ecological vision for the Mediterranean. |
| Step II: | Setting of common Mediterranean strategic goals. |
| Step III: | Identification of important ecosystem properties and assessment of ecological status and pressures. |
| Step IV: | Development of a set of ecological objectives corresponding to the Vision and strategic goals. |
| Step V: | Derivation of operational objectives with indicators and target levels. |
| Step VI: | Revision of existing monitoring programmes for ongoing assessment and regular updating of targets. |
| Step VII: | Development and review of relevant action plans and programmes |

3. Whereas the 7 steps are still relevant and considering that Step-III has been completed, it is therefore proposed to proceed with the 6-step approach.

2. Step I: Ecological Vision for the Mediterranean

4. Decision IG.17/6 (COP 15) endorsed by the CPs in 2008, defined the ecological vision for the Mediterranean was defined as:

“A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations”.

Possible Renewal Elements for Consideration:

- a) The actual vision does not refer to the aspects of climate change (CC);
- b) The sustainability and/or sustainable development aspects are discreet; and
- c) A time span could be integrated in the EcAp Roadmap vision as it is the case for example, for the Post-2020 SAPBIO .

5. Possible proposal for formulation, in line with the vision of the UNEP/MAP Mid-Term Strategy (MTS) 2022-2027 ([Decision IG.25/1](#)):

“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.”

3. Step II: Strategic Goals for the Mediterranean

6. The strategic goals for the Mediterranean were adopted at COP 15 (Decision IG.17/6):
- 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.*

Possible Renewal Elements for Consideration:

- a) *Replace the reference to “Ecological Status” by “Good Environmental Status” (in coherence with GES).*
- b) *Replace the reference to “allow recovery” by “enhance environmental conditions allowing natural recovery” to include passive or active ecosystem restoration actions.*
- c) *Integrate climate change and its impacts into the strategic goals.*

7. Possible proposal for formulation of updated strategic goals:

- a) To protect, ~~allow recovery~~ **enhance environmental conditions allowing natural 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~~ **Good Environmental 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, **including climate change** and natural events.

4. Step III: Identification of Important Ecosystem Properties and Assessment of Ecological Status and Pressures

8. Step III was concluded in 2012 (COP17) through undertaking an initial assessment to determine priority issues, information availability as well as gaps that need to be filled, at regional and sub-regional levels.

5. Steps IV and V: Ecological Objectives, Indicators, GES Definitions and Targets

9. An important milestone was achieved in 2012 (COP 17) with the adoption of the 11 Ecological Objectives (EOs), including the respective indicators, GES definitions and targets (Decision IG.20/4) (Annex I).

10. The Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria was adopted during COP 19 in 2016 (Decision IG.22/7), defining in detail a total of 27 Common Indicators (CIs), of which 4 Candidate Indicators, for the 11 EOs of IMAP. This decision provides for first time a number of methodological elements to be considered per EO and CI, a reference list of species and habitats, as well the first assessment criteria for pollution and marine litter, thus enabling a coherent approach for monitoring the respective CIs.

11. An important element to be considered for EcAp Policy update is Climate Change. The initial consideration is for climate change to be considered in both EO7 and EO8. In the case of the EO7 having a focus on hydrography some hydrographic parameters such as salinity, temperature, waves and currents are changing rapidly due to climate change and such alterations may have much stronger impacts on marine habitats and ecosystems than those monitored by Common Indicator 15.

12. With regard to the terrestrial ecosystems related to EO8, and in particular for some specific coastal ecosystems such as wetlands and estuaries, dunes, coastal forests and woods that are threatened by climate change impacts, monitoring efforts should be put in place and further enhanced in order to have a holistic approach for their sustainable use, protection and restoration as appropriate. According to the ICZM Protocol (Art. 10), measures to protect their characteristics, allowing for the provision of goods and services should be put in place.

13. As all these ecosystems are under climate stress and changes happen relatively quick monitoring and assessment of impacts by climate change would allow for adopting measures to mitigate and adapt to such changes so to maintain the diversity and integrity of coastal ecosystems and landscapes. The upcoming CORMON Meeting on Coast & Hydrography, planned to be organized on 17 October 2024, will further discuss these aspects and will provide relevant guidance to the Secretariat. In the present document, no particular revision is introduced.

14. The Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries (6-7 June 2024) emphasized the importance of not adding a separate Ecological Objective (EO) on climate change. Instead, it recommended adapting the existing EOs and Common Indicators (CIs) to integrate climate change aspects. Further clarification of Good Environmental Status (GES) definitions, indicators, and methodologies for establishing baseline and threshold values was also stressed, while taking into account the effects of climate change.

15. Ecological and operational objectives and indicators have been defined for the majority of EOs and factsheets and guidelines have also been created. However, monitoring scales and threshold values (TV) or clear targets are still being outlined for many indicators (e.g. for the biodiversity/NIS indicators) making it difficult to determine at national and sub-regional level whether or not GES has been achieved.

16. Operational Objectives, GES definitions, Common Indicators and related targets still need to be defined for EO4, EO 6, EO8, and EO 11, including for the candidate indicators, especially for those which are still in the initial phase of development.

6. Step VI: Revision of existing monitoring programmes for ongoing assessment and regular updating of targets.

17. Since 2016 national IMAP-based monitoring programmes have been developed and are operational. The revision of the national IMAPs will be carried out as of 2026 in line with the proposed updated roadmap (Annex 2)

7. Step VII: Development and review of relevant action plans and programmes

18. National Action Plans (NAPs) and/or Programmes of Measures (PoMs) have been developed since 2016 for all Contracting Parties to the Barcelona Convention. During the 2024-2025 biennium the Secretariat in close consultation and cooperation with its Contracting Parties has initiated the process for updating the NAPs/PoMs, a process which is expected to be concluded in COP24 in 2025 (Annex II).

19. Moreover, since 2013 a number of important, legally-binding Regional Plans have been adopted for the Mediterranean, including a number of specific measures and timelines as presented in detail in Table 1.

8. Ecosystem Approach Implementation Roadmap and Timeline

20. A timeline extended from 2010 till 2019, including projected outputs of the Ecosystem Approach roadmap implementation was adopted by COP17 in 2012 (Decision IG.20/4), including the establishment of the Ecosystem Approach Coordination Group (EcAp CG). An updated timeline is proposed as described in Annex 2 to the present document.

Table 1: Specific measures and timeline for their implementation in the framework of the legally-binding Regional Plans and Post-2020 SAPBIO, adopted in the framework of UNEP/MAP Barcelona Convention System.

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)	
Urban Wastewater Treatment	
Art. V (6): All agglomerations are provided with collecting systems for urban wastewater for those with a population equivalent (p.e.) of more than 15,000	2025
Art. V (6): All agglomerations are provided with collecting systems for urban wastewater for those with a population equivalent (p.e.) between 2000 and 15,000	2030
Art. V (7): Adopt emission limit values as provided for in Appendix I of the Regional Plan for: (i) discharge of effluents from urban wastewater treatment plants to the environment; (ii) reuse of reclaimed wastewater for agriculture irrigation; and (iii) discharge of industrial wastewater into collecting systems and urban wastewater treatment plants	2025
Art. V (9): All discharges from agglomerations over than 15,000 p.e. are subject to the extent possible to tertiary treatment provided that the Good Environmental Status (GES) of the recipient environment is maintained	2030
Art. V (9): All discharges from agglomerations of size of between 2000 and 15,000 p.e. are subject to the extent possible to secondary treatment provided that the Good Environmental Status (GES) of the recipient environment is maintained	2030
Art. V (15): Competent authority or appropriate body adopt emission limit values appropriate to the nature of industry discharging industrial effluents to collecting systems connected to urban WWTPs	2025
Art. V (16): Industrial wastewater discharged into collecting systems and urban WWTPs shall meet, as a minimum, the emission limit values	2035
Other Measures¹:	
Art. V (10): Promote nature-based solutions to the extent possible for small agglomerations of less than 2000 p.e.	n/a
Art. V (11): Ensure that urban wastewater treatment plants, built to comply with the requirements of Articles 7 and 8, are designed, constructed, operated and maintained to ensure sufficient performance under normal local climatic conditions	n/a
Art. V (12): Ensure that WWTPs are designed to account for seasonal variations of loads; volume and characteristics of the local municipal wastewater; and limitation of pollution of receiving water.	n/a
Art. V (13.i): Implement measures for segregating collecting systems for storm water and municipal wastewater, if technically and economically feasible;	n/a
Art. V (13.ii): Prevent or if not possible minimize sewage and wastewater treatment plants' overflow due to rainwater penetration and flooding;	n/a
Art. V (13.iii): Address impacts of points of discharge of treated wastewater;	n/a
Art. V (13.iv): Adopt tools for conservation of surface water runoff in built environment;	n/a
Art. V (13.v): Reduce pollutant loads and litter in storm water runoff from municipal and industrial sources.	n/a
Art. V (14.i): Promote the reuse of reclaimed wastewater.	n/a
Art. V (14.ii): Implement wastewater reuse systems	n/a
Art. V (17): Take measures to ensure regular monitoring of discharged effluent wastewater, receiving water, reclaimed wastewater and industrial effluents	n/a
Art. VI (18): Collaborate to implement, exchange and share best practices directly or with the support of the Secretariat	n/a
Art. VIII (18): Report on implementation of measures stipulated in this Regional Plan in line with the reporting requirement and timelines provided in Article 26 of the Convention and Article 13, paragraph 2(d) of the LBS Protocol	n/a
Urban Wastewater Treatment and Sewage Sludge Management	
Art. V (7): Contracting Parties shall adopt Class A biosolids suitable for use as fertilizer for agricultural crops having met the pathogen reduction requirements set in Table 1 by treatment processes	2025
Art. V (8): Contracting Parties shall adopt limit values for heavy metals to ensure that use would not affect human health and the environment as provided for in Table 2 (heavy metals in biosolids) and Table 3 (heavy metals in soil)	2025
Art. V (12): Contracting Parties shall establish the required infrastructure for the implementation of the requirements of the applicable measures of this Regional Plan with regards to the use for agricultural land applications and/or for energy/nutrient recovery	2025

¹ Other measures that the Contracting Parties legally commit to undertake as per the Regional Plan with no specific deadlines

Other Measures²:	
Art. V (7): Set classes for sludge with limit values for pathogen contents for biosolids to ensure that use would not affect human health and the environment	n/a
Art. V (7): Consider adopting Class B biosolids suitable for use as fertilizer for non-food crops having met the pathogen reduction requirements set in Table 1 by treatment processes	n/a
Art. V (9): Specify the conditions for use of sludge in its different states (stabilized, treated, untreated) taking into consideration the proximity of sludge application to various types of human activities and civil structure facilities/natural features	n/a
Art. V (10): In the event that limit values set in Tables 1 to 3 (pathogens and heavy metals in biosolids and soil) cannot be met, the Contracting Parties shall apply alternative means to agricultural use including incineration and regulated landfilling	n/a
Art. V (11): Apply adequate treatment processes to reduce volatile organic compounds and diminish possible odor emissions in the different stages of sludge treatment, transport and application in agriculture and other suitable uses	n/a
Art. V (13): Reduce energy costs and increase water savings during treatment by using BAT and applying BEP	n/a
Art. V (14): Implement technologies targeting energy efficient treatment of sludge such as pretreatment of sludge, solar drying, bio-drying, composting, etc.	n/a
Art. V (15): Promote implementation of adaptation measures for climate change protection	n/a
Art. V (16): Take measures to ensure monitoring of the quality of sewage sludge in the WWTP or after treatment outside the WWTP	n/a
Art. VI (17): Exchange and share best practices directly or with the support of the Secretariat including BAT, BEP, sustainable consumption and production, circular economy, resource efficiency, WEFE Nexus in the design, construction, operation and maintenance of the urban wastewater treatment plants	n/a
Art. VIII (19): Report on implementation of measures stipulated in this Regional Plan in line with the reporting requirement and timelines provided in Article 26 of the Convention and Article 13, paragraph 2(d) of the LBS Protocol	n/a

Regional Plan on Urban Stormwater Management in the framework of Article 15 of the Land-Based Sources and Activities Protocol (LBS Protocol) (Decision IG.26/8)	
Art. V (6a): Establish a regulatory framework to develop stormwater management plans that include nonstructural and structural stormwater control measures	2028
Art. V (6b): Establish a regulatory framework to ensure that stormwater and other wastewater discharge plans, (in case of combined stormwater and sewage collection systems), are based on drainage boundaries instead of administrative boundaries	2028
Art. V (6c): Establish a regulatory framework to regulate future land use development aiming to maintain as much of its natural hydrology in order to minimize stormwater runoff, increase its infiltration, and harvest where possible rainwater for domestic or industrial or any other uses	2028
Art. V (6d): Establish a regulatory framework to identify the sources that contribute pollutants through stormwater and select the measures for pollution reduction	2028
Art. V (6e): Establish a regulatory framework to establish monitoring programmes for recipient water (e.g. lakes, water streams, groundwater, etc.), as appropriate in order to undertake the proper mitigation measures	2028
Art. V (7a): Implement the approved stormwater management plans by considering the implementation of Green Infrastructure (GI) that complements the piped networks in existing urban areas serviced with separate collection systems and Best Management Practices (BMP) in newly developed areas	2030
Art. V (7b): Implement the approved stormwater management plans by considering the construction of separate systems for municipal wastewaters (blackwater from toilets, greywater and industrial wastewater) and urban runoff in newly developed residential, commercial and industrial areas	2030
Art. V (7c): Implement the approved stormwater management plans by reducing the adverse impacts of untreated wastewater overflows discharging from existing combined collection systems of rainwater or snow melt, domestic sewage, and industrial wastewater in the same pipe	2030
Art. V (8a): Implement adequate seasonal maintenance of stormwater collection systems by maintaining an updated inventory list on storm water infrastructure and sources of pollution as well as sewage storage capacity structures	2028
Art. V (8b): Implement adequate seasonal maintenance of stormwater collection systems by planning and implementing regular road maintenance, street sweeping, storm-drain maintenance, stormwater hotline response, and landscape and park maintenance	2028
Art. V (8c): Implement adequate seasonal maintenance of stormwater collection systems by performing regular monitoring of quantity and quality stormwater at key urban stormwater structures	2028

² Other measures that the Contracting Parties legally commit to undertake as per the Regional Plan with no specific deadlines

Amendments to the Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol (Decision IG.25/9)	
Art. 8 (12): Take adequate regulatory measures to integrate the informal sector into regulated waste collection and recycling schemes	2028
Art. 8 (13): Establish, as appropriate, a regulatory framework for compostable plastics to be integrated into national waste management policies	2025
Art. 9 (15.2): Apply prevention measures aiming to achieve, to the extent possible, a circular economy for plastics (Regulate the use of primary microplastics, Implement Sustainable Procurement Policies, Establish voluntary agreements, Establish procedures and manufacturing methodologies, Identify single-use plastic products, Set targets to phase out production and use, increase the reuse and recycling, Phase-out chemical additives used in plastic products, Promote the use of recycled plastics, substitute plastics, Implement standards for product labelling, Establish dedicated collection and recycling schemes, minimize the amount of marine litter associated with fishing/aquaculture, Scale-up and replicate sustainable models)	2025
Art. 9 (15.3.a): Base urban solid waste management on reduction at source, applying the following waste hierarchy as a priority order in waste prevention and management legislation and policy: prevention, preparing for re-use, recycling, other recovery, e.g. energy recovery and environmentally sound disposal	2025
Art. 9 (15.3.b): Implement adequate waste reducing/reusing/recycling measures in order to reduce the fraction of plastic packaging waste that goes to landfill or incineration without energy recovery	2019
Art. 9 (15.3.c): Take the necessary measures to close to the extent possible the existing illegal dump sites on land in the area of the application of this Regional Plan	2020
Art. 9 (15.3.d): Identify and, to the extent possible, restore and contain, the coastal landfills that are a source of marine litter	2027
Art. 9 (15.3.f): Identify and assess impacts of marine litter accumulations in upstream regions of rivers and their tributaries, and apply measures to prevent or reduce their leakage into the Mediterranean	2025
Art. 9 (15.4.h): Explore and implement, to the extent possible, ways and means to charge reasonable cost for the use of port reception facilities or when applicable, apply No-Special-Fee system	2017
Art. 9 (15.4.i): Implement targeted measures aiming at preventing and reducing marine litter impact in Marine Protected Areas (MPAs) and Specially Protected Areas of Mediterranean Importance (SPAMIs)	2025
Art. 9 (15.4.j): Explore and implement to the extent possible “Gear marking to indicate ownership” concept and “reduced fishing catches through the use of environmental neutral upon degradation of nets, pots and traps concept	2017
Art. 9 (15.4.k): Apply cost-effective measures to prevent any marine littering from dredging activities	2020
Art. 10 (16.a): Explore and implement to the extent possible the identification in collaboration with relevant stakeholders’ accumulations / hotspots of marine litter and implementation of national programmes on their regular removal and sound disposal	2019
Art. 10 (16.b): Implement National Marine Litter Cleanup Campaigns on a regular basis and evaluate their effectiveness	2030
Art. 10 (16.c): Implement Marine Litter Cleanup Campaigns on a regular basis driven by beach; concessionaries/ managers/ local authorities, including outside the touristic season	2030
Art. 10 (16.d): Participate in International Coastal Cleanup Campaigns and Programmes	2019
Art. 10 (16.e): Apply as appropriate ‘Adopt-a-Beach’ or similar practices and enhance public participation role with regard to marine litter management	2019
Art. 10 (16.f): Apply Fishing for Litter in an environmentally sound manner, based on agreed guidelines and best practice, in consultation with the competent international and regional organizations and in partnership with fishermen and ensure adequate collection, sorting, recycling and/or environmentally sound disposal of the fished litter	2019
Art. 10 (16.g): Charge reasonable costs for the use of port reception facilities or, when applicable apply No-Special-Fee system, in consultation with competent international and regional organizations, when using port reception facilities for implementing the measures	2019
Art. 10 (17): Explore and implement to the extent possible the “Fishing for Litter” environmentally sound practices, in consultation with the competent international and regional organizations, to facilitate cleanup of the floating litter and the seabed from marine litter caught incidentally and/or generated by fishing vessels in their regular activities including derelict fishing gears	2017
Art. 10 (18): Explore and implement targeted activities for the localization and retrieval, and where possible, reuse or recycling of derelict fishing gear including through new environmentally sustainable technologies	2025
Art. 11 (19 to 21): Assessment of marine litter in the Mediterranean	2029
Art. 12 (22.b): Establish the Regional Data Base on Marine Litter which should be compatible with other regional or overarching databases	2016

Art. 12 (22.c): Establish Expert Group on Regional Marine Litter Monitoring Programme	2014
Art. 12 (23) : Design National Monitoring Programme on Marine Litter	2017
Art. 12 (25): Prepare the Guidelines for the preparation of the National Marine Litter Monitoring Programmes	2014
Art. 19 (35) : Prepare regional report on the implementation of the Regional Plan	2029
Other Measures³:	
Art. 7 (9): Consider updating periodically the LBS NAPs to integrate marine litter in accordance with the provisions of this Regional Plan and other means to perform their obligations	n/a
Art. 8 (11.a): Ensure institutional coordination, where necessary, among the relevant national policy bodies and relevant regional organizations and programmes, in order to promote integration	n/a
Art. 8 (11.b): Ensure close coordination and collaboration between national, regional and local authorities in the field of marine litter management	n/a
Art. 9 (15.1) Apply to the extent possible instruments needed to regulate and prevent marine litter pollution including plastic waste from land-based and sea-based sources, in particular the implementation of economic instruments, bans and design requirements, EPR, safe/formal markets for recycled plastics, fiscal and economic incentives, innovative business practices, best practices to create incentives)	n/a
Art. 9 (15.3.e): Apply enforcement measures to combat dumping, littering on the beach, illegal sewage disposal from land sources in the sea, the coastal zone and rivers	n/a
Art. 9 (15.3.g): Apply enforcement measures to prevent, reduce and sanction illegal dumping and illegal littering in accordance with national and regional legislation, in particular on coastal zones and rivers	n/a
Art. 9 (15.4.l): Take the necessary measures to ensure that cruise ships flying their flag or entering their ports implement the procedures for minimizing, collecting, storing, processing and disposing of garbage	n/a
Art. 9 (15.4.m): Take the necessary measures to promote best practices to prevent plastic waste and particularly single use plastic products in tourism and leisure activities including cruise shipping, including through regional cooperation	n/a
Art. 9 (15.4.n): Implement measures on prevention, response and remediation regarding litter from maritime accidents, including containers lost at sea	n/a
Art. 12 (24): Design National Monitoring Programme on Marine Litter to include: (a) harmonization and consistency with the integrated regional monitoring programme based on EcAp; (b) the need for litter monitoring in high sensitivity areas (endangered species, key habitats, etc.), and in Specially Protected Areas in the Mediterranean (SPAMIs); and (c) the need for litter monitoring in high sensitivity areas (endangered species, key habitats, etc.), and in Specially Protected Areas in the Mediterranean (SPAMIs)	n/a
Art. 14 (27): Prepare specific guidelines, taking into account where appropriate existing guidelines, to support and facilitate the implementation of measures provided for in articles 9 and 10 of the Regional Plan	n/a
Art. 16 (29): Enhance public awareness and education	n/a
Art. 17 (31): Encourage appropriate involvement of, and partnerships with, various stakeholders	n/a
Art. 18 (33): Cooperate directly or with the assistance of the Secretariat or the competent international and regional organizations to address transboundary marine litter cases	n/a

Regional Plan on Agriculture Management in the framework of Article 15 of the Land-Based Sources and Activities Protocol (LBS Protocol) (Decision IG.26/6)	
Art. V (6a): Establish a regulatory framework with the objective to reduce and further prevent pollution caused or induced by nutrients discharged from agricultural activities	2028
Art. V (6b): Establish a regulatory framework with the objective to reduce and further prevent pollution caused or induced by irrigation water runoff and percolation	2028
Art. V (6c): Establish a regulatory framework for Integrated Pest Management as one of the tools that contribute to low-pesticide-input which keeps the use of pesticides only to levels that are economically and ecologically justified	2028
Art. V (6d): Establish a regulatory framework for Good management practices that contribute to reducing plastic waste generation from agricultural activities in the context of sustainable consumption and production and circular economy	2028
Art. V (7): Establish extension/advisory services, training programmes and awareness raising campaigns for farmers in order to promote implementation of the appropriate measures on the basis of the regulatory framework established as per Paragraph (6)	2030
Art. V (8): Enact support mechanisms to enable farmers to implement, as applicable, the appropriate measures for reducing inputs of pollutants and other wastes from agricultural activities on the basis of the regulatory framework established as per Paragraph (6)	2030

³ Other measures that the Contracting Parties legally commit to undertake as per the Regional Plan with no specific deadlines

Art. V (9): Designate “vulnerable zones” as all known areas of agricultural land which drain into, and contribute to eutrophication of, coastal waters	2030
Art. V (10): Implement measures based on Good Agricultural Practices that contribute to the preservation of the health of the natural systems; further to application of smart strategies to enhance the water, energy and food Nexus; while considering the opportunities and synergies of all systems	2030

Regional Plan on Aquaculture Management in the framework of Article 15 of the Land-Based Sources and Activities Protocol (LBS Protocol) (Decision IG.26/7)	
Art. V (6): Establish a regulatory framework that sets the operational requirements to be met by aquaculture facilities as a precondition to operate	2027
Art. V (7a): Establish institutional structures and take measures to enforce, as appropriate, the adopted operational requirements addressing the pollution control aspects	2028
Art. V (7b): Establish institutional structures and take measures to provide the framework conditions to encourage aquaculture facilities to adapt their operations further to BAT in aquaculture operations	2028
Art. V (8a): Take measures to verify that aquaculture facilities have established operational processes in order to control and reduce the release of potentially detrimental substances to the marine environment	2030
Art. V (8b): Take measures to verify that aquaculture facilities have established operational processes in order to implement measures to minimize pollution originating from aquaculture activities in the water column and sediments	2030
Art. V (9): Adopt regulations for measures that promote the sustainability of aquaculture in terms of fostering responsible, economically viable, environmentally sustainable aquaculture	2027
Art. V (10): Implement measures promoting responsible, economically viable, environmentally sustainable aquaculture as per the regulated aspects	2030
Art. V (11): Regulate key aspects contributing to the generation of plastic waste from aquaculture activities in the context of sustainable production, as well as processing along the value chain and circular economy	2028

Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	
1. SPECIES AND HABITATS PLANS Update Mediterranean action plans for selected species and habitats listed under the SPA/BD Protocol.	2030
2.SPECIES RECOVERY Develop recovery plans and implement emergency actions for endangered and threatened species whose continued survival depends on such actions, including their habitats.	2030
3.MARITIME TRAFFIC Reduce the impact of maritime traffic (noise & collision) on sensitive marine species (Cetaceans, Turtles, others).	2030
4.NIS/IAS COMMITMENT Ratification of the International Convention for the Control and Management of Ballast Water and Sediments from Ships (BWM Convention), and adoption of the Regional strategy addressing ship's ballast water management and invasive species (2022-2027).	2030
5. NIS/IAS CAPACITY Strengthen the capacity of the Mediterranean countries to deal with alien marine species.	2030
6. NIS/IAS CONTROL Take the necessary field actions to mitigate the impact from NIS/IAS.	2030
7. LITTER Prevent leakage and remove marine litter to mitigate its impact on the ecosystem.	2030
8. EIA/SEA Implement environmental assessments, considering cumulative impacts on the coastal zones and their carrying capacity.	2030
9. WIND ENERGY Advocate that wind farms, are regulated in MCPAs, and cannot be developed elsewhere before their effects on the marine environment, biodiversity and human activities have been sufficiently researched, the risks are understood and alternatives assessed.	2030
10. MINERALS In line with the precautionary principle, the exploitation of minerals should not be authorised until the effect on the marine environment, biodiversity and related human activities have been sufficiently researched and the risks are understood, and alternatives assessed.	2030
11. SPATIAL PLANNING Support countries for the development of systematic conservation planning taking into account ICZM, land use/ marine use planning and management aspects in the context of MSP.	2030

12. RESTORATION Support restoration of ecosystems providing key services, those degraded and expected to become increasingly critical in a changing climate, such as wetlands and shallow seashore habitats among others.	2030
13. CLIMATE CHANGE Increase climate change impacts monitoring and contributions to mitigation and adaptation, particularly to warming, acidification, and to disaster risk reduction, through nature-based solutions and ecosystem-based approaches.	2030
14. GOOD ENVIRONMENTAL STATUS Promote actions, including scientific research, with the view of achieving GES for all biodiversity-related ecological objectives within the Ecosystem Approach EcAp/ IMAP.	2030
15. MCPAs and OECMs Assist countries in the implementation of the Post-2020 Regional Strategy for MCPAs and OECMs.	2030
16. BIODIVERSITY PLATFORM Establish an open access Mediterranean Biodiversity Platform.	2027
17. INVERTEBRATES Survey distribution and abundance, and assess status and main anthropogenic pressures, over priority invertebrate species with focus on <i>C. rubrum</i> , <i>P. nobilis</i> , and vermetid platforms.	2030
18. VERTEBRATES Establish the distribution, status, and the main anthropogenic pressures of species listed under Annex II to the SPA/BD Protocol.	2030
19. HABITATS In coastal and offshore waters, inventory and cartography key Mediterranean habitats, and assess their status and main anthropogenic pressures.	2030
20. NIS/IAS Database Develop the shared georeferenced database (MAMIAS), user-friendly platform, to continuously monitor the status and pathways of non-indigenous species and support early warning.	2030
21. OVERFISHING and IUU Implement science-based management plans to effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing, including phasing out harmful fisheries subsidies which contribute to overcapacity and overfishing.	2030
22. BY-CATCH Develop a national mechanism and implement agreed and scientifically tested by-catch mitigation measures, to eliminate all intentional or accidental killing of threatened or endangered species and/or in bad conservation status.	2030
23. SMALL SCALE FISHERIES Promote the FAO Voluntary Guidelines for Securing Small Scale Fisheries (VGSSF) and co-management practices in professional small-scale fisheries, advised by traditional ecological knowledge and the best available science.	2030
24. AQUACULTURE Support developing the Post-2020 GFCM Aquaculture and Fisheries strategy - transforming the aquaculture industry through science-based solutions and marine spatial planning (MSP) tools.	2030
25. TOURISM Develop a framework of specific indicators for assessing the impact of marine and coastal tourism on destinations and for promoting ecotourism.	2030
26. INTEGRATING BIODIVERSITY Integrate biodiversity values into national and local development planning processes, into the strategies and planning processes of marine-related economic sectors, into national accounting as appropriate, reporting systems, and into the assessment of environmental impacts.	2030
27. STREAMLINE Post-2020 SAPBIO Streamline the Post- 2020 SAPBIO and Regional strategies and action plans, developed in the framework of the SPA/BD Protocol, into national strategies, action plans and legal frameworks.	2030
28. POLITICAL WILL AND COORDINATION Ensure political will and recognition at the highest levels of Government or State, to develop appropriate governance schemes, in particular cross-sectorial and multi-level institutional coordination.	2030
29. STAKEHOLDER PARTICIPATION Facilitate stakeholder engagement to address conflict between users, build capacity to contribute to the SAPBIO enforcement, particularly in MPA planning and management, through proper participation of all stakeholders in a transparent decision-making process.	2030
30. TOP-DOWN AND BOTTOM-UP SCALING OF INTERNATIONAL COMMITMENTS Scale down international commitments into national plans and to local level, streamlining the approach, targets and actions of the Post-2020 into national strategies and into local planning processes, while facilitating the bottom-up feeding of local proposals into future planning processes at the national and Mediterranean levels.	2030

31. COMPLIANCE AND ENFORCEMENT Enable the compliance of the provisions of the SPA/BD and the ICZM Protocols and related Action Plans at national level by strengthening capacities and cooperation between judiciary and administrative bodies.	2030
32. IMAP REFINEMENT Identification of the gaps that hinder the good environmental status evaluation, and in case needed, support countries to fill them out.	2030
33. IMAP IMPLEMENTATION Update national monitoring programmes in light of the new elements of IMAP and achieve regular reporting.	2030
34. Post- 2020 SAPBIO MONITORING Allow the Contracting Parties to periodically review and report, harmonized with IMAP and UNEP/MAP monitoring frameworks, on the status of implementation of the Post-2020 SAPBIO.	2030
35. SUPPORT TO RUN THE SAPBIO Provide sufficient human and financial resources to the MAP system in order to efficiently run the implementation, follow-up and assessment mechanisms for the Post-2020 SAPBIO.	2030
36. CAPACITY BUILDING FOR THE Post-2020 SAPBIO AT NATIONAL LEVEL Enhance the national capacities to implement the Post- 2020 SAPBIO, to manage MPAs and vulnerable marine and coastal habitats and species within and across national jurisdictions, with particular attention to less developed countries, and towards reducing the gender and the digital divide.	2030
37. NETWORKING Support existing regional, subregional and/or transboundary networks, or develop new ones as needed, to enhance capacities, knowledge, experience and opportunity sharing, inter alia, on topics as NIS/IAS, migratory species, MPA management, habitat restoration, reduced by-catch, harmonized monitoring, compliance with law and regulations, and other subjects relevant to the Post- 2020 SAPBIO.	2030
38. AWARENESS Increase awareness, understanding and appreciating of the values and threats to the marine environment, stimulating improved behaviour, and of the responses and good practices, by targeting decision-makers and the general public, through reinforced and renewed mechanisms, including mass communications.	2030
39. OUTREACH AND EDUCATION Promote the integration of marine biodiversity and ecosystems conservation concerns into school, higher education, professional training, and citizen science, so that best practices and innovative technologies to protect marine and coastal ecosystems are more accessible and replicable.	2030
40. EMPLOYMENT Adequately increase the employment, notably public employment in direct relation to marine biodiversity conservation (and eventually include redirecting existing one) as basic component for future blue economy wise development.	2030
41. SUSTAINABLE FUNDING Develop sustainable funding strategies with, as appropriate, innovative approaches to mobilize alternative financial sources, covering fiscal incomes that could be redistributed, and relevant actions to fund, including The MedFund and other types of national or local financing mechanisms.	2030
42. COOPERATION Increase cooperation both north/ south, south /south, and between governmental and non-governmental actors at different levels, to support the Post-2020 SAPBIO, particularly in the less developed countries.	2030

Annex I

List of Ecological Objectives, Common Indicators, GES Definitions and Proposed Targets

Annex I: List of Ecological Objectives, Common Indicators, GES Definitions and Proposed Targets. A proposal for updating the table presented under Decision IG.21/3 (Annex I) reflecting the changes (deletions are presented in ~~strike through~~ mode, and the new elements in **bold**).

Ecological Objective 1 (EO1):		Biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic and climatic conditions	
Operational Objective	Indicator	GES	Proposed Targets
1.4 1.1 Key coastal and marine habitats are not being lost	1.4.1 Potential/observed distributional range of certain coastal and marine habitats listed under SPA protocol. 1.1.1 Habitat distributional range	The habitat is present in all its natural distributional range.	State: - The ratio Natural / observed distributional range tends to 1 Pressure - Decrease in the main human causes of the habitat decline
	1.4.2 Distributional pattern of certain coastal and marine habitats listed under SPA protocol	The distribution extent is in line with prevailing physiographic, hydrographic, geographic and climatic conditions.	State: Decline in habitat extension is reserved and the extension of recovering habitats shows a positive trend.
	1.4.3 1.1.2 Condition of the habitat- defining species and communities	The population size and density of the habitat-defining species, and species composition of the community, are within reference conditions ensuring the long-term maintenance of the Habitat	State: - No human induced significant deviation of population abundance and density from reference conditions. - The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat(for recovering habitats)

4.1 1.2 Species distribution is maintained (marine mammals, birds, reptiles)	4.1.1 1.2.1 Distributional range (marine mammals)	<u>Cetaceans:</u> The species are present in all their natural distributional range. <u>Monk Seal:</u> Monk Seal is present along recorded Mediterranean coasts with suitable habitats for the species.	State: • <u>Cetaceans:</u> The distribution of cetaceans remains stable or expanding and the species that experienced reduced distribution in the past are in favorable status of conservation and can recolonize areas with suitable habitats. • <u>Monk Seal:</u> The distribution of Monk Seal remains stable or expanding and the species is recolonizing areas with suitable habitats. Pressure/Response: • Human activities having the potential to exclude marine mammals from their natural habitat within their range area or to damage their habitat are regulated and controlled. • Conservation measures implemented for the zones of importance for cetaceans. • Fisheries management measures that strongly mitigate the risk of incidental taking of monk seals and cetaceans during fishing operations are implemented.
	4.1.1 1.2.2 Distributional range (birds)	The species continues to occur in all their Mediterranean natural habitat.	State: • No significant reduction in the population distributional range in the Mediterranean in all indicator species which are listed as least-concerned (LC); significant increase in the population distributional range in the Mediterranean in all indicator species which are currently listed with conservation concern and for colonial breeding seabirds (i.e., most species in the Mediterranean). • New colonies are established, and the population is encouraged to spread among several alternative breeding sites, especially for species with conservation concern.
	4.1.1 1.2.3 Distributional range (reptiles)	The species continues to occur in all its natural range in the Mediterranean , including nesting, mating, feeding and wintering and developmental (where different to those of adults) sites	State: • Turtle distribution is not significantly affected by human activities • Turtles continue to nest in all known nesting sites Pressure/Response: • Protection of known nesting, mating, foraging, wintering and developmental turtle sites.

			- Human activities having the potential to exclude marine turtles from their range area are regulated and controlled. - The potential impact of climate change is assessed
1.2 1.3 Population size of selected species is maintained (marine mammals, birds, reptiles)	1.2.1 1.3.1 Population abundance (marine mammals)	Cetaceans: The species population has abundance levels allowing to qualify to Least Concern Category of IUCN.	State: No human-induced mortality is causing a decrease in breeding population size or density. - Populations recover towards natural levels.
		<u>Monk Seal:</u> Number of individuals by colony allows to achieve and maintain a favorable conservation status. ¹	State: Continual recovery of population density¹
	1.2.1 1.3.2 Population abundance (birds)	The species population has abundance levels allowing to qualify qualifying to Least Concern Category of the IUCN Red List or has abundance levels that are improving and moving away from the more critical IUCN category.	State: - No human induced decrease in population abundance. Population recovers towards natural levels where depleted. - The total number of individuals is sparse enough in different spots.
	1.2.1 1.3.3 Population abundance (reptiles)	The population size allows to achieve and maintain a favorable conservation status taking into account all life stages of the population.	State: - No human induced decrease in population abundance - Population recovers towards natural levels where depleted
	1.2.2 Population density (marine mammals)	Monk Seal: Number of individuals by colony allows to achieve and maintain a favorable conservation status.	State: Continual recovery of population density
	1.2.2 Population density (birds)	Population density allows to achieve and maintain a favorable conservation status.	State: Continue recovery or maintenance of population density in enough different spots to allow resilience. No decrease in population density in new/recolonized critical habitat (for recovered populations)

¹ Originally included under 1.2.2 “Population Density” for marine mammals, and now moved to “Population Abundance” for marine mammals (current 1.3.1., ex-1.2.2).

1.3 1.4 Population condition of selected species is maintained (marine mammals, birds, reptiles)	1.3.1 1.4.1 Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates, survival/ mortality rates) (marine mammals)	<u>Cetaceans</u>: preliminary assessment of incidental catch, prey depletion and other human induced mortality followed by implementation of appropriate measures to mitigate these threats Species populations are in good condition: Low human induced mortality, balances sex ratio and no decline in calf production. <u>Monk Seal</u>: decreasing trends in human induced mortality (e.g., direct killings, pupping/resting habitat /disturbance/occupation) Species populations are in good condition: Low human induced mortality, appropriate pupping seasonality, high annual pup production, balanced reproductive rate and sex ratio.	State: - Decreasing trends in human induced mortality Pressure/Response: <u>Cetaceans</u>: Appropriate measure implemented to mitigate incidental catch, prey depletion and other human induced mortality <u>Monk Seal</u>: Appropriate measures implemented to mitigate direct killing and incidental catches and to preclude habitat destruction.
	1.4.1 Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates, survival/ mortality rates) (birds)	Species populations are in good conditions: Natural levels of breeding success & acceptable levels of survival of young and adult birds.	State: - Populations of all taxa, particularly those with IUCN threatened status are maintained in long-term following the indication of population models. Pressure/Response: - Incidental catch mortality and other anthropogenic pressures are at negligible levels, particularly for species of conservation concern with IUCN threatened status.
	1.4.1 Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates,	Low mortality induced by incidental catch. Favorable sex ratio and no decline in hatching rates.	Response: Measures to mitigate incidental catches in turtles implemented

	survival/ mortality rates) (reptiles)		
	1.4.2 Distributional pattern of certain coastal and marine habitats listed under SPA protocol	Increasing distribution of nesting sites.	The species recovers historical nesting sites.

Ecological Objective 2 (EO2): Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem			
Operational Objective	Indicator	GES	Proposed Targets
2.1 Invasive non-indigenous species introductions are minimized	2.1.1 Spatial distribution, origin and population status (established vs. vagrant) of non-indigenous species	Introduction and spread of NIS linked to human activities are minimized, in particular for potential IAS	State: The number of species and abundance of IAS introduced as a result of human activities is reduced. Pressure/Response: Improved management of the main human related pathways and vectors of NIS introduction (Mediterranean Strategy for the management of ballast waters, aquaculture ear warning systems, etc.).
	2.1.1 Trends in abundance of introduced species, temporal occurrence, and spatial distribution of non-indigenous species (NIS) particularly invasive, non-indigenous species notably in risk areas (EO2, in relation to the main vectors and pathways of spreading of such species)	Decreasing abundance of introduced NIS in risk areas	State: Abundance of NIS introduced by human activities reduced to levels giving no detectable impact.
2.2. The impact of non-indigenous particularly invasive species on ecosystems is limited	2.2.1 Ecosystem impacts of particularly invasive species.	No decrease in native species abundance, no decline of habitats and no change in community structure that have been generated by IAS via competition, predation or any other direct or indirect effect.	Pressure/Response: Impacts of NIS reduced to the feasible minimum

	2.2.2 Ratio between non-indigenous invasive species and native species in some well-studied taxonomic groups	Stable or decreasing proportion of NIS in the different habitats	State: • To be set upon species choice and their related impact degree of the invasive upon the indigenous ones, taking into account the role of Climate Change in accelerating the establishment of NIS populations.
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Ecological Objective 3 (EO3) ² : 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			
Operational Objective	Indicator	GES	Proposed Targets
3.1. The Spawning Stock Biomass is at a level at which reproduction capacity is not impaired	3.1. Spawning Stock Biomass	Achieving or maintaining good environmental status requires that SSB values are equal to or above SSBMSY, the level capable of producing maximum sustainable yield.	State: • $B > B_{thr}$
3.2. Total catch of commercial species does not exceed the Maximum Sustainable Yield (MSY) and the bycatch is reduced.	3.2. Total landing -	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.	State: • Long-Term High Yields • $Catch < MSY$ Pressure: • Reduction of IUU catch • Minimization of discarding and incidental catch of vulnerable species
3.3. Fishing mortality in the stock does not exceed the level that allows MSY ($F \leq F_{MSY}$).	3.3 Fishing mortality	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	Pressure: • F_{MSY} • $F_{0.1}$ a proxy of F_{MSY} (more precautionary)
3.4. Fishing effort should be reduced by means of a multi-annual management plan until there is an evidence for stock recovery	3.4 Fishing effort	Total effort does not exceed the level of effort allowing the Maximum Sustainable Yield (MSY)	(under development)

² Regarding EO3 consultations are ongoing with GFCM and hopefully progress is expected to by the 11th EcAp CG Meeting.

3.5. Stable or positive trend in CPUE Declines in CPUE may mean that the fish population cannot support the level of harvesting. Increases in CPUE may mean that a fish stock is recovering and more fishing effort can be applied.	3.5 Catch per unit effort (CPUE)	Catch per unit effort (CPUE) is an indirect measure of the abundance of target species. Changes in the catch per unit effort are inferred to signify changes to the target species abundance	(under development)
3.6 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	3.6 Bycatch of vulnerable and non-target species (EO1 and EO3)	The abundance / trends of populations of seabirds, marine mammals, sea turtles and sharks key species (selected according to their actual and total dependence on the marine environment, and to their ecological representativeness) is stable or not reducing in a statistically significant way taking into account the natural variability compared to the current situation.	(Work in progress within GFCM) State: <u>Cetaceans</u>: No unsustainable impact at population level. Decreasing trends in human induced mortality. Pressure: <u>Cetaceans</u>: Appropriate measure implemented to mitigate incidental catch, prey depletion and other human induced mortality. Monk seal: Appropriate measures implemented to mitigate direct killing and incidental catches and to preclude habitat destruction.

Ecological Objective 4 (EO4): 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			
Operational Objective	Indicator	GES	Proposed Targets
4.1 Ecosystem dynamics across all trophic levels are maintained at levels capable of ensuring long - term abundance of the species and the retention of their full reproductive capacity	4.1.1 Production per unit biomass estimates for selected trophic groups and key species, for use in models predicting energy flows in food webs	N/A	N/A
4.2 Normal proportion and abundances of selected species at all trophic levels of the food web are maintained	4.2.1 Proportion of top predators by weight in the food webs	N/A	N/A
	4.2.2 Trends in proportion or abundance of habitat-defining groups	N/A	N/A
	4.2.3 Trends in proportion or abundance of taxa with fast turnover rates	N/A	N/A

Ecological Objective 5 (EO5): Eutrophication 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			
Operational Objective	Indicator	GES	Proposed Targets
5.1 Human introduction of nutrients in the marine environment is not conducive to eutrophication	5.1.1 Concentration of key nutrients in the water column	Concentrations of nutrients in the euphotic layer are in line with prevailing physiographic, geographic and climate conditions	State: - Reference nutrients concentrations according to the local hydrological, chemical and morphological characteristics of the un- impacted marine region. - Decreasing trend of nutrients concentrations in water column of human impacted areas, statistically defined. Pressure: - Reduction of BOD emissions from land-based sources. - Reduction of nutrients emissions from land-based sources.
	5.1.2 Nutrient ratios (silica, nitrogen and phosphorous) where appropriate.	Natural ratios of nutrients are kept.	
5.2 Direct and indirect effects of nutrient over-enrichment are prevented	5.2.1 Chlorophyll-a concentration in the water column	Natural levels of algal biomass, water transparency and oxygen concentrations in line with prevailing physiographic, geographic and weather conditions	State: - Chlorophyll a concentrations in high-risk areas below thresholds. - Decreasing trend in Chl-a concentrations in high-risk areas affected by human activities. Index of turbidity behind threshold in high-risk areas³. Increasing trend of transparency in areas impacted by human activities⁴. Dissolved oxygen concentrations in high-risk areas above local threshold⁴. Increasing trend in dissolved oxygen concentrations in areas impacted by human activities⁴.

³ Transferred from Indicator 5.2.2

⁴ Transferred from Indicator 5.2.3

	5.2.2 Water transparency where relevant	Water transparency in line with prevailing physiographic, geographic and climate conditions.	State: ● Index of turbidity behind threshold in high risk areas. ● Increasing trend of transparency in areas impacted by human activities.
5.3 Indirect effects of nutrient over-enrichment are prevented	5.3.1 Dissolved oxygen near the bottom, i.e. changes due to increased organic matter decomposition, and size of the area concerned	Bottom water fully oxygenated in line with prevailing physiographic, geographic and climate conditions	State: ● Dissolved oxygen concentrations in high risk areas above local threshold ● Increasing trend in dissolved oxygen concentrations in areas impacted by human activities

Ecological Objective 6 (EO6): Sea-floor integrity is maintained, especially in priority benthic habitats			
Operational Objective	Indicator	GES	Proposed Targets
6.1 Extent of physical alteration to the substrate is minimized	6.1.1 Distribution of bottom impacting activities	N/A	N/A
	6.1.2 Area of the substrate affected by physical alteration due to the different Activities	N/A	N/A
6.2 Impact of benthic disturbance in priority benthic habitats is minimized	6.2.1 Impact of bottom impacting activities in priority benthic habitats	N/A	N/A
	6.2.2 Change in distribution and abundance of indicator species in priority habitats	N/A	N/A

Ecological Objective 7 (EO7): Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.			
Operational Objective	Indicator	GES	Proposed Targets
7.1 Impacts to the marine and coastal ecosystem induced by climate variability and/or climate change are minimized	7.1.1 Large scale changes in circulation patterns, temperature, pH, and salinity distribution	Ecosystems are resilient enough to adapt to climate change.	Anthropogenic impacts which may alter ecosystems' adaptive capacity are reduced.
	7.1.2 Long term changes in sea level		
7.2 Alterations due to permanent constructions on the coast and watersheds, marine installations and seafloor anchored structures are minimized	7.2.1 Impact on the circulation caused by the presence of structures	With new structures in place, near shore wave- and current patterns maintain as natural as possible.	Marine and shore based new structures planned, constructed and operated in a way to maintain the natural wave and current pattern as much as possible
	7.2.2 Location and extent of the habitats potentially impacted directly by the alterations and/or the circulation changes induced by them: footprints of impacting structures hydrographic alterations ⁵	Negative impacts due to new structure are minimal with no influence on the larger scale coastal and marine system	Planning of new structures takes into account all possible mitigation measures in order to minimize the impact on coastal and marine ecosystem and its services integrity and cultural/historic assets. Where possible, promote ecosystem health.
	7.2.3 Trends in sediment delivery, especially in major deltaic systems	N/A	N/A
	7.2.4 Extent of area affected by coastal erosion due to sediment supply alterations	N/A	N/A

⁵ Current Common Indicator 15 of IMAP.

Ecological Objective 7 (EO7): Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.			
Operational Objective	Indicator	GES	Proposed Targets
7.3 Impacts of alterations due to changes in freshwater flow from watersheds, seawater inundation and coastal freatic intrusion, brine input from desalination plants and seawater intake and outlet are minimized	7.3.1. Trends in fresh water/sea water volume delivered to salt marshes, lagoons, estuaries, and deltas; desalination brines in the coastal zone	N/A	N/A
	7.3.2. Location and extent of the habitats impacted by changes in the circulation and the salinity induced by the alterations	N/A	N/A
	7.3.3 Changes in key species distribution due to the effects of seawater intake and outlet	Water circulation in coastal and marine habitats, and changes in the levels of salinity and temperature are within thresholds, to maintain natural/ecological processes	Site specific tolerable limits of key species in immediate proximity of seawater intake and outlet structures are considered while planning, constructing and operating such infrastructure

Ecological Objective 8 (EO8): The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved			
Operational Objective	Indicator	GES	Proposed Targets
8.1 The natural dynamics of coastal areas are maintained, and coastal ecosystems and landscapes are preserved is respected and coastal areas are in good condition.	8.1.1 Areal extent of coastal erosion and coastline instability	Coastal resilience maintained and improved; and coastal uses made adaptable to coastal erosion.	Impacts of coastal erosion caused by man-made factors anticipated and prevented through coastal erosion management allowing for natural fluctuation of the coast and minimizing coastal erosion risk.
	8.1.2 Changes in sediment dynamics along the coastline	Long term sediment dynamics is within natural patterns.	Disturbance in sediment inflows reduced through improved integrated river basin management and coastal sand management practices.
	8.1.3 Area extent of sandy areas subject to physical disturbance	N/A	N/A
	8.1.4 Length of coastline subject to physical disturbance due to the influence of humanmade structures. ⁶	Physical disturbance to sandy coastal areas induced by human activities should be minimized.	Negative impacts of human activities on coastal areas are minimized through appropriate management measures

⁶ Current Common Indicator 16 of IMAP.

8.2 Integrity and diversity of coastal ecosystems, landscapes and their geomorphology are preserved	8.2.1 Land cover change⁷	Linear coastal development and low-lying terrain coastal development minimized, with perpendicular development being in balance with integrity and diversity of coastal ecosystems and landscapes. Mixed land-use structure achieved in predominantly man- made coastal landscapes.	Proposed targets should be considered as general recommendations to be adapted to regional/local specificities and knowledge: • No further construction within the setback zone and avoid further construction in low-lying coastal terrain • Change of coastal land use structure, dominance of urban land use reversed • Keep, and increase landscape diversity
	8.2.2 Change of landscape types	N/A	N/A
	8.2.3 Share of non-fragmented coastal habitats	N/A	N/A

⁷ Current Candidate Common Indicator 25 of IMAP, which is recommended to become a common indicator in the Revised Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (UNEP/MED WG. 595/Inf.4)

Ecological Objective 9 (EO9): Contaminants cause no significant impact on coastal and marine ecosystems and human health			
Operational Objective	Indicator	GES	Proposed Targets
9.1 Concentration of priority contaminants is kept within acceptable limits and does not increase	9.1.1 Concentration of key harmful contaminants in the relevant matrix in biota, sediment or water.	Level of pollution is below a determined threshold defined for the area and species.	State: - Concentrations of specific contaminants below either Background Assessment Criteria or Environmental Assessment Criteria (BACs/EACs) or below reference concentrations (from other sources). - No deterioration trends in contaminants concentrations in sediment and biota from human impacted areas, statistically defined. Pressure: - Reduction of contaminants emissions from land-based sources.
9.2 Effects of released contaminants are minimized	9.2.1 Level of pollution effects of key contaminants where a cause-and-effect relationship has been established	Concentrations of contaminants are not giving rise to acute pollution events	State: - Contaminants effects below thresholds. Levels of biomarkers identified comply with agreed Mediterranean Background Assessment Criteria or Environmental Assessment Criteria (BACs/EACs) Decreasing trend in the operational releases of oil and other contaminants from coastal, maritime and off-shore activities.
9.3 Acute pollution events are prevented and their impacts are minimized	9.3.1 Occurrence, origin (where possible), and extent of significant acute pollution events (e.g. slicks from oil, oil products and hazardous substances) and their impact on biota affected by this pollution	Occurrence of acute pollution events are reduced to the minimum.	Pressure: - Decreasing trend in the occurrences of acute pollution events. Achieve the elimination of intentional pollution of the marine environment by oil and other harmful and noxious substances (HNS) and the minimization of accidental discharge of such substances.
9.4 Levels of known harmful contaminants in major types of seafood do not exceed established standards.	9.4.1 Actual levels of contaminants that have been detected and number of contaminants which have been exceeded maximum regulatory levels in commonly consumed seafood	Concentrations of contaminants are within the regulatory limits for consumption by humans. No regulatory levels of contaminants in seafood are exceeded⁸.	State: - Concentrations of contaminants are within the regulatory limits set by legislation. - Decreasing trend in the frequency of cases of seafood samples above regulatory limits for contaminants⁸.

⁸ Transferred from Indicator 9.4.2

	9.4.2 Frequency that regulatory levels of contaminants are exceeded.	No regulatory levels of contaminants in seafood are exceeded.	State: Decreasing trend in the frequency of cases of seafood samples above regulatory limits for contaminants.
9.5 Water quality in bathing waters and other recreational areas does not undermine human health	9.5.1 Percentage of intestinal enterococci concentration measurements within established standards	Concentrations of intestinal enterococci are within established standards	Increasing trend in the percentage of intestinal enterococci concentration measurements within established standards (levels of intestinal enterococci comply with established national or international standards, such as EU 2006/7 Directive).

Ecological Objective 10 (EO10): Marine and coastal litter do not adversely affect coastal and marine environment			
Operational Objective	Indicator	GES	Proposed Targets
10.1 The impacts related to properties and quantities of marine litter in the marine and coastal environment are minimized	10.1.1 Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source)	Number/amount of marine litter items on the coastline do not have negative impacts on human health, marine life and ecosystem services	Decreasing trend in the number of/amount of marine litter (items) deposited on the coast
	10.1.2 Trends in amounts of litter in the water column, including micro- plastics, and on the seafloor	Number/amount of marine litter items in the water surface and the seafloor do not have negative impacts on human health, marine life, ecosystem services and do not create risk to navigation	Decreasing trend in the number/amount of marine litter items in the water surface and the seafloor
	10.1.3 Trends in the amount of litter coming from riverine sources⁹.	N/A	N/A
10.2 Impacts of litter on marine life are controlled to the maximum extent practicable	10.2.1 Trends in the amount of litter ingested by or entangling marine organisms, especially mammals, marine birds and turtles	N/A	Decreasing trend in the cases of entanglement or/and a decreasing trend in the stomach content of the sentinel species.

⁹ Preliminary proposal for the development of a new indicator having a focus on riverine litter, subject to review and endorsement by the upcoming CORMON Marine Litter Meeting (Jan. 2025, tbc).

Ecological Objective 11 (EO11) Noise from human activities cause no significant impact on marine and coastal ecosystems			
Operational Objective	Indicator	GES	Proposed Targets
11.1 Energy inputs into the marine environment, especially noise from human activities are minimized	11.1.1 Proportion of days and geographical distribution where loud, low and mid-frequency impulsive sounds exceed levels that are likely to entail significant impact on marine animals	Noise from human activities causes no significant impact on marine and coastal ecosystems.	Number of days with impulsive sounds sources, their distribution within the year and spatially within the assessment area, are below thresholds.
	11.1.2 Levels of continuous low frequency sound with the use of models as appropriate	Noise from human activities causes no significant impact on marine and coastal ecosystems.	Noise levels at monitoring stations are below thresholds; The extent (% or km²) of the assessment area which is above levels causing disturbance to sensitive marine animal is below limits, or such limits are exceeded for a limited amount of time.

Annex II

Updated timeline for EcAp Implementation (2026 – 2035)

Annex II: Updated timeline for EcAp Implementation (2026 – 2035)

