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23rd Meeting of the Contracting Parties to the
Convention for the Protection of the Marine Environment
and the Coastal Region of the Mediterranean and its Protocols

Portorož, Slovenia, 5-8 December 2023

Report of the Meeting

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Section 1

Report of the Meeting

Report of the twenty-third meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols

I. Introduction

1. At the invitation of the Government of Slovenia, and in accordance with the decisions adopted by the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their twenty-second meeting, held in Antalya, Türkiye, from 7 to 10 December 2021, the twenty-third meeting of the Contracting Parties was held at the Grand Hotel Bernardin in Portorož, Slovenia, from 5 to 8 December 2023.

II. Attendance

2. The following Contracting Parties to the Barcelona Convention were represented at the meeting: Albania, Croatia, Cyprus, Egypt, European Union, France, Greece, Israel, Italy, Libya, Malta, Montenegro, Morocco, Slovenia, Spain, Tunisia, Türkiye.

3. The following intergovernmental organizations were represented as observers: The following intergovernmental organizations were represented as observers: Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Commission on the Protection of the Black Sea Against Pollution, European Environmental Agency (EEA), International Maritime Organization (IMO), International Union for Conservation of Nature (IUCN), Parliamentary Assembly of the Mediterranean (PAM), Pelagos Agreement, Secretariat of the Union for the Mediterranean (UfM).

4. The following non-governmental organizations and other entities were also represented as observers: Agency for Sustainable Mediterranean Cities and Territories (AVITEM), Ankara University National Center for the Sea and Maritime Law (DEHUKAM), Arab Forum for Environment and Development (AFED), Arab Office for Youth and Environment (AOYE), Arab Network for Environment and Development (RAED), Association de Recherche Environnement et Bio Innovation (AREBI), Association of Continuity of Generations (ACG), Blue World Institute of Marine Research and Conservation, Centre International de Droit Compare de l'Environnement (CIDCE), Cittadini per l'Aria Onlus, Eco-Union, Institute for Sustainable Development and International Relations (IDDRI), International Association of Geophysical Contractors (IAGC), International Federation for Sustainable Development and Fight to Poverty in the Mediterranean – Black Sea (FISPMED), Marevivo International, Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE), Mediterranean Association to Save the Sea Turtles (MEDASSET), Mediterranean Protected Areas (MedPAN), Mediterranean Wetlands Initiative (MedWet), Fondation Mohamed VI pour la Protection de l'Environnement, OceanCare, OSCE Parliamentarian Assembly, Tour du Valat, Turkish Shipbuilders Association (GISBIR), World Wide Fund for Nature International (WWF International), World Wide Fund for Nature Mediterranean (WWF Mediterranean), Youth Love Egypt (YLE Foundation).

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

III. Opening of the meeting (agenda item 1)

6. The meeting was opened at 10 a.m. on Tuesday, 5 December 2023 by Ms. Fatma Varank (Türkiye), the outgoing President of the Bureau of the Contracting Parties. Opening statements were also delivered by Ms. Maša Kociper, State Secretary in the Cabinet of the Prime Minister of Slovenia; Ms. Elizabeth Maruma Mrema, Deputy Executive Director of UNEP; and Ms. Tatjana Hema, Coordinator of UNEP-MAP.

7. In her remarks, Ms. Varank said that, despite the solidarity shown by the Contracting Parties in adopting the UNEP/MAP medium-term strategy 2022–2027, in designating the Mediterranean Sea as an emission control area for sulphur oxides, and in taking steps to protect biodiversity, the Mediterranean region was more affected than ever by climate change-induced floods, forest fires, biodiversity loss, migration, extreme temperatures and high salinity levels. Record-breaking temperatures were exacerbating environmental problems such as natural resource depletion, pollution and the proliferation of non-native species, while the bioaccumulation of heavy metals in living organisms was linked to higher rates of human mortality and illness. Efforts to protect the seas should focus on nature-based solutions, including the identification and conservation of seagrass meadows, reefs, and wildlife. Moreover, the Contracting Parties needed to work together towards the effective and equitable implementation of marine spatial planning; decision makers needed to be provided with the most accurate information possible; and strategies and technical solutions needed to be devised in response to the issues highlighted in the Special Report on Climate and Environmental Coastal Risks by the Mediterranean Experts on Climate and Environmental Change and the 2023 Mediterranean Quality Status Report. Instead of despairing at the state of the Mediterranean, humans, as the source of the vast majority of the problems affecting it, should be the ones to find solutions.

8. In her statement, Ms. Kociper welcomed participants to Slovenia and said that the Barcelona Convention provided a solid framework for coping with the ever-multiplying challenges of the modern world. To steer clear of storms and sail with the winds of sustainable development and the green transition, the Contracting Parties needed to bring about a shift from decisions to actions, a shift that younger generations were clearly demanding. Common action and collaboration were essential to securing sustainable development for the Mediterranean, and thus the draft Portorož ministerial declaration addressed joint actions in the fields of sustainable maritime transport, aquaculture, agriculture and the preservation of biodiversity with the aim of ensuring food and water security. Also needed were a global and intergenerational perspective and the inclusion of expert institutions in every step of the decision-making process. Input from representatives of such institutions and from members of civil society and young people with regard to best practices and challenges could spur further action. The Contracting Parties should not be daunted by the scale of those challenges; rather, they should work together to overcome them.

9. In her remarks, Ms. Mrema said that, as the world grappled with the triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste, MAP and the Barcelona Convention and its Protocols were more important than ever. It was commendable that the Contracting Parties were pushing forward in support of sustainable development, as evidenced by the theme for the ministerial session: “Green transition in the Mediterranean”. By pursuing a green transition – through progress in science and technology, improvements in governance frameworks and growing public awareness, and an emphasis on nature-based solutions and regional cooperation – the Contracting Parties could contribute to meeting the goals of the Kunming-Montreal Global Biodiversity Framework, including through the implementation of the Strategic Action Programme for the conservation of biodiversity and sustainable management of natural resources in the Mediterranean. The Contracting Parties could also help to meet targets under the Paris Agreement by taking bold steps on decarbonization and adaptation. In the months and years to come, there would be many opportunities for increased collective action, including the sixth session of the United Nations

Environment Assembly, the negotiations on an international legally binding instrument on plastic pollution, including in the marine environment, and the United Nations Ocean Conference to be held in Nice in June 2025.

10. In her statement, Ms. Hema said that the health, well-being and livelihoods of millions of people in the Mediterranean region depended on the Contracting Parties' collective ability to deliver on the vision of a healthy Mediterranean Sea and coast. While the region was in the throes of the triple planetary crisis of climate change, biodiversity loss and pollution, progress was being made, as illustrated by the progress report on activities carried out during the 2022–2023 biennium and the 2023 Mediterranean Quality Status Report, which provided a comprehensive assessment of the implementation of the Integrated Monitoring and Assessment Programme (IMAP). The Contracting Parties were reaping the benefits of that implementation, with data trickling down through the regional data repository (IMAP InfoSystem). The report, which contained recommendations for achieving good environmental status, could help the Contracting Parties to design and launch evidence-based environment and development policies that the region needed. Notwithstanding significant progress by the Contracting Parties at the regional and national levels, the remarkable development of the regulatory framework and related measures had outpaced implementation, with the result that more needed to be done by the Contracting Parties in terms of enforcement and compliance in order for them to achieve their collective ambition.

11. Almost 50 years on from its inception, the MAP system needed support if it was to fulfil the Contracting Parties' ambitious vision and continue to serve as a catalyst for and coordinator of regional efforts to promote a healthy Mediterranean Sea and coast. In addition to adequate funding, MAP required as much political backing and recognition as possible. The fiftieth anniversary would thus be a time to celebrate accomplishments but also to bridge gaps and accelerate joint efforts.

12. The texts of the opening statements are set out in Annex I to the present report.

IV. Organizational matters (agenda item 2)

A. Rules of procedure

13. The Contracting Parties agreed that the rules of procedure for meetings and conferences of the Contracting Parties to the Barcelona Convention (UNEP/IG.43/6, annex XI), as amended by the Contracting Parties (UNEP(OCA)/MED IG.1/5 and UNEP(OCA)/MED IG.3/5), would apply to their deliberations at the meeting.

B. Election of officers

14. In accordance with rule 20 of the rules of procedure and with the principles of geographical representation and continuity (article 19 of the Convention and article III of the terms of reference of the Bureau of the Contracting Parties), the Contracting Parties elected the members of the Bureau, as follows, from among the representatives of the Contracting Parties:

President:	Mr. Mitja Bricelj (Slovenia)
Vice-Presidents	Ms. Heba Sharawy (Egypt)
	Ms. Nassira Rheyati (Morocco)
	Ms. Marie Therese Gambin (Malta)
	Ms. Itziar Martín Partida (Spain)
Rapporteur:	Ms. Djurdjina Bulatović (Montenegro)
Ex officio:	Ms. Fatma Varank (Türkiye) (in her capacity as the President of the Bureau during the biennium 2023–2024)

C. Adoption of the agenda

15. The Contracting Parties adopted their agenda on the basis of the provisional agenda circulated in document UNEP/MED IG.26/1:

1. Opening of the meeting
2. Organizational matters
 - 2.1 Rules of procedure
 - 2.2 Election of officers
 - 2.3 Adoption of the agenda
 - 2.4 Organization of work
 - 2.5 Verification of credentials
3. Thematic decisions
4. Programme of work and budget 2024–2025
5. Ministerial session
 - 5.1 Opening of the session
 - 5.2 Report on activities carried out in the framework of UNEP/MAP since the twenty-second Meeting of the Contracting Parties
 - 5.3 Ministerial session: “Green transition in the Mediterranean: from decisions into actions”
 - 5.4 Istanbul Environment Friendly City Award 2022–2023
 - 5.5 Portorož Ministerial Declaration
6. Dates and place of the twenty-fourth Meeting of the Contracting Parties
7. Any other business
8. Adoption of the report
9. Closure of the meeting

D. Organization of work

16. The Contracting Parties agreed to follow the timetable proposed in the annotated provisional agenda (UNEP/MED IG.26/2/Rev.1), to work in plenary sessions, and to establish a contact group, chaired by Mr. Ali Saad Hamid Abosena (Egypt), to consider the programme of work and budget for 2024–2025. They also agreed to establish a working group, chaired by Ms. Nataša Bratina (Slovenia), to review and, if necessary, update the draft Portorož ministerial declaration for possible adoption during the ministerial session of the meeting.

E. Verification of credentials

17. In accordance with rule 19 of the rules of procedure for meetings and conferences of the Contracting Parties to the Barcelona Convention and its related protocols, applicable to the current meeting, the Bureau examined the credentials of the representatives of the 19 Contracting Parties participating in the meeting. Of those Contracting Parties, 17 had submitted their credentials to the secretariat, and they were all found to be in order.

V. Thematic decisions (agenda item 3)

18. The Contracting Parties considered the draft decisions set out in documents UNEP/MED IG.26/4, UNEP/MED IG.26/5/Rev.2, UNEP/MED IG.26/6/Rev.1, UNEP/MED IG.26/7–15 and UNEP/MED IG.25/16/Rev.1.

A. Decision IG.26/1: Compliance and reporting

19. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/4. She recalled that the outstanding issues related to the nomination of members of the Compliance Committee and their alternates and the adoption of the activity report of the Compliance Committee, which reported directly to the Contracting Parties.

20. The Chair of the Compliance Committee outlined the elements of the draft decision.

21. In the ensuing discussion, one representative, speaking on behalf of a group of countries, thanked the Compliance Committee for its work. She said that the group supported the proposed amendments to the procedures and mechanism on compliance under the Barcelona Convention, as they would increase the effectiveness of the Committee. She urged Contracting Parties that had not yet done so to submit their national implementation reports for the period 2020–2021 as soon as possible. In the case of continued non-compliance with the reporting obligations, she said, the Committee should be called upon to take appropriate action. She asked the secretariat to propose concrete actions to address such situations.

22. Subsequently, the Coordinator reported that nominations for members and their alternates had been received from the Contracting Parties in groups I and II but not from group III. After a brief consultation in the margins of the meeting, the Coordinator explained that the Contracting Parties in group III were not yet in a position to nominate their members and alternates, but that another option was for the matter to be taken up by the Bureau of the Contracting Parties at its first meeting, in early 2024.

23. The Contracting Parties agreed that Group III would present nominations for members and alternates for consideration by the first Bureau meeting of 2024.

24. The Contracting Parties adopted decision IG.26/1 as set out in Section 3 of the present report.

B. Decision IG.26/2: Governance

25. A representative of the secretariat, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/5/Rev.2, which had been revised to ensure that the memorandums of understanding in annexes I and II were in line with the new template provided by UNEP and to include feedback on the memorandum of understanding with the Union for the Mediterranean received from that organization after issuance of the original document. In addition, a number of square brackets remained from the 2023 meeting of the MAP focal points.

26. In the ensuing discussion, one representative, speaking on behalf of a group of countries, proposed the deletion of a number of square brackets in the document related to amendment of the partner policy; new partnerships; and amendment of the terms of reference of the Bureau.

27. The Contracting Parties adopted decision IG.26/2 as set out in Section 3 of the present report.

C. Decision IG.26/3: The 2023 Mediterranean Quality Status Report and a renewed ecosystem approach policy in the Mediterranean

28. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/6/Rev.1, which still contained square brackets in paragraph 2. She recalled that the revised version of the executive summary of the 2023 Mediterranean

Quality Status Report, which was set out in annex I to the document, took into account all the comments received from Contracting Parties before, during and after the 2023 meeting of the Mediterranean Action Plan focal points. Editorial changes had been made to improve internal coherence, and an appendix had been added to annex I to provide a more visual representation of the findings therein.

29. In the ensuing discussion, one representative, speaking on behalf of a group of countries, while acknowledging the efforts undertaken by the secretariat and all the MAP components in preparing the report, added that the process had been hampered by a lack of monitoring data from the Contracting Parties. While appreciating how those data gaps had been addressed through the use of alternative data sources, she nevertheless wished to point out that monitoring and assessment was an obligation under the Convention and that the Compliance Committee should be called upon to take appropriate action when Contracting Parties continually failed to meet that obligation.

30. She requested the deletion of the appendix, saying that more time was needed to review it. It could, however, be used as input for the development of the future summary for policymakers.

31. She asked for more information about the content and timing of the online publication to be developed as a second communication product regarding the 2023 Mediterranean Quality Status Report. She requested that mention of the future online publication be made in the draft decision.

32. In response, the representative of INFO/RAC said that the online publication would contain the same information as the 2023 Mediterranean Quality Status Report, but that the website format would enable it to be presented differently, giving visitors both an overview and the possibility of seeking more detail on the elements in which they were interested.

33. One representative, in response to the assertion in the report that corridors were the biggest pathway for the introduction of non-indigenous species, said that recent studies had found marine fouling to be the most common cause. It was thus necessary to review the issue.

34. One observer stressed the importance of addressing a number of issues, including stormwater management, pollution from pesticides and fertilizers, and the harm caused by per- and polyfluoroalkyl substances.

35. The Contracting Parties adopted decision IG.26/3 as set out in Section 3 of the present report.

D. Decision IG.26/4: Amendments to annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

36. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/7, and in particular to the two options presented in square brackets in the annex to the draft decision.

37. During the ensuing discussion, one representative, speaking on behalf of a group of countries, noted that the second option involved listing in annex III four of the species originally proposed for listing in annex II. She supported the first option but offered a compromise whereby the eagle ray (*Myliobatis aquila*) would be listed in annex III instead of annex II. She nevertheless underscored the fact that all the referred species were in the IUCN Red List of Threatened Species and should thus be accorded a high level of protection, through the application of the precautionary principle in line with article 4, paragraph 3 (a) of the Convention and the adopted common criteria for inclusion of species in annex II of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol). Another representative opposed to the above compromise as regards the eagle ray and insisted to leave it to be included in annex II because it is a declared endangered species in the eastern Mediterranean.

38. Several representatives, however, expressed a preference for the second option, with one saying that the different conditions on the southern and northern coasts of the Mediterranean should be taken into account and that more in-depth study was therefore needed. Another representative argued for the acceptance of the conclusion of the SPA/BD focal points and the application of the precautionary principle, and suggested that the requested studies be carried out in parallel with the listing rather than instead of it.

39. The representative of an observer organization said that listing in annex II would be more effective in preventing further loss of these threatened species but that listing in Annex III would also provide benefits by improving data and management.

40. The Conference of the Parties agreed to hold additional informal discussions in the margins of the meeting to try to reach consensus on the issue.

41. Subsequently, the coordinator of the informal discussions reported that the Contracting Parties involved had explained their respective positions during the discussions but had not been able to reach consensus, owing to potential socioeconomic impacts that had not yet been assessed.

42. The representatives of Libya, Morocco and Tunisia expressed reservations regarding the listing of *Aetomylaeus bovinus*, *Bathytoshia lata*, *Dasyatis pastinaca* and *Myliobatis aquila* in annex II rather than annex III to the Protocol, while the representative of the European Union registered a reservation regarding the listing of *Myliobatis aquila* in annex II rather than annex III.

43. Responding to a question regarding procedure, the Coordinator explained that, as most of the Contracting Parties were in favour of the original proposal, the decision would be submitted for adoption as orally amended, including to indicate the reservations expressed. Following adoption, a revised version of the amendments to the annexes to the Protocol would be sent to the Depositary with a request to circulate it to all Contracting Parties, which would then be entitled to raise any objections.

44. One representative suggested that, following adoption of the decision, a step-wise approach for the implementation of the decision should be developed, in order to give countries enough time to adapt to the new situation and allow those countries that have made a reservation in relation to the listing of a number of species to lift this reservation in the next biennium. To this end, stock assessments and socio-economic studies on the impacts of the implementation of this decision should be undertaken with financial and secretarial support from UNEP/MAP. The Coordinator confirmed that such studies will be undertaken but would need to be provided for in the programme of work for the upcoming biennium.

45. The Contracting Parties adopted the first option, with four Contracting Parties entering reservations.

46. The Contracting Parties adopted decision IG.26/4 as set out in Section 3 of the present report.

E. Decision IG.26/5: Specially Protected Areas, Specially Protected Areas of Mediterranean Importance and ecosystem restoration

47. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/8.

48. Two observer organizations made comments. The first said that there was a critical need for quantitative and qualitative data, particularly in relation to strategic outcome 4. That information, which was critical to the success of the evaluation and monitoring framework, would need to be provided by the Contracting Parties. The other observer underlined the importance of wetlands conservation and restoration in combating climate change and biodiversity loss.

49. The Contracting Parties adopted decision IG.26/5 as set out in Section 3 of the present report.

F. Decision IG.26/6: Regional Plan on Agriculture Management in the Framework of Article 15 of the Land-Based Sources Protocol

50. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/9.

51. The Contracting Parties adopted decision IG.26/6 as set out in Section 3 of the present report.

G. Decision IG.26/7: Regional Plan on Aquaculture Management in the Framework of Article 15 of the Land-Based Sources Protocol

52. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/10, which had been revised on the basis of the comments received at the most recent MAP focal points meeting.

53. The Contracting Parties adopted decision IG.26/7 as set out in Section 3 of the present report.

H. Decision IG.26/8: Regional Plan on Stormwater Management in the Framework of Article 15 of the Land-Based Sources Protocol

54. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/11, which had been approved at the meetings of the focal points of the Coordinated Mediterranean Pollution Monitoring and Research Programme and of MAP.

55. The representative of an observer organization said that the decision, along with the decision on agriculture management within the framework of Article 15 of the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities, was particularly important because it represented the first time that parties were tackling non-point sources and fully linking integrated water resource management with integrated coastal zone management and even offshore management.

56. The Contracting Parties adopted decision IG.26/8 as set out in Section 3 of the present report.

I. Decision IG.26/9: Updated Guidelines for the Dumping of Inert Uncontaminated Inorganic Geological Materials

57. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/12.

58. The Contracting Parties adopted decision IG.26/9 as set out in Section 3 of the present report.

J. Decision IG.26/10: Marine spatial planning in the Mediterranean

59. The Director of the Priority Actions Programme Regional Activity Centre (PAP/RAC), introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/14.

60. The representative of an observer organization noted that marine spatial planning represented governance at the highest levels, involving various government ministries, multiple economic sectors, citizens and the scientific community in a joint effort of citizen science and, in some cases, international partners. She called for increased stakeholder involvement and public participation in the process and for information sharing, in accordance

with the principle of direct democracy. She recommended that the Black Sea be included in the strategy through the creation of a formal focal point for the dissemination of initiatives throughout the territory. Lastly, recalling that the blue economy referred to the economic use of water, she advocated the inclusion of marine lakes, rivers, lagoons and other bodies of water.

61. During subsequent consideration of the draft decision, the representative of Egypt reiterated her delegation's desire to maintain its reservation concerning the full text of the decision.

62. The Contracting Parties adopted decision IG.26/10 as set out in Section 3 of the present report, including a mention of the reservation entered by Egypt and Libya.

K. Decision IG.26/11: Regional harmonized procedures for the uniform implementation of the Ballast Water Management Convention in the Mediterranean Sea

63. The Head of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/14, which would, among other things, facilitate enhanced regional cooperation, including through the conclusion of regional agreements consistent with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004).

64. The Contracting Parties adopted decision IG.26/11 as set out in Section 3 of the present report.

L. Decision IG.26/12: Establishment of a regional activity centre on climate change

65. The Coordinator, introducing the sub-item, presented a new draft text, set out in document UNEP/MED IG.26/15, which had been submitted as a compromise proposal by a group of parties in place of the draft decision considered at the 2023 meeting of MAP focal points.

66. In the ensuing discussion, several representatives took the floor to express their support for the proposal, given that the Mediterranean region was particularly affected by climate change.

67. One representative, speaking on behalf of two observer organizations/Mediterranean Action Plan partners, proposed that UNEP/MAP establish clear and ambitious decarbonization targets for the Mediterranean region and that the Contracting Parties request the secretariat to commission a study to determine the remaining carbon budget for the Mediterranean region up until 2050. He suggested that the conduct of the study could be a first task for the new regional activity centre.

68. Another representative of an observer organization/Mediterranean Action Plan partner proposed that the draft decision make mention of harmful marine heat waves in the preamble and count nature-based solutions among the best practices for addressing climate change in the body of the decision. A third such representative emphasized the importance of ensuring that women, civil society and Indigenous Peoples were involved in the work of the new centre.

69. The Contracting Parties adopted decision IG.26/12 as set out in Section 3 of the present report.

M. Decision IG.26/13: Assessment studies: summary for policymakers of the MedECC Special Report on Climate and Environmental Coastal Risks

70. The Coordinator, introducing the sub-item, drew attention to the draft decision set out in document UNEP/MED IG.26/16/Rev.1.

71. A representative of the Mediterranean Experts on Climate and Environmental Change (MedECC) introduced the updated summary for policymakers of the MedECC Special Report on Climate and Environmental Coastal Risks, noting that the summary had been revised in the light of written submissions and a consultation with Contracting Parties held on 6 November 2023.

72. The Contracting Parties adopted decision IG.26/13 as set out in Section 3 of the present report.

VI. Programme of work and budget 2024–2025 (agenda item 4)

73. The Coordinator, introducing the item, drew attention to the draft decision set out in document UNEP/MED IG.26/17, the report on the financial implementation of the programme of work for 2022–2023 (UNEP/MED IG.26/Inf.14) and the outcomes of the online consultation on budgetary matters held on 2 November 2023 (UNEP/MED IG.26/Inf.17). She then delivered a presentation on the programme of work and budget for 2024–2025, covering its alignment with the UNEP/MAP medium-term strategy for 2022–2027, the inclusion of lessons learned from the implementation of the programme of work for 2022–2023, the key intended outcomes of the proposed programme of work and an overview of budget proposals. With regard to the budget, she noted that, following the request of the MAP focal points at their 2023 meeting, two different scenarios were presented in the proposals, one on the basis of no increase in assessed ordinary contributions and one on the basis of a 2 per cent increase in those contributions. Further minor adjustments to the proposals had been made in the light of the online consultation on budgetary matters held on 2 November 2023, which had been attended by interested Contracting Parties. In closing, she encouraged the early payment of contributions from Contracting Parties wherever possible and, drawing attention to the draft decision, said that the text was based closely on previous decisions but allowed for more flexibility in the adjustment of allocation of funds to activities.

74. One representative, speaking on behalf of a group of countries, reiterated that in light of the preamble on Med NO_x ECA agreed by the Contracting Parties at COP 22, and the Antalya Ministerial Declaration, the countries are fully committed to reduce emissions from ships, both to fight climate change and air pollution. As it was already the case for the Med SO_x ECA process, she stressed the importance that the study assesses, in a comprehensive manner, health, environmental and socio-economic impacts in the Mediterranean region as a whole. She also emphasized that the studies be undertaken as soon as possible in 2024 and that they are launched on the basis of clear terms of reference agreed by nominated experts from all Parties, including synergies and trade-offs with other ongoing or future policy initiatives addressing ship emissions.

75. Subsequently, Mr. Abosena (Egypt), in his capacity as the chair of the Budget Contact Group, introduced the outcome of the deliberations of the contact group in the form of a conference room paper. The Coordinator provided further explanations regarding the document.

76. In the ensuing discussion, one representative, speaking on behalf of a group of countries, said that the group could agree to the increase in the grade of the REMPEC post from P-4 to P-5 as long as the cost difference was covered using voluntary funding and was therefore subject to the availability of resources. A similar approach should be taken to the funding of the analysis linked to the new regional activity centre on climate change and the study on species, which should be taken from the budgetary surplus. He made a proposal for an additional text to ensure the fair and equitable use of the Mediterranean Trust Fund to support operational costs of all the regional activity centres.

77. One representative, speaking on behalf of a group of countries, asked that the Secretariat includes in every biennium budget an appropriate line in table 2, part 1 to consider unpaid arrears older than the last two biennia and to cover the amount with the unutilized positive balance of the MTF or other appropriate funds. She also urged Contracting Parties which have arrears to pay them without delay or conditionalities. She added that the group of countries she represents asked that in operational paragraph 8 of the Decision, the wording “approve” should be used instead of “take note” and added that this question should be addressed by the Bureau.

78. One representative sought greater clarity with regard to the applicable scale of assessment throughout the biennium, given that a new scale of assessment was likely to be approved at the United Nations level during the two-year period. A representative of UNEP clarified that, when the scale of assessment changed during a biennium, the new scale was applied only during the following biennium.

79. The Contracting Parties adopted decision IG.26/14 as set out in Section 4 of the present report.

VII. Ministerial session (agenda item 5)

80. A ministerial session was held on Thursday, 7 December 2023, comprising introductory remarks; a report on activities carried out in the framework of UNEP/MAP since the twenty-second meeting of the Contracting Parties; an interactive policy review session featuring a panel discussion on the theme “Green transition in the Mediterranean: from decisions to actions”; the presentation of the Istanbul Environment Friendly City Award for 2022–2023; the signature of a memorandum of understanding between UNEP/MAP and the secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS); and the consideration and adoption of the Portorož Ministerial Declaration.

A. Opening of the session

81. The session was opened at 10.15 a.m. by Mr. Mitja Bricelj, President of the Bureau of the Contracting Parties, who acted as facilitator of the ministerial session.

82. After a short video presentation on the theme of the meeting, “Green transition in the Mediterranean: from decisions to actions”, opening statements were delivered by Ms. Maša Kociper, State Secretary in the Cabinet of the Prime Minister of Slovenia; Ms. Elizabeth Maruma Mrema, Deputy Executive Director of UNEP; Mr. Robert Golob, Prime Minister of Slovenia; and Ms. Tatjana Hema, Coordinator of the Mediterranean Action Plan. The texts of their statements are set out in Annex II to the present report.

83. Ministers and heads of delegation of the Contracting Parties then made their interventions in the following order: Cyprus, Libya, Spain (European Union Council Presidency), Greece, European Union, Bosnia and Herzegovina, Croatia, Egypt (via video message), France, Italy, Lebanon, Malta, Montenegro, Morocco, Tunisia, Israel, Türkiye. Their interventions were followed by those of the heads of delegation of observer organizations/Mediterranean Action Plan partners in the following order: IMO, ACCOBAMS, OSCE Parliamentary Assembly, Parliamentary Assembly of the Mediterranean, MedPAN, Union for the Mediterranean, Task Force Africa, MIO ECSDE (the latter also on behalf of the Association of Continuity of Generations, Environment and Bio Innovation Association, MEDASSET and the Global Water Partnership Mediterranean), OceanCare and MedCities.

84. In their statements, the ministers and heads of delegation thanked Slovenia for its hospitality and the secretariat for its organization of the meeting and its work over the biennium. Several representatives underscored the vulnerability of the Mediterranean region to the effects of the triple planetary crisis of climate change, biodiversity loss and pollution, with some calling for renewed and reinforced commitment to combating the crisis in line with the theme of the meeting. Many stressed the importance of the efforts and initiatives undertaken

by the UNEP/MAP-Barcelona Convention system and its pivotal role in uniting the countries in the region under a coherent policy framework to protect the Mediterranean. Some representatives underlined the key role of regional seas conventions in contributing to global commitments, including the achievement of the Sustainable Development Goals.

85. Many representatives therefore welcomed the Portorož Ministerial Declaration, which clearly set out future ambitions. Some highlighted other important outcomes of the meeting, such as the executive summary of the 2023 Quality Status Report, the adoption of three new regional plans on agriculture management, aquaculture management and urban stormwater management, and the measures to protect additional species through amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean. Many representatives reaffirmed their commitment to implementing the Convention and its protocols. Appreciation was expressed for the support of the regional activity centres, with several representatives welcoming the decision on the establishment of the new regional activity centre for climate change in Türkiye.

86. Representatives described the actions that their countries had undertaken in support of the aims of the Convention. Such initiatives included the adoption of strategies and action plans, for example, on sustainable consumption and production patterns or integrated coastal zone management; the enactment and implementation of legislation, including on climate action; the development of renewable energy sources; decarbonization; the creation of a new carbon sink; the establishment of marine protected areas; the conduct of high-resolution mapping to identify sensitive habitats; the development and implementation of plans to implement a circular economy; programmes on wastewater management and industrial pollution control; the reduction of single-use plastic and pollution from plastics and microplastics; implementation of the Zero Waste initiative; waste recycling and reuse; wastewater treatment; desalination; the reduction of emissions from ships; the creation of observatories; the engagement of the private sector to create employment and boost the uptake of innovative solutions; the adoption of fiscal and regulatory instruments and incentives to stimulate new economic and investment opportunities in support of environmental goals; and the running UNEP/MAP-Barcelona Convention pilot projects to build knowledge and capacity for use throughout the entire region.

87. Multilateralism and multisectoralism were also deemed important for the successful implementation of existing agreements, whether well-established ones such as the Barcelona Convention or more recent ones such as the Kunming-Montreal Global Biodiversity Framework, and for the development of instruments such as the future global agreement to combat plastic pollution. Similarly, partnerships were essential, as they enabled the fostering of cooperation and the sharing of experiences.

88. Several representatives highlighted the need to ensure that civil society, particularly young people, were involved in environmental decision-making. One representative said that civil society was a critical driving force in the green transition and that communication and education efforts were crucial to change behaviour and to empower various sectors of society to contribute to new sustainable consumption patterns. Among the other elements deemed important for enabling countries to meet the challenges facing them in the region and at the global level were innovation; research; and effective monitoring, accompanied by metrics.

89. Several representatives expressed their gratitude for the capacity-building and technical assistance that they had received through the UNEP/MAP-Barcelona Convention system and asked that such support continue. One representative announced that her Government would make an additional voluntary contribution of 1.4 million euros.

90. The representatives of partner organizations, in their statements, likewise thanked the meeting host and the secretariat and highlighted their close cooperation with the UNEP/MAP-Barcelona Convention system and their support of the aims of the Convention as they strove to achieve common goals. Proof lay in the memorandums of understanding that

their organizations had signed or would sign with UNEP/MAP. Among the issues that they raised were the importance of ensuring that the decisions taken by the Contracting Parties were effectively implemented; that there was close cooperation between the Contracting Parties and civil society at all levels; that non-governmental organizations and non-state actors were engaged in decision-making, implementation and monitoring processes; that access to information was ensured; that there was greater proliferation and sharing of good practices; that efforts were put into innovation; that marine protected areas were not simply established but also subsequently managed effectively; and that there were greater attention to and safeguards against greenwashing.

91. The texts of the statements made by the heads of delegation of the Contracting Parties are set out in Annex III to the present report.

B. Report on activities carried out in the framework of UNEP/MAP since the twenty-second Meeting of the Contracting Parties

92. The Coordinator provided an overview of the work done under the programme of work for the biennium 2022–2023, as more fully described in the progress report on activities set out in document UNEP/MED IG.26/3, which was to be read in conjunction with document UNEP/MED IG.26/18, containing statements of accounts for the financial period, and document UNEP/MAP IG.26/19, containing the overall findings of an analysis of the information in national implementation reports for the 2020–2021 biennium.

93. The Contracting Parties took note of the information provided and congratulated the secretariat and the MAP components for the progress achieved.

C. Interactive ministerial policy review session: “Green transition in the Mediterranean: from decisions to actions”

94. Mr. Jihed Ghannem, UNEP/MAP Public Information Officer, introduced the speakers for the panel discussion on the theme of “Green transition in the Mediterranean: from decisions to actions”: Mr. Almotaz Abadi, Deputy Secretary-General for Water, Environment and Blue Economy, Union for the Mediterranean; Mr. Jean-Charles Orsucci, Mayor of Bonifacio, a coastal town on the island of Corsica in France; Ms. Lučka Kajfež Bogataj, climatologist, Professor of Biotechnology at the University of Ljubljana and member of the Intergovernmental Panel on Climate Change; Mr. Michael Scoullou, Chair of the Mediterranean Information Office for Environment, Culture and Sustainable Development; Ms. Yeganeh Forouheshfar, economist and senior researcher for the Euro-Mediterranean Economists Association; and Mr. Ahmed Yassin, co-founder of Banlastic Egypt.

95. Mr. Abadi said that the Union for the Mediterranean was focusing not only on protecting the Mediterranean Sea and its biodiversity but on harnessing its potential for improving the socioeconomic situation of the region’s population. He underscored that, first and foremost, political will was needed to enable a green transition, including by establishing the necessary regulations and partnerships and by implementing a whole-of-government and whole-of-society approach. The Union for the Mediterranean provided a platform for its member States to engage in inclusive and comprehensive dialogue on the blue and green economies and environmental issues while at the same time considering other agendas. It was important for governments to engage with the people of the Mediterranean to show that the green transition was an opportunity for economic development, as well as a way of overcoming environmental challenges, and to encourage innovative approaches from the private sector.

96. Following a short video presentation on the measures taken to protect the environment of Bonifacio, Mr. Orsucci said that his small town of 3,000 inhabitants, which welcomed 2 million visitors every year, had introduced several green initiatives, including severe restrictions on the mooring of vessels that had successfully prevented the destruction of

Posidonia oceanica fields while also contributing to the local economy through the collection of mooring fees. It was critical for actions relating to green transition to be taken at the local level, enabling solutions to specific issues, while at the same time considering those issues at the regional or even global level to allow for the exchange of best practice and for interconnected solutions.

97. Ms. Kajfež Bogataj said that the speed and impact of climate change in the Mediterranean remained underestimated by many and would likely lead, in 20 or 30 years' time, to very dry summers with an average increase of temperatures by 4°C and only half the current amount of water available. She said that two main areas of focus should be energy and food. The generation of renewable power through the use of hydropower or biomass might not be feasible in the region in the future, given the predicted changes in the climate. Even more pressing issues included energy storage, strengthening national grids through the use of smart grids, and improving forest, agricultural coastal and marine management to allow for sufficient carbon dioxide sinks. In order to ensure food security in the region, agriculture needed to be transformed to withstand changes in the climate, and the Mediterranean Sea itself should be used to a greater extent as a food source, while at the same time guarding against overfishing. Turning to the circular economy, she said that there should be a focus on recycling precious metals and on using the sea as a source of new, low-carbon materials. The region also needed to ensure that its cities became smart cities, with better public transport links and transport solutions that improved air quality, and with infrastructure that could withstand both changes in climate and major weather events. Finally, she noted the importance of social equality, gender equality and education in achieving a green transition.

98. Mr. Scoullos recalled the critical nature of adopting a source-to-sea approach, as pollution could not be prevented in the marine environment without considering land-based sources, and noted the importance of reorienting agricultural practices in that regard. In order to achieve a green transition in the Mediterranean, not only new technologies but also new approaches to governance were required, such as a water-energy-food-ecosystem nexus approach, at the national level in particular, that ensured the integration of policies for all four elements and avoided a silo approach. For example, in order to ensure that wastewater could be treated to be used safely in agriculture, it was vital to design infrastructure not only for the water itself but also for the energy required for the treatment of the water. The public needed to be made aware of the approach both to communicate its benefits and to help identify areas where such synergies already existed and could be strengthened further. He clarified that the approach was intended as an evolution rather than a revolution, involving strengthening and adapting existing structures rather than creating something new, and therefore would truly be a green transition.

99. Ms. Forouheshfar said that, although many countries in the region had national decarbonization plans, the whole region remained heavily reliant on fossil fuels. There was much potential for the further development of renewable energy in the region but it was important that such development be based on a collective approach, with countries supporting each other. She noted that the southern Mediterranean countries in particular would require significant support not only to produce renewable energy but to develop the infrastructure needed to use it. Support would also be required from international organizations and funding mechanisms, as well as private investors, and governments had a role to play in developing equitable, stable policies that would attract investors, including through the use of carbon and "nature" markets and the issuance of green bonds. It was also critical to foster innovation by facilitating access to funding for those developing new technologies. Finally, she underlined the need for the green transition to be equitable, both by ensuring that the digital divide was bridged and by providing a social safety net for all, in particular those directly affected by the transition, to ensure that no one was left behind.

100. Mr. Yassin said that his organization, Banlastic Egypt, which focused on banning single-use plastic, was run by young people and benefited from a close connection with the

Government of Egypt, providing the latter with “on-the-ground” information on the severity of the problem of single-use plastic and suggesting ways to tackle it, thereby informing national policy. He expressed his desire to replicate the approach across the Mediterranean and to improve information-sharing, for example, through a platform that would allow young innovators to engage with each other, as well as with youth organizations and governments, on the implementation of innovative solutions. He stressed the importance of provision of financing for small and medium-sized green enterprises, in particular those run by young people, that was easy to access and free of unnecessary bureaucracy.

101. Following the presentations, questions and comments from the floor were invited. In response to a comment that the technology for smart grids and energy storage was already available, Ms. Kajfež Bogataj said that the challenge now was for governments to invest in smart grids and for renewable energy storage, which was often provided to citizens by private companies, to be made affordable. In response to an observation that wastewater could be used without the need for energy, either through natural cleaning methods in lagoons or for uses where no treatment was necessary, such as for heat pumps, Mr. Scoullos said that, although such methods could not be used for all wastewater and so energy would often be needed, their existence underlined the need for governments to change their decision-making framework to allow them to consider a mix of centralized and decentralized solutions, investing in smaller-scale options rather than relying solely on high-level investment.

102. Mr. Yassin expressed his support for the initiative described by one observer, who said that workshops in entrepreneurial skills had been run in Tunisia specifically for students and recent graduates in the field of life sciences. The scheme had proved successful, and she encouraged participants to run similar workshops in their own countries, in particular to combat high levels of youth unemployment.

103. In response to a request from one observer for the views of the panellists on the concept of “degrowth”, namely planned, democratic reduction of production and consumption with the aim of reducing environmental pressures and inequality while improving well-being, Mr. Orsucci said that he did not support the concept, but rather advocated economic sobriety. He said that, although health and education should always remain priorities, governments should also work closely with captains of industry to seek solutions to the problems facing the region. Ms. Kajfež Bogataj said that she supported the concept and encouraged wider discussion of it and of other economic models, as such concepts were not widely taught in schools or known among the general public. Ms. Forouheshfar, while agreeing that indicators such as social and economic well-being should be considered, said that gross domestic product was still the main indicator considered by economists. She therefore noted the significance of a recent study indicating that a green transition and a move to net zero in the southern Mediterranean would have a negative effect on gross domestic product in the short term but lead to 10 per cent growth in gross domestic product in the long run. Mr. Scoullos noted that the “degrowth” concept was not new and was indeed the path that high-income countries needed to follow, but that it would benefit from a different name that focused on the positive elements of the concept.

104. The President then introduced young people from a high school in Rome, who had been invited to attend the ministerial session as part of a project conducted by the Ministry of Environment and Energy Security of Italy on the conservation, protection and health of the Mediterranean Sea. The students expressed the view that young people in the region were powerless spectators of the dramatic effects of the triple planetary crisis and felt deep anxiety about the future of the planet. They therefore called upon Contracting Parties to take swift and concerted action to stop environmental decline in the region, as decisions made today would have serious consequences for young people in the future.

105. A member of the Youth Parliament of the Sava river basin underlined the importance of enabling young people in different countries to connect with each other to discuss their

opinions and develop solutions to the issues facing coastal and marine environments by encouraging such projects to be part of school curricula and by using social media.

D. Istanbul Environment Friendly City Award 2022–2023

106. The Coordinator announced that the city of Genoa, Italy, had been selected as the winner of the 2022–2023 attribution of the Istanbul Environment Friendly City Award, which had been established in 2016 as a flagship initiative of the Mediterranean Strategy for Sustainable Development and was supported through generous funding from the Government of Türkiye. Urbanization was a well-recognized global megatrend, with 70 per cent of the world's population expected to be city dwellers by 2050. In the context of the current discussion on accelerated action towards a green transition, it was fitting to celebrate the achievements of Mediterranean cities in that arena. Cities provided unique hubs where synergies among ideas, initiatives, private-sector pursuits and public policy could drive the green agenda forward, and the Istanbul Environment Friendly City Award recognized the efforts of local authorities to tackle that potential. Through an indicator-based evaluation, the city of Genoa had demonstrated progress in the four fields covered by the award: nature and biodiversity protection; social, economic and cultural sustainability; built environment; and governance.

107. The President then presented the Istanbul Environment Friendly City Award to Mr. Mario Mascia, Municipality Councillor of Genoa for Urban Planning, Maritime State Property, Economic Development, Labour and Labour Relations, in the presence of the Deputy Executive Director of UNEP, the Coordinator and the representative of Türkiye.

108. Mr. Mascia conveyed the greetings of the Mayor of Genoa, Mr. Marco Bucci, and thanked the Contracting Parties for the award, which he said confirmed his city's commitment to a prosperous and sustainable future. The municipality of Genoa applied environmental, social and governance criteria to large and small projects and carried them out with commitment and participatory dialogue. He characterized his local government's primary duty as being optimistic, learning from the past, studying future scenarios, and transforming challenges into opportunities to make the city more attractive and sustainable, fostering a better quality of life through the protection and promotion of terrestrial, marine and coastal ecosystems as a legacy for future generations. The government considered the preservation of seas and oceans a moral duty towards future generations, and it planned to redouble its efforts to make pollution a distant memory, starting with plastic pollution, which threatened the survival of many ecosystems. He wished to dedicate the award to all participants in the Convention and their joint efforts to care for the planet's sea, water, air and land, the precious sources of life and human survival.

109. The representatives then viewed a video of Genoa, as well videos from the second and third finalists, Izmir, Türkiye, and La Spezia, Italy.

E. Memorandum of understanding between the United Nations Environment Programme in its capacity as secretariat of the Mediterranean Action Plan and the secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)

110. A memorandum of understanding between UNEP in its capacity as secretariat of MAP and the secretariat of ACCOBAMS was signed by the Deputy Executive Director of UNEP, Ms. Elizabeth Maruma Mrema, and the Executive Secretary of ACCOBAMS, Ms. Susanna Salvador.

F. Portorož Ministerial Declaration

111. Ms. Bratina (Slovenia), chair of the working group established to review the draft Portorož ministerial declaration, introduced the draft text of the declaration, which was set out in document UNEP/MED IG.25/26.

112. The representative of an observer organization said that it would be preferable to use the term “multidimensional crisis”, rather than “triple planetary crisis”, to reflect the fact that there were more than three elements involved in the environmental crisis facing the planet. She also requested that references be added in the declaration to the Convention to Combat Desertification and to the Enhancing Nature-based Solutions for an Accelerated Climate Transformation (ENACT) initiative, which had been an outcome of the twenty-seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, which had been presided over by Egypt.

113. Ms. Anne-France Didier, President of the Mediterranean Commission on Sustainable Development, gave a presentation on the Commission’s work as it related to the draft declaration, underscoring the challenges faced by countries in the Mediterranean in relation to climate change and adaptation, employment and ensuring a sustainable blue economy, and preserving the health of the region’s environment. The Commission intended to conduct a review of the Mediterranean Strategy for Sustainable Development in order to strengthen it. Areas of focus for the Commission’s work included the preservation of marine biodiversity – for example, by tackling overfishing and illegal fishing and by protecting *Posidonia oceanica* through a dedicated Mediterranean Posidonia Network; maritime spatial planning; the decarbonization of transport in the region; and the development of renewable energy in the Mediterranean. The Commission also intended to launch an initiative on the water-energy-food-ecosystems nexus in the Mediterranean source-to-sea continuum. With regard to cross-cutting aspects of the Commission’s work, she said that it was considering how best to integrate proposals put forward by young people into its action plans and to ensure the involvement of civil society in its deliberations and in discussions with policymakers. The Commission continued to consider the gender dimension in its work, as well as to develop a wide variety of tools that would be helpful for the areas of the Mediterranean most in need of support, including through educational initiatives. She stressed the importance of partnerships with States, non-governmental organizations and other stakeholders for the work of the Commission.

114. Subsequently, the Contracting Parties adopted the Portorož Ministerial Declaration as set out in Section 2 of the present report.

VIII. Dates and place of the twenty-fourth Meeting of the Contracting Parties (agenda item 6)

115. The meeting agreed that the 24th Meeting of the Contracting Parties will take place in either Cairo or Alexandria in Egypt in December 2025 with the exact venue and date to be defined at a later date.

IX. Any other business (agenda item 7)

116. The Coordinator recalled that, at their twenty-second meeting, the Contracting Parties had adopted decision IG.25/6 on amendments to the annex to the Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (Dumping Protocol). In accordance with the Barcelona Convention and international law, it was incumbent on the Depositary, the Government of Spain, to submit the amendments for acceptance by all Contracting Parties to the Protocol. However, because the amendments pertained to the annexes to the amended Dumping Protocol, which had not yet entered into force, rather than to the annexes to the original Dumping Protocol, the procedure of notification and acceptance could not be completed. Following consultations with the UNEP Legal Unit, the secretariat considered that it would not be in the interests of the Contracting Parties to redraft the decision in line with the original Dumping Protocol. Thus, she suggested

that the Contracting Parties might wish to instruct the secretariat either to send a letter to the Depositary requesting the formal suspension of the notification procedure until the amended Dumping Protocol had entered into force, for which two more ratifications were required, or to prepare a formal decision to suspend the notification procedure. However, such a decision could be submitted to the Contracting Parties for consideration at their next meeting. She invited the Contracting Parties to recommend the action they deemed most appropriate.

117. The Contracting Parties agreed with the first of the proposed options and therefore requested the secretariat to write to the Depositary requesting the formal suspension of the notification procedure until the amended Dumping Protocol had entered into force.

X. Adoption of the report of the meeting (agenda item 8)

118. The Contracting Parties adopted the report on the basis of the draft report set out in document UNEP/MED IG.26/L.1, as orally amended. The secretariat was entrusted with the finalization of the report.

XI. Closure of the meeting (agenda item 9)

119. Following the customary exchange of courtesies, the Chair declared the meeting closed at 6.30 p.m. on Friday, 8 December 2023.

Annex I

Statements Delivered at the Opening of COP 23 (5 December 2023)

COP 23 UNEP/MAP BARCELONA CONVENTION**Welcome Speech by Ms. Fatma Varank****Deputy Minister of Environment, Urbanization and Climate Change of the Republic of Türkiye**

Dear Delegates

The Honorable Ms. Elizabeth Maruma Mrema, Deputy Executive Director of the United Nations Environment Program,

Honorable Mr. Uroš Brežan, Minister of Spatial Planning and Natural Resources of Slovenia,

The Honorable Ms. Tatjana Hema, Director of the Mediterranean Action Plan,

Ladies and gentlemen,

It gives me great pleasure and honor to open the 23rd Conference of the Parties for the Barcelona Convention and to welcome you to this important meeting. I greet you with respect.

We are very proud to be delivering this task, which we received 2 years ago in Antalya, to Slovenia today in this beautiful city of Portoroz.

At the 22nd Conference of the Parties in the post COVID Pandemic period, we, as all Parties, demonstrated our commitment to the environmental recovery of the Mediterranean and took many important decisions.

In this period, we see that the adoption of the Medium Term Strategy, the groundbreaking decision to declare the Mediterranean Sea as a whole as a Sulphur Emission Control Area, decisive steps to protect biodiversity and updates to the Additional Protocols of the Convention have been successfully implemented under the leadership of the Convention Secretariat.

Especially during the process of adopting the MedSECA decision, we, as all the Countries, showed an important solidarity and ensured the adoption of the decision, showing how much solidarity the Countries in the Mediterranean can show when it comes to the environment.

DESPITE THE NEGATIVITIES

Despite this, we see that the Mediterranean has not had an easy time in the last 2 years. As inhabitants of the Mediterranean, we are more affected by the ongoing floods, forest fires, loss of biodiversity, migration and especially the extreme temperature increase and increase in salinity caused by climate change. It is a fact that we are affected both financially and morally as countries due to these negativities.

On the climate point, yearly temperature records are causing new environmental problems, such as the rapid depletion of natural resources, increased pollution, and the rise of non-native species. In addition, climate-driven irregular migrations are likely to cause new problems for the Mediterranean.

We know how important the Mediterranean is among the world's seas. At this point, we see that the problems that the Mediterranean will face in the coming period will increase and become much more dimensional.

For instance, the accumulation (bioaccumulation) of heavy metals in the body of living organisms such as fish and sea turtles due to pollution in the Mediterranean Sea, and the related increase in mortality and human illnesses are among the issues we need to consider in the coming period.

At this point, although we have taken many important decisions and tried to put them into practice as the Mediterranean Action Plan, we see that we have fallen short of achieving what we call Good Environmental Status.

Because when we consider that environmental problems are complex and multidimensional, we need a holistic and united search for a solution. At this point, we would like to emphasize again that it is time to act together and move from "Decision to Action" as stated in the Theme of this COP.

NATURE IS THE SOURCE OF THE SOLUTION

Our seas are called the "Lungs of the Earth" and both we as humans and the creatures we share this world with pay the price for our failure to protect our seas. Our only way out seems to be nature.

In this context, we believe that the work carried out especially for the protection of seagrass meadows will make important contributions to the future of the Mediterranean.

For example, we need to identify and increase the amount of areas to ensure greater protection of areas of vital importance for the Mediterranean, such as Sea Turtles, Mediterranean Seals, Mediterranean reefs and seagrass meadows.

We must work together towards the effective and equitable implementation of the concept of Marine Spatial Planning in marine areas, with the contribution and support of all States Parties.

We know that all elements of the Mediterranean Action Plan system are ready to work together for the future of the Mediterranean. In particular, the most accurate information should be provided to decision-makers to support them in making the right decisions.

At this point, we believe that it is of great importance to take steps towards strategies and technical solutions on the issues highlighted in the MedECC and MedQSR Reports.

FOR THE FUTURE OF THE MEDITERRANEAN

In the summer of 2023, all countries struggled with record temperatures and related anomalies. Instead of feeling sorry for the Mediterranean, which is our home, we should struggle for a solution. When we consider that we are the source of the vast majority of the problems experienced at the point we have reached as humanity, we will find the solution.

I hope that the period ahead will be a period of prevention and reduction of land-based pollution, better waste management, more efforts to combat climate change, and a healthier ecosystem in the Mediterranean, one of the world's most important sources of biodiversity.

I would like to thank Ms. Tatjana HEMA, Coordinator of the Mediterranean Action Plan, and her team, as well as you, the Representatives of the Contracting Parties, for your support and contributions during this process of assuming the Bureau Presidency. I would also like to wish Slovenia, our new Bureau President, success in her work.

I hope we have a pleasant COP process. Thank you.

**Welcome Speech by Ms. Maša Kociper,
State Secretary**

Office of the Prime Minister of the Republic of Slovenia

Excellencies, ladies and gentlemen, honoured guests, participants of the conference!

It is an honour to have you all in Portorož. I hope that you had a pleasant evening and that you are ready to start the hard work.

The Barcelona Convention provides us with the right framework for coping with the environmental challenges of the contemporary world. And, yes, the challenges are multiplying: the climate crisis, pollution crisis, crisis of biotic diversity, to name just a few.

If we want to avoid the perfect storm and sail with the mild winds of sustainable development and green transition, we definitively need to move from decisions to actions; as our motto – and our youth! - clearly demand from us.

As you are well aware, we will proceed with plenary, ministerial and side-events.

Over the course of four days, senior representatives of the contracting parties will meet, discuss, and decide with the representatives of scientific institutions, NGOs and also the younger generation!

If there is one message that we will wear the whole time, not only on our jackets, but also in our hearts, it is the importance of common action and the collaboration of organisations in securing the sustainable future of the Mediterranean.

The plenary decisions will address joint actions in the field of sustainable maritime transport, aqua- and agri-culture and preserving biotic diversity, with the aim of providing security in the domains of both food and water.

While the whole world discusses the same questions at the same time in Dubai, our COP 23 is focused on our own, Mediterranean Sea. A global and intergenerational perspective is needed, though, and evoked both here and there, so we really are not only *part* of a bigger picture, but also an important *partner* in providing solutions.

We are certain that ministers will do their best to translate the decisions drafted in the Portorož Declaration, into concrete actions. One of the ways of guaranteeing success is to include expert institutions in every step of the decision-making process.

Many of these topics will be debated during the side-events. We are looking forward to the debates among the representatives of scientific institutions, NGOs and engaged youth, because their best practices, and also most challenging dilemmas, can bring the necessary wind and salt to the dynamics of the declarations and further action.

The agenda is very promising: from the prevention of maritime pollution and very specific ways of preserving biodiversity to the importance of maritime spatial planning as an integral part of the blue economy.

Honoured colleagues, participants and guests,

Let us not fear the *scale* of the challenges in front of us. In Slovene, “skala” means *rock*: we Slovenes like to climb every rock, because you can get a better view of what lies ahead of you. Honoured friends, let us climb these challenges together, let us make COP 23 memorable – as the place to be!

Thank you and all the best!

**Opening remarks of the 23rd Meeting of the Contracting Parties to
the Barcelona Convention and its Protocols**

**Ms. Elizabeth Maruma Mrema
Deputy Executive Secretary of the UN Environment Programme**

Excellencies, Parties to the Barcelona Convention, colleagues.

As the world fights back against the triple planetary crisis of climate change, nature and biodiversity loss and pollution and waste, the Mediterranean Action Plan (MAP) and the Barcelona Convention are more important than ever.

MAP has, of course, been crucial to the protection of the Mediterranean for many years. In fact, the forthcoming biennium will see the celebration of MAP@50, marking half a century of environmental multilateralism and regional solidarity.

UNEP applauds what the Parties have achieved. In particular, the adoption of the Mediterranean Sea as an “Emission Control Area for Sulphur Oxides and Particulate Matter” by the International Maritime Organization was a bold step towards a sustainable blue economy.

Now, you, the Parties to the Barcelona Convention are looking to push forward in support of sustainable development, as the theme of this ministerial session – Green Transition in the Mediterranean – shows.

We know, the green transition can harness rapid progress in science and technology, improvements in governance frameworks and growing public awareness.

At the same time, nature-based solutions must be put front and centre. And, as not every Mediterranean country has the same financial or technological resources, regional cooperation will be essential.

Through a green transition, Parties can help to meet the goals of the Kunming-Montreal Global Biodiversity Framework. For example, through the implementation of the “Strategic Action Programme for the conservation of biodiversity and sustainable management of natural resources in the Mediterranean”. This will help reach the target that by 2030, at least 30 percent of coastal and marine areas are effectively conserved and managed.

Parties can help to meet climate targets under Paris Agreement by taking bold steps on decarbonization and adaptation – the need for which was highlighted after the tragedy that befell the Libyan coastal city of Derna.

They can pursue a planet free of harm from chemicals and waste – and in so doing back the recently adopted Global Framework on Chemicals and the upcoming legally binding instrument to end plastic pollution, including in the marine environment.

In the months and years to come, there are many opportunities for increased collective action. The Mediterranean region can make its presence felt at the sixth UN Environment Assembly, in Nairobi at the end of February. Play a prominent role in what should be the decisive round of negotiations on the plastics instrument, which will take place in Ottawa in April 2024. And put forward its perspective and solutions at the UN Ocean Conference, to take place in the Mediterranean city of Nice in June 2025.

In this meeting, I am looking forward to hearing ideas, actions, and solutions for a healthy Mediterranean Sea, and sustainable development for everyone across the region.

Thank you.

COP 23 Opening Speech

Ms. Tatjana Hema
UNEP/MAP Coordinator

Ms. Fatma Varank, Deputy Minister of Ministry of Environment, Urbanization and Climate Change of Türkiye, and President of the Bureau of the Contracting Parties to the Barcelona Convention,

H.E. Maša Kociper, State Secretary in the Cabinet of the Prime Minister of the Republic of Slovenia,

Ms. Elizabeth Maruma Mrema, UNEP Deputy Executive Director

Members of Contracting Parties and Observer delegations,

Distinguished guests,

Ladies and gentlemen,

Allow me to express my gratitude to the government of Slovenia and to colleagues at the Ministry of Natural Resources and Spatial Planning for the impeccable organization of COP 23 here in the Adriatic splendour of Portoroz.

As we consider the agenda before you today, it is good to keep in mind that the city hosting COP 23 is taking place has forged a name for itself by tapping into the healing effects of sea water and brine since the 13th century.

It is also the home of an enduring salt harvesting tradition employing a 700-year-old environment-friendly method.

Your endeavour will strengthen the framework that the Contracting Parties have built together, through unrelenting cooperation, over the last five decades.

The health, wellbeing, and livelihoods of millions in the Mediterranean region depend on our collective ability to deliver on the vision of a healthy Mediterranean Sea and coast. This is no easy feat.

The entire planet is in the throes of a triple crisis of climate change, biodiversity loss and pollution. Our region is no exception, and the impacts of this compounded crisis are increasingly evident.

But this region is making progress, notwithstanding the high winds it is facing, thanks to your commitment and to action taken by the Contracting Parties at home.

Evidence of that progress is contained in the MAP Progress Report, which illustrates how the MAP system is effectively delivering on the Medium-Term Strategy that the Contracting Parties adopted at COP 22 in Antalya in 2021.

Evidence of progress can also be found in the 2023 edition of the Mediterranean Quality Status Report.

Notwithstanding significant advancements accomplished by the Contracting Parties, both at the regional and national level, the remarkable development of the regulatory framework and related measures has outpaced implementation.

More needs to be done to match our collective ambition, with accelerated and resolute national action on enforcement and compliance.

The next biennium will see the MAP system mark the passing of 50 years since its inception. “MAP at 50” needs support to maintain its vigour, efficacy and ability to match the momentous challenges that the Mediterranean region is facing with adequate responses.

MAP needs to have the means of fulfilling the ambitious vision that the Contracting Parties have embraced and adopted for the Mediterranean region.

If MAP is to continue to play its role as a catalyzer and coordinator of regional efforts for a healthy Mediterranean Sea and coast, strong leadership from the Contracting Parties is a must.

That support can take many forms. In addition to adequate budgets, MAP needs all the political support and recognition that the Contracting Parties can bestow.

This is a time to celebrate accomplishments, but also to bridge gaps and accelerate our joint efforts.

Thank you for your continued support. I wish us a successful COP 23.

Annex II

Statements Delivered at the Opening of the Ministerial Session (7 December 2023)

**COP 23 Ministerial Session Opening Speech by Ms. Maša Kociper
State Secretary of the Office of the Prime Minister of the Republic of Slovenia
On behalf of Ms. Alenka Bratušek
Acting Minister of Natural Resources and Spatial Planning**

Excellencies, ministerial colleagues, ladies and gentlemen,

It is with great pride that I welcome you all to the ministerial meeting of the Conference of Parties of the Barcelona Convention in Portorož.

When you search the horizon, you can see two neighbouring countries across the sea – this is the connecting role of our Adriatic Sea. However, if we widen our horizons across the Mediterranean, three continents are united by a single sea. So, even when we are solving our regional challenges, we need to be aware of the complexity of the world.

Allow me, as acting Minister for Natural Resources and Spatial Planning, to introduce to you a few of the resources and spaces of your host, Slovenia: a very dense network of rivers and the highest percentage of forests in the whole of Europe makes us a competent partner in the debate for both a blue and green future.

However, climate changes are transforming the water regimes of our regions and dramatically threatening forests: last year's forest fire on the Karst and this year's floods, the worst in our history, are two warnings that have proved even to the greatest sceptics how dramatically our planet is changing.

Heavy rain with avalanches has not only endangered lives of people but has literally changed the direction of rivers, while floods have destroyed whole settlements and important infrastructure. An estimated ten billion euros of damage show the scale of the catastrophe.

How do we cope with this? When planning urgent works and future development we must take into account the impact of climate change both in radically transformed river management and in frequent periods of drought.

We see a safer future in more pragmatic use of green and blue corridors in spatial planning, so as to increase the climate resistance of river basins and sea shores.

Together with establishing blue, water corridors, we are also developing green ones for better ecological connectivity. By doing so, we can improve water, food and energy security on local, national, cross-border and regional levels.

This is the main reason why Slovenia is actively promoting the introduction of blue and green corridors within the framework of bilateral and multilateral commissions on water, as well as the Barcelona Convention, the Convention on the Protection of the Danube River and EU macroregional strategies.

Let me list some of the recent successes:

- The result of cross-border cooperation is a transboundary biosphere reserve, Mura-Drava-Danube;
- In the basin of the Sava River, a whole network of protected areas has been established, together with an efficient flood-protection system;

- Together with Italy, we have developed a cross-border system for flood risk reduction and connected it with an integral smart coastal management system and maritime spatial planning;
- Within the framework of the Barcelona Convention and the EUSAIR we are developing blue and green corridors in the Adriatic-Ionian eco-region.

For an efficient response to all the challenges that the future is bringing, both globally and to the Mediterranean, we still need to do more in terms of cross-border and regional cooperation by including younger generations in the decision-making process.

We have explicitly committed to this in the Portorož Declaration, for which I am sincerely thankful. The level of tangible commitments is the best forecast for the Slovene presidency of the Barcelona Convention: we do not intend to be »conventional«, but rather to move from words to actions. Quite simply, the times demand this from all of us!

My sincere thanks for all the good work that you have done in recent days for our common sea and the people on its shores. I am convinced that the future will connect us even closer!

So, see you soon!

Speech by Ms. Elizabeth Maruma Mrema, Deputy Executive Director of UNEP, at the ministerial segment of the 23rd Meeting of the Contracting Parties (COP 23) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention).

Good morning!

The celebrated naturalist, Sir David Attenborough, called the Mediterranean “The First Eden”. It has a special place in human history as a nexus between three continents: an early superhighway of trade and cultural exchange.

It is also a region, like everywhere on Earth, that is facing the triple planetary crisis of biodiversity loss, pollution and climate change.

For 50 years, the Regional Seas Programme has brought together diverse partners to protect the common waters between them. And leading the way has been the Mediterranean Action Plan – the Barcelona Convention.

This robust legal platform, consistently aligned with international law, was the first of 18 such conventions and plans, of which 14 were established under UNEP’s guidance.

It is a shining example of how regional governance mechanisms can spur collective action on environmental protection.

The Convention is as active as ever. Recent successes include the Regional Plan on Marine Litter Management in the Mediterranean which is the world’s first such legally binding framework and a model for other regions, especially in light of the much-anticipated global treaty on plastic pollution.

Large new Marine Protected Areas have recently been created, by Algeria, Libya, and Albania.

And last year, the International Maritime Organization brokered a deal to significantly reduce air pollution from shipping in the entire Mediterranean. We implore parties to this Convention to redouble efforts to meet the 2050 goal of net-zero shipping emissions.

I am delighted to observe a strong commitment from the parties involved in the Barcelona Convention and the Mediterranean Action Plan towards the Kunming Montreal Global Biodiversity Framework. I am encouraged by plans for action to ensure that by 2030, at least 30 percent of coastal and marine areas are effectively conserved and managed.

Recently, the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction was adopted by consensus and is currently in the process of being ratified. The significance of this Convention, along with the MAP, cannot be overstated in terms of bringing it into force.

But, colleagues, more needs to be done.

UNEP’s report on the *State of the Environment and Development in the Mediterranean* warns that “unless urgent and resolute action is taken to halt current trends, environmental degradation could have serious and lasting consequences for human health and livelihoods in the region”.

We urge the Convention Parties to put a stop to the degradation of marine and coastal biodiversity by effectively implementing the Mediterranean region’s own post-2020 Biodiversity Framework.

We advocate for the regional-level implementation of the global framework for chemicals adopted at the 5th International Conference on Chemicals Management in September this year.

UNEP remains resolute as a steadfast partner in the pursuit of sustainable ocean governance. We are dedicated to supporting member states to achieve shared objectives for people and the planet. We urge all stakeholders – parties, governments, and society as a whole – to raise our ambitions and accelerate our actions at global, regional, and national levels.

The solutions lie within reach. We have to reduce threats to biodiversity. We must meet people's needs sustainably and equitably. And we must stop subsidising harmful industries and activities.

Ahead of next February's UN Environment Assembly in Nairobi, Kenya, and the UN Ocean Conference in 2025 in Nice, France, let us harness this global momentum. And strengthen our commitment to preserving this Mediterranean Sea, and all of our precious ocean, for present and future generations.

Thank you.

COP 23 Ministerial Session Opening Speech by Dr. Robert Golob
Prime Minister of the Republic of Slovenia

Honoured guests, ladies and gentlemen,

Welcome to Slovenia, on the shores of the Adriatic, where the Mediterranean reaches deepest into the heart of Europe. We are proud to be part of the sea that connects Europe, Africa and Asia.

Many global paths cross here. Development has always been closely connected with the coast and the sea: merchant ships, maritime transport, fishery and salt pans have all marked these shores, from Antiquity and the Venetian Republic through the Illyrian Provinces to contemporary Europe.

There are major ports and development hubs here: Koper and Trieste, Venice and Rijeka, while pipelines, railways and highways reach into the heart of Europe.

Today, the Mediterranean is the most visited tourist destination in the world: so, pressures on the coastal and maritime resources are increasing.

When we talk about a triple crisis today – climate change, pollution and loss of biodiversity – it is not something distant. We all experience its consequences. Last year, the Mediterranean part of Slovenia experienced a period of intense drought followed by the biggest forest fire in our history, while in August this year we were victims of the most dramatic river floodings ever!

Unfortunately, the Mediterranean is today also witnessing a security crisis, increasing conflicts and the atrocities of war. We have reached a point at which peace and security in the Mediterranean are not something self-evident.

We need to create the conditions to improve water, food, energy, biotic and climate security. All this can be achieved only with peace and sincere cooperation among nations and between generations.

It is no coincidence then that collaboration with the younger generation is a key topic this year in Portorož. Intergenerational and cross-border collaboration are the main weapons for improving the quality of life for people on the shores of our sea. Here lies the real force of the Barcelona Convention!

Slovenia is proud to be taking over the presidency of the Barcelona Convention for the next two years. We are honoured to be in the company of Turkey and Egypt in actively contributing to cooperation in the Mediterranean.

An important step on this road is signing the Programme of Cooperation Danube – Black Sea – Mediterranean. For the first time in history, it defines concrete, agreed actions to monitor the Danube Basin, as the most international river basin in the world and reduce its potential harmful impact on the coastal and maritime ecosystems of the Black Sea and the Mediterranean.

By introducing protected areas on the sea and by respecting the importance of green and blue corridors in development planning, we are building a safer future for new generations of citizens of the Mediterranean.

What matters to us is a human-centred approach. Our citizens must be at the centre of green transition. A healthy environment – also a healthy marine environment - is a human right.

Excellencies,

During COP 22 in Antalya, you supported a ground-breaking decision on »the designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides« - a decision we will implement during the Slovene presidency! This will considerably improve the quality of air in the Mediterranean. This is also our concrete message to the contracting parties of the Paris Agreement, who are during the course of these days debating in Dubai actions to reduce the emissions of greenhouse gases from fossil fuels.

Cooperation on a global level is essential to achieve the optimal and sustainable use of coastal resources and democratic and socio-economic progress of all countries involved.

Slovenia is very much involved in environmental, water, peace and security diplomacy – and this will be the priority of our mandate at the Security Council of the United Nations in the years 2024 and 2025.

Honoured friends,

Many thanks for your sincere efforts in the last few days to improve our common document. We understand the Portorož Declaration to be a very concrete programme of how to reinforce cooperation among Mediterranean countries: to turn finally our decisions into actions!

We owe this to our children – and also to the history of this wonderful part of the world whose descendants we are: from Athens to Rome, from Barcelona to Beirut, from Antalya to Portorož and onwards to Egypt!

Good luck, Mediterranean!

Opening Remarks
by Ms. Tatjana Hema
UNEP/MAP Coordinator

Excellencies,
Ladies and gentlemen,

Welcome to Portoroz and thank you for attending the Ministerial Session of COP 23 of the Barcelona Convention and its Protocols.

This is the foremost regional gathering on environmental and sustainability issues in the region, where representatives of the 21 Mediterranean coastal countries and the European Union come together under the auspices of UNEP/MAP:

- to ponder the state of marine and coastal ecosystems,
- to consider interactions between socio-economic and natural systems based on science,
- and to agree on pathways to decouple development from the drivers of the triple crisis of climate change, biodiversity and nature loss, and pollution and waste.

“Green transition in the Mediterranean: from decisions to actions” is the theme that the Bureau of the Contracting Parties articulated and adopted for the Ministerial Session today.

Two years after the adoption of the Antalya Ministerial Declaration, which was tantamount to a regional green manifesto, time has come to take stock and reflect on acceleration pathways towards greener economies.

This year, COP 23 will hold a regional prism to COP 28 of UNFCCC (UN Climate Change Conference) happening this week in Dubai.

From coastal resilience, and green shipping to the decarbonization of Mediterranean economies, responding to climate change will appear prominently today, including during the panel discussion.

And so will the need to accelerate the implementation of the Kunming-Montreal Global Biodiversity Framework in the Mediterranean region.

The transition towards decarbonization and nature-positive economic models is gaining traction.

But more, much more, needs to be done. For a green, just, and inclusive transition to take place in the Mediterranean, a dual whole-of-government, whole- of-society approach is needed.

Meaningful engagement with youth and women, as key agents of change, is crucial.

The full implementation of the Barcelona Convention and its Protocols remains a mandatory step in the journey to a greener future.

Closing implementation gaps and strengthening enforcement of the Barcelona Convention and its Protocols will make Mediterranean economies greener and societies more resilient.

Thank you for your attention.

Annex III

Statements Delivered by Contracting Parties at the Ministerial Session (7 December 2023)

23rd Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols

Portoroz, Slovenia, 7 December 2023

STATEMENT BY

Minister, Mr. Petros Xenophontos

MINISTRY OF AGRICULTURE, RURAL DEVELOPMENT & ENVIRONMENT, REPUBLIC OF CYPRUS

Honorable Ministers,

Deputy Executive Director UNEP

Coordinator of UNEP/MAP,

Distinguished representatives, Dear colleagues, Dear Friends

It is a great pleasure to be here today in the beautiful coastal city of Portoroz and I would like first to express my sincere thanks to the Slovenian authorities for hosting the 23rd COP Meeting, and my appreciation for the work carried out by the Secretariat of UNEP/MAP in organizing this Meeting.

Dear Mediterranean colleagues,

We are all here today celebrating the 47th anniversary of the Convention, 47 years of the regional cooperation established through the Mediterranean Action Plan of the Barcelona Convention and its Protocols, to protect our common heritage, the Mediterranean Sea, and sharing our vision for a clean, pollution-free, healthy and sustainable Mediterranean Sea.

Alongside these ambitious goals, we need to renew and reinforce our commitment to marine protection and conservation strategy and remain focused to the continuation of our joint work in close cooperation, under the coordination, assistance and support of the Secretariat, which must play a leading role.

The Republic of Cyprus, being aware of the significant importance of the Mediterranean Sea and its environmental and sustainable development challenges strongly support the identified priorities in order to ensure the protection of its fragile environment, the well-being and prosperity of the Mediterranean citizens and is ready to implement the ongoing global and regional processes, goals and targets.

I remind you that climate change is one of the greatest challenges of our era and we are deeply considered about its impacts on human and marine life and health, the increase of the marine temperature, the acidification and deoxygenation, the increase of invasive species and the changes in the abundance and dispersion of marine species. So, recognizing climate change as a global problem connected to the protection and sustainability of biodiversity, I strongly believe that the protection of the Mediterranean is of crucial importance.

The Republic of Cyprus remains an active Contracting Party of the Barcelona Convention, committing to participate in common actions with the other Contracting Parties for the successful implementation of the new Programme of Work for the 2024-2025 biennium for the achievement of a healthy, clean, sustainable and climate resilient Mediterranean Sea.

Acknowledging the significant importance of our Mediterranean Sea and its environmental and sustainable development challenges, we are strongly support and welcoming the Portoroz Ministerial Declaration with its main theme on “Green transition in the Mediterranean: from decisions into actions”.

Ladies and Gentlemen,

Considering the fact that the creation and sustainable management of Marine Protected Areas (MPAs) is one of the useful tool for the protection of biodiversity, Cyprus has achieved so far the protection of **19 %** of its total marine area, meaning its territorial waters and Exclusive Economic Zone, through the establishment of marine protected areas designated under various protection regimes, such as Natura 2000 sites, SPAMIs, Fisheries Restricted Areas and areas with no-take zones, in line with the SPA/BD Protocol of the Barcelona Convention, the Convention on Biological Diversity, the EU Habitats Directive and the EU Biodiversity Strategy.

In support to the above, an extensive and high-resolution mapping of *Posidonia oceanica* and other important habitats under the Habitats Directive along Cyprus’ coastline was completed recently.

Also, a research survey with high resolution mapping was undertaken at the **deep sea**, namely at the Eratosthenes Seamount in the EEZ of Cyprus, in order to identify potential presence of sensitive habitats.

Dear Friends,

Cyprus has always been devoted to the achievement of the Good Environmental Status of the marine environment, applying the Mediterranean Ecological Objectives set in the framework of UNEP/MAP and the Barcelona Convention, resulting to the implementation of the Integrated Monitoring and Assessment Programme under Ecosystem Approach. This, in turn, has led to informed decision making and effective implementation of targeted measures.

Recently, the updated Program of Measures of the Marine Strategy Framework Directive was finalized and submitted to the EU, including the National Action Plans (NAPs) that were agreed under the Land Based Sources Protocol, of the Barcelona Convention.

Last but not least,

We consider essential, to actively involve young generation, to give them voice and listen to their innovative ideas on addressing the environmental and climatic challenges, if we want to achieve our common goal of protecting and improving biodiversity for a healthier and more productive marine environment and thus a better quality of life and prosperity for everyone.

Let me assure you that Cyprus is fully engaged in the implementation of the Barcelona Convention and its Protocols by supporting them on a technical and political level and taking concrete actions to ensure a healthy and prosperous future for current and future generations.

Thank you for your attention.

**Transcription of the video message recorded by H.E. Dr. Yasmin Fouad
Minister of Environment of the Arabic Republic of Egypt**

Good morning

Heads of Delegation and Member States to the Barcelona Convention,

Firs of all, I would like to express my thanks and appreciation to the Republic of Slovenia for hosting the 23rd Meeting of the Conference of the Parties to the Barcelona Convention. I had wished to be among you today in this important COP, but due to prior engagement I have not been able to participate, but I am very keen to follow very closely with the Egyptian Delegation the deliberations and the results of this Conference.

In a world that is approaching the year 2024, so many global environmental challenges that faces our world and put our future generations at risk, issues related to the Mediterranean Sea come at a higher agenda and we should all strive and work so closely in order to overcome those challenges.

The Barcelona Convention will be able, through the upcoming years, to stand up, together with the member States and the International Organizations, to show and to proof to the world that blue economy could be achieved, and the Sustainable Development Goals would also be achieved.

In that regard, I really wish you all successful deliberations and looking forward to seeing you in Egypt to continue our pathway together towards a Mediterranean Sea that is free from pollution.

Thank you.

UNEP/MAP COP23 – Ministerial Session
7 December 2023, Portorož, Slovenia
Contracting Party: Libya

It is a pleasure for me to speak to you all today, in this important meeting among so many respected colleagues, in this historic city on the Mediterranean coast.

I also would like to thank the republic of Slovenia for this hospitality and excellent organizing this event.

At the start, let me thank the Secretariat of Barcelona Convention for their excellent work in the past two years particularly, for conducting an excellent pilot projects in several countries in which Libyan was among them.

This comes within the framework of building capacity and help the countries implement the IMAP. In fact, Libya found that the conduction of pilot projects and training programmers were good tools for building capacity particularly for the assessment and evaluation of the pollution level in the marine environment.

We all know that assessment and evaluation needs monitoring data, and we all know that there are still difficulties in this issue to many Mediterranean Countries. The contracting parties thankfully have put in place national monitoring programs that, among others, monitor the status of the marine environment concerning Contaminants of the Ecological Objective 9 (EO9).

Excellences, Ladies and Gentlemen.

Libya is strongly believe that monitoring at the national level is the basis for the sub-regional and regional Mediterranean environmental assessments. In this regard, Libya propose and request to the Secretariat, to include in the upcoming biennium a programme of a number of pilot projects activities that foresees provision of the technical support to CPs and help the countries to apply assessment methodologies developed and applied for the 2023 MED Quality status Report.

Finally, I wish to express our commitment to the regional vision of a clean and healthy Mediterranean Sea and Coast within the framework of the Barcelona Convention system for pursuing of a Good Environmental Status in the M

Excellences, Ladies and Gentlemen, Dear all

As regional community, we must rise to the challenge and deliver – even as the multilateral system is facing unprecedented pressure such as pollution, climate change, threats to species and ecosystems of the marine environment. We at Libya are grateful for all assistance received and I do realize that there is much work ahead of you over the next years as we pursue our common work towards making progress on ending the environmental problem in our Mediterranean Sea. So, I ask for your continued support and determination to do that.

Thank you for your attention.

**ICOP 23 CONVENIO DE BARCELONA
SESIÓN PLENARIA
INTERVENCIÓN DE DON HUGO ALFONSO MORÁN FERNÁNDEZ
SECRETARIO DE ESTADO PARA EL MEDIOAMBIENTE
DEL REINO DE ESPAÑA**

Portoroz 07 diciembre 2023

Excelencias, honorables ministros, distinguidos delegados, señoras y señores. Ante todo, me gustaría agradecer al Gobierno Esloveno su amable hospitalidad y los esfuerzos en la organización de este importante evento. Y tengo el placer de dirigirles estas palabras no sólo en nombre de España, sino también como Presidencia de turno del Consejo de la Unión Europea, en este segundo semestre de 2023.

El Convenio de Barcelona para la protección del medio marino y la región costera del Mediterráneo es un foro incomparable en el que confluyamos distintas culturas, pueblos, formas de vida y de pensamiento para, mediante el entendimiento mutuo, hacer del mar que nos baña un lugar saludable y sostenible.

Y con ese convencimiento, ahora más que nunca es el momento de pasar de las decisiones a la acción, parafraseando el lema de esta Conferencia de las Partes. Los diferentes niveles del Convenio, basados en el conocimiento científico, hemos de estar coordinados para que los resultados sean efectivos, apropiados y dirigidos a afrontar los problemas más urgentes de forma integral y tomando todos los elementos de los ecosistemas, terrestres y marinos como base de protección.

Somos conscientes de que formamos parte de una gran familia mediterránea y que representantes de alto nivel, negociadores, técnicos y personal de apoyo hemos de hacer todo lo posible para que nuestro mar no se deteriore y siga siendo el nexo de cohesión de la región.

No queremos dejar pasar la oportunidad de agradecer a la Unidad de Coordinación del Convenio de Barcelona, junto con el resto de Centros de Actividad Regionales, su dedicación y esfuerzo para coordinar el trabajo común.

El trabajo realizado durante este último bienio, por parte de todos los involucrados, ha demostrado que, gracias a esta colaboración y esfuerzo conjunto, los resultados obtenidos han sido satisfactorios. En esta semana se aprobarán algunos instrumentos relevantes que ayudarán a seguir protegiendo nuestro mar.

Sin embargo, a pesar de estos resultados, el Mediterráneo sigue enfrentándose a numerosas amenazas que pueden provocar, no sólo una disminución del buen estado ambiental de sus aguas, sino también un deterioro de la vida que confluye a lo largo de sus costas. Además, en los últimos tiempos, los eventos extremos ligados al incremento de temperatura de sus aguas han golpeado diversas zonas de nuestras costas de forma severa.

Para España, así como para el grupo de países que representamos como Presidencia del Consejo de la Unión Europea, la importancia del Mediterráneo se extiende más allá de sus fronteras. A lo largo de los años y hasta nuestros días, sus recursos naturales han contribuido al desarrollo de las civilizaciones, por lo que la conservación y protección de esos recursos es una responsabilidad para todos nosotros.

Celebramos, por tanto, las decisiones que vamos a adoptar durante esta reunión de las partes, decisiones que afrontan de manera directa los problemas actuales de la región. Entre ellas, destacamos los tres nuevos planes regionales: de acuicultura, agricultura y aguas pluviales; así como la modificación del Protocolo de Áreas Especialmente Protegidas y Biodiversidad para incluir nuevas especies, en línea con la hoja de ruta marcada años atrás para la mejora del medio ambiente marino en nuestra región.

Estas decisiones vienen a sumarse a otros logros recientes alcanzados en el foro de la Organización Marítima Internacional, gracias, de nuevo, al esfuerzo conjunto de los países Mediterráneos hoy presentes en esta Conferencia de las Partes.

Me refiero, por supuesto, a la Zona de Control de Emisiones de Azufre (SECA) del Mediterráneo, que entrará en vigor en mayo de 2025, y que esperamos pueda tener su continuidad en un futuro próximo con la declaración también de Zona de control de emisiones de Nitrógeno (NECA), para lo cual van a iniciarse próximamente los trabajos técnicos en el seno de este Convenio.

Quisiera también referirme especialmente a la declaración, en julio de este año, del Mediterráneo noroccidental como Zona Marítima Especialmente Sensible, con el objetivo de reducir el riesgo de colisión con cetáceos y de episodios de contaminación generados por buques. Esta nueva Zona Marítima Especialmente Sensible ha sido un logro clave para la protección de la biodiversidad marina y costera y supone, además, una contribución efectiva al Programa de Acción Estratégico Post-2020 para la Conservación de la Diversidad Biológica y la Gestión Sostenible de los Recursos Naturales en la Región Mediterránea y un modelo a reproducir en otras áreas del Mediterráneo.

Me gustaría, igualmente, aplaudir el tema elegido para esta sesión ministerial y que, a la vista de la última información sobre la situación ambiental, tanto a nivel regional como global, es de vital importancia para nuestros ecosistemas: es decir, llevar a cabo acciones concretas para conseguir la transición hacia un Mediterráneo más verde. Además, compartimos la idea de involucrar a las generaciones más jóvenes en este proceso como un elemento esencial para conseguirlo. Los jóvenes, como representantes de las futuras generaciones, han de estar involucrados en este proceso, de forma que puedan tomar el relevo y participar en la generación de una cultura sostenible en torno a la región.

Es necesario, asimismo, seguir enfocando nuestros esfuerzos en priorizar políticas para la conservación de nuestros ecosistemas marinos y costeros, al igual que fomentar la colaboración entre gobiernos, instituciones, comunidades locales y organizaciones internacionales. Las economías verde y azul han de estar muy presentes en el desarrollo económico de la región, como fuentes perdurables de generación de empleo y riqueza, a la par que nexo con la sostenibilidad y la conservación del entorno.

En este sentido, la ordenación del espacio marítimo constituye una herramienta imprescindible para lograr el equilibrio entre el desarrollo sostenible de los sectores marítimos y costeros y la necesaria protección ambiental. Y en este punto, apartándome por un momento de nuestro papel como Presidencia de la Unión Europea, quisiera compartir con ustedes que, en España, hemos aprobado en este año 2023 los primeros Planes de Ordenación del Espacio Marítimo, contando para ello con una muy amplia participación de sectores, organismos científicos, sociedad civil y administraciones.

El multilateralismo ha demostrado, en numerosas ocasiones, su valía para la protección de nuestros mares y prueba de ello son los grandes avances en la protección de nuestros mares y océanos en los últimos tiempos. Como ejemplo, el reciente Tratado de los océanos para la protección de la biodiversidad más allá de las fronteras nacional (BBNJ), o el futuro tratado sobre plásticos, ambos bajo el amparo de Naciones Unidas, que reflejan la creciente concienciación sobre el medio ambiente marino y su impacto en nuestra sociedad.

Como he señalado, es nuestra responsabilidad actuar para garantizar un Mediterráneo próspero y saludable para las generaciones futuras. Por eso, debemos ser el faro de la sociedad que, iluminado por el conocimiento científico, guíe las políticas y acciones para proteger y respetar nuestro mar. El futuro depende de nosotros, de todos nosotros.

Muchas gracias.

23rd Conference of the Contracting Parties to the Barcelona Convention (COP23)

**Statement by the Hellenic Republic
during the Ministerial Segment, 7 December 2023**

**Mr. Petros Varelidis
Secretary-General for Natural Environment and Water
Hellenic Ministry of Environment and Energy, GREECE**

Your Excellency Madame State Secretary,
Your Excellency Deputy Executive Director of UNEP,
Your Excellency Coordinator of the Mediterranean Action Plan,
Distinguished Delegates and colleagues,

Let me, first, express our appreciation to the Government of Slovenia for hosting the 23rd Meeting of the Contracting Parties to the Barcelona Convention in this beautiful place, and for its warm hospitality.

I would also like to congratulate the UNEP/MAP Secretariat, personally the Coordinator Tatjana Hema, for the important work and efforts to effectively address our common challenges and to further strengthen the status of the Mediterranean Action Plan regionally and globally.

The Mediterranean Sea must be a sea that unite us and not divide us. And that's what the Barcelona Convention is about.

The cornerstone for that is for all of us to respect a common set of rules, that is to respect the rule of international law. And the cornerstone of the international law as regards the sea is UNCLOS.

To promote the sustainable development and the environmental protection of the Mediterranean Sea, Greece follows a comprehensive policy that has 3 pillars:

- Transition to climate neutrality
- Promotion of circular economy
- Protection of natural environment

With regard to climate change, Greece remains firmly committed to the collective efforts to achieve the Paris Agreement targets. We strongly believe that all countries developed and developing have to adopt NDCs that correspond to the target of limiting the temperature increase of the planet to 1,5 degrees °C. And unfortunately, that's not the case so far.

On the contrary, we are growing our economy while lowering emissions – in total our emissions are down 43% as we turn increasingly to renewable energy.

In our National Climate Law, adopted last year, we have set ambitious targets for 2030 and 2040 (55% and 90% respectively reduction of our GHG emissions compared to the reference year of 1990) towards climate neutrality by 2050, starting by decommissioning all lignite powered plants by 2028. We have already cut our coal use by over 80%.

Based on our National Energy and Climate Plan, Greece will surpass the target attributed to us by the EU legislation for 2030 by 23%. By 2030 80% of our electricity will be produced by RES. Already the RES

penetration has reached about 50%. Last year, our penetration of wind and solar was the 7th highest in the world, and our installed capacity was the 5th highest on a per capita basis.

Our Climate Law supports also adaptation mainstreaming to all related strategies and action plans also through nature-based solutions and green infrastructure. We must devote more resources to resilience. The adaptation gap is as important as the emissions gap.

Special focus is given on greening our numerous islands. For that, apart from the GR-eco Islands initiative where we mobilize private funding, we have secured more than 2 billion € from EU funds for the decarbonization of the islands through a dedicated Decarbonization Fund.

In the field of circular economy, Greece's new National Circular Economy Action Plan sets concrete actions for all stakeholders up to 2025, with emphasis on drastically reducing single-use plastics. Greece, with such an extended coastline, is considerably affected by plastic marine litter. In this context, we have adopted the target to reduce plastic litter by 50% and microplastics by 30%, by 2030. To achieve this target, we need to apply the source-to-sea approach. We have also committed to collect and recycle 40% of fishing gear containing plastic, starting from 2025.

Regarding marine environment, Greece, has decided to declare 10% of the Greek territorial waters as a no-take zone by 2030 and we already plan bold measures to make this happen. We have adopted by law the target to protect at least 30% of its sea areas by 2030 (and we will do so much sooner, probably by 2025) and to rehabilitate 30% of specific marine habitat types by 2030. We have also secured funds through the Recovery and Resilience Fund to set up a state-of-the-art surveillance system to effectively patrol these areas by 2026.

Before closing, I would like to draw your attention to the upcoming 9th Our Ocean Conference, to be hosted by Greece, on 16-17 April 2024.

The Conference will highlight important aspects for ensuring the sustainable management and conservation of the seas and oceans and their resources, by focusing, particularly on: sustainable tourism; green shipping; and the reduction of plastic & microplastic pollution.

An additional priority area of the Conference introduced by Greece will be the Green transition in the Mediterranean, as a horizontal element across the six standard areas of action of the Our Ocean Conferences. We, therefore, urge all contracting parties, Mediterranean partners and stakeholders to submit ambitious voluntary commitments, to highlight at the global level that the Mediterranean remains at the forefront of environmental protection and sustainable development, and we invite you all to work together to this end.

Thank you.

ELEMENTS FOR SPEECH

**Barcelona Convention Ministerial Meeting
December 7th 2023**

Intervention by DDG Mr. Patrick Child

President, (President of the Conference), Distinguished Ministers,

Honourable Ambassadors and fellow delegates,

- On behalf of the EU, I would like to thank you for inviting us to beautiful Portoroz, and for the warm hospitality we have received. My special thanks go to both the host country Slovenia, and the UNEP/MAP Coordination Unit for the excellent organisation and preparation of the event ensuring that we can work efficiently and in good ambiance.
- Commissioner Sinkevičius, the European Commissioner responsible for Environment, Oceans, Fisheries as well as Environment, regrets that he is unable to join us and sends his best wishes for a successful meeting.
- The Barcelona Convention and UNEP MAP have been pivotal in delivering progress towards a health and sustainable Mediterranean region. COP23 represents another milestone in this process.
- In the light of the new Global Biodiversity Framework, and the ongoing negotiations on the UNFCCC COP 28 in Dubai, this Convention needs to send a clear signal to the world: we support an ambitious environmental agenda for a green transition in the Mediterranean.
- This green transition comes at a crucial moment. To limit the world temperature rise to 1.5 degrees, prevent pollution and halt the loss of biodiversity, we need to act now!
- This is why the EU welcomes the Portoroz Ministerial Declaration, ‘A Green transition for the Mediterranean: from decisions to actions’, which we will adopt later today. We will reaffirm our political commitment to protect the marine environment of the Mediterranean, in an inclusive, fair and equitable way.

(COP main deliverables in line with EU Green Deal)

- This COP is ready to adopt several key milestones, which are fully aligned with the EU Green Deal agenda and Zero Pollution Strategy:
- Firstly, the Quality Status Report 2023. To understand if our actions are delivering results, it is paramount to monitor the state and evolution of the Mediterranean marine and coastal environment. This will provide the scientific evidence that we need for further decision making and for tackling the remaining challenges.
- Secondly, three new Regional Plans on sustainable agriculture, aquaculture and stormwater management. Pollution from land-based sources is heavily impacting the Mediterranean Sea, and we need effective plans and timelines for delivering action to limit further pollution.
- Thirdly, inclusion of new species of rays and sharks in the Biodiversity Protocol to the Convention. These species are in a critical state needing a high level of protection. The Mediterranean is a biodiversity hotspot, but we need to continue to protect it if we want to preserve its diversity for future generations.
- These deliverables will drive forward the green transition that we so desperately want for the Mediterranean. But to ensure its future success, we need to ensure that the transition is equitable, fair and inclusive.
- A fair transition means we leave nobody behind. To do this we will need to share the costs

in an equitable way, through effective social and fiscal policies and ensure that sufficient support is available for those that need it.

- This also includes regional solidarity, both within countries as well as between countries around the Med sea-basin, on a basis of respectful partnership
- And finally, it is necessary to gain full citizen support and involvement, especially from young people (our future leaders!) and empowering the role of women in the transition process.
- UNEP MAP is in an ideal position to help the countries in this green transition, offering nature-based solutions and ensuring an all inclusive approach.
- The EU also stands ready to help and support the process!

(Barcelona in the Global context)

- The EU is fully part of the Barcelona Convention. Our common efforts and interests are not simply a legal relationship, nor are they limited to applying the ecosystem approach or to contributing to the implementation of our Marine Strategy Framework Directive.
- Our common interests are broader and derive from the UN Sustainable Development Goals, our common horizon to which all Barcelona Parties are committed.
- Not only has the Barcelona Convention achieved a lot for its own marine region, but it has also been instrumental for contributing to the 2030 Sustainable Development Agenda and the resolution of global challenges that remain ahead of us, notably in relation to Biodiversity and Climate Change.
- About climate change, we would like UNEP-MAP to further intensify activities in the area of *climate change*, seeking full implementation of global commitments under the Paris Agreement at the regional level of the Mediterranean. This includes the further decarbonization of the blue economy sectors, including maritime transport.
- Finally, we believe that the triple planetary crisis (climate/energy – food – biodiversity/pollution) we are faced with today, requires an integrated, multisectoral response. In the maritime context, this should build on marine spatial planning geared towards long term sustainability, taking full account of the carrying capacity of the marine environment.

(Conclusions)

- To conclude, the Mediterranean Sea is an area rich in history and culture and for centuries it has played a critical role in the development of shipping and trade. But it is also a fragile and closed sea, with densely inhabited coastal areas and unique natural features. It needs our protection!
- I am confident that our meeting today will deliver the necessary building blocks for a green transition in the region. Let's work all together to make this a reality. Let us make sure that in 2025, when UNEP MAP celebrates its 50th anniversary we can look back with pride and forward to a hopeful future for the Mediterranean.

23^{ème} Conférence des Parties Contractantes à la Convention de Barcelone (COP23)

Déclaration Ms. Florence Levy

Ambassadrice de France en Slovénie

lors du segment ministériel, 7 décembre 2023

Mesdames messieurs les Ministres,
Madame la Secrétaire exécutive,
Mesdames messieurs les chefs de délégation

Je suis honorée de représenter la France aujourd'hui à cette réunion si importante pour l'environnement marin de la Méditerranée. Permettez-moi de féliciter le Secrétariat de la Convention pour la préparation de cette conférence des Parties, ainsi que la Slovénie pour son accueil. Vous pouvez compter sur le plein soutien de la France pour votre présidence dans les deux années à venir.

Les prochaines années seront décisives dans la lutte contre le changement climatique, la perte de biodiversité et la lutte contre la pollution. En Méditerranée, une des mers les plus riches au monde en matière de diversité biologique avec plus de 17 000 espèces recensées, le constat est inquiétant : 40% des espèces marines sont considérées en déclin. La région méditerranéenne connaît une perte de la biodiversité marine parmi les plus importantes au monde. De même, le récent rapport du réseau d'experts méditerranéens sur le climat et les changements environnementaux, le MedECC désigne la Méditerranée comme le deuxième hotspot mondial le plus menacé par le changement climatique, derrière la région Arctique. Ainsi, pour 2°C de réchauffement climatique au-dessus de la valeur préindustrielle, les températures diurnes maximales en Méditerranée augmenteront vraisemblablement de 3,3°C. Une réponse urgente et coordonnée est impérieuse.

Pour ce faire, la France contribue au travail primordial de la Convention de Barcelone par l'intermédiaire de contributions volontaires et je suis heureuse d'annoncer une nouvelle contribution pour l'année 2023, à la hauteur de 1,4M€. Elle s'ajoute à la contribution volontaire de 2022, qui était à hauteur de 1,1M€. Ces contributions permettront de soutenir la mise en œuvre du programme de travail de la Convention et notamment de renforcer les activités de protection de la biodiversité et la lutte contre la pollution plastique, entre autres.

C'est aussi cette volonté de répondre concrètement à l'urgence environnementale en passant des décisions à l'action qui a motivé le lancement du Plan d'Action pour une Méditerranée exemplaire (PAMEx) par le Président de la République, en 2021. Il est articulé autour de quatre priorités : la protection de la biodiversité, la lutte contre la pollution, contre la surpêche, et la décarbonation du transport maritime.

A l'approche du cinquantième anniversaire du Programme des mers régionales, en 2024, et de la Convention de Barcelone, en 2025, je voudrais rappeler la centralité des conventions de mers régionales dans la gouvernance internationale de l'Océan. C'est pour cela que nous avons proposé au Programme des Nations Unies pour l'Environnement d'organiser la réunion annuelle des Conventions de mers régionales à Nice, en juin 2025, lors de la Conférence des Nations Unies sur l'Océan, que nous co-organisons avec le Costa Rica.

Nous voulons faire de cette Conférence un moment historique pour l'océan, dans la suite du *One Ocean Summit* de Brest. Nous l'organisons sur la façade méditerranéenne à dessein. Cette Conférence s'articulera autour de trois priorités : la convergence du multilatéralisme, les financements et l'économie bleue, et la science.

La Conférence des Nations Unies sur l'Océan devra être un moment de convergence du multilatéralisme et nous souhaitons que soit conclu un Pacte pour l'Océan, qui permettrait d'accélérer toutes les négociations et la mise en œuvre des textes qui y sont relatifs. Je pense à l'entrée en vigueur du traité BBNJ en 2025 ou à la finalisation des négociations relatives au traité plastique en 2024 qui pourront être valorisés lors de l'UNOC. La mise en œuvre de l'objectif protection de 30% de la planète du cadre de Kunming-Montréal, et sa déclinaison méditerranéenne par la stratégie SAPBIO, seront également primordiales.

Je vous donne donc rendez-vous en juin 2025 à Nice, en France pour la Conférence des Nations Unies sur l'Océan.

Je vous remercie.

**REPUBLIC OF ALBANIA
MINISTRY OF TOURISM AND ENVIRONMENT**

Statement Albania – COP 23

**Ms. Klodiana Marika
Head of Delegation
Director of Nature and Forests
Ministry of Tourism and Environment**

Dear Ministers, Deputy Executive Director, Ms. Maruma Mrema, Coordinator of UNEP/MAP, Ms. Hema, Ladies and Gentlemen,

First of all I would like to show my appreciation to the Government of Slovenia, for welcoming us in the beautiful city of Portoroz, and secondly the secretariat for all the coordinating efforts to reach out the previous decision taken under the Barcelona Convention.

As it is recognized and agreed now it is time to translate the decisions into actions.

The triple crisis, loss of biodiversity, pollution both of air and water, waste and climate change are issues that need to be treated in a concerted manner, and I think the time has come. We need to take actions without any reservation.

I am here on behalf of the Albanian Government and I would like to show that Albania is committed to take concrete measures to halt the loss of biodiversity, tackle the pollution both of air and water, waste and to mitigate the effects of climate change by using both nature based solutions and ecosystem based approach.

The Ministry of Tourism and Environment on behalf of Albanian Government has tried to respond to the protection and conservation of environment and to climate change challenges with concrete policies and programs, as well as by significantly enhancing cooperation with key development partners and other international donors and institutions.

The adoption, implementation and enforcement of the EU acquis on Environment is an obligation for Albania as accessing country in the framework of the Stabilisation and Association Process.

Furthermore, the EU Green Deal and the Green Agenda for Western Balkans, altogether and in the frame of global attention that biodiversity and climate has received, are at the focus of the work of the Ministry for the year 2023 and beyond towards green transition.

Albania is committed to put both efforts and resources available to work on conservation of biodiversity waste management, while creating the enabling environment for circular and blue economy, and becoming resilient by mitigating the effects of climate.

Interlinkage between the three Rio Conventions (biodiversity, land degradation and climate change) and Barcelona Convention, requires actions in an accord and unified manner, and I am glad that our Ministry is trying to bring implementation of the Conventions in an effective and efficient way, despite the limited human and financial resources.

There is a commitment towards the process of transition from linear to a circular and green economy and its underpinning principles which require changes in both production and consumption to

decouple economic growth from resources use. In order to achieve this transition, it is necessary that we ensure a sustainable supply of raw materials, increase resource productivity and retain the resources with our economies for as long as possible. With the aim to reduce pressure on available natural resources and energy and to extend products' lifetime, research and innovation systems need to provide further boost to developing sustainable solutions, which will contribute to environmental protection and minimise the amount of waste generated in the region.

In this perspective, Albania is working on:

- Take measures to protect and conserve biodiversity. The surface of the protected areas has been increased to 21.4% of the surface of the country. A new MPA, the Porto Palermo has been designated. We have designated Vjosa the last free flowing river in Europe as National Park.
- Conclude and implement a regional agreement on prevention of plastic pollution, including specifically addressing the priority issue of marine litter and cleaning the rivers which are the main polluters of the seas;
- Develop circular economy strategies looking at the entire lifecycle of products, waste prevention, modern waste management and recycling, re-use, repair and re-manufacturing;
- Design and implement consumer-targeted initiatives raising awareness of citizens on waste, separate collection and sustainable consumption;

Transition to circular economy, where waste is seen as a source of material by its return to the economy as raw material, will be profitable for both the environment and national economy.

Blue economy programme

Albania's General National Spatial Plan 2015–2030 singles out the coast as the most important zone of the national territory because of our position, natural values, biodiversity significance, and cultural and historical heritage.

Competing demands from multiple users in the coastal and marine space have resulted in sub-optimal development or missed economic opportunities, while imposing multiple stresses on finite coastal systems and resources.

Our Government is taking actions for tackling coastal and marine pollution, aspiring to progressively become the first European plastic-free country.

A Blue Economy Programme is developed following a participatory approach and in consultation and cooperation with line Ministries in charge and World Bank that recently approved the project.

Based in four components, the Blue Economy Programme seeks to: (i) Improve institutional and human capacity for delivering the maritime economy, (ii) Create appropriate financial mechanisms to support private sector by improving public fishery related infrastructure, (iii) Establish the Albanian coast as a hub in the region and broader, and (iv) Consolidate tourism hubs (clusters) and maritime ecosystems by securing provisions of financial support for small and medium enterprises (SMEs), fishermen and other communities which livelihoods depend on maritime activities.

In that respect, we are engaged with local authorities towards:

- Achieving a "zero waste society". This is a major local challenge that needs assistance and exchange on best practices to make the most effective investment choices in terms of prevention, collection and treatment of municipal waste. All this in order to implement the waste hierarchy and, as a minimum, to reach the European targets.

- The full implementation of the "polluter pays principle" to help local and regional authorities in meeting EU waste targets and also limit the financial and organisational burden on them.

Tourism sector

The Albanian economy is aiming for a new economic model which in its essence imposes involvement in the potentials of growth and social cohesion of factors and sectors that make it more productive and more competitive. In the challenges of medium and long-term developments of the Albanian economy, tourism is considered one of the most potential sectors to achieve higher economic growth and with positive effects on increasing employment and real income. This year we had almost 8 million tourists, and we expect to increase the number in the coming years, by aiming a-year around tourism. Of course tourism development will be based on and supported by environmental protection, including natural resources, ecosystems, landscapes, biodiversity, etc. and, in some areas, it will also be supported by the improvement of the existing environment.

Tourism development will ensure the social structures and social welfare of the inhabitants of tourist destinations, of the people working in this business and of the whole society.

**STATEMENT
OF THE REPUBLIC OF CROATIA**

to the
*23rd Ordinary Meeting of the Contracting Parties to
the Convention for the Protection of the Marine Environment
and the Coastal Region of the Mediterranean and its Protocols*

Portorož, Slovenia, 5-8 December 2023

**Delivered by
Ms. Elizabeta Kos
Director
Ministry of Economy and Sustainable Development**

**Thank you Mr/Ms Chair,
Distinguished delegates, Ladies and Gentlemen,**

- I join in thanking our hosts (both Slovenia and Secretary) for organizing this Conference. This Conference is giving us chance to continue important work on marine and coastal protection. Results of all the goals achieved are crucial for the protection of Mediterranean environment. As it is constantly emphasized - Mediterranean is a valuable asset. We all should know better – it's priceless.
- Mediterranean is home to some of the world's most diverse ecosystems. It also has riches in its cultural diversity and its historic heritage. Besides all that, Mediterranean also has few well preserved beaches. It appears that everyone wants them. All these riches have their price tags. From the environment protection view, amounts on price tags are obviously too low. They are low all around us. These price tags have direct effect on the pressures Mediterranean is exposed to. Decades of irresponsible practices at sea and on land shifted this inlet so far out of balance, that we are now positive that the global climate change risk is even more risky here in the Mediterranean.
- We, all together, are risking not to ever be able to protect it for our descendants. Therefore, we wholeheartedly support the idea behind this COP's slogan and call upon all parties on an urgent action for protection and preservation of our common heritage.
- While thinking of Croatia's membership in the UNEP/MAP, going on for 30 years now, we also recollect of over 30 years of Post Rio Barcelona Convention. Integrated approach summarizing economic, social and environmental dimension of sustainable development, concluded in Rio, conceived an ambitious endeavour to try and manage coastal zones in the Mediterranean.
- In order to achieve sustainable development by providing solutions for complex social, ecological, economic and institutional problems in coastal area, PAP/RAC was established. Croatia is honoured to have had the chance to succeed PAP/RAC hosting. We are, off course, proud of every achievement of all other MAP components as well.
- Our participation in MAP activities led us to implement agreed actions through preparation of various strategic documents concerning sustainable development, enhancement of monitoring system, emergency system for preparedness and response as well as nature protection improvement.

- As far as the Adriatic Sea is concerned, its shallowness makes it very sensitive to pollution on one side, and climate change related damage on the other. Many of our projects and activities in cooperation with neighbouring countries tackle these issues trying to reduce pressures and increase cooperation.
- Harmonized marine and coastal monitoring programs, and scientifically based assessments of the status of marine and coastal environment make the basis for sound management of this area. In that sense, we strongly support harmonized implementation of UNEP/MAP Ecosystem Approach Roadmap as well as Marine Spatial Planning and other ICZM tools as an important preconditions for science-based policy making in the service of green transition.
 - Last five decades of Barcelona Convention and UNEP/MAP represent an important legal framework and a platform for cooperation and joining forces in undertaking environmental priority actions.

Mr. Chair, Dear Colleagues, Ladies and Gentlemen,

- Our hopes are that Portorož Declaration will act as a landmark for our future cooperation and coordination in applying important COP decisions that we adopt here. I am confident that only together we can build a prosperous, peaceful and liveable future for generations to come.

Thank you for your attention

**Barcelona Convention Ministerial Meeting
December 7th 2023**

Intervention by Mr. Rani Amir

Director

**Marine Environment Protection Division
Ministry of Environmental Protection**

Thank you chair,
Distinguished Ministers,
Dear Madam UNEP/MAP Coordinator
Dear delegates,
ladies and gentlemen,

In the name of the Israeli delegation to the 23rd meeting of the Contracting Parties to the Barcelona Convention, I would like to thank Slovenia for hosting us in this beautiful Adriatic coast of Portoroz. I would also like to thank very much the secretariat of UNEP/MAP for the hard and continuous work done over the years.

Our region, with its rich history and diverse cultures, is facing significant challenges that demand our collective attention. The first and paramount issue is the urgent need to enhance marine pollution prevention. The threat arrives from various sources, including industrial discharges, shipping activities, and inadequate solid waste management and municipal wastewater treatment.

To preserve the ecological balance, we must strengthen our efforts in the best monitoring practices, rigorous regulation, followed by enforcement measures, to ensure the sustainable use of this vital resource, the Med Sea.

That is what Israel does, with the unequivocal influence of this convention and its protocols on its national legal and regulatory toolbox and the policies thereafter.

Israel commits to actively participating in regional initiatives aimed at enhancing the enforcement of the Barcelona Convention. We believe we have demonstrated over the years, our devotion to the targets set by the Mediterranean Action Plan, by eliminating Land-based sources, dramatically reduce Land-based pollution loads, operating rigorously towards ship-polluting activities and much more.

A second issue is collaboration. We strongly believe that by sharing best practices and fostering collaboration, we can collectively ensure that the Convention's objectives are met, making our economies greener and our societies more resilient to environmental challenges.

Climate change is a third pressing concern that requires our immediate and collaborative action. The Mediterranean region is experiencing the effects of a changing climate, with fast rising sea levels, increased temperatures, and extreme weather events. It is imperative that we implement measures to mitigate these impacts. Israel remains committed to supporting initiatives that promote climate resilience and sustainable development in our shared Mediterranean home. We are amid a process that will enable the coastline municipalities to have in situ adaptation measures according to the IPCC scenario SSP5 8.5. to this end I would like to congratulate Türkiye for the new CC\RAC, which we all hope will assist us all in understanding the best techniques and methods we should apply to accommodate this concern.

Israel recognizes the significance of evidence-based policies in steering our nation towards a more sustainable and green future. Our commitment to research and innovation has positioned us as a leading county in the development and implementation of environmentally sound practices, which we will be willing to share with our neighboring countries of the Mediterranean. By investing in cutting-edge technologies and fostering collaboration with the private sectors, Israel has successfully

integrated desalination technologies, waste-water reuse, industrial wastewater treatment, which results in reduction of pollution loads and improvement of the marine environment status.

Recognizing the necessity of garnering public support for green policies, Israel has implemented comprehensive awareness and education programs to engage citizens in the sustainable development journey. From promoting renewable energy sources to encouraging eco-friendly practices in daily life, ending with citizen's awareness to a clean coast program.

Reflecting on the accomplishments of the past biennium, it is inspiring to note the strides we have made collectively, as was presented by the secretariat of the last biennium's accomplishments. The collaborative efforts of the Contracting Parties have yielded positive results in many areas such as the reduction of plastic pollution, the protection of biodiversity, and the promotion of sustainable fisheries. However, we cannot rest. There is much more work to be done, and Israel stands ready to contribute actively to these ongoing endeavors.

As we discuss the environmental challenges facing our region for the next biennium and years to come, I have listened to the Slovenian Prime Minister this morning, and it saddens me to acknowledge remarks which were not related to our environmental agenda, while presenting an unbalanced reality. Therefore, I choose not to further comment on that.

In conclusion, let this forum continue to be a platform for excellent collaboration, dialogue, and concrete actions. Together, as Contracting Parties to the Barcelona Convention, we have the capacity to enhance the positive trend of our mutual efforts and lead a better Mediterranean for its people.

But ladies and gentlemen, this opportunity and commitment must come with actions and activities, regulations and enforcement when needed, enough of declarations. The time for action has long passed.

Thank you.

UNEP/MAP COP23 – Ministerial Session
7 December 2023, Portorož, Slovenia
Contracting Party: Italy

Honorable Ministers, Her Excellency Deputy Executive Director of UNEP, His Excellency Chair of the Conference of the Contracting Parties, distinguished Coordinator of UNEP/MAP, distinguished Delegates, ladies and gentlemen, first of all I wish to thank the Government of Slovenia for hosting and organizing this meeting in such a beautiful city, Portorož. Allow me to also thank the UNEP/MAP Coordination Unit and in particular Ms. Tatjana Hema and her staff for their excellent work in ensuring a successful meeting.

Italy appreciates in particular the organization of a special Ministerial session on “Green transition in the Mediterranean: From decisions into actions”. Indeed, the selected title immediately indicates a clear direction to be followed: translate our decisions into actions without hesitations and be determined to achieve concrete and effective results.

Italy in particular fully shares and agrees on the necessity to urgently address the triple crisis caused by Biodiversity loss, pollution and climate change, as stressed also at the CBD COP in Montreal last year and confirmed at the ongoing COP28 of the UNFCCC.

Italy firmly believes in the key role of the Regional Sea Conventions in contributing to the implementation of global commitments and to this aim has always supported the acknowledgment of their work and value in the global fora. Over the past five decades, Italy has supported with conviction the mandate, structure, and work of the Mediterranean Action Plan and Barcelona Convention, including through the dedicated bilateral Agreement, and is willing to continue its support in the future.

In this context, I am honored to confirm that the promotion of the central role of Regional Sea Conventions will be included among the priorities of the next G7 Italian Presidency with special attention given to pollution prevention, in particular through the promotion of IMO instruments such as SECA and NECA.

Italy is willing to provide a strong political input that the whole Regional Mediterranean Community will benefit from, and, to this purpose, I confirm our full willingness to work together with the Contracting Parties and the Secretariat to strengthen synergies for this common objective.

Finally, let me express my high appreciation for the participation of young people to this COP: their enthusiasm and their willingness to contribute to the protection of the marine and coastal environment represent a further driving force for our commitment that needs to be translated into concrete actions for the benefit of present and future generations.

Excellencies and Colleagues from the Contracting Parties, Italy is firmly convinced that we do need a change of paradigm to substantially accelerate our action to deliver effective and substantive results to reverse the degradation of our environment, that is essential to sustain our life and to ensure prosperity to all Mediterranean countries and people.

Time has come to change our “business as usual behavior”, time has come to run and not to walk, time has come to be ambitious and to act as a real community of the Mediterranean region, without timidity and national egoisms. We are collectively called to demonstrate our resolution and capacity to act: we owe this to our people and in particular to the fragile ones and to young people who will inherit this world.

Thank you very much.

National Statement of the Republic of Malta for the High Level Segment at the 23rd Conference of the Parties at the Barcelona Convention

Portoroz– 7th December 2023

1. Honourable Ministers, Ambassadors and colleagues, on behalf of the Hon. Dr Miriam Dalli, Minister for the Environment, Energy and Enterprise of the Republic of Malta, I would like to express gratitude to the Ministry of Natural Resources and Spatial Planning of Slovenia and the UNEP/MAP Secretariat for the excellent organization of the 23rd Conference of the Parties of the Barcelona Convention.
2. The achievements of the MAP system are clear: for the past decades, the Barcelona Convention have provided a platform among different Contracting Parties for the formulation of a coherent policy and legal framework enhancing regional cooperation for the protection of the environment and promotion of sustainable development in the Mediterranean region. This system continues to serve as a model for the Mediterranean as well as other world regions. The MAP system has over the decades, provided much-needed capacity-building opportunities to ensure that Contracting Parties are able to face the challenges brought about by the rapid environmental change in our region.
3. With this in mind, Malta emphasises the importance of continuously translating our collective efforts into tangible actions, by implementing the UNEP/MAP Decisions in a fair and equitable manner. As a leading country in the maritime sector, Malta recognises the importance of continuously working to reduce emissions from ships, in a fair and sustainable manner without hindering competitiveness and socio-economic growth. In this respect, Malta invites all Contracting Parties to continue working by embracing the international rules emanating from IMO MARPOL Annex VI so as to effectively showcase our collective efforts in the Mediterranean by ensuring a common level playing field.
4. Moreover, Malta wishes to emphasise that through the assessment on the possible designation of the Nitrogen Oxide Emission Control Area (NECA), we must take into consideration the actions in favour of climate actions, such as the already designated SECA as well as upcoming policies of the ETS Maritime applicable to the EU-MED States, as well as the IMO GHG Emission Reduction Strategy. Undertaking such a level of assessment will enable all Contracting Parties to effectively consider the impacts of new proposed measures, whilst also identifying and accounting for regional and international measures which can preserve the competitiveness of all Contracting Parties. This will enable all of us to effectively assess the required level of action and set a clear path of ambition in the Mediterranean region.
5. On this point, Malta echoes the need to enable and empower a meaningful change for a green transition, by promoting inclusive policy approaches through the engagement of citizens and stakeholders in the decision-making processes and so accelerate the transition towards sustainable economic growth.
6. With this in mind, Malta is in the process of adopting a *National Strategy for the Environment*, which embraces an inclusive policy approach stressing the importance of environmental protection and green transition in its scope and mandate. Amongst other aspects, the green transition will be undertaken through the adoption of fiscal instruments, so to stimulate new economic and investment opportunities, in tandem with communication and education efforts

that effectively change behaviours and empower different sectors of society to contribute to new sustainable patterns.

7. Citizen choices are indeed a critical driving force for enabling a new transition. Changes in the day-to-day behaviour and activities may cumulatively have a significant positive effect on the environment and ultimately on wellbeing. With this in mind, the Government of Malta has continuously promoted the “*Saving Our Blue Campaign*”, with a view to increase awareness and engage citizens, civil society, NGOs and private sectors in the adoption of sustainable production and consumption patterns, addressing land base pollution sources, such as single-use plastic products.
8. Such efforts have been further enabled through the implementation of regulatory and fiscal incentives in line with the implementation of Malta’s Single Use Plastic Strategy. As a small-island State in the Mediterranean, Malta recognises the value of measures which protect and preserve our natural resources, cognisant of new investment and economic opportunities.
9. In line with regional and EU obligations, Malta has recently adopted the Conservation Objectives and Measures under the Habitats Directive, which will ensure appropriate management of marine protected areas and improvement of the conservation status of the relevant habitats and species through management of relevant pressures. In this context, Malta is in the process of adopting a monitoring programme for the marine environment which provide the actual evidence base of the implementation of our actions.
10. An effective sustainable transition will be enabled through the engagement of the private sector and the promotion of a sustainable blue growth. This year, Malta has launched the Blue Med initiative with a view to assist businesses to develop further the blue economic potential in the country. The Initiative will support and assist traditional blue economic sectors in embracing innovative business solutions, making their business operation more sustainable in the long run and therefore truly embracing the objectives of the Sustainable Development Agenda. This will also stimulate new employment opportunities as well as boost the uptake of new technologies and innovative solutions which can address plastic waste reduction, promote renewable energy, enhance food security and implement eco-tourism practices.
11. Technology, finance and reliable data are core to an inclusive, open, fair and non-discriminatory economy. This comprehensive approach will require reliable monitoring and foresight metrics to feed into policy making. Such horizon scanning would anticipate future trends, risks, emerging issues, and their potential implications and opportunities and hence inform decisions. In this regard, Malta would like to express its interest in the possibility of entering into discussions with the Priority Actions Programme Regional Activity Centre (PAP/RAC) to undertake a Coastal Area Management Project (CAMP) to assist Malta in the continued implementation of the Integrated Coastal Zone Management Protocol to enhance our resilience towards climate impacts.
12. Mr. Chair, allow me to conclude by reaffirming Malta’s commitment to continue working with regional partners and the UNEP/MAP Secretariat in order to strengthen our collective actions for the protection of our natural resources, whilst contributing to accelerate the sustainable transition in the Mediterranean region.

STATEMENT

**by Ms. Tamara Brajovic, Head of Delegation of Montenegro,
Director, Directorate for Nature Protection
Ministry of Tourism, Ecology, Sustainable Development and Northern Region Development**

**The Twenty-Third Ordinary Meeting of the Contracting Parties
to the Convention for the Protection of Marine Environment and the Coastal Region of the
Mediterranean and its Protocols
Portorož, Slovenia, 5-8 December 2023**

Dear Chairs, Your Excellencies,
Ladies and Gentleman,

Please allow me to express the great privilege I feel at having the opportunity to represent Montenegro at the 23rd Meeting of the Contracting Parties to the Barcelona Convention. It is my honour and pleasure to greet you on this exceptional occasion and to thank the Government of Slovenia for hosting us in the beautiful town of Portoroz, that, in many ways, reflects the environmental, cultural and historical heritage of the Adriatic Sea.

From COP 14, also organized in Portoroz, to discussions we are having this week at COP 23, we have come a long way. From the commitment to give our voice to the sea because “the sea deserves our voice” to the intention to move from decisions into actions towards green transition, numerous new values and policy documents were created, new horizons were opened, and lessons were learned.

A clean, healthy and productive Mediterranean Sea is a prerequisite for sustainable development of the entire region. Today’s ministerial session is a great opportunity to confirm our commitment to the implementation of the Barcelona Convention, by agreeing all to switching to green, in particular through i) strengthening the science policy interface and rooting the decision making in a reliable evidence of the state of the marine environment and coastal transformation processes; ii) reducing pollution from sea- and land-based sources; iii) achieving the progress towards the Kunming-Montreal post-2020 Global Biodiversity Framework, iv) accelerating integration of the maritime spatial planning and integrated coastal zone management tools into development plans.

The holistic, integral and integrated approach of the Mediterranean Action Plan requires our decisive actions. The policy framework of the Barcelona Convention has reached a high level, by addressing all key problems and challenges. However, despite our commitments, there is an evident lack of practical answers in overcoming a triple planetary crisis of climate change, biodiversity loss and pollution. Concurrently, we are experiencing an economic development decline with the cross-generational impacts. Green transition is fundamental in addressing the multiplicative and multidimensional challenges which threaten us all. We must provide answers on how to catalyze the right action to transform the unsustainable patterns that drive overexploitation of natural resources, as well as on how to maximize our operational efficiency and effectiveness.

Montenegro has been developing technical capacities for an adequate implementation of both the EU legislation and the Barcelona Convention and its Protocols and has been making available those capacities for the needs of regional cooperation. We implemented many key pilot approaches of UNEP/MAP, including: 1) the preparation and implementation of the first national strategy of

sustainable development within the framework of the Mediterranean Strategy of Sustainable Development, as well as the one of the first national strategies for integral coastal zone management along with the integration of ICZM tools into key national spatial and development plans; 2) testing patterns for sustainable production and consumption; 3) testing the application of the ecosystem approach to Marine Spatial Planning, and 4) setting the first Integrated National IMA-based Monitoring Program and implementing it as part of the regular national monitoring program. As a small country, we believed that we may demonstrate the optimal implementation modalities within the Barcelona Convention and thus encourage their wider application among the Contracting Parties. This imposed a huge commitment that calls for enabling activities, along with the use of the technical and financial tools which need to become available through strong and effective regional collaboration.

In the spirit of COP 23 - from decisions to actions, we must recognize a necessity to re-direct our focus on key priorities based on the original mandate of UNEP/MAP. That means that it is above all necessary to concentrate our efforts on the transfer of knowledge to the countries and supporting them technically and financially in the full implementation of the Barcelona Convention extensive policy framework and standards, considering that green transition may be achieved through practical responses in the national and cross-boundary contexts.

With the expectation that the UNEP/MAP will continue providing an ever-stronger, regional, multilateral framework for the protection and sustainable development of the Mediterranean marine and coastal environment, I wish us a successful conclusion of the COP and efficient implementation of its decisions in the upcoming biennium. Thank you.

UNEP/MAP COP23 – Ministerial Session
7 December 2023, Portorož, Slovenia
Contracting Party: Morocco

- اسمحوالي في البداية، أن أعبر لكم باسم المملكة المغربية، عن شكري لحكومة سلوفينيا وسكرتارية خطة عمل البحر الأبيض المتوسط لبرنامج الأمم المتحدة للبيئة على التدابير المتخذة لتنظيم هذا اللقاء الإقليمي.
 - يطيب لي كذلك أن أحيي الاختيار الصائب لشعار "الانتقال الأخضر في المتوسط: من القرارات إلى الفعل" كشعار يوطر أشغال هذه الدورة.
 - فهدفنا اليوم هو تعزيز العمل، عبر حلول مبتكرة للتحديات المستعصية، التي تعرفها منطقتنا نتيجة للتأثير المتزايد لتغير المناخ على فقدان التنوع البيولوجي وتفاقم التلوث، وتسريع تموضع المنطقة في مسار أكثر استدامة،
- حضرات السيدات والسادة،**
- لقد انخرط المغرب، وبشكل كامل تحت قيادة صاحب الجلالة الملك محمد السادس، نصره الله، في الجهود الدولية والإقليمية في مجال حماية البيئة والتنمية المستدامة،
 - حيث يولي اهتماما خاصا لمسألة حماية الساحل على المستوى الإقليمي والوطني إذ جعلها في صلب الاستراتيجية الوطنية للتنمية المستدامة، والتي تهدف إلى ضمان انتقال نحو اقتصاد أخضر وشامل في افق 2030.
 - ويتجسد هذا الاهتمام، وبانخراط جميع الفرقاء، من خلال اتخاذ مجموعة من الإجراءات على المستوى القانوني والمؤسسي ومن خلال البرامج والمشاريع التي من شأنها حماية الساحل والأوساط البحرية ومنها:
 - قانون الساحل والمخطط الوطني والمخططات الجهوية التي تدمج تغير المناخ وتماشى مع التدبير المندمج للمناطق الساحلية،
 - استراتيجية وخطة عمل "ساحل بدون بلاستيك إرساء المبادئ الاقتصادية الدائري،
 - خطة عمل وطنية بشأن أنماط الاستهلاك والإنتاج المستدامة، لتشجيع القطاع الخاص على الانخراط في عملية إنتاج مستدامة
 - برامج هيكلية لتدبير النفايات وللصرف الصحي السائل ومكافحة التلوث الصناعي وللحفاظ على التنوع البيولوجي؛
 - مرصد وطنية وجهوية وقطاعية تهتم بمؤشرات البيئة والتنمية المستدامة؛
 - وبرامج للتوعية والتحسيس للمحافظة على البيئة الساحلية وخاصة تلك التي تصهر عليها مؤسسة محمد السادس لحماية البيئة،
- ولتسريع الانتقال نحو اقتصاد أخضر اعتمدنا سياسة إرادية تهدف عدم الفصل بين التنمية الاقتصادية وانبعاثات الغازات الدفيئة من خلال "استراتيجية التنمية منخفضة الكربون 2050"

حضرات السيدات والسادة

إن حجم التحديات التي تواجه المنطقة اليوم، يتطلب منا الانتقال إلى اقتصاد أخضر عبر شراكات قوية، وتبادل المعرفة والخبرة، وتعبئة الموارد المالية لتنفيذ حلول مندمجة، والتي تحتم علينا أكثر من أي وقت مضى استكشاف جميع المسارات الممكنة لمواصلة تعزيز تعاوننا وتحفيز العمل الجماعي وتعبئة جهود جميع المتدخلين وتظافرها وعلى جميع المستويات.

وإننا نشيد بالجهود التي يقوم بها نظام خطة عمل البحر المتوسط، وندعوه أن يواصل دوره الأساسي في المنطقة من خلال دعم الأطراف لتنفيذ اتفاقية برشلونة وبروتوكولاتها،

وأود، في الختام، أن أكد على التزام المغرب الذي يتأخر حاليا الدورة السادسة للجمعية الأمم المتحدة للبيئة في دعم التعاون على مستوى منطقة البحر الأبيض المتوسط، مع التفاني الكامل في تعزيز قيم التنمية المستدامة على المستوى الإقليمي والدولي، والسلام عليكم ورحمة الله وبركته.

**UNEP/MAP COP23 – Ministerial Session
7 December 2023, Portorož, Slovenia
Contracting Party: Tunisia**

Mes dames Messieurs, chers chefs des délégations chers tous ;

C'est un grand plaisir pour la Tunisie d'être présenté parmi vous dans cette occasion Biennal de la Conférence des parties contractantes à la convention de Barcelona COP 23 ;

Nous exprimons nos vives gratitude et respect pour le gouvernement de la Slovénie pour l'organisation et l'hospitalité d'accueil dans cette belle ville Portoroz.

Egalement nous exprimons la satisfaction de la Tunisie pour le travail accompli par le secrétariat du PAM, et ces centres d'activités Régional et nous félicitons d'une manière exceptionnel le CAR/ ASP qui Héberge en Tunisie en tant que pays hôte pour le soutiens et l'assistance à la Tunisie pour la mise en œuvre des programmes national de protection et de préservation de la méditerrané, ainsi que la mise en œuvre du programme de travail du plan d'action pour la méditerranéen.

Nous adressons aussi à cette occasion toutes nos félicitations pour la Turquie qui a bien assuré le déroulement et la présidence de l'ancien biennal et nous acculions avec grand plaisir la naissance du nouveau centre d'activités régionales du changement climatique CAR CC en Turquie. Nous espérons à ce centre une bonne intégration parmi les autres CAR et une bonne synergie pour la mise en œuvres des activités et programmes de travail du PAM.

Nous souhaitons une bonne continuation, solidarité et efficace coordination pour par toutes les composantes du PAM et les pays contractantes.

Merci et à bientôt.

**UNEP/MAP COP23 – Ministerial Session
7 December 2023, Portorož, Slovenia
Contracting Party: Türkiye**

Honorable Ministers of the Contracting Parties,

Honorable Director

Dear Participants

- I greet you with my sincerest wishes.
- First of all, I would like to thank the Government of Slovenia for their hospitality.
- We are here together for the future of the Mediterranean.
- Today, we will take decisions on many technical and administrative issues.
- We will also declare our intention to work with determination for the future of the Mediterranean with the Portoroz Declaration.

DISASTER OF THE CENTURY

- As you know, we faced a great disaster on February 6.
- This earthquake, which we call the disaster of the millennium, directly and indirectly damaged 18 cities and affected 14 million people.
- After this incident, which caused a serious destruction, we are working as Country to rebuild our cities by taking into account the earthquake reality.

"WORK ON CLIMATE AND GREEN TRANSFORMATION

- Recently, average temperature of the World has increased by 1 degree Celsius.
- Climate change is now a security issue, especially for the Mediterranean.
- As Türkiye, as a party to the Paris Climate Agreement, we have made commitments for green transformation.
- With the National Action Plan on Climate Change, we have identified 541 actions and the organizations responsible for these actions.
- We are creating a new carbon sink area of approximately 2.7 million square meters in order to reduce the negative impacts of climate change and achieve the carbon emission target set by our country.
- We are preparing our Climate Law.

ZERO WASTE INITIATIVE

- Also, "Zero Waste is a project that we can describe as our flagship.
- We are resolutely implementing the Zero Waste Project, which has become a global environmental movement and a world brand under the auspices of Mrs. Emine Erdoğan.
- The United Nations (UN) General Assembly adopted the "Zero Waste" resolution in December 2022.
- At the recent UN Summit, United Nations Secretary General Antonio Guterres and Mrs. Emine Erdoğan signed the Global Zero Waste Declaration of Goodwill to combat the climate crisis. Our President also invited the whole world to the Zero Waste mobilization.

- In addition, it was decided to declare March 30 as International Zero Waste Day and celebrate it all over the world.

- Since the beginning of the project, 45.5 million tons of recyclable waste has been processed by enterprises licensed by our Ministry and brought into the economy.

WORKS IN THE FIELD OF ENVIRONMENT

- We have increased the number of blue flag beaches, which are indicators of the cleanliness of our seas, to 551 in 2023.

- In the first half of 2023, we exceeded the year-end target of 5% in treated wastewater reuse rate.

- We will increase the reuse rate in agricultural, environmental, industrial and other areas to 15% in 2030.

- With our wastewater treatment plants, the municipal population served has reached 90 %.

- We strictly monitor our seas and coasts. To protect our seas against pollution, waste from ships is managed through waste reception services provided at 339 facilities.

- Forest Fires Meteorological Early Warning System (MEUS) was put into operation in order to take precautions against forest fires in advance.

- Türkiye's national geographical information system was established and data sharing between public institutions was facilitated.

- We bring new sink areas to our country with strong green corridors spreading across the country. We have increased the amount of protected areas to 12.71%.

Honorable Ministers

- We will continue to work diligently for the sustainability and protection of the Mediterranean with all the environmental efforts I have mentioned.

- As all stakeholders across the Mediterranean, we need to take more effective steps as Parties in terms of joint efforts, sharing of experiences and dissemination of best practices.

- Especially at a time when the world agenda is dominated by wars and tensions, we need a common sense and rational approach.

- Mankind must find a way to live in harmony with the environment for the future.

- I hope that the decisions we will take today at this meeting will bring good results for the marine environment and coastal regions of the Mediterranean.

- I express my sincere gratitude on behalf of Türkiye for the groundbreaking decision to establish the Regional Activity Center on Climate Change within the UNEP/MAP System, hosted by Türkiye.

- I greet you all with respect.

Annex IV

List of Participants

LIST OF PARTICIPANTS / LISTE DES PARTICIPANTS**REPRESENTATIVES OF THE CONTRACTING PARTIES / REPRÉSENTANTS DES
PARTIES CONTRACTANTES****ALBANIA / ALBANIE****Ms. Elvana Ramaj**

Director in charge of the Circular Economy Directorate
Ministry of Tourism and Environment

Ms. Klodiana Marika

Director in charge for Nature and Forestry
Ministry of Tourism and Environment

Ms. Shpresa Domi

Head of Projects Unit
Ministry of Tourism and Environment

CROATIA / CROATIE**Ms. Elizabeta Kos**

Director, Ministry of Economy and Sustainable
Development

Mr. Mario Šiljeg

Ph.D., Director of Josip Juraj Strossmayer Water Institute

Mr. Ivan Radić

Senior Expert Adviser in the Service for Sea and Coastal
Protection, Ministry of Economy and Sustainable
Development, Member of Delegation

Ms. Sandra Trošelj Stanišić

Senior Expert Adviser in the Service for Sea and Coastal
Protection, Ministry of Economy and Sustainable
Development

Ms. Biserka Vištica

Head of Department for Environmental Protection of Sea
and Inland Waters, Ministry of the Sea, Transport and
Infrastructure

Ms. Ivana Marović Gugić

Senior Maritime Safety Inspector, Maritime Safety
Directorate, Ministry of the Sea, Transport and
Infrastructure

Ms. Marijana Kapa

Senior Expert Advisor in Regional Department for
Resource Management, Directorate of Fisheries, Ministry
of Agriculture

Ms. Slavica Matijević

Ph.D., Scientific Advisor
Institute of Oceanography and Fisheries

CYPRUS / CHYPRE**Mr. Petros Xenophontos**

Minister
Ministry of Agriculture, Rural Development and
Environment

Ms. Marina Argyrou

Director

Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and
Environment

Mr. Lavrentios Vasiliades

Fisheries and Marine Research Officer

Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and
Environment

Mr. Konstantinos Antoniadis

Fisheries and Marine Research Office

Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and
Environment

Ms. Eftychia Ioannou

Head of the Minister's Office

Ministry of Agriculture, Rural Development and
Environment

EGYPT / ÉGYPTÉ

Dr. Ali Saad Abosana

Chief Executive Officer

Egyptian Environmental Affairs Agency (EEAA)

Dr. Heba Sharawy

Chairperson of the Compliance Committee

MAP Coordinator - Head of ICZM Department
Ministry of Environment

Mr. Mohamed Hamed

CEO Technical Officer

**EUROPEAN UNION / UNION
EUROPÉENNE**

Mr. Patrick Child

Deputy Director General

Directorate-General for the Environment
European Commission

Silvia Bartolini

Head of Unit

Directorate-General for the Environment
European Commission

Ms. Anna Bobo Remijn

Policy Advisor

Directorate-General for the Environment
European Commission

Mr. Daniel Van Assche

International Relations Assistant

Directorate-General for the Environment
European Commission

Ms. Rasa Catillon

Policy Assistant to the Deputy Director General

Directorate-General for the Environment
European Commission

FRANCE / FRANCE**Ms. Florence Levy**

Ambassadrice de France en Slovénie

Mr. Nabil Medaghri Alaoui

Protection internationale des océans – Global Ocean
Protection, Sous-direction de l'environnement et du climat
Ministère de l'Europe et des Affaires étrangères

Mr. David Elkaïm

Chargé de mission Négociations internationales
Biodiversité marine Conventions de Barcelone et de
Carthagène Direction de l'Action européenne et
internationale
Ministère de la transition écologique et solidaire

Mr. Jean Vermot

Coordonnateur milieu marin et contentieux européen
Mission internationale de la direction de l'eau et de la
biodiversité
Ministère de la transition écologique et de la cohésion des
territoires

Ms. Margot Parcaroli Ruiz

Chargée de mission environnement
Direction générale des affaires maritimes, de la pêche et de
l'aquaculture
Secrétariat d'État chargé de la mer

Ms. Phénia Marras-Aït Razouk

Chargée de mission au milieu marin
Ingénierie de projets de coopération internationale
Office français de la biodiversité

Ms. Anne France Didier

President of the MCSD
Pilote ODD14
Conseillère “Territoires maritimes et littoraux”
Secrétariat d'État à la Mer
DGAMPA/Service des espaces maritimes et
littoraux/SDPM

GREECE / GRÈCE**Mr. Petros Varelidis**

Secretary General for the Natural Environment and Water
Hellenic Ministry of Environment and Energy

Mr. Argyrios Makris

Ambassador of the Hellenic Republic to the Republic of
Slovenia

Mr. Nikolaos Mavrakis

Head of the Department of European and International
Environmental Affairs
Directorate of International and European Affairs
Hellenic Ministry of Environment and Energy

Ms. Maria Papaioannou

Department of European and International Environmental Affairs
Hellenic Ministry of Environment and Energy

Ms. Konstantina Rempesteke

Department of European and International Environment Affairs
Directorate of International and European Affairs
Hellenic Ministry of Environment and Energy

Ms. Erietta Scalieri

Legal Counselor
Legal Department
Hellenic Ministry of Foreign Affairs

Mr. Nikolaos Vagdoutis

Deputy Head of Mission
Embassy of the Hellenic Republic to the Republic of Slovenia

ISRAEL / ISRAËL

Mr. Rani Amir

Director
Marine Environment Protection Division
Ministry of Environmental Protection

ITALY / ITALIE

Dr. Oliviero Montanaro

Director General
Directorate General for Natural Heritage and the Sea
Ministry of Environment and Energy Security

Ms. Silvia Sartori

Officer
Division VII Marine and Coastal Strategy and Global Marine Environmental Policies'
Directorate General for Natural Heritage and the Sea
Ministry of Environment and Energy Security

Ms. Cristina Farchi

Officer
Division VII Marine and Coastal Strategy and Global Marine Environmental Policies'
Directorate General for Natural Heritage and the Sea
Ministry of Environment and Energy Security

LIBYA/ LIBYE

Mr. Ibrahim Munir

Minister of Environment

Mr. Salih Diryaq

Director of Sirte Branch
Sirte, Administrative Center
Ministry of Environment

Mr. Almokhtar Saied

Researcher
Nature Conservation Department

MALTA / MALTE

Ms. Claire Cordina-Borg

Environment Protection Officer
Environment and Resources Authority (ERA)

Ms. Roberta Debono

Environment Protection Officer
Environment and Resources Authority (ERA)

Ms. Miraine Rizzo

Team Manager
Environment and Resources Authority (ERA)

MONTENEGRO / MONTÉNÉGRO

Ms. Tamara Brajović

Director General
Directorate for Nature Protection
Ministry of Tourism, Ecology, Sustainable Development
and Northern Region Development

Ms. Djurdjina Bulatović

Independent advisor
Directorate for Nature Protection
Ministry of Tourism, Ecology, Sustainable Development
and Northern Region Development

MOROCCO / MAROC

Ms. Nassira Rheyati

Head of the International Cooperation Division
Partnership, Communication and Cooperation Division
Environment Department
Ministry of Energy Transition and Sustainable
Development

Mr. Mohamed El Bouch

Director
National Laboratory for Pollution Studies and Monitoring
Ministry of Energy Transition and Sustainable
Development

Mr. Sami El Iklil

Program Manager
Mohammed VI Foundation for Environment Protection

SLOVENIA / SLOVÉNIE

Ms. Maša Kociper

State Secretary
Office of the Prime Minister of the Republic of Slovenia

Mr. Gregor Umek

Acting Director-General
Water Directorate
Ministry of Natural Resources and Spatial Planning

Ms. Nataša Bratina

Acting Director General
Spatial Planning and Construction Directorate
Ministry of Natural Resources and Spatial Planning

Mr. Mitja Bricelj

National Focal Point for the Barcelona Convention
Ministry of Natural Resources and Spatial Planning

Ms. Barbara Breznik

Secretary
Water Directorate
Ministry of Natural Resources and Spatial Planning

Ms. Maja Šmid

Minister Counsellor
Department for Global Challenge
Ministry of Foreign and European Affairs

Mr. Dejan Guduraš

Undersecretary
Water Directorate
Ministry of Natural Resources and Spatial Planning

Ms. Zala Strojín Božič

Undersecretary
Directorate for Climate Policies
Ministry of Environment, Climate and Energy

Mr. Janez Berdavs

Undersecretary
Directorate for Climate Policies
Ministry of Environment, Climate and Energy

SPAIN / ESPAGNE

Mr. Hugo Alfonso Morán Fernández

Secretary of State for Environment
Ministry for the Ecological Transition

Ms. Ana María Oñoro Valenciano

Director General for the Coast and the Sea
Ministry for the Ecological Transition and Demographic Challenge

Ms. Carmen Sofía Estébanez

Chief of Cabinet of the Secretary of State for the Environment

Ms. Itziar Martín Partida

Deputy Director General for the Coast and the Sea
Ministry for the Ecological Transition and Demographic Challenge

Mr. Jorge Ureta Maeso

Head of the International Marine Protection Unit
Ministry for the Ecological Transition and Demographic Challenge

Ms. Victoria Eugenia Lucaya Lucaya

Ministry for the Ecological Transition and Demographic Challenge

Mr. Samuel Suárez

Ministry for the Ecological Transition and Demographic Challenge

TUNISIA / TUNISIE

Mr. Mohamed Sghaier Ben Jeddou

National Sanitation Utility
Ministry of Local Affairs and Environment

TÜRKİYE / TÜRKİYE

Ms. Fatma Varank

Deputy Minister

Ministry of Environment Urbanization and Climate Change

Mr. Recep Akdeniz

Director General

Ministry of Environment, Urbanization and Climate Change

Mr. Hüseyin Bayraktar

Director General

Ministry of Environment, Urbanization and Climate Change

Ms. Vildan Bölükbaşı Atay

Head of Department

Ministry of Environment, Urbanization and Climate Change

Mr. Mustafa Başkara

CEO

National Center for the Sea and Maritime Law

Mr. Mehmet Tamer Çobanoğlu

Expert

Department of Marine and Coastal Management

Directorate General of Environmental Management

Ministry of Environment, Urbanization and Climate Change

Mr. Serdar Sağdıç

Engineer

**REPRESENTATIVES OF UNITED NATIONS SPECIALIZED AGENCIES AND OTHER
INTERGOVERNMENTAL ORGANIZATIONS / REPRESENTANTS DES INSTITUTIONS
SPECIALISEES DES NATIONS UNIES ET AUTRES ORGANISATIONS
INTERGOUVERNEMENTALES**

**AGREEMENT ON THE CONSERVATION
OF CETACEANS OF THE BLACK SEA,
MEDITERRANEAN SEA AND
CONTIGUOUS ATLANTIC AREA
(ACCOBAMS) / L'ACCORD SUR LA
CONSERVATION DES CÉTACÉS DE LA
MER NOIRE, DE LA MÉDITERRANÉE ET
DE LA ZONE ATLANTIQUE ADJACENTE
(ACCOBAMS)**

Ms. Susana Salvador
Executive Secretary

**COMMISSION ON THE PROTECTION OF
THE BLACK SEA AGAINST POLLUTION /
COMMISSION POUR LA PROTECTION DE
LA MER NOIRE CONTRE LA POLLUTION**

Ms. Iryna Makarenko
Pollution Monitoring and Assessment Officer

**EUROPEAN ENVIRONMENTAL AGENCY
(EEA) / AGENCE EUROPEENNE POUR
L'ENVIRONNEMENT (AEE)**

Ms. Cécile Roddier
Ocean Governance

**INTERNATIONAL MARITIME
ORGANIZATION (IMO) / ORGANIZATION
MARITIME INTERNATIONALE (OMI)**

Ms. Patricia Charlebois
International Maritime Organization
Deputy Director
Subdivision for Implementation
Marine Environment Division

**INTERNATIONAL UNION FOR
CONSERVATION OF NATURE (IUCN) /
UNION INTERNATIONALE POUR LA
CONSERVATION DE LA NATURE (UICN)**

Mr. Maher Mahjoub
Director
Ms. Pilar Marín
Marine and Coastal Project Officer

OSCE PARLIAMENTARIAN ASSEMBLY

Mr. Azay Guliyev
Parliamentarian

**PARLIAMENTARY ASSEMBLY OF THE
MEDITERRANEAN (PAM)**

Mr. Sergio Piazzi
Ambassador – Secretary General

PELAGOS AGREEMENT

Ms. Constanza Favilli
Executive Secretary
Permanent Secretariat of the Pelagos Agreement

**SECRETARIAT OF THE UNION FOR THE
MEDITERRANEAN (UFM) / LE
SECRÉTARIAT DE L'UNION POUR LA
MÉDITERRANÉE (UPM)**

Mr. Almotaz Abadi
Deputy Secretary General
Ms. Alessandra Sensi
Head of Sector Environment, Green and Blue
Economy

**NON-GOVERNMENTAL ORGANIZATIONS
ORGANISATIONS NON-GOUVERNEMENTALES**

**AGENCY FOR SUSTAINABLE
MEDITERRANEAN CITIES AND
TERRITORIES (AVITEM) / AGENCE DES
VILLES ET TERRITOIRES
MEDITERRANEENS DURABLES (AVITEM)**

Mr. Pierre Massis
Head of Partnerships

**ANKARA UNIVERSITY NATIONAL
CENTER FOR THE SEA AND MARITIME
LAW (DEHUKAM)**

Mr. Mustafa Başkara
CEO

Mr. Demir İsmail
Leading Researcher

Ms. Derya Ulutürk
Researcher

Ms. Büşra Deniz
Researcher

Mr. Çağrı Ünal
Researcher

Ms. Bilge Sena Erdem
Project researcher

**ARAB FORUM FOR ENVIRONMENT AND
DEVELOPMENT (AFED)**

Mr. Najib Saab
Secretary General

**ARAB OFFICE ON YOURH AND
ENVIRONMENT (AOYE)**

Mr. Essam Nada
Executive Director

**ARAB NETWORK FOR ENVIRONMENT
AND DEVELOPMENT (RAED)**

Mohamed Hussein Abdel Moneim
Project Manager

**AREBI (ENVIRONMENT AND BIO
INNOVATION ASSOCIATION /
ASSOCIATION DE RECHERCHE
ENVIRONNEMENT ET BIO INNOVATION)**

Ms. Amel Hamza-Chaffai
President Founder

**ASSOCIATION OF CONTINUITY OF
GENERATIONS (ACG) / ASSOCIATION DE
LA CONTINUITE DES GENERATIONS**

Ms. Sana Taktak
CEO

**CENTRE INTERNATIONAL DE DROIT
COMPARE DE L'ENVIRONNEMENT**

Mr. Michel Prieur
President

Ms. Laurent Vasallo
Information Assistant

CITTADINI PER L'ARIA ONLUS

Ms. Anna Gerometta

ECO-UNION

Mr. Jérémie Fosse
Director

**INSTITUTE FOR SUSTAINABLE
DEVELOPMENT AND INTERNATIONAL
RELATIONS (IDDRI)**

Mr. Angelo Sciacca
Senior Research Fellow (Blue Tourism)

**INTERNATIONAL ASSOCIATION OF
GEOPHYSICAL CONTRACTORS (IAGC) /
ASSOCIATION INTERNATIONALE DES
ENTREPRENEURS EN GEOPHYSIQUE
(IAGC)**

Ms. Ross Compton
EAME Consultant

Mr. Alex Loureiro

**INTERNATIONAL FEDERATION FOR
SUSTAINABLE DEVELOPMENT AND
FIGHT TO POVERTY IN THE
MEDITERRANEAN – BLACK SEA
(FISPMED)**

Mr. Roberto Russo
President

Ms. Vera Chinelatto
Secretary Manager
Junior Project Manager

Ms. Carla Letizia
Junior Project Manager

MAREVIVO INTERNATIONAL

Mr. Pier Paolo Celeste
Chief of Marevivo International

Ms. Rafaella Giugni
Responsible for Institutional Relations

**MEDITERRANEAN INFORMATION
OFFICE FOR ENVIRONMENT, CULTURE
AND SUSTAINABLE DEVELOPMENT
(MIO-ECSDE)**

Mr. Michail Scoullos
Chairperson

Mr. Thomais Vlachogianni
Senior Policy/Programme Officer

MEDASSET

Ms. Konstantina Andreanidou
Programmes and Policy Officer

**MEDITERRANEAN PROTECTED AREAS
(MedPAN)**

Ms. Marie Romani
Executive Secretary

Ms. Carole Martínez
Senior Policy Manager

MedWet

Ms. Marianne Courouble
Policy Officer

**MOHAMMED VI FOUNDATION FOR
ENVIRONMENT PROTECTION**

Mr. Sami El Iklili
Program Manager

OCEANCARE

Mr. Carlos Bravo
Ocean Policy Expert

Mr. Nicolas Entrup
Director International Relations

TOUR DU VALAT

Ms. Margaux Daval
Associate PhD candidate from Aix-Marseille
University

**TURKISH SHIPBUILDERS ASSOCIATION
(GISBIR)**

Mr. Mehtap Ozdemir

**WORLD WIDE FUND FOR NATURE
INTERNATIONAL (WWF
INTERNATIONAL) / FONDS MONDIAL
POUR LA NATURE**

Ms. Carlotta Bianchi
Policy Officer

**WORLD WIDE FUND FOR NATURE
MEDITERRANEAN (WWF
MEDITERRANEAN) / FONDS MONDIAL
POUR LA NATURE (MEDITERRANÉE)**

Mr. Alessio Satta
Director

**YOUTH LOVE EGYPT (YLE
FOUNDATION)**

Mr. Ahmed Fathy
CEO

Mr. Adhm Abdelghany
Head of Scientific Research and Policy Hub

Mr. Zeinab Khair
Legal Consultant

**SPECIAL GUESTS-PANELISTS /
INVITES SPECIAUX-PANELISTES
ENALEIA**

BANLASTIC EGYPT

Mr. Ahmed Yassin
Social Entrepreneur

**EURO-MEDITERRANEAN ECONOMIST
ASSOCIATION (EMEA)**

Ms. Yeganeh Forouheshfar
Senior Researcher

**MUNICIPALITY OF BONIFACIO / MAIRIE
DE BONIFACIO**

Mr. Jean Charles Orsucci
Mayor

UNIVERSITY IO LJUBLJANA, SLOVENIA

Ms. Lucka Kajfez Bogataj
Climatologist

**THE BARCELONA CONVENTION AND COMPONENTS OF THE MEDITERRANEAN
ACTION PLAN / PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT -
SECRETARIAT DE LA CONVENTION DE BARCELONE ET COMPOSANTES DU PLAN
D'ACTION POUR LA MEDITERRANEE**

**UNITED NATIONS ENVIRONMENT
PROGRAMME / PROGRAMME DES
NATIONS UNIES POUR
L'ENVIRONNEMENT**

Ms. Elizabeth Mrema
Deputy Executive Director
UNEP

Mr. Johan Robinson
Chief Ecosystem Integration Branch
Ecosystem Division

Mr. Rami Abdel Malik
Programme Coordinator
Special Assistant to the Deputy Executive Director
Executive Office

Ms. Nancy Soi
Programme Management Officer
Ecosystems Division

Mr. Georgios Petridis
Lead, Supply Chain Team
Programme Advisory Services Unit
Corporate Services Division

Mr. Girma Gina
Finance and Budget Officer
Corporate Services Division

**UNEP/MAP COORDINATING UNIT /
PNUE/PAM UNITÉ DE COORDINATION**

Ms. Tatjana Hema
Coordinator

Mr. Ilias Mavroeidis
Governance Programme Officer

Ms. Kumiko Yatagai
Fund/Administrative Officer

Mr. Mohamad Kayyal
Programme Management Officer

Mr. Jihed Ghannem
Public Information Officer

Mr. Ihab Tarek
Legal Officer

Ms. Patrizia Busolini
EcAp Med III Programme Officer

Mr. Christos Ioakeimidis
Project Management Officer

Mr. Stavros Antoniadis
Associate Administrative Officer

Ms. Polonča Skendzic
COP23 Liaison Officer

**THE MEDITERRANEAN POLLUTION
ASSESSMENT AND CONTROL
PROGRAMME (MED POL) / LE
PROGRAMME D'ÉVALUATION ET DE
MAÎTRISE DE LA POLLUTION MARINE EN
MEDITERRANEE (MED POL)**

Ms. Olfat Hamdan
MED POL Programme Management Officer

Mr. Erol Cavus
Programme Officer

REGIONAL ACTIVITY CENTRES / CENTRES D'ACTIVITÉS RÉGIONALES

**PLAN BLEU REGIONAL ACTIVITY CENTRE
(PLAN BLEU/RAC)
PLAN BLEU / CENTRE D'ACTIVITÉS
RÉGIONALES (PLAN BLEU/RAC)**

Mr. Antoine Laffite
Head of Plan Bleu Observatory

**REGIONAL ACTIVITY CENTER FOR THE
PRIORITY ACTIONS PROGRAMME
(PAP/RAC) / CENTRE D'ACTIVITÉS
RÉGIONALES PROGRAMME D' ACTIONS
PRIORITAIRES (CAR/PAP)**

Ms. Željka Škaričić
Director

Mr. Marko Prem
Deputy Director

**REGIONAL MARINE POLLUTION
EMERGENCY RESPONSE CENTRE FOR
THE MEDITERRANEAN SEA (REMPEC)
/ CENTRE RÉGIONAL
MEDITERRANÉEN POUR
L'INTERVENTION D'URGENCE
CONTRE LA POLLUTION MARINE
ACCIDENTELLE (REMPEC)**

Mr. Ivan Sammut
Head of Office

**REGIONAL ACTIVITY CENTER FOR
SPECIALLY PROTECTED AREAS (SPA/RAC)
/ CENTRE D'ACTIVITÉS RÉGIONALES
POUR LES AIRES SPECIALEMENT
PROTÉGÉES (CAR/ASP)**

Mr. Khalil Attia
Director

Mr. Atef Ouerghi
Programme Officer

**REGIONAL ACTIVITY CENTRE FOR
SUSTAINABLE CONSUMPTION AND
PRODUCTION (SCP/RAC-MedWaves) /
CENTRE D'ACTIVITÉS RÉGIONALES POUR
LA CONSOMMATION ET LA PRODUCTION
DURABLES (CAR/CPD-MedWaves)**

Mr. Jesús Maestro
Director

Mr. Matías Ibáñez Sales
Project Manager
Policy Area

Section 2

Portorož Ministerial Declaration

PORTOROŽ MINISTERIAL DECLARATION

We, Ministers of the Environment and Heads of Delegation of the Contracting Parties to the Convention on the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols, meeting in Portorož, Slovenia, on 7 December 2023,

Considering that the year 2025 will mark 50 years since the establishment of the Mediterranean Action Plan (MAP) in Barcelona, under the auspices of UNEP Regional Seas Programme (RSP) and its contribution for inspiring similar cooperation frameworks around the globe, as well as the strengthening of the Regional Seas Programme, which today harbours 18 Regional Conventions and Action Plans, involving more than 146 countries,

Recalling also the adoption of the Barcelona Convention in 1976, its revision in 1995, its further consolidation with 7 Protocols, as a collective major achievement of its Contracting Parties during five decades of continuous cooperation, action and implementation,

Emphasizing that, through their unfaltering commitment to multilateral cooperation, the Contracting Parties have empowered the UNEP/MAP-Barcelona Convention system, which has in turn delivered a comprehensive, science-based package of regulatory instruments and measures, as well as guidelines to facilitate their implementation,

Welcoming progress in the delivery of the UNEP/MAP mandate, the implementation of its Medium-Term Strategy for 2022-2027,

Noting the UNEP/MAP-Barcelona Convention system's linkages with and contributions to the implementation of 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), and to the Decade of Action, including in response to calls for accelerating sustainable solutions from the global to the regional and to the national/local level,

Renewing our commitment to translating decisions into action through the effective implementation of the Barcelona Convention and its Protocols as an essential prerequisite for a green transition in the Mediterranean and for addressing the triple planetary crisis of climate change, biodiversity loss and pollution in the region,

Renewing our commitment to supporting the achievement of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (in particular SDG 14),

Welcoming the outcomes of recent multilateral processes and Conferences including the 2022 UN Ocean Conference, the 2023 UN Water Conference, as well as the adoption of the UNGA Resolution (A/RES/76/300) on the human right to a clean, healthy, and sustainable environment,

Reminding the goals of the UN Decade on Ecosystem Restoration and the UN Decade of Ocean Science for Sustainable Development,

Welcoming the outcomes of the sessions and adopted resolutions of the United Nations Environment Assembly of the United Nations Environment Program (UNEA), especially those with a particular relevance to the Mediterranean,

Recalling the United Nations General Assembly resolution 76/296 of July 2022, entitled "Our Ocean, Our Future, Our Responsibility", which highlights that its goals can also be successfully applied at the regional level through raising awareness and increased cooperation,

Embracing the adoption of the Kunming Montreal Global Biodiversity Framework (KMGBF), at the 15th Conference of the Parties to the Biodiversity Convention, last December 2022, in

particular its target 3 calling to ensure and enable that by 2030 at least 30 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures,

Welcoming the outcomes of the further resumed fifth session of the Intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (General Assembly resolution 72/249), where the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (A/CONF.232/2023/4) was adopted by consensus and which is now open for signature. Recognizing that action is needed from the Mediterranean Region as a contribution to its early entry into force and the pivotal role of the Barcelona Convention Contracting Parties in this process,

Recalling that climate change is one of the greatest challenges of our time, we are deeply concerned about its adverse effects on human life and health, and on marine life, including rising sea temperatures, acidification and deoxygenation of the sea, sea level rise, shifts in the abundance and distribution of marine species, increase of invasive alien species and degradation of marine biodiversity,

Fully aware that urgent action is needed to bolster resilience to the unfolding impacts of climate change, while pursuing efforts towards decarbonization and transition to sustainable green economies,

Welcoming the progress of the intergovernmental negotiating committee, established by resolution 5/14 of the UNEA at its resumed fifth session, in developing an international legally binding instrument on plastic pollution, including in the marine environment, and calling for all efforts to be undertaken to conclude negotiations before the end of 2024,

Fully aware of the need for further promoting sustainable development and guaranteeing quality of life in the Mediterranean region by expediting efforts and mobilizing all actors to this end,

Considering the priorities discussed at the 20th session of the Mediterranean Commission on Sustainable Development, Marseille, France, 14-16 June 2023. Fully aware of the absolute necessity, as identified by the OCEAN DECADE ACTIONS FRAMEWORK (UNESCO), to strengthen scientific knowledge and expertise, notably in Mediterranean Sea region,

Noting the key findings of the 2023 Mediterranean Quality Status Report and highlighting the fact that despite the measures taken to date, work shall continue to achieve and maintain good environmental status of the marine and coastal environment,

Welcoming the designation by the International Maritime Organisation of a Particularly Sensitive Sea Area (PSSA) in the North Western Mediterranean sea as a result of a collective initiative in favour of a more effective protection of oceans and seas.

Switching to Green

1. *Commit to halt the degradation of marine and coastal biodiversity through the effective implementation of the Mediterranean region's own post-2020 Biodiversity Framework (SAPBIO) in close interaction with the Kunming-Montreal Global Biodiversity Framework (KMGBF) and the Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction,*

2. *Enhance* actions to address climate change in the Mediterranean and increase protection of the marine ecosystems against the detrimental impacts from climate change, and strengthen scientific knowledge and expertise in this area, such as through the Network of Mediterranean Experts on Climate and environmental Change (MedECC),

3. *Commit* to advance decarbonization, including in the blue economy sectors supporting *inter alia* the increased levels of ambition of the International Maritime Organization's Strategy for reducing GHG emissions from ships, in particular its goal of reaching net zero by 2050, while also recognizing the Water-Energy-Food-Ecosystem Nexus as an important approach to maximize benefits for environment and sustainable development in the region,

4. *Commit* to the implementation of the Mediterranean SO_x Emission Control Area, which will become effective on the 1st of May 2025, ensuring a uniform application and level playing field and to engage in the process for the possible designation of the Mediterranean as a whole as Nitrogen oxides emission control area (NECA),

5. *Urge* the Contracting Parties to ratify and effectively implement MARPOL Annex VI, as soon as possible, if they have not yet done so, at least by the date of entering into force of Med SECA, to the extent possible,

6. *Commit* to implement at the regional level the global framework for chemicals adopted at the 5th International Conference on chemicals management (ICCM5 - Bonn, Germany, 25-29 September 2023), to manage chemicals and waste safely, with possible references to relevant Protocols/ Regional Plans and concrete results achieved by the GEF-funded MedProgramme, with the intention that UNEP/MAP joins the High Ambition Alliance on chemicals and waste and continues to support Contracting Parties in this process,

7. *Take concrete actions* to ensure effective and timely implementation of the regional legally binding measures adopted under the Land-Based Sources and Activities (LBS) Protocol of the Barcelona Convention, with the aim of achieving substantive pollution reduction and prevention by 2030 and commit to addressing plastic pollution including through the promotion of circular approaches and reduction of single-use plastics,

8. *Commit* to raise the level of ambition and implement targeted actions to accelerate progress towards achieving Good Environmental Status and Sustainable Development Goals, considering the very important processes of revision and update of the Ecosystem Approach RoadMap and of the Mediterranean Strategy for Sustainable Development (MSSD),

9. *Accelerate* the implementation of Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM) through national and local measures, as appropriate, so as to enable the development of a sustainable and resilient blue economy as a vehicle for the green transition, and through the application of the Strategic Environmental Assessment (SEA) and the Environmental Impact Assessment (EIA) as important tools to integrate environmental considerations in MSP plans,

10. *Enhance action and synergies* with other relevant global and regional frameworks as well as initiatives and processes, in particular UNEA and its ocean-related resolutions, relevant IMO conventions, and other Multilateral Environmental Agreements (MEAs), the European Green Deal the Union for the Mediterranean (UfM) Ministerial Declarations on Sustainable Blue Economy and on Environment and Climate Action, the WestMED Initiative Ministerial Declaration, to maximize the effective implementation of the Barcelona Convention and its Protocols,

11. *Welcome* global and regional multi partner collective initiatives, coalitions and partnerships addressing the preservation of marine and coastal biodiversity and climate change, such as GOA (Global Ocean Alliance), the ENACT partnership (Enhancing Nature Based Solutions for an Accelerated Climate Transformation) and PAMEx (Plan of Action for a Model Mediterranean Sea),

12. *Encourage* to take action to ratify, approve, accept or accede to the Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction as a contribution from the Contracting Parties to the Barcelona Convention to its early entry into force,

13. *Commit* to promote and raise awareness on the importance of the Particularly Sensitive Sea Area (PSSA) in the North Western Mediterranean sea as a key achievement for the protection of marine and coastal biodiversity, an effective contribution to the Post-2020 Strategic Action Programme for the Conservation of Biological Diversity and Sustainable Management of Natural Resources in the Mediterranean Region and a model to be reproduced in other areas of the Mediterranean, and also commit to enhance synergies for similar collective initiatives to be undertaken in the Mediterranean,

14. *Commit* to make every effort to ensure and enable that by 2030 at least 30 per cent of coastal and marine areas are effectively conserved and managed, as a contribution of the Mediterranean Region to the achievement of target 3 of the CBD KMGBF,

15. *Support* an ambitious new global framework under the United Nation Strategic Approach to International Chemicals Management beyond 2020 and agree that UNEP/MAP will join the High Ambition Alliance on chemicals and waste in support of this objective,

16. *Ensure* that the contribution of the Contracting Parties to the Barcelona Convention and its Protocols to the negotiation process for an international legally binding instrument on plastic pollution including in the marine environment pursuant to UNEA Resolution 5/14 considers the regional and national contexts, challenges and achievements in tackling marine litter and plastic pollution, and that the implementation of the future instrument capitalizes on the work undertaken within the Regional Seas Action Plans and Conventions, aiming at maximizing synergies and coordination, as appropriate. In that context, we highlight the importance of a comprehensive approach that addresses the full lifecycle of plastics,

17. *Commit* to strengthen cooperation with other relevant Regional Seas Conventions and their Action Plans, to foster complementarity with G7 and G20 fora, in particular through the 2024 Italian G7 Presidency, and with respect to the key role of the Regional Sea Programmes in implementing and achieving global commitments, and to enhance interregional cooperation between the Mediterranean, the Danube and the Black Sea, through a ‘Source to Sea’ approach,

Investing in future generations

18. *Involve* youth in environmental issues and decision-making processes innovatively through:

- a. Modernizing education programs and promote education for sustainable development and global citizenship in both formal and informal settings to raise young people's awareness on the importance of the environment and sustainable development from an early age and as an instrumental tool for the achievement of the SDGs giving also due consideration to the gender perspective, also in line with the Mediterranean Strategy on Education for Sustainable Development and its Action Plan towards 2030,
- b. Raising the level of inter-generational collaboration,
- c. Involving young people in the activities of local, national, and regional institutions and environmental programs and devolving climate change adaptation policies and plans from the national to the local level (top-down and bottom-up),
- d. Developing and enhancing inter-generational cooperation in planning and implementing measures for adaptation to climate change to improve resilience and responses to climate

related risks and disasters, biodiversity conservation as well as prevention and reduction of marine pollution, in particular marine litter.

19. *Encourage* civil society, private sector, and other key stakeholders to support education and awareness raising on environmental and sustainable development challenges and solutions, including those based on circular economy, and encourage concrete action to maximize effectiveness and results on the ground,

20. *Intensify* activities at all levels, to achieve the Sustainable Development Goals (SDGs) being at the midpoint to 2030, and to this end, *commit* to a swift update of the Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025 in order to effectively implement Agenda 2030 on Sustainable Development and its SDGs at the regional level, seeking to amend current unsustainable trajectories and place the region on alternative pathways to sustainability and resilience,

50 years of UNEP/MAP in 2025

30 years of Post Rio Barcelona Convention

21. *Celebrate with pride* and undertake an ambitious campaign to raise awareness at the global, regional and national levels, including through the attendance of relevant events, on the achievements of the UNEP/MAP - Barcelona Convention system and highlight its commitment and vision to “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,”

22. *Invite* all MAP Partners and regional institutions having Observer status in the meetings of the Contracting Parties to the Barcelona Convention to support and join the communication campaign on the celebration of the 50th anniversary year by undertaking concerted outreach activities,

23. *Urge* the Contracting Parties to ensure universal ratification of all Protocols to the Barcelona Convention, and in this context to ratify as a priority within 2024 the Amendments to the Dumping Protocol so as to celebrate this important achievement in this milestone anniversary of the UNEP/MAP-Barcelona Convention system,

24. *Commit* to contribute to the 6th Session of the United Nations Environment Assembly under the Presidency of the Kingdom of Morocco (26 February to 1 March 2024), and to organize a high-level event for the UNEP MAP 50th year anniversary at the 3rd UN Ocean Conference in Nice under the leadership of France, Spain, Slovenia and Egypt, and *also commit* to raise the profile of the Barcelona Convention system at the 2024 Our Ocean Conference hosted by Greece, the 2025 UN Ocean Conference and other global events with the participation and support of the Secretariat.

Section 3

**Thematic decisions adopted by the 23rd Meeting of the Contracting Parties to the Convention for the
Protection of the Marine Environment and the Coastal Region
of the Mediterranean**

Decision IG.26/1

Compliance and Reporting

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

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

Recalling also the United Nations General Assembly resolution 67/296 of July 2022, entitled “Our Ocean, Our future, Our responsibility”,

Recalling Decision IG.25/2 of COP 22 (Antalya, Türkiye, 7-10 December 2021) requesting the Secretariat to undertake a consultation process as soon as possible and not later than January 2023 with the Contracting Parties with a view to review the proposed amendments to procedures and mechanisms on compliance and report on the outcome at COP 23,

Having regard to the Barcelona Convention, in particular Articles 26 and 27 thereof, about reports and compliance control, respectively, and the relevant articles of its Protocols,

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

Emphasizing the Compliance Committee’s unique role in facilitating and promoting compliance by the Contracting Parties with the obligations under the Barcelona Convention and its Protocols,

Stressing the importance of the timely submission of national implementation reports by the Contracting Parties, for the COP to keep under review the implementation of the Barcelona Convention and its Protocols,

Appreciating the progress made by Contracting Parties in implementing the Barcelona Convention and its Protocols, acknowledging at the same time the challenges and difficulties faced in this complex process,

Noting with concern that several Contracting Parties continue their recurrent practice of non-submission of national implementation reports for the last three biennia,

Aware of the need to ensure that, in coordination with MAP components, where appropriate, adequate action is taken to facilitate and promote compliance through capacity building activities with regards to submissions of the National Implementation Reports as resources allow,

Appreciating the work carried out by the Compliance Committee during the biennium 2022-2023 in addressing general and specific cases of difficulties in the implementation of the Barcelona Convention and its Protocols,

Having regard to the report of the Consultation Meeting of the Contracting Parties held on 31 January 2023, on the proposed amendments to the Procedures on Mechanisms of Compliance,

Having considered the reports of the 18th and 19th meetings of the Compliance Committee and its Activity report for the biennium 2022-2023,

1. *Adopt* the amendments to the Procedures and Mechanisms on Compliance, set out in Annex I to this present Decision,
2. *Adopt* the Activity Report of the Compliance Committee for the Biennium 2022-2023, including its findings and recommendations, set out in Annex II to this present Decision,

3. *Adopt* the Programme of Work of the Compliance Committee for the Biennium 2024-2025, set out in Annex III to the present Decision,
4. *Urge* the Contracting Parties who have not yet submitted their national implementation reports for the biennium 2018-2019 (8 Contracting Parties) and the biennium 2020-2021 (11 Contracting Parties) to do so, as soon as possible by 2nd April 2024 at the latest,
5. *Appreciate* the actions taken by Spain to implement the findings and recommendations by the Compliance Committee for the case of Mar Menor and further *encourage* their efforts to achieve full compliance with the requirements and obligations of the Barcelona Convention and its Protocols following recommendations of the Compliance Committee and report.
6. *Elect* the candidates nominated by the Contracting Parties listed in Annex IV to this present Decision as members and alternate members of the Compliance Committee respectively.

Annex I

Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols

I. Objective and Principles

1. The objective of the compliance mechanism is to facilitate and promote compliance with the obligations under the Barcelona Convention and its Protocols, taking into account the specific situation of each Contracting Party.
2. The compliance procedure shall be facilitative, non-adversarial, dispute-preventing and cooperative in nature and its operation be guided by the principles of transparency, fairness, expedition as well as by equitable principles.
3. The compliance procedure shall be conducted by the principles of “due process” and “due diligence” in order to ensure fairness and transparency.

II. Compliance Committee

4. A compliance committee, hereinafter referred to as “the Committee”, is hereby established.
5. The Committee shall consist of seven members elected by the Meeting of the Contracting Parties before the end of each Ordinary Meeting of the Contracting Parties from a list of candidates nominated by the Contracting Parties. For each member of the Committee, the Meeting of the Contracting Parties shall also elect an alternate member from the above-mentioned list.
6. A full term of office commences at the end of an Ordinary Meeting of the Contracting Parties and runs until the end of the second Ordinary Meeting of the Contracting Parties thereafter. For the principle of continuity of functions, the term of office of the Chair and two Vice-Chairs of the Compliance Committee is extended as appropriate until their successors are elected at an Ordinary Meeting of the Compliance Committee.
7. At the Meeting of the Contracting Parties at which the decision establishing the mechanism is adopted, the Meeting shall elect three members and their alternates for half a term and four members and their alternates for a full term. At each ordinary meeting thereafter, the Contracting Parties shall elect for a full-term new members and alternates to replace those whose period of office is about to expire.
8. Members and alternates members shall not serve on the Committee for more than two consecutive terms.
9. The members of the Committee shall be nationals of Parties to the Barcelona Convention. The Committee shall not include more than one national of the same State.
10. Nominated candidates shall be persons of recognized competence in the matters dealt with by the Barcelona Convention and its Protocols and in relevant scientific, technical, socioeconomic, legal or other fields. Each nomination shall be accompanied by the curriculum vitae of the candidate. Contracting Parties may consider the nominations of candidates from civil society and academia. While nominating their candidates Contracting Parties shall also give due consideration to avoid every possible conflict of interest.
11. In electing members of the Committee and their alternates, the Meeting of the Contracting Parties shall take into consideration equitable geographical representation, shall ensure rotation in order to secure the participation of nominated individuals from all Contracting Parties as members of the Committee within a reasonable period of time. To the extent possible, they shall also take into consideration a balance of scientific, legal and technical expertise.
12. The Committee shall elect its officers – a Chairperson and two Vice-Chairpersons – on the basis of equitable geographic representation and rotation.

13. Members of the Committee and their alternates shall serve in their individual capacities and shall act objectively in the interests of the Barcelona Convention and its Protocols for the protection of the Mediterranean Sea and its coastal area avoiding any conflict of interest.

III. Meetings of the Committee

14. The Committee shall meet at least once a year. The Committee may decide to hold additional meetings, in particular in conjunction with those of other Convention bodies.
15. The Secretariat shall inform all Contracting Parties of the date and venue of the meetings of the Committee. Unless the Committee or the Party whose compliance is in question (hereinafter “the Party concerned”) decides otherwise, the meetings of the Committee will be open to:
 - i. Parties to the Convention, which shall be treated as observers in accordance with the Rules of Procedure for meetings and conferences of the Contracting Parties for the purpose of their participation in the Committee; and
 - ii. observers, in accordance with Article 20 of the Convention and the Rules of Procedure for the meetings and conferences of the Contracting Parties
16. In the absence of a member from a meeting, the respective alternate shall serve as the member
17. For each meeting, a quorum of seven members is required.
18. The Committee shall make every effort to reach agreement by consensus on its findings, measures and recommendations. If all efforts to reach consensus have been exhausted, the Committee shall as a last resort adopt its findings, measures and recommendations by at least a three-fourths majority of the members present and voting. “Members present and voting” means members present and casting an affirmative or a negative vote.

IV. Role of the Compliance Committee

19. The role of the Committee shall be to consider:
 - (a) specific situations of actual or potential non-compliance by individual Parties with the provisions of the Convention and its Protocols;
 - (b) at the request of the Meeting of the Contracting Parties, general compliance issues, such as recurrent non-compliance problems, including in relation to reporting, taking into account the reports referred to in Article 26 of the Convention and any other report submitted by the Parties; and
 - (c) any other issues as requested by the Meeting of the Contracting Parties.
20. In assessing and verifying information provided and the actual situation on the ground, the Committee may be assisted by the Secretariat including MAP components.

V. Procedure

1. Submissions by Parties

21. The Committee shall consider submissions by:
 - (a) a Party in respect of its own actual or potential situation of non-compliance, despite its best endeavours; and
 - (b) a Party in respect of another Party’s situation of non-compliance, after it has undertaken consultations through the Secretariat with the Party concerned and the matter has not been resolved

within three months at the latest, or a longer period as the circumstances of a particular case may require, but not later than six months.

22. Submissions as referred to in paragraph 18 concerning the alleged non-compliance of a Party shall be addressed in writing to the Committee through the Secretariat, supported by substantiating information setting out the matter of concern and the relevant provisions of the Barcelona Convention and its Protocols.
23. The Secretariat shall, within two weeks of receiving a submission in accordance with paragraph 18 (b), send a copy of that submission to the Party concerned.
24. The Committee may decide not to proceed with a submission that it considers to be
 - anonymous,
 - de minimis or
 - manifestly ill founded.
25. The Secretariat shall inform both the Party concerned and the Party indicated in paragraph 18(b) about the Committee's findings under paragraph 21 within two weeks of the date of the findings.

2. Referrals by the Secretariat

26. If the Secretariat becomes aware from the periodic reports referred to in Article 26 of the Convention and any other reports submitted by the Parties that a Party is facing difficulties in complying with its obligations under the Convention and its Protocols, the Secretariat shall notify the Party concerned and discuss with it ways of overcoming the difficulties. If the difficulties cannot be overcome within a maximum period of three months, the Party concerned shall make a submission on the matter to the Compliance Committee in accordance with paragraph 18 (a). In the absence of such a submission within six months of the date of the above-mentioned notification, the Secretariat shall refer the matter to the Committee.

3. Referral to the Committee on its own initiative

27. The Committee may examine, on the basis of the biennial activity reports or in the light of any other relevant information, any difficulties encountered by a Contracting Party in the implementation of the Convention and its Protocols. The Committee may ask the Party concerned to provide all additional information. The Party concerned shall have a period of two months to respond. Paragraphs 24 to 30 and 32 to 34 shall apply, *mutatis mutandis*, in the case of referral to the Committee on its own initiative.

4. Proceedings

28. The Party concerned may present information on the issue in question and present responses and/or comments at every stage of the proceedings. At the invitation of the Party concerned, the Committee may undertake on-site appraisals.
29. The Committee may:
 - (a) ask the Party concerned to provide further information, including an assessment of the reasons
 - (b) why the Party may be unable to fulfil its obligations; and with the consent of the Party concerned, gather information in the territory of that Party, including on-site appraisals.
30. In its deliberations, the Committee shall take into account all the available information concerning the issue in question, which shall also be made equally available to the Party concerned.
31. The Party concerned shall be entitled to participate in the discussions of the Committee and present its observations. The Committee may, if it considers it necessary in a particular case of

non-compliance, ask the Party concerned to participate in the preparation of its findings, measures and recommendations.

32. The Committee shall be guided by the principle of “due process” in order to ensure fairness and transparency.
33. The Committee shall, through the Secretariat, notify the Party concerned of its draft findings, measures and recommendations in writing within two weeks from the date of their completion. The Party concerned may comment in writing on the draft findings, measures and recommendations of the Committee within a period of time determined by the Committee.
34. The Committee, any Party or others involved in its deliberations shall protect the confidentiality of information transmitted in confidence by the Party concerned.

VI. Committee reports to the Meetings of the Contracting Parties

35. The Committee shall prepare a report on its activities.
 - (a) The report shall be adopted in accordance with paragraph 16. Where it is not possible to reach agreement on findings, measures and recommendations by consensus, the report shall reflect the views of all Committee members and provide the reasoning for its findings, measures and recommendations.
 - (b) As soon as it is adopted, the Committee shall submit the report through the Secretariat, including such recommendations on individual and general issues of non-compliance as it considers appropriate to the Parties for consideration at their next meeting.

VII. Measures

36. The Committee may take one or more of the following measures with a view to promoting compliance and addressing cases of non-compliance, taking into account the capacity of the Party concerned, and also factors such as the cause, type, degree and frequency of non-compliance:
 - (a) provide advice and, as appropriate, facilitate assistance;
 - (b) request or assist, as appropriate, the Party concerned to develop an action plan to achieve compliance within a time frame to be agreed upon between the Committee and the Party concerned;
 - (c) invite the Party concerned to submit progress reports to the Committee within the time frame referred to in subparagraph (b) above on the efforts it is making to comply with its obligations under the Barcelona Convention and its Protocols; and
 - (d) make recommendations to the Meeting of the Contracting Parties on cases of non-compliance, if it finds that such cases should be handled by the Meeting of the Contracting Parties.
37. The Meeting of the Contracting Parties may decide, upon consideration of the report and any recommendations of the Committee, taking into account the capacity of the Party concerned, and also factors such as the cause, type and degree of non-compliance, appropriate measures to bring about full compliance with the Convention and its Protocols, such as:
 - (a) facilitate implementation of the advice from the Committee and facilitate assistance, including, where appropriate, capacity-building measures, to an individual Party;
 - (b) make recommendations to the Party concerned;
 - (c) request the Party concerned to submit progress reports on achievement of compliance with the obligations under the Convention and its Protocols; and
 - (d) publish cases of non-compliance.

38. In the event of a serious, ongoing or repeated situation of non-compliance by a Party, the Meeting of the Contracting Parties, where appropriate, may:

- (a) issue a caution;
- (b) issue a report of non-compliance regarding that Party; or
- (c) consider and undertake any additional action that may be required for achievement of the purposes of the Convention and the Protocols.

VIII. Review of procedures and mechanisms

39. The Meeting of the Contracting Parties shall regularly review the implementation and effectiveness of the compliance mechanism and take appropriate action.

IX. Relationship with Article 28 of the Convention (Settlement of Disputes)

40. These procedures and mechanisms shall operate without prejudice to the settlement of disputes provisions of Article 28 of the Convention.

X. Enhancement of synergies

41. In order to enhance synergies with mechanisms of compliance under other relevant multilateral environmental agreements, the Committee may consult with those mechanisms and invite them to attend its meetings. The Committee shall report back to the Meeting of the Contracting Parties, including with recommendations as appropriate.

XI. Secretariat

42. The Coordinating Unit shall serve as the Secretariat of the Committee. It shall, inter alia, arrange and service the meetings of the Committee.

Annex II

Activity Report of the Compliance Committee for the biennium 2022-2023

Activity Report of the Compliance Committee for the biennium 2022-2023

Section 1: Introduction

1. The role and functioning of the Compliance Committee is governed by Decision IG.17/2 on Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, as amended by Decisions IG. 20/1 and IG. 21/1 and Decision IG. 19/1 on the Rules of Procedure of the Compliance Committee, as amended by Decision IG. 21/1.
2. The Compliance Committee met twice during the biennium 2022-2023. The 18th Meeting of the Compliance committee was held on 29-30 June 2022 Athens, Greece. The 19th Meeting was held on 4-5 July 2023 in Athens, Greece, at the premises of the United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP) Coordinating Unit.
3. At its 18th and 19th Meetings, the Compliance Committee went through its Programme of Work for the biennium 2021-2022 adopted by the 22nd Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (COP 22) (Antalya, Türkiye, 7-10 December 2022) & Programme of Work for the biennium 2024-2025. The key outcomes of the work of the Compliance Committee are presented in this report in accordance with paragraph 31 of the Procedures and Mechanisms on Compliance based on the conclusions and recommendations of the meetings. Further information is provided in the full report of the 18th and 19th Meetings of the Compliance Committee.

Section 2: Specific Submissions under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols

Communication to the Compliance Committee under paragraph 23.bis of the Procedures and Mechanisms on Compliance

4. This section summarizes the discussions held at the 18th and 19th meetings of the Compliance Committee on the communication submitted by the Ecologistas en Accion de la Region Murciana (Spain) to the Committee under paragraph 23.bis of its Procedures and Mechanisms and conclusions reached based on discussions. New submission was received under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols at the 19th Compliance Committee meetings.
- 18th Meeting of the Compliance Committee (29-30 June 2022 Athens, Greece). The discussions held at the meeting according to paragraph 29 of the Procedures and Mechanisms, concluded that the Compliance Committee shall, through the Secretariat, notify the Party concerned of its draft findings, measures and recommendations in writing within two weeks from the date of their completion. According to Rule 31(2) of the Rules of Procedure of the Compliance Committee, written comments on the findings, measures and recommendations submitted within 45 days of their receipt by the Party concerned shall be circulated by the Secretariat to the members and alternate members of Committee and shall be included in the Committee's biennial report to the Meeting of the Contracting Parties. Based on these provisions, the Compliance Committee concluded to ask the Secretariat to notify the Party concerned by 15th July 2022.

The Compliance Committee:

- a. Adopted the draft decision attached to this report in relation to the communication to the Compliance Committee under Paragraph 23.bis of the Procedures and Mechanisms on Compliance concerning compliance by Spain with its obligations under the Barcelona Convention and its Protocols.
- b. The Committee asked the Secretariat to notify the Party concerned of its findings, measures and recommendations in writing by 15th July 2022. The Party concerned may comment in writing on the draft findings, measures and recommendations within 45 days of receipt, in accordance with Rule 31, para 2, of the Rules of Procedure of the Compliance Committee.

- c. The Compliance Committee decided, through the Secretariat, to inform the communicant of the outcome of the proceedings.
- d. The Compliance Committee noted the importance of communicating its findings, measures and recommendations and invited the Secretariat to propose ways of communication and to work with the Committee in this respect by 30th September 2022.
- 19th Meeting of the Compliance Committee (4-5 July 2023). The discussions held at the meeting on both the substantive and procedural aspects of the proceedings laid down in paragraphs 24 to 30 of the Procedures and Mechanisms on Compliance concluded as follows:

The Compliance Committee agreed:

- a. The Committee notes with satisfaction the receipt of information from the Party Concerned in response to its findings and recommendations concerning the communication on the case of Mar Menor.
- b. The Committee notes the extensive work done by both the Government of Spain and the Regional Government of Murcia to advance compliance with the Barcelona Convention and the relevant protocols (the SPA/BD Protocol, the ICZM Protocol, the LBS Protocol and the Dumping Protocol).
- c. The Committee wishes to congratulate the Government of Spain for enacting the new legislation for the recognition of legal personality of Mar Menor and its basin (Law 19/2022, of September 30th, 2022) which grants a new legal status recognizing of Mar Menor as a subject of rights and allowing for its autonomous governance. The Committee considers this legislative development as a major qualitative step towards the effective ecosystemic legal protection and participatory governance of the Mar Menor.
- d. The Committee welcomes the progress reflected in the reports. At the same time, the Committee requests further information and some clarifications with regard to the following points:
 - An assessment to be provided regarding the conformity of the existing and evolving regulatory framework with the specific provisions of the Barcelona Convention and its Protocols (the SPA/BD Protocol, the ICZM Protocol, the LBS Protocol and the Dumping Protocol). In this context, the concrete implementing measures should be specified.
 - Regarding the information provided by the Region of Murcia in their response to the Findings and Recommendations (paragraph 3.2), the Committee would request a summary of the contents of the aforementioned websites, the information and data provided and an assessment of whether the websites provide information in an adequate, timely, effective, accessible and continuous manner, as per the Findings and Recommendations adopted by the Committee.
 - In addition to the detailed quantitative description provided in the Spanish response to the Findings and Recommendations regarding the meetings of the coordinative bodies of Mar Menor, the Compliance Committee would request an assessment to reflect the specific public participation procedures and outcomes of the participatory processes as described.
 - With regards to future annual progress reports to be submitted, the Compliance Committee would request a consolidated single report by Spain (not exceeding 10 pages).
 - Also, the discussions held at the 19th meeting of the Compliance Committee was focused on the formal response of the concerned Contracting Party following communication dated September 9th, 2022, received by the Secretariat from Law

firm “Huglo Lepage” on a possible case of non-compliance. This communication was received by the Secretariat based on Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols.

The Compliance Committee agreed:

- a. The communication should have been shared in 2 weeks from receipt by the Secretariat with both France and the Compliance Committee.
- b. The committee requested the Secretariat to share the communication with the Committee as soon as possible.
- c. Compliance Committee member Samira HAMIDI to become the rapporteur for this case and share with the Committee members a short summary on its admissibility criteria.

Section 3: General Issues of Compliance under the Barcelona Convention and its Protocols

Status of submission and criteria for the assessment of national implementation reports under Article 26 of the Barcelona Convention

5. This section summarizes the discussions held at the 18th and 19th meetings of the Compliance Committee on the results of the testing of the criteria of submission, timelines, completeness and implementation against a set of 2018-2019 national implementation reports and the 2020-2021 national implementation reports submitted by Contracting Parties. This section also includes the conclusions of the discussions held at the 18th and 19th meetings of the Compliance Committee on the status of submission of national implementation reports.

• 18th Meeting of the Compliance Committee (29-30 June 2022 Athens, Greece)

The Compliance Committee agreed as follows:

- a. The Compliance Committee agreed to ask the Secretariat to work with the Compliance Committee in applying the tested and living criteria of submission, timeliness, completeness and implementation as a screening tool for the preliminary assessment of national implementation reports submitted for the biennium 2020-2021, with a view towards presenting a report on the preliminary screening by the 19th Meeting of the Compliance Committee.
- b. The Compliance Committee welcomed the submission of national implementation reports for the biennium 2018-2019 using the new online Barcelona Convention Reporting System (BCRS), invited Contracting Parties to submit their national implementation reports for the biennium 2020-2021 by the deadline of December 2022, and urged those Contracting Parties who have not yet submitted their national implementation reports for the previous biennia to do so before the 2023 MAP Focal Points Meeting.
- c. The Compliance Committee stressed the importance of including effectiveness among the above criteria and decided to include the development of indicators relating to effectiveness in its workplan.

• 19th Meeting of the Compliance Committee (4-5 July 2023 Athens, Greece)

The Compliance Committee agreed as follows:

- a. The Committee expressed satisfaction for the submission of reports by 9 Contracting Parties, including the European Union and expressed deep concern for the low rate of submission of implementation reports as indicated by the Secretariat including recurring non submission of reports from a number of Contracting Parties.
- b. The Committee agreed that the draft decision to COP 23 should contain a strong call to those Contracting Parties who have not yet submitted their national implementation reports for the biennium 2018-2019 and the biennium 2020-2021 to do so, as soon as possible and by the 2nd

of April 2024 the latest.

- c. It was also agreed that there is a need to enhance country capacities for the preparation and submission of national reports considering the complex obligations under the Barcelona Convention and its Protocols. The Committee recommended to implement Decision IG. 21/1 in order to comply with Article 26 of the Barcelona Convention; in particular, the Contracting Parties which repeatedly failed to abide by their reporting obligations may receive a caution addressed by the Meeting of the Parties in accordance with paragraph 34 (a) of Decision IG. 17/2.
- d. The Committee highlighted the importance of INFO/RAC ensuring a smooth operation of the online reporting system as well as the online availability of the data included in the Reports in order to allow the accessibility and transparency of environmental information.

Section 4: Functioning of the Compliance Committee

6. This section summarizes the discussions held at the 18th and 19th meetings of the Compliance Committee on its effective functioning, as follows:

- 18th Meeting of the Compliance Committee (29-30 June 2022 Athens, Greece)

The Compliance Committee agreed as follows:

- a. The Compliance Committee discussed the open issues of the Procedures and Mechanisms on compliance under the Barcelona Convention and its Protocols as presented in Appendix II of Annex I of Decision 25/2 and agreed that the preferred option for paragraph II(3) is for the Committee to consist of 14 members, keeping the same total number as the current members and alternates. Therefore, in relation to paragraph III (15) of the Procedures and Mechanisms the required quorum would be 10 members.
 - b. The Committee agreed with the following timeline proposed by the Secretariat in document UNEP/MED CC.18/5:
 - July-September 2022: Preparation of the explanatory note and final proposal of the draft amendments;
 - 15 October 2022: Documents sent to Contracting Parties for their comments with a deadline of one month;
 - 15 December 2022: Working documents for the online meeting sent out;
 - January 2023: Online meeting of Contracting Parties to discuss the proposed amendments.
 - c. The Committee welcomed the preparation by the Secretariat of the explanatory note on the proposed amendments to the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols and Rules of Procedure of the Compliance Committee, noting that it could be based on the existing relevant work of the Compliance Committee and in particular the explanations provided in the Note by the Secretariat of Document UNEP/MED CC.16/12 and on discussions that took place on this issue during the 18th Meeting of the Compliance Committee.
 - d. The Compliance Committee recalled the activity report Section 4, para 7(A)(2), attached to Decision IG.25/2, to establish a channel of communication with the Bureau and the MAP Focal Points for the Compliance Committee to gather feedback on their recommendations and reiterated that it is important to be represented at the 93rd Bureau meeting (Thessaloniki, Greece, 30 November – 1 December 2022) and especially the online consultation meeting of Contracting Parties to take place in January 2023 to provide necessary explanations in relation to the proposed amendments.
- 19th Meeting of the Compliance Committee (4-5 July 2023 Athens, Greece)

The Compliance Committee agreed as follows:

- a. The Committee requested the Secretariat to revise the Rules of Procedures following the adoption of the Procedures and Mechanisms of Compliance at COP 23 and present
- b. them to the next Compliance Committee meeting; to this end, the Committee also, requested the revision of the Rules of Procedures to be included in the workplan of the Committee for the next biennium.
- c. The Committee requested the Secretariat to share with the Committee the full report of the Consultation Meeting held on 31 January 2023 including the latest agreed version of the amendments to the Procedures and Mechanisms of Compliance.

Programme of Work of the Compliance Committee for the Biennium 2022-2023

7. The Compliance Committee at its 17th Meeting agreed on its Programme of Work for the biennium 2022-2023.

Section 5: Cooperation with other Compliance Procedures and Mechanisms of Multilateral Environmental Agreements (MEAs)

8. This section summarizes action taken to strengthen cooperation with the Compliance Procedures and Mechanisms established under other MEAs.

- 18th Meeting of the Compliance Committee (29-30 June 2022 Athens, Greece)

The Compliance Committee agreed as follows:

- a. The Compliance Committee welcomed the collaboration between UNEP/MAP as a UNEP Regional Sea Programme and the ESPOO Convention and its SEA Protocol in relation to the issues of Transboundary Environmental Impact Assessment and Strategic Environmental Assessment.
- b. The Compliance Committee decided to include the consideration of this important issue in its workplan.

- 19th Meeting of the Compliance Committee (4-5 July 2023 Athens, Greece)

The Compliance Committee agreed as follows:

9. The Committee stressed the importance of possible collaboration with Compliance Committee mechanisms of other Multilateral Environmental Agreements and particular interest was expressed for the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)

Annex III

Programme of Work of the Compliance Committee for the biennium 2024-2025

Programme of Work of the Compliance Committee for the biennium 2024-2025		
Activity	Lead/Who	Timetable/When
Specific submissions under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocol		
1. To consider any submissions and/or referrals in accordance with Section V of the Procedures and Mechanisms on Compliance	Compliance Committee	20 th and 21 st Compliance Committee Meetings
General issues of compliance under the Barcelona Convention and its Protocols		
2. To consider specific situations of actual or potential non-compliance by individual Parties in accordance with Section IV of the Procedures and Mechanisms on Compliance	Compliance Committee	20 th and 21 st Compliance Committee Meetings
3. At the request of the Meeting of the Contracting Parties, to consider general compliance issues in accordance with Section IV of the Procedures and Mechanisms on Compliance	Compliance Committee	20 th and 21 st Compliance Committee Meetings
4. To consider any other issues as requested by the Meeting of the Contracting Parties in accordance with Section IV of the Procedures and Mechanisms on Compliance	Compliance Committee	20 th and 21 st Compliance Committee Meetings
Enhanced effectiveness of the compliance mechanism		
5. To facilitate assistance, in coordination with MAP components, to address non-compliance situations	CU, MAP Components, Compliance Committee	20 th and 21 st Compliance Committee Meetings
6. Revise the Rules of Procedures for the Compliance Committee Meetings based on the approved compliance procedure mechanism by COP 23 for adoption by COP 24	CU, Compliance Committee	20 th and 21 st Compliance Committee Meetings
7. Develop follow-up mechanism for the implementation of the decisions of the CC, regulation of the flow of work between 2 meetings of the CC as well as inputs for communication purposes of the work of the CC and its outcome, including dissemination.	Compliance Committee,	20 th and 21 st Compliance Committee Meetings
8. Develop a mechanism to assess the effectiveness of the implementation of measures taken by the Contracting Parties under the Barcelona Convention, including indicator-based approaches	Compliance Committee;	20 th and 21 st Compliance Committee Meetings
9. To continue building and strengthening synergies, with other Compliance Committee's Multilateral Environmental Agreements (MEAs), including holding joint sessions.	Compliance Committee	20 th and 21 st Compliance Committee Meetings
10. Undertake reflection on ways and means to promote implementation of Article 15 (on public information and participation) of the Barcelona Convention considering the procedures and the best practices under other multilateral environmental agreements		

Annex IV

Compliance Committee members and alternates nominated by COP23

**Members and Alternate Members of the Compliance Committee elected by the
23rd Meeting of the Contracting Parties**

Group I: Algeria, Egypt, Lebanon, Libya, Morocco, Syria and Tunisia

- **Mr. Abdelaziz Zine**, national of Morocco, as a Member of the Compliance Committee for a term of four years, until COP 25
- **Mr. Mohammed Salem Hamouda**, national of Libya, as Alternate Member of the Compliance Committee for a term of four years, until COP 25

Group II: Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia, Spain and the European Union

- **Mrs Daniela Addis**, national of Italy, as a Member of the Compliance Committee for a term of four years, until COP 25
- **Mr Evangelos Raftopoulos**, national of Greece, as a Member of the Compliance Committee for a term of four years, until COP 25
- **Mr Mario Siljeg**, national of Croatia, as an alternate Member of the Compliance Committee for a term of four years, until COP 25
- **Mrs Xenia Loizidou**, a national of Cyprus, as an alternate Member of the Compliance Committee for a term of four years, until COP 25
- **Mr Marko Starman**, national of Slovenia, as an alternate Member of the Compliance Committee for a term of two years, until COP 24

Group III: Albania, Bosnia and Herzegovina, Israel, Monaco, Montenegro and Turkey

COP 23 agreed to delegate to the Bureau of the Contracting Parties the election of a member and alternate member for Group III at its first meeting in 2024.

Decision IG.26/2
Governance

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their 23rd Meeting,

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

Recalling also the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

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

Considering also Decisions IG.20/13, IG.21/13, IG.23/3, IG.24/2 and IG.25/3 on governance, adopted by the Contracting Parties at their 17th (COP 17) (Paris, France, 8-10 February 2012), 18th (COP 18) (Istanbul, Turkey, 3-6 December 2013), 20th (COP 20) (Tirana, Albania, 17-20 December 2017), 21st (COP 21) (Naples, Italy, 2-5 December 2019) and 22nd (COP 22) (Antalya, Türkiye, 5-8 December 2021) Meetings respectively,

Recalling Decision IG.25/1 of COP 22 (Antalya, Türkiye, 7-10 December 2021) on the UNEP/MAP Medium-Term Strategy 2022-2027 and *considering* Decision IG. 23/5 on the Updated Resource Mobilization Strategy, adopted by the Contracting Parties at their 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017),

Recognizing the significant successful efforts of the Secretariat and MAP Components to secure the funding and support needed for the adequate functioning and fulfilment of the mandate of the MAP system during the previous MTS 2016-2021 and in the first biennium of the current MTS 2022-2027 cycle,

Stressing the effective and substantial progress made in the strengthening of regional cooperation and enhanced coordination in supporting the implementation of the Barcelona Convention and its Protocols, the Mediterranean Strategy for Sustainable Development and other decisions of the Contracting Parties, and *highlighting* the need to continue work in that direction by inter alia enhancing regional synergies and complementarities, with the view to maximizing the effective and efficient use of resources and enhancing impacts on the ground,

Recalling the Plan of Action for a Model Mediterranean Sea by 2030 (PAMEx), as a multi-partner collective initiative, and its priority objectives addressing the preservation of marine and coastal biodiversity in the Mediterranean, the promotion and development of sustainable fishing to end overfishing by 2030, redoubled efforts to combat marine pollution, particularly so that no plastic is discharged into the Mediterranean by 2030, and the promotion of maritime transport practices which protect the marine and environment and combat climate change,

Recalling the “Common Operational Principles for MAP Components” adopted through Decision IG.25/3 at COP 22 (Antalya, Türkiye, 5-8 December 2021),

Recalling the UNEP and UN policy and strategy for gender equality and the environment and *appreciating* the effort by the Secretariat on gender mainstreaming and women empowerment in policy, administrative and programmatic matters related to the work and mandate of the UNEP/MAP-Barcelona Convention system,

Appreciating the guidance and advice provided to the Secretariat by the Bureau of the Contracting Parties to the Barcelona Convention on all policy and administrative matters related to the successful delivery of the UNEP/MAP Programme of Work and COP decisions, and having considered the reports of their 92nd, 93rd and 94th Meetings held in March 2022, November-December 2022 and June 2023 respectively,

1. *Approve* the updated Memorandum of Understanding (MoU) between UNEP/MAP and the Secretariat of the Union of the Mediterranean (UfMS), set out in Annex I to this Decision, and request the Secretariat to proceed towards its signature;

2. *Also approve* the Memoranda of Understanding (MoUs) between UNEP/MAP and the Permanent Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS), between UNEP/MAP and the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution (BSC), and between UNEP/MAP and the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA), set out in Annex II to this Decision, and *request* the Secretariat to proceed towards their signature;

3. *Endorse* the list of new and renewed MAP Partners, set out in Annex III to this Decision; *note with appreciation* the contribution of all partners to the work of the UNEP/MAP-Barcelona Convention system, and *encourage* the Secretariat to continue reaching out and working closely with partners to further strengthen and enhance collaboration and governance for the protection of the marine environment and coastal region of and promoting sustainable development in the Mediterranean;

4. *Approve* the amendments to the partner policy as set out in Annex V of the present Decision, amending Decision 19/6 on “*MAP/Civil society cooperation and partnership*”, so as to enlarge the scope to other stakeholders (such as scientific institutions/universities, intergovernmental organizations, private sector organizations), and to enable entities which do not have their headquarters or regional offices in the Mediterranean, but which have activities in the Mediterranean and actively contribute to the objectives of UNEP/MAP, to become MAP Partners;

5. *Authorise* UNEP/MAP Secretariat to hosting PAMEx Technical Secretariat with a view to maximizing mutual synergies and further implementation of the UNEP/MAP-Barcelona Convention, without any budgetary implications to MAP;

6. *Adopt* the updated Resource Mobilization Strategy, contained in Annex IV to this Decision, and its Appendix 1 providing indicative resource needs and potential donors and partners for the implementation of the UNEP/MAP MTS 2022-2027 and *request* the Secretariat and MAP Components to strengthen their efforts in mobilizing external resources needed for the effective implementation of biennial Programmes of Work and MTS 2022-2027;

7. *Urge* Contracting Parties and *invite* other relevant partner and donor organizations to support the implementation of the updated Resource Mobilization Strategy, in order to ensure adequate financial resources for the implementation of the UNEP/MAP Mid-Term Strategy 2022-2027 and associated Programme of Work;

8. *Agree* with the amendment of the ToRs of the Bureau as set out in Annex VI of the present Decision, in order to allow the possibility for the election of the Contracting Party representing the Presidency of the previous COP as a Bureau ex-officio member, to enhance continuity in the work of the Bureau;

9. *Request* the governments of MAP Components' Host Countries to rigorously implement the “Common Operational Principles for MAP Components” adopted at COP 22 (Decision IG.25/3) and ask them to proceed with staff recruitments in line with the recommendations adopted at COP 10 (as reflected in document UNEP(OCA)/MED IG.11/10) in particular when posts are covered totally or in part by the MTF;

10. *Request* the Contracting Parties and the Secretariat to further enhance efforts on gender mainstreaming and women empowerment taking into account relevant UNEP and national policies, as appropriate, including in the substantive delivery of the work of UNEP/MAP.

Annex I

**Updated Memorandum of Understanding (MoU) between UNEP/Mediterranean Action
Plan-Barcelona Convention Secretariat and the Secretariat
of the Union for the Mediterranean (UfMS)**

Annex I

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE UNITED NATIONS ENVIRONMENT PROGRAMME IN ITS CAPACITY AS
SECRETARIAT OF THE MEDITERRANEAN ACTION PLAN (UNEP/MAP)
AND
THE SECRETARIAT OF THE UNION FOR THE MEDITERRANEAN (UfMS)**

Hereafter collectively referred to as “the Parties” or individually as “Party”

WHEREAS UNEP/MAP has the mandate as per the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean adopted in 1976 and revised in 1995, to assist the Mediterranean countries, with its main objectives through its seven Protocols respectively to assess and control marine pollution; to ensure sustainable management of natural marine and coastal resources; to address common challenges related to the prevention and reduction of pollution from land-based sources, ships, dumping, off-shore installations and the movement of hazardous substances; to ensure the protection of biodiversity; and, the integrated management of coastal zones;

WHEREAS UNEP/MAP has also the mandate to assist in the implementation of the Mediterranean Action Plan (MAP) which was adopted in 1975 and became MAP II after its revision in 1995, and which is the instrument for planning sustainable development in the Mediterranean. Through this Plan a dialogue has been established with all relevant Organizations in the region, more recently under the Mediterranean Strategy for Sustainable Development (MSSD) adopted at Ministerial level by the 14th Meeting of the Contracting Parties to the Barcelona Convention in Portoroz, Slovenia (COP14) (2005), as revised by COP 19 (2016);

WHEREAS, in this context, the Contracting Parties to the Barcelona Convention had adopted Regional Strategies, Actions Plans and Programmes as well as put in place regional structures including a consolidated system of focal points, the Coordinating Unit and six Regional Activity Centers,¹ which have a mandate for carrying out activities aimed at implementing the seven Protocols of the Barcelona Convention, the decisions of the Meetings of the Contracting Parties to the Barcelona Convention and its Protocols, and to facilitate implementation of the Mediterranean Action Plan (MAP II) and its Strategies;

WHEREAS the Paris Declaration adopted at the 17th Meeting of the Contracting Parties to the Barcelona Convention (Paris, France, 10 February 2012), welcomed the ongoing efforts to enhance cooperation between UNEP/MAP with the Secretariat of the Union for the Mediterranean (UfMS);

WHEREAS the Euro-Mediterranean Ministerial Conference on Environment (Cairo, 20 November 2006) took note of the Barcelona Convention, its Protocols and the Mediterranean Strategy for Sustainable Development, insisted on the need for a regional approach, increased cooperation and finance, and called for coordination in order to implement both the Horizon 2020 initiative for the depollution of the Mediterranean and the UNEP/MAP-Barcelona Convention Strategic Action

¹ Six MAP Regional Activity Centres (RACs) are based in Mediterranean countries, each offering its own environmental and developmental expertise for the benefit of the Mediterranean community in the implementation of MAP activities. These six RACs are the following: 1. Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)-Malta, Blue Plan Regional Activity Centre (BP/RAC)-France, Priority Actions Programme Regional Activity Centre (PAP/RAC)-Croatia, 4. Specially Protected Areas Regional Activity Centre (SPA/RAC)-Tunisia, 5. Sustainable Consumption and Production Regional Activity Centre (SCP/RAC)-Spain and, 6. INFO/RAC-Italy

Program to combat pollution from land based sources (SAPMED), as well as complementary actions and programs contributing to environmental objectives and sustainable development in the Mediterranean.

WHEREAS the UfMS is mandated by the Heads of State and Government Joint Declaration of the Paris Summit for the Mediterranean (Paris, France, 13 July 2008) to give new impulse to the “Barcelona Process: Union for the Mediterranean” in terms of identification, follow-up, promotion of projects and the search for partners, and further elaborated by the Final Statement of Foreign Affairs Ministerial (Marseille, France, 4 November 2008);

WHEREAS the first Ministerial Conference of the Union for the Mediterranean (UfM) on sustainable urban development (Strasbourg, France, 10 November 10th 2011) took note of the Barcelona Convention, its Protocols and the Mediterranean Strategy for Sustainable Development, in Portoroz and, in the final declaration, the Ministers called for the elaboration of a UfM sustainable urban strategy, respecting the specific pace of economic social and environmental development of each State and entrusted the member States the task of elaborating the UfM Urban Development Strategy with the support of the-UfMS;

WHEREAS the large development of renewable energy and energy efficiency are of crucial importance to mitigate climate change and address energy challenges in the Mediterranean area, the Paris declaration has tasked the UfMS to “explore the feasibility, development and creation of a Mediterranean Solar Plan” (MSP). The UfM Member States have called upon the UfMS to coordinate the development of the MSP Master Plan in close cooperation with all the stakeholders. The MSP is aiming at boosting the development and deployment of renewable energy and energy efficiency technologies in the Mediterranean region through building up 20 GW capacities of RE by 2020. The MSP is a regional sectorial initiative which could contribute to the Mediterranean Strategy for Sustainable Development.

WHEREAS both Parties, the UNEP/MAP, with its legal, policy- setting and technical responsibilities, and UfMS, with its inter-ministerial political structure and mandate to work as the focal point for multi-source funding of projects in the framework of the UfM, are complementary and share common objectives with regard to the reduction/elimination of pollution as well as promoting sustainable development, and wish to collaborate to further achieve these common goals and objectives within their respective mandates and governing rules and regulations;

WHEREAS the Parties intend to conclude this Memorandum of Understanding (hereinafter referred to as “MoU”) with the aim at enhancing impact and increasing synergies and developing their cooperation and effectiveness to achieve common objectives in the field of the protection of marine and coastal environment as a contribution to sustainable development in the Mediterranean.

THE PARTIES, HAVE AGREED TO COOPERATE UNDER THIS MEMORANDUM OF UNDERSTANDING AS FOLLOWS:

**Article 1
Purpose**

1. The purpose of this MoU is to provide a framework of cooperation between the Parties to further achieve the shared goals and objectives of their Contracting Parties and Members in regard to pollution prevention and control of Mediterranean coastal and marine waters, protection of biodiversity and ecosystems; Integrated Coastal Zone Management (ICZM) including Urban Development and other fields related to sustainable development and particularly Sustainable Consumption and Production (SCP), sustainable use of water, renewable energy and energy efficiency, in their fields of competence in line with their respective mandates.
2. This MoU seeks to further harmonize the activities of the Parties, take advantage of their expertise, high level and ministerial meetings to mutually support their respective initiatives and processes, optimize the use of resources and avoid duplication, while ensuring the complementarity in the actions taken, in order to increase the value added of the final outcome.

**Article 2
Scope**

1. The Parties shall work together, to the extent possible, within the remit of their objectives mandates and their respective regulatory framework, for the implementation of the activities undertaken pursuant this MoU. The areas of cooperation for this MoU are defined in Article 1(1).
2. Areas of cooperation are agreed jointly in accordance with the Articles of this MoU and its Annex to enable the Parties to respond to current and newly emerging issues in the realm of the shared goals and objectives as stated in Article 1(1) in accordance with the decisions of the governing bodies of the Parties. Annex 1 enumerates an indicative list of activities that are envisaged in each area of cooperation as a basis for organizational arrangements of Article 3.
3. The areas of cooperation will be revised as appropriate, to be in line with those decisions of the governing bodies of the Parties that might have a bearing on their respective mandates.
4. Specific activities will be identified and carried out on the basis of a separate legal instrument pursuant to Article 3(4). In identifying specific areas of cooperation due regard will be given to both Parties' geographic coverage, capacity for implementation and experience in the related field.

**Article 3
Organizational arrangements and Consultations**

1. The Parties shall hold bilateral consultations on matters of common interest, whenever deemed appropriate by both Parties, in accordance with an agenda agreed in advance by them, aiming also at the development/review of their collaborative activities. In following three items should be examined at the occasion of regular consultations:
 - a) review progress in the work by the Parties in implementing the MoU;
 - b) technical and operational issues related to furthering the purposes of the MoU; and,
 - c) identify future actions and responsibilities, to ensure efficient planning for the implementation of the MoU.

2. Both Parties will identify one overall focal point within their internal organizational structure to coordinate cooperation, monitor joint activities and be informed of progress and exchanges at expert level. In addition, the Parties shall encourage bilateral meetings at desk-to-desk level and set up on an ad hoc basis as deemed necessary by them to address priority matters related to the areas of cooperation under this MoU for the implementation of activities in specific areas, countries and regions and to develop and monitor collaborative actions. The Parties will also consider the possibility of collaborative activities such as conferences, missions, etc.
3. Where the Parties convene a meeting at which policy matters related to this MoU will be discussed, the Parties, as appropriate, invite each other as observers.

Article 4 **Fundraising**

1. In implementing activities, projects and programmes in the agreed priority areas, the Parties shall execute separate legal instruments in writing and signed by the authorized representatives of the Parties, appropriate for the implementation of such initiatives.
2. Neither Party shall engage in fund raising with third parties for activities to be carried out within the framework of this MoU in the name of or on behalf of the other.
3. Nothing under this MoU imposes financial or contractual obligations upon either Party. Any financial commitments of the Parties must be reflected in writing and signed by the Parties as stated in Article 4 (1) in a specific separate legal instrument, taking into account the relevant administrative and financial rules and procedures applicable to the Parties.

Article 5 **Project labeling and replication**

Within the scope of the Parties' respective regulatory framework the Parties shall endeavor to work jointly towards:

1. Identifying, within countries that are both Contracting Parties to the Barcelona Convention and members of the UfM, projects that could meet the UfM requirements for labeling and that are aligned with the objectives and obligations of the Barcelona Convention and its Protocols and the UNEP/MAP Programme of Work in line with UNEP/MAP Programme of Work;
2. Identifying on-going actions or partners which could join other promoters in the phase before labeling and carry out activities which will support promoters in implementing the labeled projects. This could come in the form of exchanging information and/or participating in events or meetings organized by UNEP/MAP or UfMS;
3. Supporting the replication of successful projects, undertaken by UNEP/MAP or other actors, in other Mediterranean countries applying a regional dimension;
4. Enhancing visibility and raise awareness about the Barcelona Convention activities and initiatives among UfM political and technical bodies that participate in the labeling process and about UfM priority projects or objectives which contribute to the Barcelona Convention among the UNEP/MAP-Barcelona Convention focal points, as well as through each other specific programmes or projects, participating in advisory working groups or Steering Committees, as need be.

5. All projects submitted for labeling, implementation or replication which originates from the policy, management or technical activities of the other Party should clearly identify the Party from which the project or initiative originates.

Article 6

Status of personnel

1. For the purpose of implementation of this MoU, no agents, sub-contractors or employees of one of the Parties shall be considered in any way as agents or staff members of the other Party. Each of the Parties shall not be liable for the acts or omissions of the other Party or its personnel/persons performing services on behalf of it.
2. The Parties are not being responsible for any salaries, wages, insurance or other benefits due or payable to the other Party's personnel. Moreover, the other Party shall be solely responsible for all such salaries, wages, insurance and benefits, including without limitation, any severance or termination payments to its personnel. The Parties shall entertain no claims and have no liability whatsoever in respect thereof.
3. Neither Party shall be entitled to act or make legally binding declarations on behalf of the other Party. Nothing in this MOU shall be deemed to constitute a joint venture, agency, interest grouping or any other kind of formal business grouping or entity between the Parties.

Article 7

Dispute settlement

1. The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this MOU. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then prevailing, or according to such other procedure as may be agreed between the Parties.
2. Any dispute, controversy or claim between the Parties arising out of this MOU which is not settled amicably in accordance with the foregoing sub-article may be referred by either Party to arbitration under the UNCITRAL Arbitration Rules then in force. The arbitral tribunal shall have no authority to award punitive damages. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

Article 8

Official emblems and logos

1. Neither Party shall use the name, emblem or trademarks of the other Party, its subsidiaries, affiliates, and/or authorized agents, or any abbreviation thereof, in publications and documents produced by the Parties, without the express prior written approval of the other Party in each case.
2. In no event will authorization of the Parties name or emblem, or any abbreviation thereof, be granted for Commercial purposes.

Article 9

Intellectual Property Rights

1. The Parties shall consult with each other regarding the Intellectual Property Rights as appropriate relating to any project or benefits derived thereof in respect of activities carried out under a

separate legal instrument for the implementation of activities and projects related to this MOU.

Article 10 Confidentiality

1. The handling of information will be subject to each Party's corporate confidentiality policies.
2. Before disclosing internal documents, or documents that by virtue of their content or the circumstances of their creation or communication must be deemed confidential, of the other Party to third parties, each Party will obtain the express, written consent of the other Party. However, a Party's disclosure of another Party's internal and/or confidential documents to an entity the disclosing Party controls or with which it is under common control, or to an entity with which it has a confidentiality agreement, will not be considered a disclosure to a third party, and will not require prior authorization.
3. For UNEP, a principal or subsidiary organ of the United Nations established in accordance with the Charter of the United Nations will be deemed to be a legal entity under common control.

Article 11 Responsibility

1. Each Party will be responsible for dealing with any claims or demands arising out of its actions or omissions, and those of its respective personnel, in relation to this MoU.
2. The UFMS Secretariat shall indemnify, hold and save harmless and defend at its own expense, the UN, UNEP and/or UNEP/MAP, their officials, personnel and representatives, from and against all suits, claims, demands and liability of any nature or kind which may arise in relation to this MoU due to any actions or omissions attributable to UFMS.

Article 12 Notification and Amendments

1. Any communication addressed to either Party in connection with this MoU shall be in writing and shall be sent to the following addresses:

For UNEP/MAP

UNEP/MAP – Barcelona Convention
Secretariat 48, Vassileos Konstantinou
Avenue
Athens 11635, Greece

For the UfMS

Secretariat of the Union for the
Mediterranean Palacio de Pedralbes - C/
Pere Duran Farell, 11 08034 Barcelona
Spain

2. Each Party shall notify the other in writing, within 3 months of any proposed or actual changes that it deems necessary for this MoU.
3. Upon receipt of such notification, the Parties shall consult each other with a view of reaching an

agreement on any actual or proposed change(s) suggested in accordance with Article 12 (2).

4. This MoU may be amended only by mutual agreement of the Parties reflected in writing, which shall be considered as an integral part of this MoU.

Article 13

Interpretation

1. The Annex to this MoU will be considered part of this MoU. Unless the context otherwise requires, references to this MoU will be construed as a reference to this MoU including the Annex hereto, as varied or amended in accordance with the Articles of this MoU.
2. This MoU represents the broad understanding between the Parties and supersedes all prior MOUs, communications and representations, whether oral or written, concerning the subject matter of this MoU.

Article 14

Termination

1. Either Party may terminate this MoU by giving three months' prior written notice to the other Party. It shall cease to exist in three (3) months following notification of the termination of this MoU. In that event, the Parties will agree on measures required for the orderly conclusion of any ongoing activities.
2. Upon termination of this MoU, the rights and obligations of the Parties defined under any other legal instrument executed pursuant to this MoU will cease to be effective.
3. Any termination of or withdrawal from the MoU will be without prejudice to (a) the orderly completion of any ongoing activity and (b) any other rights and obligations of the Parties defined accrued prior to the date of termination or of its withdrawal under this MOU or any other provision of a specific legal instrument executed pursuant to this MoU.

Article 15

Duration

1. This MoU will be effective upon the last date of signature of the authorized representatives and remain in force three years from this date. Such term might be extended by written agreement among the Parties, subject to such evaluations the Parties deem appropriate and by mutual agreement among the Parties, unless terminated in accordance with Article 13 above.

This MoU is signed in two (2) original copies in English equally authentic.

IN WITNESS WHEREOF, the duly authorized representatives of the Parties affix their signatures below.

**For United Nations Environment
Programme**

**For the Secretariat of the Union for
the Mediterranean**

Name:

Title:

Date: _____

Name:

Title:

Date: _____

Appendix 1

Indicative List of Activities relating to the envisaged areas of cooperation within the framework of this MoU

The indicative list of activities below takes into consideration most relevant and recent processes on Environment and Sustainable Development at global and Mediterranean regional levels including the 2030 Agenda for Sustainable Development (2030 Agenda) and its Sustainable Development Goals (*SDGs*), the Paris Agreement adopted in 2015 under the UN Framework Convention on Climate Change (UNFCCC), and the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets as well as the Post-2020 Global Biodiversity Framework under the UN Convention on Biological Diversity (CBD). Regarding the regional Mediterranean level, the activities are inspired by the Ministerial Declarations adopted by the Contracting Parties to the Barcelona Convention, and especially the Naples Ministerial Declaration of 2019 and the Antalya Declaration of 2021, the Declarations of the Union for the Mediterranean Ministerial Meetings, as well as the key findings and policy messages of relevant policy-oriented assessments studies, such as the 2020 Report on the State of the Environment and Development (SoED) and the First Mediterranean Assessment Report (MAR1) by the Mediterranean Experts on Climate and environmental Change (MedECC). The Parties, in implementing these activities are inspired by their mandates, Medium-Term Strategies and Programmes of Work adopted by their respective Contracting Parties/Member States.

Pollution including marine litter prevention and control of Mediterranean coastal and marine waters

- 1.1 Cooperate as far as possible and if applicable according to the respective mandates, capacities, and resources in
 - updating and implementing the National Action Plans (NAPs) and the Regional Plans containing legally binding measures and timetables regarding the elimination of pollution from sectors of activity, including marine litter management, adopted under the Protocol to the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol), as well as in their potential update and assessment through NAPs/H2020 indicators:
 - advancing the UfM GreenerMed Agenda and implementation plan together with the UfM Road Map for the implementation of Blue economy and related reporting and monitoring mechanisms
- 1.2 jointly develop a strategic vision of the priority projects needed to achieve regional commitment of a healthy and clean Mediterranean for a Greener Med, including among others and if conditions apply:
 - Collaborate in supporting capacity building initiatives and activities to countries with regard to projects formulation and implementation and promoting best results/practices dissemination and replication.
 - Cooperate in supporting countries of the Mediterranean to assess the status of implementation and or update the list of priority projects in the investment portfolio of regional interests.
 -

- Cooperate in establishing a sustainable joint monitoring system and follow up of the status of funding and implementation of investment projects related to pollution control and reduction in the Mediterranean and their concrete impacts on the ground.
 - Exchange on a regular basis data and information on the list of the above-mentioned projects funded or likely to be funded according to technical reporting modalities agreed between both parties.
- 1.3 Identify ongoing actions or partners, which could join other promoter's activities and receive their contribution to help the promoters implementing projects of regional interest, such as integrated priority projects tackling pollution hot spots, leading to possible projects towards UfM labeling and UNEP/MAP support;
- 1.4 Cooperate on the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships, the Mediterranean Ballast Water Management Strategy, and the Mediterranean Offshore Action Plan, through the identification and implementation of projects. This could be done, inter-alia, by the promotion of studies and projects aimed at answering to the constant increase in shipping activity and achieve the objective to protect the marine environment in the Mediterranean region by reducing impacts from ships, by preventing, preparing and responding to marine pollution from ships.

2. Marine and Coastal Ecosystems and Biodiversity Protection in the Mediterranean region

- 2.1 Cooperate in supporting implementation of regional and national measures which the Mediterranean countries have identified as a priority to advance implementation of the 11 Ecological Objectives of the Ecosystem Approach to human activities in the Mediterranean under the Barcelona Convention including:
- UNEP/MAP Ecosystem Approach Roadmap.
 - the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP).
- 2.2 Contribute and support the establishment, strengthening and expansion of Marine Protected Areas (MPAs) and Specially Protected Areas of Mediterranean Importance (SPAMIs) in the framework of the UNEP/MAP and the Protocol to the Barcelona Convention on Specially Protected Areas and Biological Diversity (SPA/BD Protocol) and in the context of the Post-2020 Global Biodiversity Framework, including through projects (establishment and management, capacity-building, monitoring, trust fund).
- 2.3 Cooperate in supporting the implementation of regional and national strategic actions provided for in the Post 2020 SAP BIO and the Post-2020 Strategy for MCPAs and OECMs in the Mediterranean, adopted in 2021 under the Barcelona Convention.

3. Urban development, Integrated Coastal Zone Management (ICZM) and Marine Spatial Planning (MSP)

- 3.1 Cooperate to promote the Barcelona Convention Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol) implementation and MSP for enhancing the sustainable use of marine and coastal resources in the context of the sustainable development in the Mediterranean coastal zones, building on the experience

gained and tools developed in the framework of the UNEP/MAP- and other organizations as appropriate;

- 3.2 Cooperate to conclude and make operational, the UFM Guidance framework for sustainable Euro-Mediterranean cities and territories for decision-makers and practitioners;
- 3.3 Develop a set of recommendations on how to shape urban development by enabling a shared perspective in urban and territorial strategies, taking into consideration the Barcelona Convention and its protocols, particularly for the implementation of the ICZM Protocol and Action Plan.

4. Other fields related to Sustainable Development, including Blue Economy, Circular Economy, Sustainable Consumption or Production (SCP), Climate Change, Renewable Energy and Energy Efficiency and Information and Communication:

- 4.1 Cooperate to promote and further advance the implementation of the Mediterranean Strategy for Sustainable Development (MSSD) and its Flagship Initiatives; as well as the GreenerMed Agenda and implementation plan together with RoadMap for the implementation of the UfM Ministerial on Blue Economy;

Contribute to the, implementation and monitoring of the Mediterranean Strategy for Sustainable Development (MSSD), including through the Mediterranean Sustainability Dashboard and SCP Indicators, as well as the reporting and monitoring mechanism set in place within the the GreenerMed Agenda and implementation plan together with RoadMap for the implementation of the UfM Ministerial on Blue Economy.

- 4.2 In the field of energy and climate change:

- Continue to jointly promote and support the independent network of Mediterranean Experts on Climate and environmental Change (MedECC) and its work, towards a more robust regional Science-Policy Interface (SPI) and support platform in order to reach constructive and representative implication of regional and national policymakers, taking into account that scientists' and experts' voluntary engagement is contingent on good interfacing with policymakers, including through adequate financial support from supporting institutions and the officialization and/or institutionalization of the network.

- Cooperate on methodologies, studies, analysis and economic evaluations to increase the share of marine and coastal renewable energy sustainably used in the Mediterranean and take this progress into account in updating and implementing the Mediterranean Strategy on Sustainable Development;

- Take full advantage of available. Voluntary carbon credits for nature-based solutions to help deliver the Paris Agreement goals by fostering supply-side incentives and ensuring that emissions reductions are accompanied by positive results for communities; Promote innovative finance tools to support the deployment and scaling up of renewable energy and energy efficiency projects in the Mediterranean area.

- Continue to promote adaptation to climate change in the Mediterranean region by increasing resilience of coastal areas to climate change, through nature-based solutions, such as maintaining or restoring coastal wetlands, mangroves, sand dunes and salt

marshes that help stabilize shorelines and act as a natural barrier against sea level rise.

4.3 In the field of Blue Economy, Circular Economy and Sustainable Consumption and Production (SCP):

- Cooperate in the implementation of the commitments undertaken by the Mediterranean countries, including the; commitments emerging from the UfM Ministerial on Environment and Climate Change and the ones related to the Ministerial on Blue Economy; the obligations of the Barcelona Convention and its Protocols, to implement common regional priorities to shift to a Sustainable Blue Economy, Sustainable Consumption and Production and circular economy approaches; including direct actions of both organizations on non-single use of plastics and preventing plastic pollution;
- Cooperate in the support to Mediterranean countries in mainstreaming SCP at regional level and implement it in their national context according to the existing SCP Plans.

4.4. In other fields:

- Collaborate in enhancing public information, awareness-raising, communication and advocacy, through joint initiatives and activities;
- Follow-up and collaborate in mobilizing external resources for Mediterranean countries to foster and implement priorities and commitments of both organizations at the regional and national levels.

Annex II

Memoranda of Understanding Between UNEP/Mediterranean Action Plan-Barcelona Convention Secretariat (UNEP/MAP) and other organizations, namely:

- (a) The Permanent Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS)**
- (b) The Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution (BSC),**
The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)

MEMORANDUM OF UNDERSTANDING

between

The United Nations Environment Programme in its capacity as Secretariat of the Mediterranean Action Plan (UNEP/MAP)

and

The Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS)

WHEREAS the United Nations Environment Programme (hereinafter referred to as UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment;

WHEREAS UNEP/MAP is administered by UNEP and has the mandate as per the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean adopted in 1976 and revised in 1995, to assist the Mediterranean countries, with its main objectives through its seven protocols respectively to assess and control marine pollution; to ensure sustainable management of natural marine and coastal resources; to address common challenges related to the prevention and reduction of pollution from land-based sources, ships, dumping, off-shore installations and the movement of hazardous substances; to ensure the protection of biodiversity; and, the integrated management of coastal zones;

WHEREAS UNEP/MAP has also the mandate to assist in the implementation of the Mediterranean Action Plan (MAP) which was adopted in 1975 and became MAP II after its revision in 1995;

WHEREAS in this context, the Contracting Parties to the Barcelona Convention adopted Regional Strategies, Actions Plans and Programmes as well as put in place regional structures including a consolidated system of focal points, the Secretariat and six Regional Activity Centers², which have a mandate for carrying out activities aimed at facilitating implementation of the seven Protocols of the Barcelona Convention, the decisions of the Meetings of the Contracting Parties to the Barcelona Convention and its Protocols;

WHEREAS the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS) was adopted in 1996 as a result of a consultation process involving the Secretariat of the 1979 Convention on the Conservation of European Wildlife and Natural Habitats ("Bern Convention"), the 1979 Convention on the Conservation of Migratory Species of wild animals ("Bonn Convention" or CMS) and the 1995 Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean ("Barcelona Convention") and its Protocols;

WHEREAS the ACCOBAMS aims to achieve and maintain a favourable conservation status for cetaceans through measures to eliminate deliberate killing of cetaceans and to mitigate the impacts of harmful human activities;

WHEREAS the Secretariat of the ACCOBAMS (hereinafter referred to as ACCOBAMS Secretariat) has in its mandate to liaise and facilitate co-operation with international and national bodies whose activities are directly or indirectly relevant to the conservation of cetaceans in the ACCOBAMS area;

WHEREAS UNEP/MAP and ACCOBAMS Secretariat (hereinafter collectively referred to as "the Parties") share common objectives with regard to the conservation, protection, enhancement and support of nature and natural resources, including biological diversity, and wish to collaborate to further these common goals and objectives within their respective mandates and governing rules and regulations;

WHEREAS the 14th Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Portoroz, Slovenia, 8-11 November 2005) recommended the Contracting Parties to recognize that common obligations relating to cetaceans under the Specially Protected Areas and Biodiversity Protocol are fulfilled by the implementation of ACCOBAMS;

² Six MAP Regional Activity Centres (RACs) are based in Mediterranean countries, each offering its own environmental and developmental expertise for the benefit of the Mediterranean community in the implementation of MAP activities. These six RACs are the following: 1. Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)-Malta, 2. Blue Plan Regional Activity Centre (BP/RAC)-France, 3. Priority Actions Programme Regional Activity Centre (PAP/RAC)-Croatia, 4. Specially Protected Areas Regional Activity Centre (SPA/RAC)-Tunisia, 5. Cleaner Production Regional Activity Centre (CP/RAC) -Spain and, 6. INFO/RAC-Italy.

WHEREAS the 18th Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Istanbul, 3-6 December 2013) welcomed the steps taken by UNEP/MAP for the initial discussions regarding a cooperation agreement with ACCOBAMS, and requested UNEP/MAP to finalize the agreement;

WHEREAS several UNEP/MAP regional activity centers and Programmes address issues of importance for ACCOBAMS;

WHEREAS Resolution 1.4 approved at the First Meeting of the Parties to ACCOBAMS entrusted the RAC/SPA of UNEP/MAP with the duties of the ACCOBAMS Coordination Unit for the Mediterranean region;

WHEREAS an Action Plan for the conservation of cetaceans in the Mediterranean Sea was adopted in 1991 by the Contracting Parties to the Barcelona Convention at their Seventh Ordinary Meeting and for which RAC/SPA provides technical follow-up for its implementation;

WHEREAS the Parties share common goals and objectives with regard to conservation of marine environment and ecosystems in the Mediterranean region and intend to conclude this Memorandum of Understanding (hereinafter referred to as “MoU”) with the aim of consolidating, developing and detailing their cooperation and effectiveness to achieve the common objectives and strengthen regional synergy within their respective mandates and governing rules and regulations;

RECALLING that UNEP/MAP and the ACCOBAMS Secretariat have concluded a Memorandum of Understanding on 11 February 2016, identifying areas of common interest;

THEREFORE, UNEP/MAP-Barcelona Convention and THE ACCOBAMS SECRETARIAT HAVE AGREED TO COOPERATE UNDER THIS MEMORANDUM OF UNDERSTANDING (MoU), AS FOLLOWS:

Article 1 Interpretation

1. References to this Memorandum of Understanding shall be construed as including any Annexes, as varied or amended in accordance with the terms of this MoU. Any Annexes shall be subject to the provisions of this MoU, and in case of any inconsistency between an Annex and this MoU, the latter shall prevail.
2. Implementation of any subsequent activities, projects and programmes pursuant to this MoU, including those involving the transfer of funds between the Parties, will be based on appropriate legal instruments agreed between the Parties. The terms of such legal instruments shall be subject to the provisions of this MoU.
3. This MoU represents the complete understanding between the Parties and supersedes all prior MoUs, communications and representations, whether oral or written, concerning the purpose of this MoU, as reflected in Article 3 below.
4. Any Party's failure to request implementation of a provision under this MoU shall not constitute a waiver of that or any other provision of this MoU.

Article 2

Duration

1. This MoU shall be effective upon the last date of signature of the approving officials and remain in effect for 6 years, unless terminated in accordance with Article 15 below.

Article 3

Purpose

1. Having regard to the respective mandates of the Parties, the purpose of this MoU is to provide a framework for cooperation and understanding, and to facilitate collaboration between the Parties so to further their shared goals and objectives in regard to the conservation of marine environment and ecosystems in their respective fields of competence.
2. The objectives of this MoU shall be achieved through:
 - a. A regular dialogue and meetings between UNEP/MAP and the ACCOBAMS Secretariat;
 - b. the implementation of appropriate legal instruments between the Parties in order to plan and implement the necessary activities relevant to this cooperation, including through projects and programmes pursuant to Article 1.2.

Article 4

Areas of Cooperation

1. The areas of Cooperation are jointly agreed through the cooperation mechanism foreseen in this MoU. Policies and priorities under this MoU may be jointly updated by the Parties pursuant to its Article 5, so to allow the Parties to respond to emerging issues in the realm of environment and sustainable development.
2. The Parties have agreed to the following preliminary overarching cooperation areas under this MoU, which form part of UNEP/MAP's mandate and programme of work, and have been approved by Ordinary Meetings of Contracting Parties to Barcelona Convention. The areas of cooperation listed below are covered by the priority activities for ACCOBAMS, in accordance with their mandate and Programme of Work.
 - a. Collection and assessment of information relating to the conservation of cetaceans;
 - b. Identification, protection and management of marine areas of particular importance for cetaceans, in particular transboundary areas and areas beyond the national jurisdiction of coastal States;
 - c. Promotion of ecosystem-based approach for the conservation of marine environment and ecosystems through the assessment, monitoring and mitigation of adverse human-cetacean interactions, such fisheries, ship strikes, offshore noise-producing activities and marine litter;
 - d. Legal, institutional and policy-related cooperation;
 - e. Development of capacity-building activities (e.g. training programmes, dissemination of relevant information, awareness-building, etc.).
3. The above list is not exhaustive and should not be interpreted to exclude or replace other forms of cooperation between the Parties on other issues of common interest. The details on the activities to be developed under the areas of cooperation indicated above are included in, but not limited to, the

Annex to this MoU, which shall be reviewed by the Parties every (2) years in order to adapt it to the priority activities and to any new guidance that may be decided by their respective governing bodies.

4. Specific activities may be identified and will be carried out on the basis of appropriate legal instruments established between the ACCOBAMS Secretariat and UNEP/The ACCOBAMS Secretariat and UNEP/MAP shall work together, to the extent possible, within the remit of their respective mandates, for the implementation of the activities undertaken pursuant to this MoU.
5. The present MoU seeks to consolidate and intensify cooperation between the Parties and to strengthen regional synergies. In this context, ACCOBAMS Secretariat and UNEP/MAP- will inform each other of their respective activities linked to their cooperation framework, and of their capacity-building related initiatives so as to strengthen a permanent cooperation, including through their websites.

Article 5

Organization of the Cooperation

1. The Parties shall hold bilateral meetings on matters of common interest, in accordance with an agreed agenda between the Parties, for the purpose of streamlining and monitoring collaborative activities. Relevant international organizations and relevant initiatives/projects may be invited by both Parties to join such consultations that will take place at least once a year, through face-to-face or remote meetings. Consultations will include a discussion of technical and operational issues related to furthering the objectives of this MoU
2. In implementing activities, projects and programmes linked to the agreed priority areas, the Parties shall follow a separate legal instrument appropriate for the implementation of such initiatives, in accordance with Article 1.2 above. In identifying cooperation areas under this MoU, due regard shall be given to ACCOBAMS' and UNEP/MAP's geographic coverage.
3. Where one of the Parties is organizing a meeting with external participation at which policy matters related to the aims of this MoU shall be discussed, it shall, as appropriate, either invite the other Party to participate in the meeting, or provide an update on relevant policy matters discussed at the meeting.
4. The ACCOBAMS Secretariat and UNEP/MAP will inform their relevant governing bodies every 2 years on progress made in implementing this MoU
5. Nothing under this MoU imposes financial obligations upon either Party. If the Parties mutually agree to allocate specific funds to facilitate an activity undertaken pursuant to this MoU, such an agreement will be reflected in writing and signed by both Parties. In particular, for the implementation of joint activities within the framework of this MoU that might involve payment of funds, a specific separate legal instrument will be agreed and signed by both Parties, as appropriate, taking into account those relevant administrative and financial rules and procedures applicable to the Parties.
6. The Parties will undertake, within their global knowledge network and to the extent possible, to facilitate mutual access to relevant information and body of work as well as dissemination between them. The Parties will consider the possibility of joint missions and hosting joint training activities and/or information sessions.

Article 6

Status of the Parties and their Personnel

1. While confirming their strong willingness to cooperate and, to the extent possible, to create

synergies in the implementation of their respective activities, the Parties acknowledge and agree that they are separate and distinct entities and that ACCOBAMS Secretariat is separate and distinct from the United Nations and UNEP.

2. The employees, personnel, representatives, agents, contractors, affiliates or Partners of the ACCOBAMS Secretariat, including the personnel engaged by the ACCOBAMS Secretariat for carrying out any of the project activities pursuant to this MoU, shall not be considered in any respect or for any purposes whatsoever as being employees, personnel, representatives, agents, contractors or affiliates of the United Nations, including UNEP, nor shall any employees, personnel, representatives, agents, contractors or affiliates of UNEP be considered, in any respect or for any purposes whatsoever, as being employees, personnel, representatives, agents, contractors or affiliates of the ACCOBAMS Secretariat.
3. Neither Party shall be entitled to act or make legally binding declarations on behalf of the other Party. Nothing in this MoU shall be deemed to constitute a joint venture, agency, interest grouping or any other kind of formal business grouping or entity between the Parties.

Article 7 Fundraising

1. To the extent permitted by the Parties' respective regulations, rules and policies, and subject to Article 2, the Parties may engage in fundraising from public and private sectors to support the activities, projects and programmes to be developed or carried out pursuant to this MoU.
2. Neither Party shall engage in fundraising with third parties in the name of, or on behalf of, the other, without prior express written approval of the other Party.

Article 8 Intellectual Property Rights

1. Nothing in these MoU shall be construed as granting or implying rights to or interest in, intellectual property of the Parties, except as otherwise provided in Article 8.2.
2. In the event that the Parties foresee that intellectual property should be created in relation to a particular activity, project or programme to be carried out under this MoU, the Parties shall agree the respective terms of ownership and use through a legal instrument concluded as per Article 1.2.

Article 9

Use of Name and Emblem

1. Neither Party shall use the name, emblem or trademarks of the other Party, its subsidiaries and/or affiliates, or any abbreviation thereof, in connection with its business or for public dissemination without the prior expressly written approval of the other Party in each case. In no event shall the authorization of the UN, UNEP and/or UNEP/MAP name or emblem be granted for commercial purposes or for use in any manner that suggests an endorsement by UN/UNEP and/or UNEP/MAP of ACCOBAMS products, business practices or services.
2. ACCOBAMS Secretariat acknowledges being aware of the independent, international and impartial status of the UN, UNEP and/or UNEP/MAP, and recognizes that their names and emblems cannot be associated with any political or sectarian cause or otherwise used in a manner inconsistent with the status of the UN, UNEP and/or UNEP/MAP.
3. The Parties agree to recognize and acknowledge this collaboration, as appropriate. To this end, the Parties shall consult with each other concerning the manner and form of such recognition and acknowledgement.

Article 10

United Nations Privileges and Immunities

1. Nothing in, or relating to, this MoU shall be deemed a waiver, express or implied, of any of the privileges and immunities of the United Nations, including its subsidiary organs.

Article 11

Confidentiality

1. The handling of information shall be subject to each Party's corporate confidentiality policies.
2. Before disclosing internal documents, or documents that by virtue of their content or the circumstances of their creation or communication must be deemed confidential, of the other Party to third parties, each Party shall obtain the express, written consent of the other Party. However, a Party's disclosure of another Party's internal and/or confidential documents to an entity that the disclosing Party controls, or with which it is under common control, or to an entity with which it has a confidentiality agreement, shall not be considered a disclosure to a third party, and shall not require prior authorization.
3. For UNEP, a principal or subsidiary organ of the United Nations established in accordance with the Charter of the United Nations shall be deemed to be a legal entity under common control.

Article 12

Responsibility

1. Each Party shall be responsible for dealing with any claims or demands arising out of its actions or omissions, and those of its respective personnel, in relation to this MoU.
2. ACCOBAMS Secretariat shall indemnify, hold and save harmless and defend, at its own expense, the United Nations and UNEP, their officials, personnel and representatives, from and against all suits, claims, demands and liability of any nature or kind, which may arise in relation to this MoU, in case of any wrongdoing or omissions attributable to ACCOBAMS Secretariat.

Article 13

Dispute Settlement

1. The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this MoU. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then prevailing, or according to such other procedure as may be agreed between the Parties.
2. Any dispute, controversy or claim between the Parties arising out of this MoU which is not settled amicably in accordance with the Article 13.1 may be referred by either Party to arbitration under the UNCITRAL Arbitration Rules then in force. The arbitral tribunal shall have no authority to award punitive damages. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

Article 14

Notification and Amendments

1. Each Party shall promptly notify the other in writing within 3 months of any anticipated or actual material changes that will affect the execution of this MoU.
2. Upon receipt of such notification, the Parties shall consult each other with a view of reaching an agreement on any actual or proposed change(s) suggested in accordance with Article 14.1.
3. The Parties may amend this MoU by mutual written agreement, which shall be appended to this MoU and become an integral part of it.

Article 15

Termination

1. Either Party may terminate this MoU by giving six (6) months' prior written notice to the other Party.
2. Upon termination of this MoU, the rights and obligations of the Parties defined under any other legal instrument executed pursuant to this MoU shall cease to be effective, except as otherwise provided in this MoU.
3. Any termination of the MoU shall be without prejudice to (a) the orderly completion of any ongoing collaborative activity and (b) any other rights and obligations of the Parties accrued prior to the date of termination.
4. The obligations under Articles 8-13 do not lapse upon expiry, termination of or withdrawal from this MoU.

Article 16

Additional Parties

1. Another entity seeking to become a Party to this MoU must notify both Parties, in writing, of its wish, providing its reasons and intended contributions. Following mutual consultations, should both Parties agree in writing to the requesting entity's accession to the MoU, UNEP/MAP and ACCOBAMS Secretariat, acting on behalf of the other Parties, shall jointly accept the accession of the requesting entity to the MoU, as an additional Party, through exchange of letters.

IN WITNESS WHEREOF, the duly authorized representatives of both Parties affix their signatures below.

For UNEP/MAP-Barcelona Convention

Name:

Date:

For the ACCOBAMS Secretariat

Name:

Date:

Annex

ACTIVITIES RELATING TO THE COOPERATION AREAS OF THIS MoU

1. Promotion of ecosystem-based approach for the conservation of marine environment and ecosystems through the assessment, monitoring and mitigation of adverse human-cetacean interactions, such fisheries, ship strikes, underwater noise-producing activities and marine litter

- To contribute to the formulation of a regional strategy based on agreed indicators and reference points (ecological, biological, etc.) so to monitor the status of the marine environment and ecosystems, and that of marine living resources by providing specific recommendations, in particular regarding underwater noise;
- To cooperate in undertaking assessments of the state of marine environment and ecosystems and marine living resources, including in relation to the impacts of fisheries, marine litter and offshore activities on marine environment, taking into account the socio economic aspects;
- To collaborate in developing key regional strategies to integrate the environment protection component into social and economic development, especially in relation to maritime traffic, underwater noise-producing activities and fisheries;
- To collaborate in the elaboration, including external fundraising, of joint projects for the implementation of activities of common interest in relation to this MoU;
- To strengthen scientific advice on issues of common interest, including the negative effects of pollution in the marine environment and ecosystems, and on marine living resources, in particular noise pollution and destructive fishing gears;
- To consider initiatives to develop the concept of marine spatial planning in a manner that takes into account activities for the preservation of marine habitats and possible conflicts between these activities and other uses of the sea (e.g. shipping, marine renewable energies, etc.);
- To enhance collaboration with other relevant organizations as appropriate, including those whereby other MoUs have been signed, to share a common regional database of sites of particular importance for biodiversity conservation (in particular cetaceans critical habitats);
- To exchange views regarding the governance of the Mediterranean, with particular regard to those areas located beyond national jurisdiction and take part, where possible, to ongoing initiatives aimed at improving the said governance.

2. Development of capacity-building activities like training programmes, dissemination of relevant information, building awareness.

- To collaborate with relevant MAP components on initiatives that raise awareness and promote the mitigation of adverse human-cetacean interactions, such fisheries, ship strikes, underwater noise- producing activities and marine litter.

MEMORANDUM OF UNDERSTANDING BETWEEN

**The United Nations Environment Programme in its capacity as Secretariat of the Mediterranean
Action Plan (UNEP/MAP)**

AND

**THE PERMANENT SECRETARIAT OF THE COMMISSION ON THE PROTECTION OF THE
BLACK SEA AGAINST POLLUTION (BSC PS)**

**MEMORANDUM OF UNDERSTANDING
BETWEEN**

**The United Nations Environment Programme in its capacity as Secretariat of the Mediterranean
Action Plan (UNEP/MAP)**

AND

**THE PERMANENT SECRETARIAT OF THE COMMISSION ON THE PROTECTION OF THE
BLACK SEA AGAINST POLLUTION (BSC PS)**

WHEREAS the United Nations Environment Programme (hereinafter referred to as UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment;

WHEREAS the Coordinating Unit of the Mediterranean Action Plan/Secretariat of the Barcelona Convention (hereinafter referred to as UNEP/MAP) is administered by UNEP and has the mandate as per the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean adopted in 1976 and revised in 1995, to assist the Mediterranean countries, with its main objectives through its seven protocols respectively to assess and control marine pollution; to ensure sustainable management of natural marine and coastal resources; to address common challenges related to the prevention and reduction of pollution from land-based sources, ships, dumping, off-shore installations and the movement of hazardous substances; to ensure the protection of biodiversity; and, the integrated management of coastal zones;

WHEREAS UNEP/MAP has also the mandate to assist in the implementation of the Mediterranean Action Plan (MAP) which was adopted in 1975 and became MAP II after its revision in 1995;

WHEREAS the 18th Ordinary Meeting of the Contracting Parties to Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (Barcelona Convention) (Istanbul, 3-6 December 2013) welcomed the cooperation established between the UNEP/MAP and relevant international and regional Organizations and asked the Secretariat to extend cooperation with other relevant Organizations with whom synergy is needed for reaching the objectives of the Barcelona Convention/MAP;

WHEREAS, The Convention on the Protection of the Black Sea Against Pollution (hereinafter referred to as) signed in Bucharest in April 1992, and ratified by all six riparian states of the Black Sea in 1994, fully recognizing the need to preserve the Black Sea ecosystem as a valuable natural endowment of the region, whilst ensuring the protection of its marine and coastal living resources as a condition for sustainable development of the Black Sea coastal states, well-being, health and security of their population;

WHEREAS, Contracting Parties to Bucharest Convention adopted the Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea in 2009 that contains challenges and policy actions to overcome these challenges threatening the sustainability of marine resources of Black Sea;

WHEREAS, Contracting Parties to Bucharest Convention agreed to further strengthen cooperation with international organizations such as GEF, UNDP, UNEP, BSEC (Black Sea Economic Cooperation), European Union, the World Bank, and IMO, in support of the implementation of the Convention on the Protection of the Black Sea Against Pollution and its protocols;

WHEREAS, the Parties, acknowledge the commitment of Republic of Türkiye, expressed in several

fora, in its capacity as a Party to both Conventions, on facilitating this Memorandum of Understanding;

WHEREAS UNEP/MAP and BSC PS (hereinafter on referred as the Parties) intend to conclude this Memorandum of Understanding (hereinafter referred to as “MoU”) with the aim of consolidating, developing and detailing their cooperation and effectiveness to achieve the common objectives in the field of protection of the marine and coastal environment;

RECALLING that UNEP/MAP-and the BSC PS have concluded on 11 February 2016 an MOU, which was expired by the end of December 2021,

NOW, THEREFORE, the Parties HAVE AGREED TO COOPERATE UNDER THIS MEMORANDUM OF UNDERSTANDING AS FOLLOWS:

Article 1 Interpretation

1. References to this MoU shall be construed as including any Annexes, as varied or amended in accordance with the terms of this MoU. Any Annexes shall be subject to the provisions of this MoU, and in case of any inconsistency between an Annex and this MoU, the latter shall prevail.
2. Implementation of any subsequent activities, projects and programmes pursuant to this MoU shall necessitate the execution of appropriate legal instruments between the Parties. The terms of such legal instruments shall be subject to the provisions of this MoU.
3. This MoU represents the complete understanding between the Parties and supersedes all prior MoUs, communications and representations, whether oral or written, concerning the subject matter of this MoU.
4. Any Party’s failure to request implementation of a provision of this MoU shall not constitute a waiver of that or any other provision of this MoU.

Article 2 Duration

1. This MoU shall be effective upon the last date of signature of the approving officials and remain in effect until the end of December 2028, unless terminated in accordance with Article 14 below.

Article 3 Purpose

1. The purpose of this MoU is to provide a framework of cooperation and understanding, and to facilitate collaboration between the Parties to further achieve their shared goals and objectives in regard to the conservation of marine environment and ecosystems in their fields of competence and geographical coverage.

Article 4 Areas of Cooperation

1. Areas of Cooperation are agreed jointly through the cooperation mechanism in the MoU. The relevant priorities under this MoU may also be jointly reviewed every two (2) years by the Parties

pursuant to Article 5.

2. Both parties will endeavor, as fast as possible, to complete the process of granting each other mutual observership status.
3. The Parties have agreed to the following preliminary and overarching areas of cooperation for this MoU, which form part of mandate and programme of work of both Parties:
 - a) Collection and assessment of information relating to ecosystem-based approach and in particular facilitation of implementation of other relevant environmental legislation, i.e., UNEP/MAP Integrated Monitoring and Assessment Programme (IMAP), Black Sea Integrated Monitoring and Assessment Program (BSIMAP), EC Marine Strategy Framework Directive (MSFD), at regional scale.
 - b) Assessment of State of the Environment and quality status report, including indicators development underpinning this assessment.
 - c) Collection, assessment and exchange of information regarding implementation of Integrated Coastal Zone Management (ICZM), biodiversity and land-based sources and activities protocols.
 - d) Promote awareness raising, and joint action against plastic pollution and marine litter using Circular Economy and Sustainable Consumption and Production (SCP); legal, institutional and policy related cooperation.
 - e) Development of capacity building activities (e.g., joint projects, training programmes, dissemination of relevant information, building awareness, etc.).
 - f) Collaboration to promote Marine Spatial Planning and ICZM tools, as well as the establishment and sustainable management of Marine Protected Areas (MPAs) and other Area Based Management Tools (ABMT).
4. The above list is not exhaustive and should not be taken to exclude or replace other forms of cooperation between the Parties on other issues of common interest.
5. The areas of cooperation are relevant within the context of the mandates of the Parties. As appropriate, they will be revised to be in line with those decisions of the governing bodies of the Conventions that might have a bearing on their respective mandates.
6. BSC and UNEP/MAP shall work together, to the extent possible, within the remit of their respective mandates, for the implementation of the activities undertaken pursuant to this MoU.

Article 5

Organization of the Cooperation

1. The Parties shall hold bilateral meetings on matters of common interest, in accordance with an agenda agreed to in advance by the Parties, for the purpose of developing and monitoring collaborative programmes and projects. Relevant international organizations and relevant initiatives/projects may be invited by both Parties to join such consultations that will take place at least once per year, through face-to-face meetings or remote conferences.
2. In implementing activities, projects and programmes in the agreed priority areas, the Parties shall execute separate legal instruments appropriate for the implementation of such initiatives in accordance with Article 1.2 above. Both Parties will inform the governing bodies of their respective Conventions on the progress made in implementing this MoU every two years.
3. Nothing under this MoU imposes financial obligations upon either Party. If the Parties mutually agree to allocate specific funds to facilitate an activity undertaken pursuant to this MoU, such an agreement will be reflected in writing and signed by both Parties. In particular, for the implementation of joint activities within the framework of this MoU that might involve payment of funds, a specific separate legal instrument will be entered into, as appropriate, taking into account

those relevant administrative and financial rules and procedures prevailing for the Parties.

4. The Parties undertake to share knowledge and information in their areas of operation and expertise relevant to this MoU. The Parties will consider the possibility of joint missions and the hosting of joint training activities and information sessions.

Article 6

Status of the Parties and their Personnel

5. The employees, personnel, representatives, agents, contractors or affiliates of BSC PS, including the personnel engaged by BSC PS for carrying out any of the project activities pursuant to this MoU, shall not be considered in any respect or for any purposes whatsoever as being employees, personnel, representatives, agents, contractors or affiliates of the United Nations, including UNEP, nor shall any employees, personnel, representatives, agents, contractors or affiliates of UNEP be considered, in any respect or for any purposes whatsoever, as being employees, personnel, representatives, agents, contractors or affiliates of BSC PS. Neither Party shall be entitled to act or make legally binding declarations on behalf of the other Party. Nothing in this MoU shall be deemed to constitute a joint venture, agency, interest grouping or any other kind of formal business grouping or entity between the Parties.

Article 7

Fundraising

1. To the extent permitted by the Parties' respective regulations, rules and policies, and subject to sub-article 2 of this Article, the Parties may engage in fundraising from the public and private sectors to support the activities, projects and programmes to be developed or carried out pursuant to this MoU.
2. Neither Party shall engage in fundraising with third parties in the name of or on behalf of the other, without the prior expressed written approval of the other Party in each case.

Article 8

Intellectual Property Rights

1. Nothing in the MoU shall be construed as granting or implying rights to or interest in, intellectual property of the Parties, except as otherwise provided in sub-article 2 of this Article.
2. In the event that the Parties foresee that intellectual property that can be protected shall be created in relation to a particular activity, project or programme to be carried out under this MoU, the Parties shall negotiate and agree on the terms of its ownership and use in the relevant legal instrument concluded.

Article 9

Use of Name and Emblem

1. Neither Party shall use the name, emblem, logo or trademarks of the other Party, its subsidiaries and/or affiliates, nor any abbreviation thereof in connection with its business or for public dissemination without the prior expressed written approval of the other Party in each case.

Article 10

Confidentiality

1. The handling of information shall be subject to each Party's corporate confidentiality policies.
2. Before disclosing internal documents, or documents that by virtue of their content or the circumstances of their creation or communication must be deemed confidential, of the other Party to third parties, each Party shall obtain the expressed written consent of the other Party. However, a Party's disclosure of another Party's internal and/or confidential documents to an entity the disclosing Party controls or with which it is under common control, or to an entity with which it has a confidentiality agreement, shall not be considered a disclosure to a third party, and shall not require prior authorization.
3. For UNEP, a principal or subsidiary organ of the United Nations established in accordance with the Charter of the United Nations shall be deemed to be a legal entity under common control.

Article 11

Responsibility

1. Each Party will be responsible for dealing with any claims or demands arising out of its actions or omissions, and those of its respective personnel, in relation to this MoU.
2. BSC PS shall indemnify, hold and save harmless and defend, at its own expense, the United Nations and UNEP, their officials, personnel and representatives, from and against all suits, claims, demand and liability of any nature or kind, which may arise in relation to this MoU due to any actions or omissions attributable to BSC PS.

Article 12

Dispute Settlement

1. The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this MoU. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then prevailing, or according to such other procedure as may be agreed between the Parties.
2. Any dispute, controversy or claim between the Parties arising out of this MoU which is not settled amicably in accordance with the foregoing sub-article may be referred by either Party to arbitration under the UNCITRAL Arbitration Rules then in force. The arbitral tribunal shall have no authority to award punitive damages. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

Article 13

Notification and Amendments

1. Each Party shall promptly notify the other in writing of any anticipated or actual material changes that will affect the execution of this MoU.
2. Upon receipt of such notification, the Parties shall consult each other with a view of reaching an agreement on any actual or proposed change(s).
3. The Parties may amend this MoU by mutual written agreement, which shall be appended to this MoU and become an integral part of it.

Article 14 Termination

1. Either Party may terminate this MoU by giving three (3) months' prior written notice to the other Party.
2. Upon termination of this MoU, the rights and obligations of the Parties defined under any other legal instrument executed pursuant to this MoU shall cease to be effective, except as otherwise provided in this MoU.
3. Any termination of the MoU shall be without prejudice to (a) the orderly completion of any ongoing collaborative activity and (b) any other rights and obligations of the Parties accrued prior to the date of termination.
4. The obligations under Articles 8-13 do not lapse upon expiry or termination of this MoU.

Article 15 United Nations Privileges and Immunities

1. Nothing in or relating to this MoU shall be deemed a waiver, express or implied, of any of the privileges and immunities of the United Nations, including its subsidiary organs.

IN WITNESS WHEREOF, the duly authorized representatives of the Parties affix their signatures below.

For United Nations Environment Programme

**For the Permanent Secretariat of the
Commission on the Protection of the Black
Sea Against Pollution**

Name:

Name:

Date:

Date:

**MEMORANDUM OF UNDERSTANDING
BETWEEN**

**The United Nations Environment Programme in its capacity as Secretariat of the Mediterranean
Action Plan (UNEP/MAP)**

AND

**The Regional Organization for the Conservation of the Environment of the Red Sea and the Gulf of
Aden (PERSGA)**

WHEREAS the United Nations Environment Programme (hereinafter referred to as UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment;`

WHEREAS the Secretariat of the Barcelona Convention and the Mediterranean Action Plan (hereinafter referred to as UNEP/MAP) is administered by UNEP and has the mandate as per the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean adopted in 1976 and revised in 1995, to assist the Mediterranean countries, with its main objectives through its seven protocols respectively to assess and control marine pollution; to ensure sustainable management of natural marine and coastal resources; to address common challenges related to the prevention and reduction of pollution from land-based sources, ships, dumping, off-shore installations and the movement of hazardous substances; to ensure the protection of biodiversity; and, the integrated management of coastal zones;

WHEREAS UNEP/MAP has also the mandate to assist in the implementation of the Mediterranean Action Plan (MAP) which was adopted in 1975 and became MAP II after its revision in 1995;

WHEREAS in this context, the Contracting Parties to the Barcelona Convention adopted Regional Strategies, Actions Plans and Programmes as well as put in place regional structures including a consolidated system of focal points, the Secretariat and six Regional Activity Centers¹, which have a mandate for carrying out activities aimed at facilitating implementation of the seven Protocols of the Barcelona Convention, the decisions of the Meetings of the Contracting Parties to the Barcelona Convention and its Protocols;

WHEREAS The Regional Organization for the Conservation of the Environment of the Red Sea and the Gulf of Aden (hereinafter referred to as (PERSGA), an intergovernmental body based on the 1982 Jeddah Convention and established in 1995 under the umbrella of the Arab League, is responsible for the development and implementation of regional programmes for the protection and conservation of the ecosystem and biological diversity of the Red Sea and the Gulf of Aden, prevention and control of maritime pollution and for supporting sustainable development. The member states of the Jeddah Convention are: Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan and Yemen;

RECALLING that Barcelona Convention UNEP/MAP and PERSGA have concluded on 15 June 2003 an MOU, which was expired by the end of December 2004.

NOW, THEREFORE, UNEP/MAP AND THE PERSGA HAVE AGREED TO COOPERATE UNDER THIS MEMORANDUM OF UNDERSTANDING AS FOLLOWS:

Article 1 **Interpretation**

1. References to this MoU shall be construed as including any Annexes, as varied or amended in accordance with the terms of this MoU. Any Annexes shall be subject to the provisions of this MoU, and in case of any inconsistency between an Annex and this MoU, the latter shall prevail.
2. Implementation of any subsequent activities, projects and programmes pursuant to this MoU, including those involving the transfer of funds between the Parties, shall necessitate the execution of appropriate legal instruments between the Parties. The terms of such legal instruments shall be subject to the provisions of this MoU
3. This MoU represents the complete understanding between the Parties and supersedes all prior MoUs, communications and representations, whether oral or written, concerning the subject matter of this MoU.

4. Any Party's failure to request implementation of a provision of this MoU shall not constitute a waiver of that or any other provision of this MoU.

Article 2

Duration

1. This MoU shall be effective upon the last date of signature of the approving officials and remain in effect for three years, unless terminated in accordance with Article 15 below.

Article 3

Purpose

1. Having regard to the respective mandates of the Parties, the purpose of this MoU is to provide a framework of cooperation and understanding, and to facilitate collaboration between the Parties to further their shared goals and objectives in regard to the conservation of marine and coastal environment in their fields of competence.
2. The objectives of this MoU shall be achieved through:
 - a. Regular dialogue and meetings between UNEP/MAP and the PERSGA;
 - b. Execution of separate legal instruments between the Parties to define and implement any subsequent activities, projects and programmes pursuant to Article 1.2.

Article 4

Areas of Cooperation

1. The Parties have agreed to the following preliminary and overarching areas of cooperation for this MoU:

Under the present MOU, UNEP/MAP and PERSGA may cooperate on a bilateral basis for the mutual exchange of experience in any or all of the following fields of study or management:

- a. Biodiversity and marine protected areas
 - b. Maritime pollution and contingency planning
 - c. Integrated coastal zone management
 - d. Marine pollution monitoring and assessment
 - e. Oceanography and seabed mapping
 - f. Climate change
 - g. Legislation and enforcement (related to the marine and coastal environment)
 - h. Control of Land Based Activities
 - i. Capacity Building
 - j. Fisheries and Aquaculture
2. The above list is not exhaustive and should not be taken to exclude or replace other forms of cooperation between the Parties on other issues of common interest.
 3. Specific activities may be identified and will be carried out on the basis of separate legal instruments established between the PERSGA and UNEP/MAP.
 4. The PERSGA and UNEP/MAP shall work together, to the extent possible, within the remit of their respective mandates, for the implementation of the activities undertaken pursuant to this MoU.
 5. This MoU seeks to consolidate and intensify cooperation between the Parties and to strengthen regional synergy. In this context, PERSGA and UNEP/MAP will inform each other of their respective capacity development and capacity development related initiatives so as to strengthen cooperation through a permanent platform, such as websites of the Parties.

Article 5

Organization of the Cooperation

1. The Parties shall hold bilateral meetings on matters of common interest, in accordance with an agenda agreed to in advance by the Parties, for the purpose of developing and monitoring collaborative activities. Relevant international organizations and relevant initiatives/projects may be invited by both Parties to join such consultations that will take place at least once per year, through face-to-face meetings or remote conferences. The following two items should be examined at least once per year in occasion of consultations:
 - a. discuss technical and operational issues related to furthering the objectives of this MoU; and
 - b. review progress of collaboration and related work between the PERSGA and the UNEP/MAP
2. In implementing activities, projects and programmes in the agreed priority areas, the Parties shall execute a separate legal instrument appropriate for the implementation of such initiatives in accordance with Article 1.2 above. In identifying the areas of cooperation under this MoU, due regard shall be given to PERSGA' and the UNEP/MAP's-UNEP/MAP geographic coverage.
3. Where one of the Parties is organizing a meeting with external participation at which policy matters related to the aims of this MoU shall be discussed, it shall, as appropriate, either invite the other Party to participate in the meeting or update it on relevant policy matters discussed at the meeting.
4. The PERSGA and UNEP/MAP will inform their relevant governing bodies on the progress made in implementing this.
5. Nothing under this MoU imposes financial obligations upon either Party. If the Parties mutually agree to allocate specific funds to facilitate an activity undertaken pursuant to this MoU, such an agreement will be reflected in writing and signed by both Parties. In particular, for the implementation of joint activities within the framework of this MoU that might involve payment of funds, a specific separate legal instrument will be entered into, as appropriate, taking into account those relevant administrative and financial rules and procedures applicable to the Parties.
6. The Parties will undertake, within their global knowledge network and to the extent possible, to facilitate mutual access to relevant information and body of work as well as dissemination between them. The Parties will consider the possibility of joint missions and the hosting of joint training activities and information sessions.

Article 6

Status of the Parties and their Personnel

1. While confirming their strong willingness to cooperate and to the extent possible create synergies in the implementation of their respective activities, the Parties acknowledge and agree that they are separate and distinct entities and that PERSGA is separate and distinct from the United Nations and UNEP. The employees, personnel, representatives, agents, contractors, affiliates or Partners of the PERSGA, including the personnel engaged by the PERSGA for carrying out any of the project activities pursuant to this MoU, shall not be considered in any respect or for any purposes whatsoever as being employees, personnel, representatives, agents, contractors or affiliates of the United Nations, including UNEP, nor shall any employees, personnel, representatives, agents, contractors or affiliates of UNEP be considered, in any respect or for any purposes whatsoever, as being employees, personnel, representatives, agents, contractors or affiliates of the PERSGA. Neither Party shall be entitled to act or make legally binding declarations on behalf of the other Party. Nothing in this MoU shall be deemed to constitute a joint venture, agency, interest grouping or any other kind of formal business grouping or entity between the Parties.

Article 7

Fundraising

1. To the extent permitted by the Parties' respective regulations, rules and policies, and subject to sub-article 2, the Parties may engage in fundraising from the public and private sectors to support the activities, projects and programmes to be developed or carried out pursuant to this MoU.
2. Neither Party shall engage in fundraising with third parties in the name of or on behalf of the other, without the prior express written approval of the other Party in each case.

Article 8

Intellectual Property Rights

1. Nothing in the MoU shall be construed as granting or implying rights to or interest in, intellectual property of the Parties, except as otherwise provided in Article 8.2.
2. In the event that the Parties foresee that intellectual property that can be protected shall be created in relation to a particular activity, project or programme to be carried out under this MoU, the Parties shall negotiate and agree on terms of its ownership and use in the relevant legal instrument concluded as per Article 1.2.

Article 9

Use of Name and Emblem

1. Neither Party shall use the name, emblem or trademarks of the other Party, its subsidiaries and/or affiliates, or any abbreviation thereof, in connection with its business or for public dissemination without the prior expressly written approval of the other Party in each case. In no event shall authorization of the UN, UNEP and/or UNEP/MAP name or emblem be granted for commercial purposes or for use in any manner that suggests an endorsement by UNEP/MAP of PERSGA products, business practices or services.
2. PERSGA acknowledges that it is familiar with the independent, international and impartial status of the UN, UNEP and/or UNEP/MAP and recognizes that their names and emblems may not be associated with any political or sectarian cause or otherwise used in a manner inconsistent with the status of the UN, UNEP and/or UNEP/MAP.
3. The Parties agree to recognize and acknowledge this collaboration, as appropriate. To this end, the Parties shall consult with each other concerning the manner and form of such recognition and acknowledgement.

Article 10

United Nations Privileges and Immunities

1. Nothing in or relating to this MoU shall be deemed a waiver, express or implied, of any of the privileges and immunities of the United Nations, including its subsidiary organs.

Article 11

Confidentiality

1. The handling of information shall be subject to each Party's corporate confidentiality policies.
2. Before disclosing internal documents, or documents that by virtue of their content or the circumstances of their creation or communication must be deemed confidential, of the other Party to third parties, each Party shall obtain the express, written consent of the other Party. However, a

Party's disclosure of another Party's internal and/or confidential documents to an entity the disclosing Party controls or with which it is under common control, or to an entity with which it has a confidentiality agreement, shall not be considered a disclosure to a third party, and shall not require prior authorization.

3. For UNEP, a principal or subsidiary organ of the United Nations established in accordance with the Charter of the United Nations shall be deemed to be a legal entity under common control.

Article 12

Responsibility

1. Each Party will be responsible for dealing with any claims or demands arising out of its actions or omissions, and those of its respective personnel, in relation to this MoU.
2. The PERSGA shall indemnify, hold and save harmless and defend at its own expense, the UN, UNEP and/or UNEP/MAP, their officials, personnel and representatives, from and against all suits, claims, demands and liability of any nature or kind which may arise in relation to this MoU due to any actions or omissions attributable to PERSGA.

Article 13

Dispute Settlement

1. The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this MoU. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then prevailing, or according to such other procedure as may be agreed between the Parties.
2. Any dispute, controversy or claim between the Parties arising out of this MoU which is not settled amicably in accordance with the foregoing sub-article may be referred by either Party to arbitration under the UNCITRAL Arbitration Rules then in force. The arbitral tribunal shall have no authority to award punitive damages. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

Article 14

Notification and Amendments

1. Each Party shall promptly notify the other in writing within 3 months of any anticipated or actual material changes that will affect the execution of this MoU.
2. Upon receipt of such notification, the Parties shall consult each other with a view of reaching an agreement on any actual or proposed change(s) suggested in accordance with Article 14.1.
3. The Parties may amend this MoU by mutual written agreement, which shall be appended to this MoU and become an integral part of it.

Article 15

Termination

1. Either Party may terminate this MoU by giving three (3) months' prior written notice to the other Party.
2. Upon termination of this MoU, the rights and obligations of the Parties defined under any other legal instrument executed pursuant to this MoU shall cease to be effective, except as otherwise provided in this MoU.

3. Any termination of the MoU shall be without prejudice to (a) the orderly completion of any ongoing collaborative activity and (b) any other rights and obligations of the Parties accrued prior to the date of termination.
4. The obligations under Articles 8-13 do not lapse upon expiry, termination of or withdrawal from this MoU.

Article 16

Additional Parties

1. Another entity seeking to become a Party to this MoU must notify the other Parties in writing of its wish, providing its reasons and intended contributions. Following consultation, should all the Parties agree in writing to the requesting entity's accession to the MoU, UNEP/MAP and PERSGA acting on behalf of the other Parties, shall effectuate the accession as a Party to the MoU by exchanging letters with the requesting entity.

IN WITNESS WHEREOF, the duly authorized representatives of the Parties affix their signatures below.

For
United Nations Environment Programme

For
Regional Organization for the
Conservation of the Environment of
the Red Sea and Gulf of Aden

Name:

Name:

Date:

Date:

Annex III

List of Renewed and New MAP Partners

LIST OF RENEWED MAP PARTNERS

The following institutions accredited as MAP Partners are renewed for a six year-period:

- Youth Love Egypt
- Mohammed VI Foundation for Environmental Protection
- FISP MED Onlus
- University of Siena – SDSN (Sustainable Development Solution Network)

LIST OF NEW MAP PARTNERS

The following institutions are accredited as new MAP Partners:

- Turkish Shipbuilders' Association (GISBIR)
- Ankara University National Center for the Sea and Maritime Law (DEHUKAM)
- Enaleia
- Siracusa International Institute for Criminal Justice and Human Rights (SII)
- Zoï Environment Network (Zoï)
- Agreement on the creation of a marine mammals Sanctuary in the Mediterranean Sea (Pelagos Agreement)
- European Boating Industry (EBI)
- Euro-Mediterranean Economist Association (EMEA)
- European Bureau for Conservation and Development (EBCD)
- Cyprus Marine Environment Protection Association (CYMEPA)
- AMWAJ / REVOLVE Mediterraneo (AMWAJ)

Annex IV

Updated UNEP/MAP Resource Mobilization Strategy

1. Introduction

1. The 20th Ordinary Meeting of the Contracting Parties (COP 20) (Tirana, Albania, 17-20 December 2017), adopted the Updated Resource Mobilization Strategy (RMS) of UNEP/MAP, included in Annex III with Decision IG.23/5, which had a horizon period of ten years with the view to ensuring a full implementation of the Medium-term Strategy (MTS) 2016-2021 and taking a forward-looking step towards the implementation of the next MTS cycle (2022-2027), with emphasis on its first biennium.
2. With this same Decision, Contracting Parties also requested the Secretariat to further refine for consideration at COP 21 the Appendix to the Annex, to take account of the resources requirement for each strategic outcome, and the relevance of potential donors to each of these outcomes. In this respect, COP 21 took note of the “Refined Appendix to the Updated Resource Mobilization Strategy”, as set out in Annex VII to the Decision IG.24/2 on Governance.
3. COP 22 (Antalya, Türkiye, December 2021) adopted an important number of ambitious and forward looking regulatory and strategic instruments, in line with the MTS 2022-2027 priorities, including especially the new Regional Plans under the LBS Protocol, the Post-2020 SAP BIO and the Regional Strategy on MCPA and OECM, the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031), the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027) etc. The implementation of these instruments will require a considerable amount of external resources, in addition to the available core MTF funds of the system. The Post-2020 SAP BIO and the Regional Strategy on pollution from ships have developed and implemented in the first biennium of their timeframe (2022-2023) their dedicated funding strategies in consultation with and participation of key actors and potential donors, that should be used in mobilizing the needed resources for the implementation of these strategies.
4. This present RMS responds to the request by the Contracting Parties as included in the UNEP/MAP Medium-Term Strategy 2022-2027 to update the MAP Resource Mobilization Strategy for its implementation. The decision to update the RMS seeks to strengthen further the UNEP/MAP-Barcelona Convention system, to enable it to secure the required resources to fulfill its PoWs in their entirety, and to ensure that MAP Components could work to their full capacity, maintaining the main elements of the 2017 Resource Mobilisation Strategy which is still in effect, while also taking into consideration the ambitious objectives and expected outcomes of the UNEP/MAP MTS 2022-2027 and the financial needs for its full implementation.

2. Objectives

5. The RMS aims at ensuring that adequate funding is made available to support UNEP/MAP programmatic activities in the short and medium term on the basis of the MTS priorities. More particularly, the updated RMS has the following objectives:
 - a. To establish clear directions for the mobilization of resources, coming from both traditional and non-traditional sources, for the full implementation of the PoW and to identify the main counterparts and potential donors;
 - b. To define the needs and changes required to effectively mobilize resources, with a particular focus on those thematic areas of the mandate of UNEP/MAP that are most in need for external funding.
 - c. To identify new/emerging financing needs and opportunities as well as new up-to-date funding mechanisms, taking into consideration the previous years' experience in the implementation of the current resource mobilization strategy, as well as the priorities and mandates under the new MTS 2022-2027.

3. Scope

6. The present RMS complements and updates the existing strategy while also extending its timeline that was originally set at 10 years, for an additional 6-year period, i.e. until 2032.

4. Overview of UNEP/MAP funding

7. UNEP/MAP is *in primis* financed by the Contracting Parties through the assessed contributions to the Mediterranean Trust Fund (MTF). Other sources of funding include discretionary contributions from the European Union and *ad hoc* voluntary contributions by other Contracting Parties, the Host Country contributions, project funding by the Global Environmental Facility (GEF) and the European Commission, and other *ad hoc* donors. The assessed contributions generally do not provide sufficient resources to fully meet the financial requirements of the biennial PoW, and therefore the effective implementation of the POW activities relies on the mobilization of external resources. The voluntary and project funding is in general secured on an *ad hoc* basis and takes considerable staff time and efforts for the Coordinating Unit (CU) and MAP Components to achieve tangible results.

a. Contracting Parties contributions (ordinary, voluntary, host country)

8. The contributions of the Contracting Parties, including the assessed ordinary, the EU discretionary and the host country contribution for the Coordinating Unit, are crucial for the implementation of the MAP MTS and PoWs, as they provide a stable and secure source of funding, ensuring the functioning of the system by covering the administrative costs, as well as allowing effective planning by supporting certain core activities. As regards the Regional Activity Centres (RACs), the contributions of the host countries, and of IMO in the case of REMPEC, represent a noticeable part of their funding.

9. From 2004 to 2016, the total assessed contributions remained unchanged. The Contracting Parties provided in 2016 a one-time 3% increase of their assessed contributions to assist with financial obligations for organizing and hosting the COP meetings, so as to enable all Contracting Parties to host a COP meeting. Since then, the total assessed contributions have not been increased. The contributions from the Contracting Parties do not seem to have kept up with the inflationary costs and with the growing MAP mandates. Therefore, a possible regular increase of the assessed contributions to the MTF should be considered, since these contributions provide the main guarantee for stable and predictable resources and demonstrate the continued commitment of Contracting Parties.

10. MAP has benefited on a regular basis from additional voluntary contributions of the Contracting Parties to support the implementation of the PoW. They include the two phases of Bilateral Cooperation Agreement between the Italian Ministry of Environment and Energy Security (MASE) and UNEP signed in 2016 and 2021 respectively, the Bilateral Agreement between the Ministry for Europe and Foreign Affairs of France and UNEP signed in 2022, which are excellent developments and a very good examples of voluntary funding in line with the MTS and fully integrated into the MAP PoWs, as well as the voluntary contribution from Türkiye for the implementation of the different editions of the Istanbul Environment Friendly City Award, and the voluntary contribution from Monaco to support communication coverage of last COPs. Until COP 19, voluntary contributions also included the expenses of organizing COP meetings, which were covered by the respective host country.

b. Additional sources of funding

11. The European Union (EU) and the Global Environment Facility (GEF) are, and are expected to remain significant contributors to the implementation of the MTS and the biennial MAP PoWs.

12. The EU has a number of funding mechanisms and resource streams available. UNEP/MAP has used to a large extent over the past twenty years such mechanisms, including the strategic partnership with UNEP, the participation in calls for tender/project proposals, and the direct contracts between

UNEP/MAP and the European Commission. While the Directorate-General (DG) for Environment has been and will remain a key partner, attention should be also played to important programmes and funding mechanisms existing under other EU DGs and services that could provide opportunities to meet the resource requirements, such as DG INTPA, and DG NEAR, as well as DG MARE DG REGIO, DG RTD, DG JRC and GD GROW.

13. UNEP/MAP has a long-standing strong collaboration with the Global Environment Facility (GEF), which dates back to 1997. Since then, GEF supported 3 considerable investments in the region including the 47 million USD “Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security”, approved in October 2016, now being implemented by UNEP/MAP and its executing partners, as well as the Fish EBM project having a total budget of 2,273,973 USD. It is important to maintain MAP engagement with GEF, and to seek further opportunities for funding, focusing on areas in which MAP has a comparative advantage or can build desirable partnerships, in line with its mandate and with the key priorities of the GEF-8, i.e. the Food Systems Integrated Program, the Ecosystem Restoration Integrated Program, the Circular Solutions to Plastic Pollution Integrated Program, and the Clean and Healthy Ocean Integrated Program - Focus on agricultural run-off and wastewater from municipal settlements.

14. With regards to alternative sources of funding, MAP has benefitted from interaction with large environmental foundations, such as the MAVA Foundation, which however closed in 2023 leaving a considerable gap in the external resources mobilized by MAP to be filled. Cooperation and partnership with the private sector needs to be further strengthened, building on the current practices, e.g. the cooperation with the oil and gas industry through REMPEC, in order to explore this form of cooperation on its full potential. New/innovative funding possibilities (such as social and development impact bonds/loans, crowdfunding, etc.) are not explored at the moment.

15. UNEP/MAP relations and collaborations with other key international organizations, such as the World Bank (WB), United Nations Development Programme (UNDP), Islamic Development Bank (IsDB), African Development Bank (AfDB), as well as the European Investment bank (EIB), and the European Bank for Reconstruction and Development (EBRD), should be further developed and strengthened, building on existing examples of successful cooperation, including through their invitation and engagement in regular donor conferences to be organized by MAP.

c. External resource gap analysis

16. Based on an analysis of external resources required for the implementation of activities per MTS Theme (Figure 1 provided in the 2017 RMS) and the two first biennia of the current MTS (Figure 2), it is shown that some Themes/ Programmes rely largely on external resources, including the four Thematic Programmes of the current MTS. It is also shown that for some Themes/Programmes, such as the ones related to LSI and SCP (Themes of the previous MTS) and Sustainable Resource Use (Programme of the current MTS) there is a good percentage of external resource mobilized at the time of PoW development, while for others, in particular, Climate Change in both MTS cycles, there is traditionally a need for a strengthened capacity of the system to mobilize external resources. For Themes/Programmes related to biodiversity and pollution, the share between secured and non-secured external resources varies across the biennia, but there is traditionally a satisfactory amount of secured external resources. The difference between the rate of securing external resources per Theme/ Programme depends also on the interest of donors to specific areas of activity.

17. While all Themes/Programmes have benefited from external funding, the status of external funding in relation to specific types of activities vary. Taking an overview of the few past Programmes of Work, it can be seen that governance-related activities are mainly covered by the MTF, while others appear to rely mainly/largely on external sources, including:

- Preparation of national strategies and action plans
- National implementation of action plans

- Awareness raising and outreach activities
- Monitoring, inventory and assessment
- Building of platforms/networking
- Technical assistance and capacity building, including support to ratification of legal instruments
- Cooperation and partnerships

18. The adoption of a structured MTS (Themes in 2016-2021 and Programmes in MTS 2022-2027) and the development of biennial PoWs based on the MTS, plays an instrumental role in supporting the preparation and validation of project documents and proposals for external fund raising. The Resource Mobilization Strategy enables a clear planning for attracting external funds to implement the PoWs and to ensure the streamlining of external funding to support MAP programmatic priorities.

19. In order to enable new opportunities and to enhance outreach to new donors and entities, the Contracting Parties' support is essential for the diversification of the funding sources. It will enable the UNEP/MAP-Barcelona Convention system to widen its networks and partnerships with various entities and funding sources, broaden the outreach to foundations, private sector, and innovative financing mechanisms and explore novel ways to mobilize resources, such as setting up online website fundraising mechanisms to secure private donations and contributions. The organization of Donor Conferences, such as the one organized in the framework of the Resource Mobilisation Strategy of the Post 20202 SAPBIO including the Post-20202 Regional Strategy for MCPAs and OECMs are good examples to be further implemented.

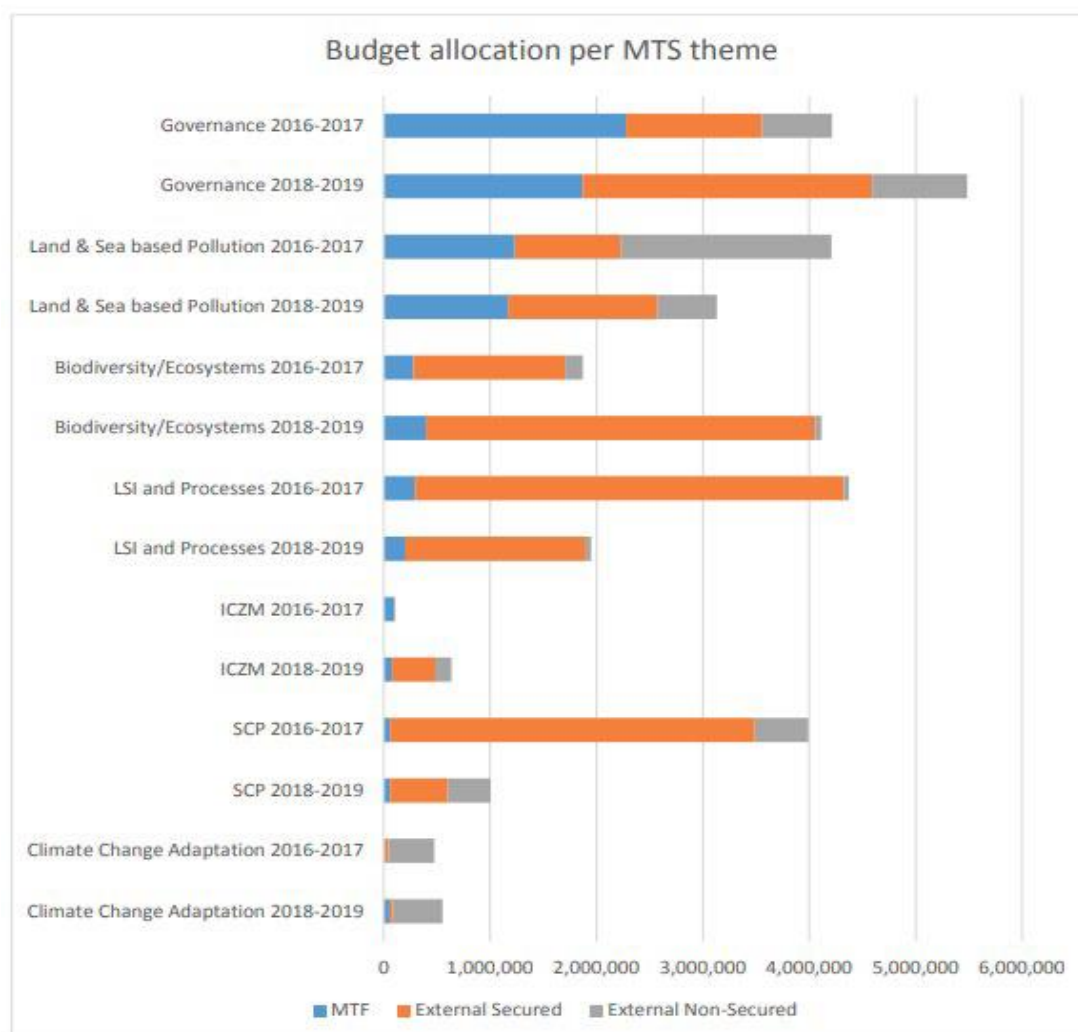


Figure 1. Budget allocation per MTS theme (2016/17 and 2018/19 PoW and Budgets)

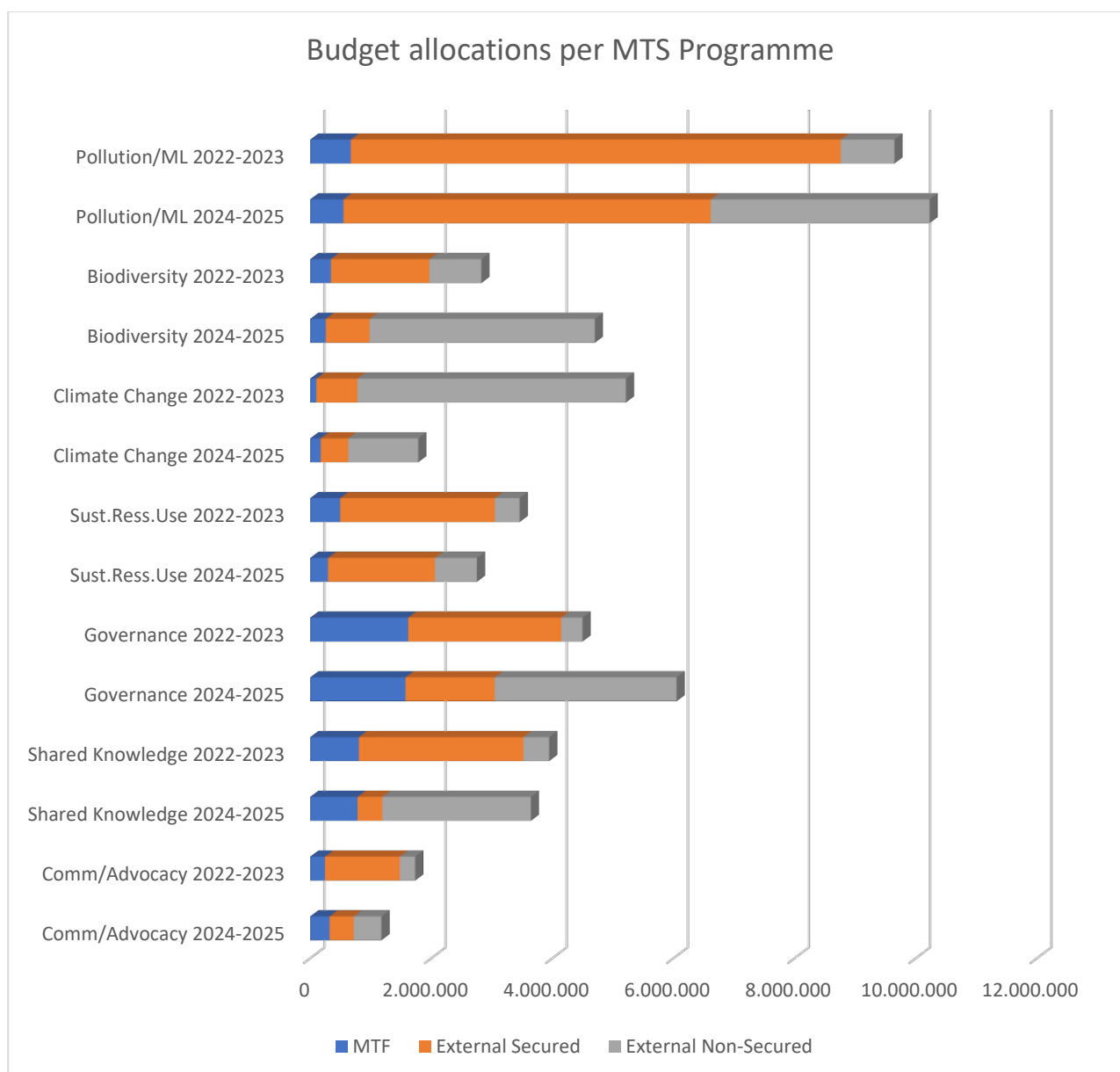


Figure 2. Budget allocations per MTS Programme in PoW 2022-2023 and (proposed) 2024-2025

5. External resource needs

20. The mandate of UNEP/MAP has increased significantly over time, addressing emerging issues of priority for the region. New or updated legal instruments, strategies and action plans have been adopted, whose implementation requires additional funding. The enlarged scope of action of MAP is reflected in the MTS, which are structured around seven different themes with a considerable number of strategic outcomes and outputs, aiming at achieving Good Environmental Status of the Mediterranean Sea and coast and contributing to the sustainable development of the region.

21. The scope of action of MAP was defined with the new MTS 2022-2027, which includes four thematic Programmes, on pollution and marine litter, on biodiversity and ecosystems, on climate change, and on sustainable use of natural resources, supported by one foundational Programme on governance and two enabling Programmes on monitoring and foresight, and on advocacy, communication and education. This new forward-looking MTS aims at addressing a number of new/emerging issues and topics, including LBS Regional Plans for sectors not traditionally regulated by MAP instruments (agriculture, aquaculture, sludge management etc.), new generation of transboundary CAMP, One Health approach, nature-based solutions, restoration of ecosystems, GHG emissions reduction, SOx/NOx Emission Control

Areas, sustainable blue economy including renewable energies, sustainable tourism, economic instruments and subsidies, digital transformation etc.

22. The Figure 3 below shows the progression of the budget per PoW since 2016 with the MTF remaining relatively stable especially since 2020-2021 biennium and the differences in the share between secured and non-secured external resources.

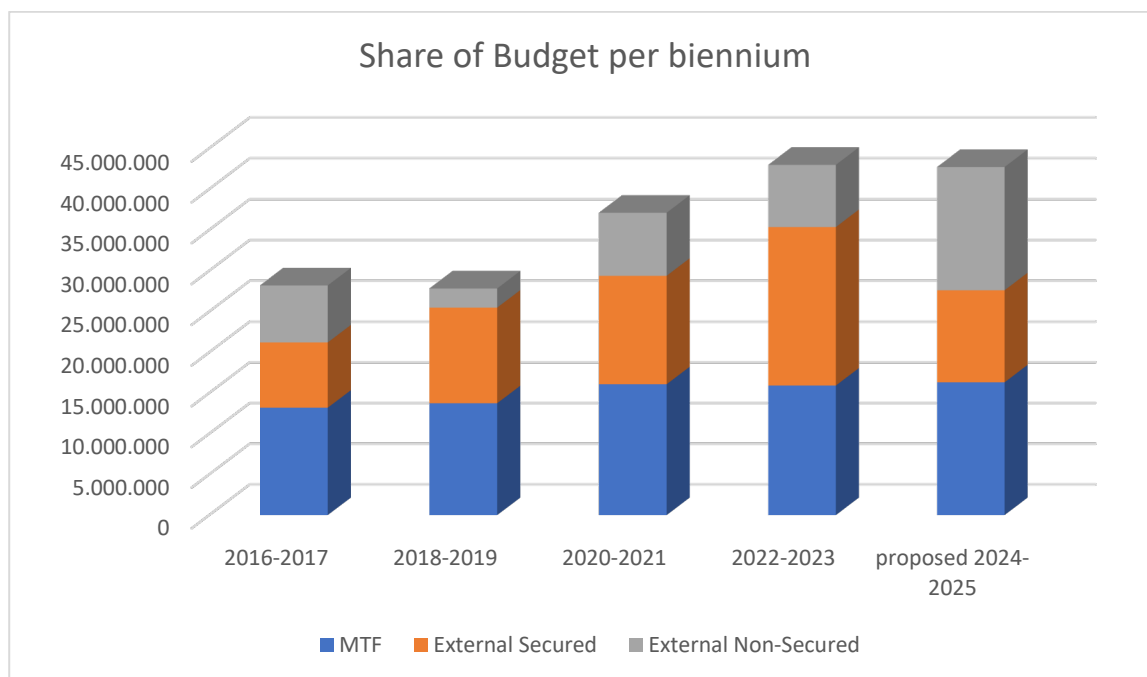


Figure 3. Share of Budget between MTF and external resources (secured and non-secured) at biennial level (2016-2017, 2018-2019, 2020-2021, 2022-2023, (proposed) 2024-2025)

23. The increased financial needs, as shown in the above Figure 3, have not been accompanied by a proportionally higher provision of resources through the assessed contributions by the Contracting Parties. As a result, the current allocation of assessed contributions (MTF) does not provide sufficient resources to fully meet the financial requirements of the biennial PoWs.

24. In 2022-2023 PoW for a total budget from MTF amounting to EUR 15.9 million (including use of MTF surplus) UNEP/MAP had mobilized at the time of the COP 22 additional resources amounting to EUR 19.4 million (7.6 million by the Secretariat and 11.8 million by the Components) and it required an additional amount of EUR 7.6 million for the full implementation of the PoW 2022-2023, large part of which was effectively mobilized during the biennium. In the proposed 2024-2025 PoW, for a total budget from MTF amounting to EUR 16.3 million (including use of MTF surplus), there is an amount of EUR 11.3 million of external resources secured to date, and an amount of EUR 15 million not yet secured.

25. In regard to the resources marked as non-secured in the proposed 2024-2025 PoW and Budget, three new large-scale EU-funded projects have been mobilised by the Secretariat to support implementation of the next biennia (2024-2025 and to some extent 2026-2027), including the ECAP MED Plus, with a total budget of USD 2,486,000, the Marine Litter MED Plus, with a total budget of USD 1,356,000 and the SEMPA project with a total budget of EUR 4,390,779, which will support key areas of MTS implementation including on Ecosystem Approach Roadmap and IMAP implementation and revision, new/updated PoM/NAP, marine litter, biodiversity and MPAs, as well as SPI approach and regional cooperation, including with the MSFD and are pending formal approval, thus expecting to reduce the amount of external resources to be mobilized.

26. Resource mobilisation efforts in the next years will continue focusing on MTS Themes/Programmes and strategic outcomes that have been proven as the most dependant on external

resources, and especially on those outcomes for which external resources are difficult to be found and secured.

27. The strategic outcomes requiring the highest rate of non-secured external funding are those related to national implementation and compliance, thematic policy development, and capacity building activities.

28. The RMS is two-fold. It first aims at ensuring that the gap in 2024-2025 overall budget is filled through fund-raising actions specifically targeted on the activities for which external funding is not yet secured. Such actions are also relevant to the next, 2026-2027, biennial budget. The second objective of the updated RMS is to identify actions that would support the mobilization of external funding in the long run, i.e. setting the ground also for the coming MTS after 2027, in order to support the implementation of the MAP programmatic objectives and actions at large. In this regard, the updated RMS aims to enable the Secretariat to enhance engagement with existing donors, and build relations and outreach to new partners and funders.

29. The RMS proposes a diversification of resource flows from a variety of donors. Such an approach would also enable the Secretariat to broaden the visibility and recognition of UNEP/MAP-Barcelona Convention and enhance the support and collaboration with new partners and donors.

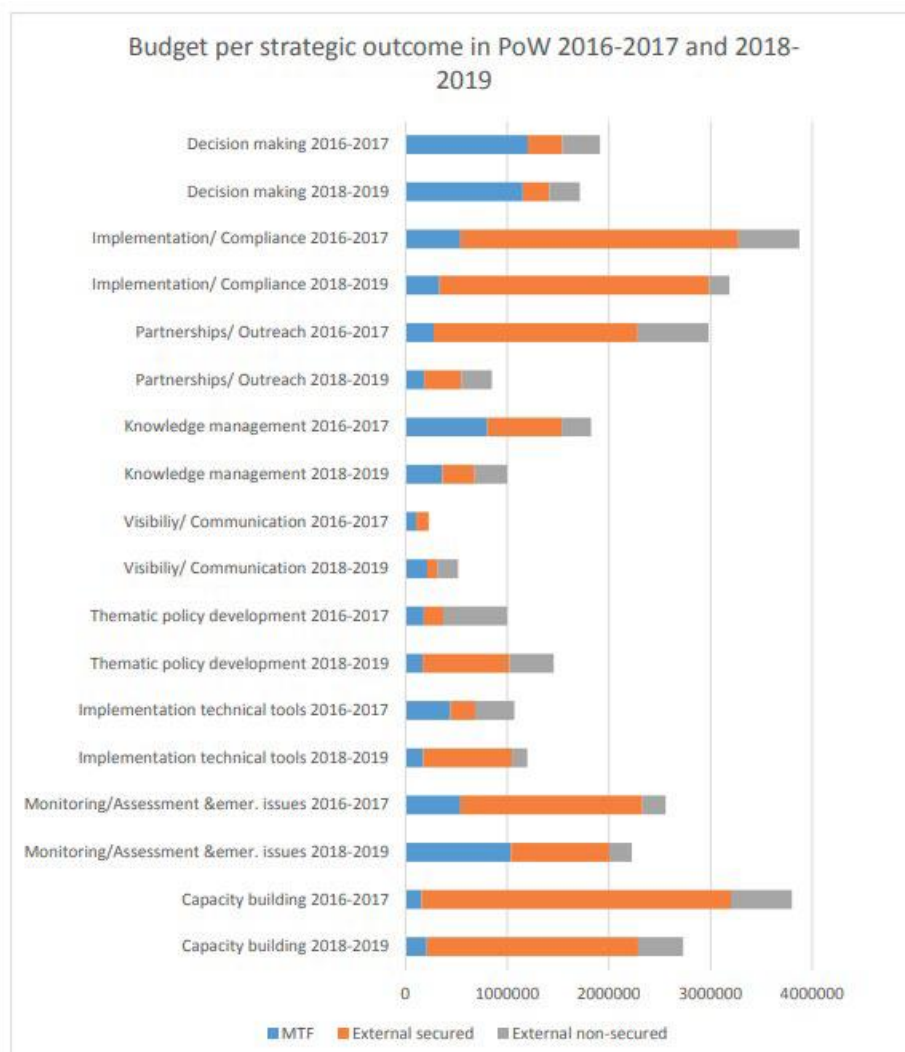


Figure 3. Budget per strategic outcome in PoW 2016-2017 and 2018-2019

6. Key actions needed to ensure effective resource mobilisation

30. Taking into account the funding situation, gaps and needs of the UNEP/MAP-Barcelona Convention system, as outlined above, and in order to ensure the effective implementation of its biennial PoWs and the overall implementation of the current and next MTSs, the updated RMS focuses on: (i) strengthening the contributions from “traditional donors”, including voluntary contribution from the Contracting Parties, and multilateral entities and MAP partners; and (ii) ensuring funding from sources not yet fully explored by MAP, including foundations, private sector and innovative mechanisms.

a. Investing more in effective outreach and communication

31. In order to increase the resource basis of the UNEP/MAP-Barcelona Convention system, it is critical to invest more in outreach and communication towards the Contracting Parties, MAP partners, key donors and the general public. Focus should be placed on promoting the impacts of MAP work and demonstrating the comparative advantages of the UNEP/MAP-Barcelona Convention system on the protection of marine environment in the Mediterranean region, especially regarding legal instruments, decision making, regional coordination, capacity building, science-policy interface, production and dissemination of environmental information, emergency response, monitoring and assessment, etc.

32. In this respect, the Coordinating Unit, in collaboration with MAP Components, has already enhanced its advocacy and communication component with a dedicated Programme 7 under the MTS 2022-2027, including a number of relevant activities, and has also organized as part of thematic finding strategies (i.e. the one for the Post 2020 SAP BIO implementation) targeted donor consultation meetings and conferences. This experience should be capitalized and further enhanced with the view to extending the audience and attracting potential new donors.

b. Reaching out to the Contracting Parties

33. Funds originating from the Contracting Parties are, and should remain, the backbone of the MAP resource base, as they provide a predictable and secure source of funding for its core mandate. It is therefore important to raise the Contracting Parties’ engagement in supporting the MAP PoW with the aim to:

- Ensure a regular and prompt payment of the assessed ordinary contributions from the Contracting Parties;
- Support an increased number of voluntary contributions from the CPs, by continuing and even strengthening cooperation agreements at strategic programme level;
- Increase the assessed ordinary contributions of the Contracting Parties in line with the growing MAP mandate, setting a commonly agreed percentage increase per year;
- Maintain an acceptable ratio between ordinary assessed and external funding for all the MTS themes and programmes.

c. Continuing and strengthening cooperation with multilateral entities and UNEP/MAP Partners

34. Funding from “traditional” donors should be maintained and if possible enhanced.

In particular:

a. With regards to the EU-funded projects and in the perspective of progressively developing a broader framework of cooperation, work should continue on the same path, while additional funding opportunities could be also explored, including funds which are not purely destined to environmental protection but are relevant to the overall MAP mandate, such as the funds from Directorate-General for Maritime Affairs and Fisheries-DG MARE, exploring in particular opportunities for partnership under the EMFAF 2021-2027, which has a financial envelop of approx. EUR 6 billion with reference to the Mission Ocean

initiative and its Mediterranean Light House project on marine Litter as well as to blue economy priorities including MSP/ICZM, but also the Directorate-General for Climate Action-DG CLIMA, Directorate-General for Research and Innovation - DG RTD on research and innovation priorities and actions in the Mediterranean on marine environment and blue economy, Directorate-General for European Neighborhood Policy and Enlargement Negotiations-DG NEAR, Directorate-General for Regional and Urban Policy (DG REGIO) on the cooperation with the transnational programmes in the Mediterranean supporting stakeholders building and implementing sub-regional projects on topics relevant to the UNEP/MAP and its Components (INTERREG EURO-MED, INTERREG NEXT SOUTH MED, INTERREG ADRION), as well as DG Joint Research Centre (JRC) for the Blue Economy Observatory and foresight studies on diverse priorities including marine environment and climate change, and DG GROW on priorities linked to circular economy etc.

b. The existing effective cooperation with GEF should be continued in the future. Although it might be challenging to receive additional funds from GEF after the large-scale MedProgramme, funding opportunities should be explored, in line with the new GEF-8 Programming directions and policy agenda, building on MAP comparative advantages and on existing partnerships with other key regional and global actors (i.e. MoU with GFCM for sustainable fisheries and biodiversity conservation goals). Links and potential areas for cooperation in the framework of GEF-8 (2022-2026) are under assessment, but based on a preliminary analysis of GEF 8 Programming Directions, the Programmes identified as being most relevant to MAP programmatic framework are the following:

- Food Systems Integrated Program - Links with Pollution, as well as assessments and foresight (MTS Programme 1, 3, 4 and 6)
- Ecosystem Restoration Integrated Program - Links with SAP BIO and restoration actions (MTS Programme 2)
- Circular Solutions to Plastic Pollution Integrated Program - Links with updated Regional Plan on Marine Litter and circular economy work (MTS Programmes 1 and 4)
- Clean and Healthy Ocean Integrated Program / Focus on agricultural run-off and wastewater from municipal settlements - Links with new LBS Regional Plans implementation (MTS Programme 1), ICZM/MSP (MTS Programme 4), and assessments and foresight (MTS Programme 6).
- Net-Zero Accelerator Integrated Program – Links with Climate Change and NbS (MTS Programme 3)

35. Based on the analysis of the past PoWs, it has been identified that the MTS cross-cutting theme/programme on climate change, in both the MTS 2016-2021 and 2022-2027 seems to be the most dependent on external funding, with a high proportion of non-secured external resources. In this regard, the MAP Secretariat should seek additional external funding opportunities to support related activities of the current and future MTS. New development funds established in response to the climate change agenda should be further explored and approached by UNEP/MAP, including the Green Climate Fund (GCF), the Adaptation Fund, etc. These funds could be pursued through joint programming and partnership collaboration with other international organizations and partners, in order to reduce workload while combining the technical expertise of the partners in joint proposal submissions. A similar approach should be followed for other MTS themes identified as more dependent on external funding, such as sustainable consumption and production.

36. Especially regarding the Green Climate Fund, its updated Strategic Plan 2024-2028 is expected to be finalized in summer 2023 and through preliminary analysis, there are links identified with MTS Programmes 3 and 4, including potential work on NDA/NAP and greening of financial policies.

37. In addition, it is important to continue strengthening the effective coordination with the MAP Components for the mobilization of resources and preparation of project proposals in a coordinated manner. Synergistic proposals should be further explored, through the Executive Coordination Panel (ECP), covering a wide range of MAP priorities and aiming at attracting more large-scale funding. The current practice of shared calls for proposal and information on on-going projects will support complementarity and amplification of impact. A standardized policy on participating and vetting externally funded projects is developed and implemented at ECP level to ensure that participation of

MAP Components in projects is coordinated by the CU and properly communicated among ECP members, and that any potential competition or overlapping is avoided.

d. Exploring opportunities for partnerships with foundations and the private sector

38. There are many foundations and private sector entities focused and engaged in the thematic areas of concern that could be enlisted in becoming partners and supporters in the implementation of national and regional priorities within the MAP mandate. This requires a coordinated approach and communication outreach to bring on board a wide range of partners as funders. Furthering relations and engagement with the private sector will require for the Contracting Parties to approve a private sector guidance policy based on the one of UNEP, and agree to specific criteria and a policy for public-private partnership development. Having an agreed policy in place will assist the Coordinating Unit and the MAP Components in the establishment of the new donor relations, especially with private sector partners. Such a guidance policy has not been yet developed for UNEP/MAP and would be an enabling factor in strengthening partnership efforts with the private sector.

i. Foundations

39. The prioritized themes of the relevant foundations indicate that most funding is going to nature/biodiversity and less to “industrial” activities, such as transport and chemicals. Surprisingly, climate change funding is not the most significant priority. Encouragingly, “sustainable communities” and “circular economy” are moving up the priority list. This shows that environmental funders are adjusting their programmes in order to ensure better coherence with political priorities and general developments.

40. MAP should aim at enhancing funding from foundations. In doing so, it is important both to prioritize foundations that are interested in the MAP priorities and activities and to build relationships, as foundations prefer not to be seen as donors receiving funding proposals, but as partners. In addition, appropriate mechanisms should be established, which would make the modality of payments more attractive to foundations. This could be done in line with the respective actions of the broader UNEP RMS.

ii. Private sector

41. There are various ways for UNEP/MAP to engage in securing resources from the private sector. Corporate fundraising is a more complicated undertaking; engagement with the private sector should be undertaken on the basis of a long-term strategic partnership, offering more than just money. UNEP/MAP should first develop and adopt criteria for engagement with these entities based on the existing UNEP Policy and long-standing experience.

42. The following are a list of potential interactions that MAP could consider to establish with the private sector entities: (a) Philanthropic donations, (b) Grants from company foundations, (c) Technical support or collaboration on special activities or initiatives with the private sector entities, (d) Sponsorship of events, e.g. UN Coastal Clean Up Day, World Water Day, World Oceans Day, World Biodiversity Day, Mediterranean Coast Day and other similar events, and publications, (e) Exchange or donation of technical skills, services, personnel, etc. (for example, WFP has a special relationship with a private courier company and the company advises WFP on logistical issues and other efficiency factors in delivery issues).

43. With the view to building partnerships with the private sector and raising financial and non-financial contributions, there is a need to identify and map priority sectors, niche markets and industries relevant to MAP activities and assess appropriate tools and funding mechanisms for private sector contributions. Opportunities for tapping onto Corporate Social Responsibility (CRS) Funds should be also explored.

iii. Blended finance

44. According to the Organisation for Economic Co-operation and Development (OECD), blended finance is defined as *the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries, where additional finance refers to commercial finance that does not primarily target development outcomes in developing countries, while development finance is public and private finance that is being deployed with a development mandate*³.

45. This model of financing is being pursued in the framework of the Plan of Action for a Model Mediterranean Sea (PAMEx) Local Investment Finance Facility (PLIFF) which leverages Public Private Partnership (PPP) to develop and finance projects at the sub-national level with local private sector a public - private independent finance facility. PLIFF aggregates existing financing solutions – that typically operate independently – in a unique catalytic financing platform, where both public and private blended funds are jointly mobilized through a single investment and technical assistance body. This innovative blended-approach will rely on a ‘de-risking approach’ and the ‘systematic buying’ of financial products by assets owners and/or PLIFF financial partners, thus allowing local and mid-size projects financing in the Mediterranean region.

46. UNEP/MAP engagement with PLIFF can be operationalized in three main streams:
- a. As a projects’ proposals developer, UNEP/MAP system can actively contribute to identify projects’ opportunities and draft projects’ proposals with partners which are aligned and contribute to the priorities and objectives of MAP Barcelona Convention.
 - b. As a member of PLIFF scientific committee, MAP can contribute to the assessment of projects’ proposals, including in terms of climate and biodiversity impact, against the agreed targets of MAP system.
 - c. UNEP/MAP and its Components could also benefit directly support from projects’ funding and act as a project implementer mobilizing its project management experience and internal expertise.
47. PLIFF is an interesting example of innovative finance mechanism that could benefit UNEP/MAP in its resource mobilization efforts, while other similar finance mechanisms should be further explored.

e. New and innovative source of funding

48. New and innovative funding possibilities should be further explored by UNEP/MAP. These may include crowd-funding, lotteries, environmental levies, etc.

49. To this end, examples that could be examined include the introduction of a 1 Euro surcharge on the ticket of passenger travelling on cruise ships in the Mediterranean in cooperation with the International Maritime Organization (IMO), the establishment of partnerships with regional hotel chains and tour operators to promote and distribute to their guests or clients a short promotional material on UNEP/MAP, and the production of a pin or ocean blue bracelet with the MAP’s logo to be given as a token of appreciation to the voluntary contributors or further employed as a marketing tool to promote UNEP/MAP and expand its awareness to wider audiences.

7. Communication tools and strategies to approach donors

50. The initiatives proposed in the updated RMS will also require that the Coordinating Unit enhances its communications functions, with the view to finding new and innovative ways to showcasing the work undertaken in the framework of the UNEP/MAP-Barcelona Convention system, and especially the impacts of this work, as well as to improving MAP visibility and public recognition towards funding partners, new potential donors and the general public.

³ [https://one.oecd.org/document/DCD/DAC\(2020\)42/FINAL/En/pdf](https://one.oecd.org/document/DCD/DAC(2020)42/FINAL/En/pdf)

51. In any approach to mobilizing resources for the forthcoming programmatic periods, UNEP/MAP will have to contend with other institutions and initiatives in an increasingly competitive and demanding funding environment. Therefore, emphasis should be placed on raising awareness of the comparative advantages of UNEP/MAP-Barcelona Convention regarding policy development, implementation, regional coordination and capacity building potential.

52. In this regard, developing new relations with this wide range of partners will require dedicated staff with skill sets and experience in interacting with the present and new funding partners. The promotion of communication activities under the RMS should be also linked with the Communication Strategy.

53. In order to support the communication efforts towards enhanced resource mobilisation it is advisable for the Coordinating Unit, in collaboration with MAP Components, to organize annual donor consultation meetings, possibly on the occasion of major international ocean-related events such as Our Ocean conferences and ocean races and private sector fairs and events. Funding proposals and concept notes could be prepared and presented at the donors meeting, involving relevant resource mobilization or communication staff and with the promotion by volunteer Contracting Parties. This could help the enhanced coordination between the Coordinating Unit and MAP Components, develop a common approach towards donors, and help minimize staff travels to present individual proposals to donors.

54. Bilateral meetings with interested donors should be also considered during the preparation phase of the PoWs, focusing on relative parts/outcomes of the PoW requiring external funding, taking into account donors specific priorities, and building on past experiences.

55. Furthermore, with the view to approaching donors, information fiches on projects under implementation, would be very useful, including also projects that are developed but not yet funded.

56. The Secretariat should strengthen its participation in relevant global, regional and national meetings and conferences, as well as in events of the foundations where contacts can be established with funders and opportunities for funding of specific activities can be explored. Such efforts could be pursued in collaboration with other regional organizations, such as GFCM, UfMS, etc. UNEP/MAP could also develop a flexible and mobile exhibit to showcase at various meetings and events its published materials and documentation relevant to its thematic and strategic objectives.

8. The way forward

57. The Secretariat will prepare timelines for the various deliverables and initiatives proposed herein with the relevant budgetary requirements. This will make it possible for UNEP/MAP to evaluate the steps and measures taken to ensure it is on track with the deliverables and effectively demonstrate progress made, while also informing the Contracting Parties of any obstacles encountered.

58. The Contracting Parties' support is essential in ensuring the successful implementation of the RMS and mitigating unforeseen circumstances that could adversely impact and/or delay the implementation of the RMS.

59. The role of the ECP should be further strengthened in the identification of external resources and the preparation of project proposals. Focus can be placed on the development of synergistic proposals for potential donors, displaying the opportunities for delivering strategic outcomes by using the full MAP system in an effective and integrated manner, and promoting the development of multi-donor funds.

60. The tables in the Appendix list the strategic outcomes and key outputs of the MTS and indicate possible donors to be approached for their funding. This is not meant to be a comprehensive listing of funding sources to be approached but rather an indicative one; it represents an analysis of existing funding instruments and agencies (at the global, regional and national/bilateral levels), taking into account their

priorities and mandates in relation to the marine and coastal environment, and their matching with the strategic outcomes and key outputs of the MTS, at a general level.

9. Recommendations

61. The following recommendations are addressed to the Secretariat and the Contracting Parties. They build upon the existing RMS recommendations and introduce new elements and proposals to enhance the potential of UNEP/MAP in securing new resources. Some of the recommendations can be implemented without additional or new resources provided, while others will require further resources to be allocated before these specific recommendations can be implemented.

1. Strengthen the commitment of Contracting Parties, including through a regular yearly increase of the assessed contributions;
2. Ensure adequate funding to fill the gaps from non-secured resources for the activities of PoW 2022-2023, focusing on strategic outcomes of the MTS that appear to be the most dependent on external funding;
3. Continue the effective coordination between the Coordinating Unit and the MAP Components for the mobilization of resources and preparation of project proposals following the standardized coordinated process for projects vetting and participation established in the ECP;
4. Continue and give high priority to the implementation and recommendations for better coherence, coordination and programme management as outlined in the forward of the Governance Paper;
5. Make the management of donor funds and approaches an integral part of the programme management cycle, ensuring that all approaches for funding are guided by the MTS and the biennial Programmes of Work;
6. Develop a system for close coordination at the country level between Focal Points of UNEP/MAP, MED POL and RACs, and GEF focal points, EU focal points and/or delegations, UN country offices, in order to help Contracting Parties to coordinate internally and to exploit funding opportunities;
7. Encourage Contracting Parties to continue providing and to enhance voluntary contributions for the implementation of the MTS and the biennial PoWs based on strategic large-scale multi-year Cooperation Agreements;
8. Maintain close cooperation with the EU and, working through the EU MAP Focal Point, identify funding opportunities relevant to the approved Mid-Term Strategy;
9. Enhance participation in EU funded projects, analyzing potential funding opportunities on various little accessed funding sources relevant to PoW implementation, i.e. in addition to the ENRTP GPGC and DG NEAR projects, explore funding opportunities under other services, i.e. DG MARE (EMFAF), DG REGIO, DG RTD etc.;
10. Identify additional funding opportunities from GEF, in line with GEF- 8 Programming directions and policy agenda, considering the possibility of joint proposals using existing partnerships with key regional and global actors;
11. Explore additional funding opportunities relating to the MTS themes, in particular on climate change adaptation, such as the Green Climate Fund, the Adaptation Fund, etc.;
12. Establish or reinforce the cooperation with major international financial institutions such as EBRD, EIB, World Bank, IsDB;
13. Establish relationships with major foundations, including the European Foundation Centre (EFC), and assess ways to improve the existing fund reception mechanisms in order to make them more attractive to possible donors;

14. Identify areas of collaboration with the private sector, including by mapping key relevant sectors and themes, identifying donors with funding priorities matching the MTS themes most in need for external funding, and assessing tools and funding mechanisms to receive contributions from the private sector as well as opportunities for tapping on to Corporate Social Responsibility (CSR) funds and to specific technical partnerships (for example opportunistic monitoring activities);
15. To this end, prepare specific private sector guidelines for UNEP/MAP, in line with relevant UNEP guidelines, to engage and develop the long-term collaboration with the private sector partners. Ensure the guidelines developed would protect the organization from reputational risks and would secure the credibility of the organization, while on the same time they will promote environmental protection and sustainable development;
16. Identify and analyze potential new/innovative funding opportunities, including, as appropriate, green financial products, green investment mechanisms, crowdfunding, lotteries, environmental levies, etc., and make best use of innovative communication tools, such as social media;
17. Strengthen and operationalize partnerships with other regional actors in approaching possible donors, by bringing an integrated plan of activities to the table;
18. Establish a monitoring and evaluation mechanisms to measure progress on the updated RMS and prepare timelines for deliverables and report on results to the Contracting Parties;
19. Design and implement new communication tools and strategies, to approach donors, putting the emphasis on the comparative advantages of the UNEP/MAP-Barcelona Convention system and the positive impacts of MAP action;
20. Organize consultation meetings with donors especially in the phase of preparation of the PoW;
21. Strengthen awareness of Contracting Parties on funding opportunities and best practices, which are relevant to them to meet their obligations under the Barcelona Convention and the MTS implementation;
22. Increase MAP representation in relevant meetings and events, and MAP visibility towards donors, foundations, the private sector and the general public;
23. Keep the project fiches compilation regularly updated, including for projects not yet funded, as a tool to be used for communication and resource mobilization purposes;
24. Increase human resource capacity for resource mobilization as well as for relevant communication activities in the Coordinating Unit; establish a mechanism to consistently manage the pool of projects financed by extra budgetary resources to consistently and efficiently support the management of external resources and the implementation of the activities that they fund.

Appendix 1. Indicative resource needs and potential donors and partners for the Implementation of the UNEP/MAP MTS 2022-2027

TABLE 1. Strategic Outcomes for Programme 1:

Towards a pollution and litter free Mediterranean Sea and Coast embracing circular economy

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
1.1. Strategies and Action plan addressing marine litter and plastics developed and implemented through comprehensive, coherent and collaborative approaches	Bilateral donors ⁴ , EU, IGOs, Regional organizations, GEF, National entities, European Investment Bank, European Bank for Reconstruction, and Development World Bank, IFA, IMO Private sector, Foundations,	3,181,445 €	- World Bank - <u>PROBLUE</u> trust fund - Foundation Tara Océan - Foundation of the Sea (Fondation de la Mer) - Fond Français pour l'Environnement Mondial (FFEM) - <u>Zukunft Umwelt Gesellschaft grant program against marine litter</u> - <u>Plastic solutions fund</u> – Philanthropic foundations - Italian Ministry of Environment and Energy Security (MASE) - EU Global Public Goods and Challenges' (GPGC) - EU (e.g. Switch Med); DG NEAR - INTERREG NEXT MED South; INTERREG EURO MED; INTERREG ADRIATIC - DG JRC Ellen Macarthur Foundation (Systemic Initiatives, Europe) - PAMEx Local Investment Finance Facility - GEF-8 Circular Solutions to Plastic Pollution Integrated Program - GEF-8 Clean and Healthy Ocean Integrated Program - GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and

⁴ Bilateral donors also include ad hoc voluntary contributions from Contracting Parties

			Minamata Conventions. - UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - Horizon EUROPE Initiative - SIDA: Environment and Climate - Total Energies Foundation, Actions on Climate, Coastal Areas and Oceans
1.2. A holistic and efficient response to land and sea -based pollution, as a part of overall Ecosystem Approach policy for the Mediterranean, (chemicals, contaminants, eutrophication, noise, oil and emerging pollution) for a sustainable Mediterranean coastal and marine ecosystem is implemented	Regional organizations, GEF Green Climate Fund, EU, Bilateral donors, Private sector partners Foundations, National entities, European Investment Bank, European Bank for Reconstruction, and Development World Bank, IFA, IGOs, IMO UNDP, UNFCCC, UN/DESA, UNESCO, UNEP	22,034,603 €	- Italian Ministry of Environment and Energy Security (MASE) - European Structural and Investment Funds, e.g., EMFAF, ERDF - GEF-8 Food Systems Integrated Programme - GEF-8 Clean and Healthy Ocean Integrated Program - GEF 7 Strategy: International Waters Focal Area. - GEF 7 Strategy: Chemicals and Waste Focal Area - UfM: “Sustainable Development” Theme – “Water Environment and Blue Economy” and “Energy and Climate Action”. - EU (e.g. Switch Med) - DG JRC Horizon EUROPE Initiative - SwitchMed Programme - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - EU ESF (European Science Foundation) - SIDA: Environment and Climate eliminating chemicals covered by the Stockholm and Minamata Conventions. - IPIECA (The global oil and gas association)
1.3. Systemic approaches for Circular Economy, eco-innovation as well as Sustainable	National Entities, EU, IGOs,	8,202,000 €	- Italian Ministry of Environment and Energy Security (MASE) - European Structural and Investment Funds, e.g., EMFAF,

Consumption and Production incorporated into key sectors of activity which are main sources of pollution	World Bank, UNDP, GEF, Private sector partners, Bilateral Donors, GEF, CBD, UNFCCC, Foundations, Innovative Financing Mechanisms Green Climate Fund, Academia, Business, Schools, UNCTAD, UNESCO, UNEP		ERDF - LIFE Programme - DG GROW - INTERREG NEXT MED South; INTERREG EURO MED; INTERREG ADRIATIC - DG JRC - Horizon EUROPE Initiative - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - GEF-8 Food Systems Integrated Programme - GEF-8 Circular Solutions to Plastic Pollution Integrated Program - GEF 7 Strategy: Chemicals and Waste Focal Area - GEF 7 Strategy: International Waters Focal Area - UNCTAD biotrade initiative - UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - SIDA: Environment and Climate - EU (Switch Med)
1.4. One Health approach developed and implemented, linking human and ecosystems health with pollution reduction and prevention, taking into account lessons learnt from the COVID-19 pandemic	WHO	1,118,657 €	- DG RTD - DG JRC - DG INTPA (CBRN CoE initiative) - DG ECHO - French Ministry of the Armies (PMG7 programme) - GEF-8 Clean and Healthy Ocean Integrated Program

TABLE 2. Strategic Outcomes for Programme 2.
Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
2.1. Ecosystem resilience improved through restoration of those with best regeneration potential	EU, UNESCO, FAO, UNEP, Foundations, Private sector, Bilateral donors ACCOBAMS, Businesses,	5,000,000 €	- <u>International Institute for Sustainability</u> - Green Climate Fund - GEF-8 Ecosystem Restoration Integrated Program - PAMEx Local Investment Finance Facility - French Facility for Global Environment (FFEM) - French Development Agency (AFD – Territorial and Ecological Transition) - Leonardo DiCaprio Foundation - Prince Albert II of Monaco Foundation - UfM: “Sustainable Development” Theme – “Water Environment and Blue Economy” and “Energy and Climate Action”. -
2.2. Comprehensive, coherent Mediterranean network of well managed MPAs and OECMs in place, expanded, effective and sustainable	Bilateral donors, CBD, UNESCO, UNEP, EU, GEF, FAO WB, UNDP, Other relevant IGOs, Foundations,	10,000,000 €	- MedFund & MedPAN - PAMEx Local Investment Finance Facility - Fondation Mava 2.0 - EU (DG-NEAR) - Italian Ministry of Environment and Energy Security (MASE) - Leonardo DiCaprio Foundation - EU INTEREG MED (<i>SPA/RAC, the UNEP/MAP biodiversity centre, is not eligible for this funding window</i>) - INTERREG NEXT South (<i>SPA/RAC, the UNEP/MAP</i>

	Private sector, ACCOBAMS, GFCM, IUCN, The Medfund, MedPAN, WWF, Businesses, Private philanthropies, Corporate foundations		<i>biodiversity centre, is eligible for this funding window)</i> - EU Life+ - GEF 7 Biodiversity Focal Area: Objective iii: Strengthen Biodiversity Policy and Institutional Frameworks. - GEF 7 Strategy: International Waters Focal Area. Objective ii: Improving Governance in Areas Beyond National Jurisdiction (ABNJ) - GEF-8 Ecosystem Restoration Integrated Program - UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - French Facility for Global Environment (FFEM) - French Development Agency (AFD – Territorial and Ecological Transition) - Prince Albert II of Monaco Foundation - Pew Bertarelli Ocean Legacy - Fondation Didier et Martine Primat - Flotilla Foundation - Wyss Foundation
2.3. Mediterranean endangered and threatened species and key habitats in favorable status of conservation	CBD, FAO, CMS, CITES, GFCM, EU, EBRD, WB, Bilateral donors IPBES, TEEB, Foundations, IGOs, National Entities,	6,900,000 €	- EU - Italian Ministry of Environment and Energy Security (MASE) - French Facility for Global Environment (FFEM) - GEF-8 Ecosystem Restoration Integrated Program - GEF 7 Biodiversity Focal Area: Objectives i: Mainstream Biodiversity Across sectors as well as within Production Landscapes and Seascapes Objective ii: Reduce Direct Drivers of Biodiversity Loss Objective iii: Strengthen Biodiversity Policy and Institutional Frameworks. - GEF 7 Strategy: International Waters Focal Area. Objective i: strengthening Blue Economy Opportunities Objective iii: Enhance Water Security in Freshwater Ecosystems

	UNESCO, Environmental Organizations/NGO, IUCN, WWF Foundations, Research institutes, UNDP, IMO, Private sector, ACCOBAMS, BirdLife CMS International and its National Partners MEDASSET Businesses		- UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - SIDA: Environment and Climate, and Sustainable Societal Development - Leonardo DiCaprio Foundation - Prince Albert II of Monaco Foundation (e.g. Blue initiative) - EU Global Public Goods and Challenges' (GPGC) - Horizon 2020 Initiative - French Development Agency (AFD – Territorial and Ecological Transition) - Ministry for Europe and Foreign Affairs of France - Monk Seal Alliance; (Med Monk Seal: monk seal monitoring in low density areas) - Blue Marine Foundation (BLUE); The Conservation of Marine Turtles in the Mediterranean Region: Enhancing the Protection of Marine Turtles, preserving ecosystem function & climate resiliency. - Office français de la Biodiversité (OFB) - Mediterranean Posidonia Network
2.4. Non -indigenous species introductions minimized and introduction pathways under control	IPBES, TEEB, Foundations, IGOs, CBD, GEF EU, National entities, UNESCO, GFCM, IMO	1,500,000€	- EU - French Facility for Global Environment (FFEM) - Leonardo DiCaprio Foundation - Prince Albert II of Monaco Foundation (e.g., Blue initiative) - GEF 7 Biodiversity Focal Area: Objective iii: Strengthen Biodiversity Policy and Institutional Frameworks. - SIDA: Environment and Climate, and Sustainable Societal Development - Office français de la Biodiversité (OFB) – Espèces toxiques envahissantes

**TABLE 3. Strategic Outcomes for Programme 3.
Towards a Climate Resilient Mediterranean**

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
3.1. Legal, policy and institutional framework strengthened at the regional and national level to efficiently address climate change related challenges (flooding, erosion, land degradation, pollution, disasters etc.)	National authorities National entities, EU, Bilateral donors EBRD, UNFCCC, CBD, UNDP Green Climate Fund, SCCF Business Council on Climate Change, Adaptation Fund, GEF	230,500 €	- CREWS initiative – World Bank - Conservatoire du Littoral, France (Délégation Europe et International), France - DG JRC - DG RTD - Rhône Méditerranée Corse Water Agency, France - GEF Programming Strategy on Adaptation to Climate Change for the LDCF and the SCCF and Operational Improvements - GEF 7 Climate Change Focal Area. Objective i: Promote Innovation and Technology Transfer for Sustainable Energy Breakthroughs Objective ii: Demonstrate Mitigation Options with Systemic Impacts Objective iii: Foster Enabling Conditions for Mainstreaming Mitigation Concerns into Sustainable Development Strategies. - GEF-8 Net-Zero Accelerator Integrated Program
3.2. Nature-based, technical solutions promoting prevention or reduction of the impact of climate change on coastal and marine ecosystems and increase resilience to climatic variability and change	Bilateral donors, Innovative Financing Mechanism, Private sector, EU, National Authorities, Adaptation Fund, CBD,	2,384,318 €	- Italian Ministry of Environment and Energy Security (MASE) - DG JRC - DG RTD - Conservatoire du Littoral, France (Délégation Europe et International), France - Rhône Méditerranée Corse Water Agency, France

	UNFCCC, EU, SCCF GEF		- UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - SIDA: Environment and Climate, and Sustainable Societal Development - GEF Programming Strategy on Adaptation to Climate Change for the LDCF and the SCCF and Operational Improvements - GEF 7 Climate Change Focal Area. Objective i: Promote Innovation and Technology Transfer for Sustainable Energy Breakthroughs Objective ii: Demonstrate Mitigation Options with Systemic Impacts. Objective iii: Foster Enabling Conditions for Mainstreaming Mitigation Concerns into Sustainable Development Strategies. - GEF-8 Clean and Healthy Ocean Integrated Program - GEF-8 Net-Zero Accelerator Integrated Program - Total Energies Foundation, Actions on Climate, Coastal Areas and Oceans
3.3. Better understanding and knowledge of climate change and its impacts on environment and development	UNFCCC, FAO, UNESCO, GEF National Entities, EU, Adaptation Fund, CBD, SCCF Green Climate Fund	508,818 €	- Italian Ministry of Environment and Energy Security (MASE) - INTERREG NEXT MED South; INTERREG EURO MED; INTERREG ADRIATIC - French Development Agency (AFD – Territorial and Ecological Transition) - Conservatoire du Littoral, France (Délégation Europe et International), France - Rhône Méditerranée Corse Water Agency, France - GEF 7 Strategy: International Waters Focal Area. - GEF Programming Strategy on Adaptation to Climate Change for the LDCF and the SCCF and Operational Improvements - GEF 7 Climate Change Focal Area. Objective i: Promote Innovation and Technology Transfer for Sustainable Energy Breakthroughs Objective ii: Demonstrate Mitigation Options with Systemic Impacts. Objective iii: Foster Enabling

			Conditions for Mainstreaming Mitigation Concerns into Sustainable Development Strategies.
3.4. Mitigation of Climate Change progressed through Circular Economy, increased resource efficiency and carbon neutrality business strategies	Private sector Innovative Financing Mechanisms EU, Bilateral donors, UNFCCC, Green Climate Fund, SCCF Business Council on Climate Change, National Entities Adaptation Fund, CBD, GEF	134,500 €	- EU (SwitchMed) - INTERREG NEXT MED South; INTERREG EURO MED; INTERREG ADRIATIC - DG JRC - DG RTD - DG NEAR - GEF Programming Strategy on Adaptation to Climate Change for the LDCF and the SCCF and Operational Improvements - GEF 7 Climate Change Focal Area. - Objective i: Promote Innovation and Technology Transfer for Sustainable Energy Breakthroughs Objective ii: Demonstrate Mitigation Options with Systemic Impacts - Objective iii: Foster Enabling Conditions for Mainstreaming Mitigation Concerns into Sustainable Development Strategies. - <u>ADEME MeetMed</u>

TABLE 4. Strategic Outcomes for Programme 4.
Towards the sustainable use of coastal and marine resources including circular and blue economy

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
4.1. Sustainability of coastal and marine resources achieved through the synergetic implementation of planning and management approaches, including the adequate consideration of Land-Sea Interactions (LSI)	Bilateral donors, EU, GEF, UNESCO National institutions, EBRD, FAO, AfDB	962,500 €	- GEF 7 Strategy: International Waters Focal Area. - DG MARE on MSP (EMFAF) - Italian Ministry of Environment and Energy Security (MASE) - French Development Agency (AFD – Territorial and Ecological Transition) - Conservatoire du Littoral, France (Délégation Europe et International), France (Délégation Europe et International) - Rhône Méditerranée Corse Water Agency, France - GEF 8 Food Systems Integrated Program - GEF-8 Clean and Healthy Ocean Integrated Program - GIZ (German Cooperation)
4.2. Sustainable Blue and Green Economy tools and approaches in the context of Sustainable Development and MSSD implementation	FAO, UNESCO, EBRD, AfDB Private sector, Innovative Financing Mechanisms EU, Foundations, GEF	1,566,917 €	- EU (Switch Med) - DG MARE (EMFAF) - INTERREG NEXT MED South; INTERREG EURO MED; INTERREG ADRIATIC - DG JRC - DG RTD - DG NEAR - DG GROW - DG REGIO - GEF-8 Food Systems Integrated Program - GEF-8 Circular Solutions to Plastic Pollution Integrated Program - GEF-7 Chemicals and Waste Focal Area. Objective:

			eliminating chemicals covered by the Stockholm Convention and Minamata Conventions that are used in or emitted from industrial and agricultural sectors.
4.3. Innovative environmental management and economic instruments implemented for the protection and efficient use of coastal and marine resources	Bilateral donors EU	237,500 €	- DG MARE (MSP and BlueInvest)
4.4. Measures defined within the Mediterranean Offshore Action Plan applied at regional level and by each Contracting Party within their jurisdiction to ensure the safety of offshore activities and reduce their potential impact on the marine environment and its ecosystem	Foundations, Regional organizations, GEF Green Climate Fund, EU, Bilateral donors, Private sector	129,854 €	- Italian Ministry of Environment and Energy Security (MASE) - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - European Structural and Investment Funds, e.g. EMFF, ERDF - GEF 7 Strategy: International Waters Focal Area. Objective i: strengthening Blue Economy Opportunities - GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and Minamata Conventions. - IOGP (International Association of Oil & Gas Producers)

TABLE 5. Strategic Outcomes for Programme 5:**Governance**

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
5.1. Effective Implementation and Enforcement by the Contracting Parties of the Barcelona Convention, its Protocols, MAP Policies, including Ecosystem Approach related COP decisions, the MSSD and Programmes of Measures achieved at regional and national levels	Bilateral donors EU National governments and regional development institutions GEF, International Development Law Organization (IDLO) could be a potential partner for technical/legal assistance to countries. Global Foundations could be funders	512,565 €	- PAMEx Local Investment Finance Facility - French Development Agency (AFD – Political and Civic Transition; Territorial and Ecological Transition) - Spanish Agency for International Development Cooperation (AECID) (Environment and climate change) - World Bank (Regional Integration; Environmental policies and institutions) - GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. - UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - Swedish International Development Cooperation Agency (SIDA): Environment and Climate
5.2. Systemic strengthening and effective functioning and delivery of MAP decision-making and advisory bodies ensured, and efficiency enhanced with new digital approaches	Bilateral donors, GEF, EU Private-public partnerships and Foundations, World Business Development Council National Institutions, Regional Entities, Bilateral donors	2,478,615 €	- EU (Switch Med) - DG NEAR - DG DIGI, Connecting Europe Facility (CEF Digital) - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - GEF 7 Biodiversity Focal Area: Objective ii: Reduce Direct Drivers of Biodiversity Loss - Conservatoire du Littoral, France (Délégation Europe et International), France - Rhône Méditerranée Corse Water Agency, France
5.3. Policy coherence and complementarity ensured among	Bilateral Donors, EU,	91,500 €	- Italian Ministry of Environment and Energy Security (MASE) - French Development Agency (AFD – Political and Civic

relevant work at global, regional and national levels and among MAP-Barcelona Convention system's policy and regulatory instruments	Regional Development Banks, UNDP, UNFCCC, IGOs, GEF UN Sustainable Development Fund, Adaptation Fund, other similar funds Private-public partnerships and Foundations, World Business Development Council		Transition; Territorial and Ecological Transition) - World Bank (Regional Integration; Environmental policies and institutions) - GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. - GEF 7 Biodiversity Focal Area: Objective ii: Reduce Direct Drivers of Biodiversity Loss - UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" - EU (Switch Med) - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - EU DG INTPA - EU DG ENV
5.4. Enhanced partnerships and multi-stakeholder engagement, including with the private sector and science policy interface	Bilateral Donors, EU, Regional Development Banks, UNDP, UNFCCC, IGOs, GEF, Private sector/foundations UN Sustainable Development Fund, Adaptation Fund, other similar funds Regional Organizations, UfM, International Environmental Organizations, World Business	1,703,575 €	- Italian Ministry of Environment and Energy Security (MASE) - DG JRC - DG MARE - DG GROW - DG NEAR - French Development Agency (AFD – Political and Civic Transition; Territorial and Ecological Transition) - World Bank (Regional Integration; Environmental policies and institutions) - GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. - UNFCCC: "Adaptation and Resilience", "Mitigation", "Action on Climate and SDGs" - EU Global Public Goods and Challenges' (GPGC) - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - GEF 7 Strategy: Chemicals and Waste Focal Area Objective: eliminating chemicals covered by the Stockholm and

	Development Council Local and subnational governments networks (MedCities, ICLEI, R20, etc) Business platforms (Business for Nature, Finance4Nature, Entreprises pour l'Environnement, etc.)		Minamata Conventions. - EU (Switch Med)

**TABLE 6. Strategic Outcomes for Programme 6:
Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making**

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
6.1. Inclusive and participatory foresight activities conducted at regional and national and local levels, with associated capacity building	Bilateral donors, Private sector entities and Foundations, European Investment Bank, European Bank for Reconstruction, and Development, EU GEF, IGOs Foundations, Scientific institutions Foundations, Universities and Educational institutions	566,000 €	- Italian Ministry of Environment and Energy Security (MASE) - DG JRC - European Neighbourhood Instrument (ENI) - EU Global Public Goods and Challenges' (GPGC) - SIDA: Regional Development Cooperation - Prince Albert II of Monaco Foundation (e.g. Blue initiative) (e.g. Blue initiative) - Environment and Energy Management Agency (ADEME), France (European Energy Network) - Rhône Méditerranée Corse Water Agency, France - GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. - GEF-8 Clean and Healthy Ocean Integrated Program - UfM: "Sustainable Development" Theme – "Water Environment and Blue Economy" and "Energy and Climate Action". - Global Partnership for Education (GPE) - The World Bank (IBRD IDA): Education for All
6.2. Science -based IMAP, foresight and other assessments and assessment tools for strengthened science -policy interface and decision making	Bilateral donors, Private sector entities and Foundations, European Investment Bank, European Bank for Reconstruction, and	1,769,840 €	- Italian Ministry of Environment and Energy Security (MASE) - DG JRC - European Neighbourhood Instrument (ENI) - EU Global Public Goods and Challenges' (GPGC) - SIDA: Regional Development Cooperation

	Development, EU GEF, IGOs Foundations, Scientific institutions Foundations, Universities and Educational institutions GPA Technical cooperation with Shipping Companies, Research institutes CBD, UNDP, National Entities IMO, UNESCO, IUCN		- Prince Albert II of Monaco Foundation (e.g. Blue initiative) (e.g. Blue initiative) - Environment and Energy Management Agency (ADEME), France (European Energy Network) - Rhône Méditerranée Corse Water Agency, France - GEF 7 Strategy: Biodiversity, Climate Change, Chemicals and Waste, and International Waters Focal Areas. - UfM: “Sustainable Development” Theme – “Water Environment and Blue Economy” and “Energy and Climate Action”. - Global Partnership for Education (GPE) - The World Bank (IBRD IDA): Education for All - UNFCCC: “Adaptation and Resilience”, “Mitigation”, “Action on Climate and SDGs” - French Facility for Global Environment (FFEM) - Horizon 2020 Initiative - Leonardo DiCaprio Foundation - Prince Albert II of Monaco Foundation (e.g. Blue initiative) - GEF 7 Strategy: International Waters Focal Area. Objective i: strengthening Blue Economy Opportunities Objective iii: Enhance Water Security in Freshwater Ecosystems - Conservatoire du Littoral, France (Délégation Europe et International), France
6.3. IMAP implementation and Environment and Development Observation provide updated and quality assured data in support of decision-making by Contracting Parties and assessment of GES	EU, Bilateral Donors, Private sector entities engaged in Informatics, IT companies (potentially)	1,111,220 €	- Italian Ministry of Environment and Energy Security (MASE) - GEF-8 Clean and Healthy Ocean Integrated Program - GEF 8 Food Systems Integrated Program

**TABLE 7. Strategic Outcomes for Programme 7:
For informed and consistent advocacy, awareness, education and communication**

Strategic Outcomes	Main Possible Donors and Partners	Resources Required (€)	Indicative list of possible donors' strategies and funding instruments of potential relevance to the individual outcomes.
7.1. Stakeholders and policy makers properly informed about the state of the Mediterranean Sea and coast and aware of the environmental priority issues	Foundations, Communication and public relation networks (pro-bono services)	878,995 €	- Italian Ministry of Environment and Energy Security (MASE) - European Neighbourhood Instrument (ENI) - EU Global Public Goods and Challenges' (GPGC) - Prince Albert II of Monaco Foundation (e.g. Blue initiative) - Ellen Macarthur Foundation (Systemic Initiatives, Europe)
7.2. Citizen and general public awareness and outreach raised through citizen science and digital campaigns	Foundations, Communication and public relation networks (pro-bono services)	558,733 €	- Fondation Good Planet - Italian Ministry of Environment and Energy Security (MASE) - European Neighbourhood Instrument (ENI) - EU Global Public Goods and Challenges' (GPGC) - Prince Albert II of Monaco Foundation (e.g. Blue initiative) - Ellen Macarthur Foundation (Systemic Initiatives, Europe) - IOC UNESCO (ocean decade)
7.3. Towards a digital transformation: use of digital technologies to improve networking and MAP visibility	Foundations, Communication and public relation networks (pro-bono services)	93,000 €	- Italian Ministry of Environment and Energy Security (MASE) - European Neighbourhood Instrument (ENI) - EU Global Public Goods and Challenges' (GPGC) - Prince Albert II of Monaco Foundation (e.g. Blue initiative) - Ellen Macarthur Foundation (Systemic Initiatives, Europe)

Annex V
MAP PARTNER POLICY

MAP PARTNER POLICY

A. Code of conduct of MAP Partners

The objective of the Code of Conduct is to guarantee a common deontology to guide the partnership between UNEP/MAP and Partners and give greater visibility to the reciprocal commitments of both the Partners and the UNEP/MAP.

Partners, as true partners of MAP, are both privileged and committed to be involved in constructive dialogue and consultations with the Contracting Parties and the various MAP components, facilitated by the MAP Secretariat, in addressing key issues and seeking the most effective implementation of MAP's work.

MAP Partners Rights

1. MAP Partners may formulate comments, constructively criticize or make proposals on the activities of MAP and the Contracting Parties;
2. MAP Partners may make written presentations on topics relevant to the objectives of the Convention during meetings and conferences. The Secretariat shall ordinarily distribute such documents, including publishing them on the MAP website. The participation of MAP Partners includes the entitlement to have access to all documents relevant to the decision-making process produced for meetings and to circulate written statements;
3. MAP Partners do not have the right to vote;
4. The points of view of MAP Partners as expressed in the meeting must be reflected in the official report of that meeting;
5. MAP Partners have the right to be informed. To this purpose they are sent by Internet all documents prepared by the various MAP bodies which are likely to be of interest to them, in a manner that allows them sufficient time to prepare and participate effectively in the decision-making process;
6. MAP Partners have the right to access environmental information. The Secretariat and MAP components shall make environmental information available to MAP Partners without them having to state an interest, as soon as possible after their request has been submitted;
7. MAP Partners are associated as closely as possible in the various phases of preparation and follow-up of MAP's programmes and actions;
8. MAP Partners may submit in writing to the MAP Secretariat general or specific comments and suggestions on topics within their competence, concerning the implementation of MAP's objectives. The Secretariat informs the Bureau accordingly;
9. MAP Partners are invited to participate in seminars, colloquia and conferences organized by the various MAP bodies;
10. MAP Partners are invited to appoint their representatives at the periodic meetings of accredited MAP Partners, especially prior to the Meetings of the Contracting Parties;
11. Agreements may be concluded between the Secretariat or MAP bodies and the MAP Partners considered the most directly concerned/competent, in order that the latter may contribute to the execution of tasks within the framework of the MAP programme. However, partnership between UNEP MAP and MAP Partners in no way implies the automatic granting of financial assistance;
12. MAP Partners may at any point renounce the accreditation accorded to them by addressing a written notification to the Secretariat.

MAP Partners Responsibilities

1. MAP Partners include in their programmes of activities the objectives pursued by MAP and its components as expressed in the Barcelona Convention and its Protocols, in resolutions of the Mediterranean Commission on Sustainable Development (MCSDD) and in decisions of the Meetings of the Contracting Parties;
2. In order to reinforce the spirit of solidarity among the peoples of the Mediterranean, MAP Partners contribute to the raising of awareness and information of their members and more generally of the public, in order to make better known the objectives of the Barcelona Convention and its Protocols, as well as the achievements of MAP;
3. To this effect, MAP Partners disseminate relevant data and information material in meetings and other events they organize and publish documents concerning MAP activities;
4. MAP Partners regularly inform the Secretariat and the various MAP programmes and RACs about their activities as well as their contribution to achieving the objectives of MAP, mainly by sending them their information bulletins, annual reports and other relevant publications and by inviting them to participate in their public meetings and other activities where appropriate;
5. MAP Partners work to promote and reinforce compliance with the Barcelona Convention and its Protocols and to contribute to their implementation with the support of MAP Partners at the local, national and international levels.
6. MAP Partners strive to build a partnership with other stakeholders, especially the private sector, other NGOs and public authorities, with a view to undertaking promotion activities relating to the implementation of the Barcelona Convention and its Protocols;
7. MAP Partners strive to develop environmental education and training activities in the Mediterranean countries, in connection with MAP's objectives and activities;
8. MAP Partners strive to develop relationships and joint actions and synergies with other MAP Partners in the North and South of the Mediterranean;
9. According to their expertise and specific experience at local, national or regional levels, MAP Partners put at the disposal of MAP their know-how and expertise by providing advice or counsel and by participating in MAP surveys, activities or publications;
10. MAP Partners regularly keep abreast of MAP's activities, and projects by using available sources, especially the various internet sites;
11. MAP Partners provide of their own accord, or at the request of the various MAP bodies, any information, documentation or report relating to subjects under study to both the Secretariat and the various programmes and RACs;
12. MAP Partners maintain continuous relationships with the various MAP Focal Points in the countries where they are present;
13. MAP Partners contribute and participate regularly in an active manner in the MAP meetings and other activities to which they are invited;
14. In expressing their points of view, MAP Partners shall refrain from any statement, whether oral or verbal, which would infringe upon the rights of others;
15. MAP Partners must not use the opportunity of MAP meetings to express political or religious views on matters other than those directly related to the Barcelona Convention;
16. In construing the application of the foregoing responsibilities of accredited MAP Partners, account shall be taken of the differentiated capacity, resources, socio-cultural circumstances and objectives of accredited MAP Partners;
17. MAP Partners' contribution to MAP implementation as described under "Responsibilities" should be properly reported in the MAP reporting process.

Compliance with the Code of Conduct

1. In case of a complaint or dispute regarding the rights and responsibilities of MAP Partners within the MAP framework between a MAP Partner and the MAP bodies, a written complaint may be lodged with the Secretariat by the MAP Partner involved. The Secretariat strives to resolve the conflict and, if necessary, calls in a mediator appointed by the Bureau.
2. If the Secretariat is of the reasonable opinion that a MAP Partner has materially failed to comply with this Code of Conduct, then:
 - a) the Secretariat shall notify that MAP Partner of its alleged non-compliance, providing the MAP Partner with a written explanation of the grounds of such alleged non-compliance;
 - b) the MAP Partners shall have 30 days following receipt of such notice to provide the Secretariat with a written response to the alleged non-compliance;
 - c) the Secretariat shall consider the written response, and either:
 - i. accept the response and withdraw its notice; or
 - ii. serve notice on the MAP Partner that the non-compliance must be remedied within 30 days of such subsequent notice;
 - d) If the MAP Partner fails to remedy the breach of the Code of Conduct within that second 30- day period, the Secretariat may refuse to renew the MAP Partner's observer accreditation, provided that, in no circumstances shall non-compliance with this Code of Conduct be used as a means of pressurizing an MAP Partner or expelling an MAP Partner on arbitrary grounds.

B. Criteria for accreditation, renewal, withdrawal of accreditation and the relevant procedures

Part I: General conditions for accreditation

MAP Partners shall contribute to the achievement of the objectives of the MAP/Barcelona Convention and its Protocols and to the delivery of the Programme of Work of UNEP/MAP. Governmental entities as well as non-governmental entities and inter-governmental entities having an interest in the MAP, may apply for MAP Partner status.

For the purpose of the present decision the following categories are eligible to apply for obtaining MAP Partner status:

1. NGOs
2. Local Authorities
3. Academic and Scientific Institutions and Networks
4. Economic Actors and Private Sector Associations
5. Civil Society Organizations, including Women and Youth Organizations
6. Secretariats of Regional Agreements

MAP Partners should satisfy the following general conditions:

- a) be representative in the field(s) of their competence and fields of action by the Mediterranean Action Plan Barcelona Convention and its Protocols;
- b) be able, through their work, to support the achievement of the objectives of the Mediterranean Action Plan/Barcelona Convention and its Protocols;
- c) be able to make known the work of the Mediterranean Action Plan/Barcelona Convention and its Protocols in the region and/or their respective countries;
- d) be able to contribute, through a specific project or programme, to the implementation of MAP/Barcelona Convention and its Protocols programme of activities;
- e) be able to contribute, through a specific event or manifestation linked to a Mediterranean Action Plan field of activity, to public awareness-raising;
- f) be able to provide, through their specific activity or experience, expert advice on the definition of Mediterranean Action Plan policies, programmes and actions;
- g) be able regularly to disseminate information to their members, where applicable, on the standards, activities and achievements of the Mediterranean Action Plan/Barcelona Convention in their own field(s) of competence;
- h) be able to furnish, either spontaneously or at the request of the Mediterranean Action Plan's different bodies, information, documents or opinions relating to their own field(s) of competence.

Part II: Specific accreditation criteria and procedures

Accreditation

The following criteria apply:

- to have legal status; terms of reference, objectives and scope of activities related to one or more of MAP's areas of activity and to the scope of the Convention and its Protocols;
- to have existed for at least four years;
- to submit financial and activity reports from the last two years;
- to operate democratically;
- to have their regional office or headquarters in a Mediterranean country and/or to have activities in the Mediterranean and actively contribute to the objectives of UNEP/MAP;
- to demonstrate proof of general or specialised, technical or scientific competence on issues related to the activities of MAP, the Barcelona Convention and its Protocols;
- to demonstrate what contributions the MAP Partner could make to MAP and the Convention and Protocols.

Accreditation procedure:

1. The request is sent to the Secretariat 6 months before a Meeting of Contracting Parties by a MAP Partner or through a proposal from a RAC/MED POL with the consent of the concerned MAP Partner. The request is made using the application form attached as Appendix to this Annex
2. RACs' opinion sought
3. Draft Secretariat proposal submitted to the MAP Focal Point of the relevant Contracting Party
4. Decision of the Bureau on the accreditation
5. Bureau decision forwarded to the MAP Focal Points meeting and subsequently to the Contracting Parties meeting for endorsement
6. Tacit consent of the Contracting Parties meeting

Withdrawal of accreditation

Following a hearing with the MAP Partner in question, the Secretariat may withdraw accreditation if it deems that the MAP Partner no longer meets the accreditation criteria or has breached the Code of Conduct and failed to remedy such breach in accordance with the provisions of the Code of Conduct.

Total lack of participation in MAP meetings and activities over a period of 4 years will lead to the accreditation being automatically cancelled following a hearing with the MAP Partner in question.

Part III: Effects of accreditation

List of MAP Partners/Observers

The Secretariat shall draw up a list of MAP Partners and update it for each Meeting of the Contracting Parties.

Participation in MAP activities

1. Art. 8-2 of the Rules of Procedure applies as a matter of principle to international MAP Partners with no special authorisation being requested. These meetings include the various meetings of the focal points.
2. Exceptionally, and depending on the agenda being of potential interest to the national/local MAP Partners, the latter may request special authorisation from the Secretariat to attend a meeting or conference which is of direct concern to them.
3. MAP Partners accredited as observers are entitled to be appointed as members of the Mediterranean Commission on Sustainable Development in accordance with the Commission's Rules of Procedure.
4. According to art.8.1.B and 8.2 of the Barcelona Convention's Rules of Procedure and art. 5 of the Rules of Procedure of the Mediterranean Commission on Sustainable Development, MAP Partners accredited according to the afore-mentioned provisions may be represented as observers at meetings of the Commission, with the consent of its Steering Committee.
5. Accredited MAP Partners may be invited to attend RAC meetings and the steering groups for RAC activities.
6. Proposals made by a MAP Partner may be put to the vote if supported by a Contracting Party.
7. The other forms of participation and partnership are laid out in the code of conduct on rights and responsibilities of MAP Partners.

Appendix

Application form for MAP Partners Status

Please send your completed form and required documents by email to unepmap@un.org

Part A - General information

1. Name and acronym of the organization in English and French
2. Address of the Headquarters
Street Town
Country
Telephone Fax
Email Internet
site
3. Year of foundation
4. Type of organization
Association; federation, foundation, professional organization, umbrella organization
5. Organizational status

President of the organization, name, surname, address Secretary
General of the organization name, surname, address Structure and
functioning of directing bodies
Staff
Number of members
6. Funding
 - Membership fees
 - Public funding
 - Private donations
 - Other, please specify
7. Aims
Please describe briefly the goals, mandate or mission of your organization in English or French
8. Activities of your organization
Please describe activities of your organization
9. Constituency
Please describe briefly the support base (members/supporters/donors) of your organization
10. Accreditations
Accreditation with other international intergovernmental organizations

11. Publications*Titles/number**Does your organization publish an annual report?*

Yes No

*Does your organization produce a list of available publications and/or educational matters?***Part B - Areas of possible cooperation with MAP**

Please indicate the areas of your organization's activities which correspond to the MAP Programme of activities and Policies:

- Governance for environment and development
- Integrating environment in development
- Legal aspects of implementation of the Barcelona Convention and its Protocols
- Pollution control and prevention
- Biodiversity conservation
- Integrated coastal zone management/Ecosystem management
- Sustainable consumption and production
- Sustainable management of natural resources and efficient use of resources
- Public participation and awareness

Part C - Modalities of cooperation with MAP

1. In what way does your organization feel it could contribute to the MAP activities and to the promotion of its values?

(Please describe: Studies, reports, previous work in the field concerned, expertise of its members, etc)

2. What practical cooperation has already been established with the Coordinating Unit and the RACs?

(Please describe joint activities, comments on draft documents, exchange of information, participation as experts, participation at MAP meeting and events, etc)

3. By what means and to which audience would your MAP Partner promote the work of MAP and its achievements?

Name and signature

Your position in the Organization Date

Please return this questionnaire preferably by email to unepmap@un.org or by post to:

Coordinating Unit for the Mediterranean Action Plan

Please enclose all the documents required to support your application for observer status:

1. Copy of the statute
2. A list of member organisations
3. A report on recent activities
4. A declaration that your organisation accepts the rights and responsibilities of MAP partners as described in the Code of Conduct of MAP partners adopted by the 16th Meeting of the Contracting Parties as amended by the 23rd meeting of the Contracting Parties.

Annex VI

Decision IG.21/13: Terms of Reference of the Bureau of the Contracting Parties to Barcelona Convention

Decision IG.21/13: Terms of Reference of the Bureau of the Contracting Parties to Barcelona Convention⁵

(Consolidated text)

Composition and tenure

Article I

1. The Bureau of the Contracting Parties shall be composed of representatives of six Contracting Parties elected by the Ordinary Meetings of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols.

Article II

1. The members of the Bureau shall serve as the President, the four Vice-Presidents and the Rapporteur and shall be elected at the commencement of the first sitting of each ordinary meeting.
2. A representative of the State hosting the meeting of the Contracting Parties will be elected during the Meeting of the Contracting Parties as President of the Bureau and act in such capacity until a new President is elected at the next Meeting of the Contracting Parties.
3. In electing the members of the Bureau, the Contracting Parties shall seek to ensure rotation amongst the Contracting Parties and will take into account regular payment of the contributions of the Contracting Parties to the MTF and regular attendance at the meetings of the Contracting Parties and compliance with their reporting obligations under the Convention.
4. Two members of the Bureau will be elected from each of the three groups of Parties to the Convention.
5. A representative of the State that is going to host the following meeting of the Contracting Parties will be elected member of the Bureau. In case of no decision in this regard at the moment of the election of the Bureau members, a representative of that State will become an ex-officio member of the Bureau from the moment a decision is made on the venue.
6. A representative of the State that presided the Bureau during the previous biennium will be elected as ex-officio member of the Bureau to ensure continuity.

Article III

1. The members of the Bureau are elected in their personal capacity and shall hold office until the election of the new Bureau at the next Ordinary Meeting of the Contracting Parties.
2. At least four members shall be replaced at each ordinary meeting, and no State will be a member of the Bureau for more than two consecutive periods, except for ex-officio members, as established in Article II (5).
3. In case of temporary absence of the President, one of the Vice-Presidents designated by him/her shall serve as President of the Bureau.
4. If a member of the Bureau resigns or otherwise becomes unable to complete his term of office, a representative of the same Contracting Party shall be named by the Contracting Party concerned to replace him/her for the remainder of his/her mandate.
5. The Coordinator shall assist the Bureau in its work and shall sit ex-officio on the Bureau.

⁵ This Decision was amended by Decision UNEP/MED IG.22/28 and then amended by Decision UNEP/MED IG.26/05.

Meetings

Article IV

1. The work of the Bureau will be carried out both by electronic means (audio and teleconferences and email) and through face-to-face meetings. The Bureau shall meet at least twice a year for a two or three day period, in regular meetings, and in extraordinary meetings, upon one month's notice, as may be necessary for the efficient discharge of its duties upon the summons of its President or upon request by one of its members.
2. Unless decided differently, the Bureau shall hold its meetings at the Headquarters of the Coordinating Unit. In case a Contracting Party offers to host a meeting of the Bureau, it shall bear the additional costs of holding the meeting in a venue other than the Coordinating Unit Headquarters.
3. The Bureau members may be accompanied to the meetings of the Bureau by advisors, as they may consider appropriate. Travel costs of advisors are born by the relevant Contracting Party.

Organizational matters

Article V

1. The meetings of the Bureau shall be convened by the Secretariat in consultation with the President of the Bureau.
2. Invitations to the meetings of the Bureau shall be sent out by the Secretariat to the members of the Bureau.
3. All Contracting Parties of the Convention which are not members of the Bureau shall be informed about the intent to hold a meeting of the Bureau and of about the agenda.
4. The Bureau may invite any Contracting Party which so requests to participate as an observer in its deliberations on any matter of particular concern to that Party, on their own expense.
5. The Secretariat shall, in consultation with the President of the Bureau, prepare the draft Agenda for each Bureau meeting, which can be completed or amended by the members of the Bureau, giving adequate advance notice to that effect.
6. Once finalized the Agenda of the Bureau shall be shared with all Contracting Parties.

Article VI

1. The Secretariat shall prepare the documents needed for the discussion of the various agenda items. These documents shall be sent one month before the meeting and shall include as a minimum the following:
 1. provisional agenda and annotated provisional agenda;
 2. status of contributions and letters requesting payment or reminders, as appropriate;
 3. status of funds committed;
 4. progress reports of the Coordinating Unit and the MAP Components on activities carried out;
 5. recommendations on specific questions;
2. Identification of the main international and national events, whose results contribute to a better knowledge of environmental development and of sustainable development in the region and which may provide a sounder basis for decision making.

Article VII

1. The working languages of the meetings of the Bureau shall be English and French.
2. The Bureau adopts its decisions by consensus. In cases where consensus cannot be reached, decisions will be made with the favorable vote of four members of the Bureau but the dissenting opinions should be reflected in the report of the meeting.
3. The reports of the Meetings of the Bureau consist of conclusions and recommendations of the Bureau meetings drafted by the Rapporteur with the support of the Secretariat and adopted in session. The final edited report shall be distributed in the working languages of the Bureau by electronic means, as soon as available, but no later than one month after the meeting, to the focal points of the Contracting Parties. Such reports shall also be made available to the ordinary meeting of the Contracting Parties taking place subsequently after the relevant meetings of the Bureau, as information documents.
4. Representatives of a Party taking part in the Bureau proceedings or meetings may use a language other than the working languages of the Bureau, only if that party provides for the interpretation.

Article VIII

1. The members of the Bureau shall consult before the meetings of the Bureau, with the focal points of the Contracting Parties of the group of Parties to the Convention from which they were elected, on the issues of the agenda of the meetings.

General Mandate*Article IX*

1. The Bureau members serve as the officers of the meetings or conferences of the Contracting Parties.
2. The Bureau is not a negotiating body. In the intersessional period between ordinary meetings of the Contracting Parties, and on their behalf, the Bureau reviews and evaluates progress in the implementation of the Convention and its protocols, and the decisions of the Contracting Parties, and provides guidance and advice to the Secretariat on all policy and administrative matters related to such implementation.
3. The Bureau makes recommendations, as appropriate, for consideration at the following meeting of the Contracting Parties, on issues of the agenda of that meeting, and overviews the preparations for those meetings including advice to the Secretariat on how to enhance the preparations, efficiency and results of the meetings of the Contracting Parties, and on any other matters brought to it by the Secretariat.
4. The Bureau carries out interim activities as may be necessary to execute the decisions of the Contracting Parties and performs any other function as may be entrusted to it by the Conference of the Parties.
5. The Bureau works together with the Secretariat on measures to enhance the functioning of the Secretariat and MAP Components, taking into account, inter alia, cost benefit analyses, performance and success indicators. To this aim, an evaluation report shall be submitted to Meetings of the Contracting Parties to facilitate on future planning of the Barcelona System.

Programme of Work and Budget

Article X

1. The Bureau shall provide guidance to the Secretariat on the preparation of the draft work programme and budget proposals for the next biennium including on the indicative planning figure in line with MAP's planning processes.
2. At its meetings, the Bureau shall consider the draft work programme and budget proposals prepared by the Secretariat and make recommendations to the Conference of the Parties.

External Relations

Article XI

1. The Bureau may, in periods between the meetings of the Contracting Parties, review the relations with similar regional Conventions and Action Plans, international financial institutions and programmes and relevant Intergovernmental and non- governmental organizations. In cooperation with the Coordinating Unit, the Bureau may submit to the meetings of the Contracting Parties policy proposals concerning such a relationship.

Emergency Situations

Article XII

1. The Bureau shall decide, during its meetings or by electronic means, with the Coordinating Unit, on responses in case of emergency situations and shall take emergency measures within the functions and financial resources of the Convention and Action Plan to deal with events requiring immediate action. The Contracting Parties shall be informed of any such decision within two months of its adoption.

Decision IG.26/3

The 2023 Mediterranean Quality Status Report and a Renewed Ecosystem Approach Policy in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

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

Recalling also the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

Recalling the United Nations Environment Assembly resolution UNEP/EA.5/Res. 3 of 2 March 2022, entitled “Future of the Global Environment Outlook”,

Recalling the Kunming-Montreal Global Biodiversity Framework (GBF) that was adopted during the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 15),

Having regard to Article 12 of the Barcelona Convention and relevant articles of its Protocols addressing monitoring and assessment,

Recalling Decisions of the Contracting Parties to the Barcelona Convention related to the implementation of the Ecosystem Approach Roadmap and Integrated Monitoring and Assessment Programme, i.e. Decision IG.17/6 (COP 15), Decision IG.20/4 (COP 17), Decision IG. 21/3 (COP 18), Decision IG.22/7 (COP 19), Decision IG.23/6 (COP 20), and Decision IG.24/4 (COP 21) and their status of implementation,

Expressing appreciation for the work undertaken by the entire UNEP/MAP Barcelona Convention system, in primis the Contracting Parties, Ecosystem Approach Coordination Group, CORMON, CORESA, MAP and MAP Components Focal Points, MAP Partners, and the Secretariat including MAP Components, for the implementation of the Ecosystem Approach Roadmap,

Expressing also appreciation for the support provided through the EU-funded projects, i.e. EcAp MED III, Marine Litter MED II and IMAP-MPA, and the Bilateral Cooperation Agreement with Italy, as well as the GEF-funded MedProgramme, in the implementation of the IMAP-based national monitoring programmes and in the preparation of the Mediterranean Quality Status Report (2023 MED QSR), as well as on the implementation of Programmes of Measures/ National Action Plans at national level,

Concerned by the pressures caused by human activities on the marine and coastal environment and *acknowledging* that unsustainable consumption and production patterns are the main drivers of environmental change in the Mediterranean, as highlighted in the socioeconomic and assessment chapters of the 2023 MED QSR,

Having considered the reports of the meetings of the Ecosystem Approach Coordination Group, and the Ecosystem Approach Correspondence Groups on Pollution, Marine Litter, Biodiversity and Coast and Hydrography, the MED POL and RAC Focal Points,

1. *Take note* of the 2023 Mediterranean Quality Status Report (2023 MED QSR) (UNEP/MED IG.26/Inf.10);

2. *Endorse* the provisional Executive Summary of the 2023 MED QSR, as set out in Annex I to the present Decision with the understanding that further work needs to be undertaken in the form of preparing an additional Summary for Policy Makers as one of the communication products of the 2023 MED QSR planned under the MAP PoW/Budget. To this purpose, it is requested of the Secretariat to set up a dedicated Working Group, composed of Contracting Parties and supported by the Secretariat, with a view of finalizing this policy document by the next EcAp Coordination Group Meeting (June 2024);

3. *Take note* of the online publication of the integrated 2023 MED QSR, along with the public availability of the 2023 IMAP Pollution MED QSR, as approved by the Meeting of Integrated CORMON (27-28 June), and all thematic assessments, which will be provided by the Secretariat on the dedicated website for the 2023 MED QSR;

4. *Endorse* the assessment criteria and threshold values as set out in Annex II to the present Decision, acknowledging their evolving nature, based on quality assured data availability and in this

context, *highlight* that any regular update should allow sufficient time for negotiation and endorsement by the CORMON and the COP before the assessment phase of next Mediterranean Quality Status Report has started;

5. *Take note of* the findings of the independent evaluation of the Ecosystem Approach Roadmap, and welcome the significant progress marked in its implementation the Contracting Parties and the Secretariat including MAP Components, building on the Ecosystem Approach governance structure;

6. *Request* the Secretariat to prepare during the biennium 2024-2025, under the leadership of the Ecosystem Approach Coordination Group, a revised Ecosystem Approach Roadmap Policy, including IMAP enhancement, taking into account, but not limited to, the outcomes of the 2023 Mediterranean QSR; the findings of the independent evaluation of the implementation of the Ecosystem Approach Roadmap as set out in Annex III to the present Decision, and other related work of the Secretariat as per the CORMONs and Ecosystem Approach Coordination Group meeting conclusions, and giving due consideration to the most recent relevant developments at global and regional level, including the expected MFSD evaluation and revision, for consideration at COP 24 in Egypt;

7. *Take note of* the Terms of Reference for the CORMONs, CORESA and Online Working Groups and the flow of interaction between Ecosystem Approach and MAP governing bodies, as set out in Annex IV to the present Decision;

8. *Call upon* Contracting Parties to continue strengthening the monitoring and assessment capacities of the national IMAP competent laboratories and authorities, with the view to delivering and reporting quality assured data and undertake reliable related assessments with support from the Secretariat and MAP Components, considering the need to ensure uniform distribution of reported data across the entire region;

9. *Encourage* the Secretariat, MAP Components and the Contracting Parties in enhancing synergies for the implementation of the Ecosystem Approach Policy and IMAP, with a particular focus on work undertaken at global level in the Regional Seas framework, Science Policy Interface and EU-MSFD;

10. *Invite* the Secretariat (INFO/RAC) to further enhance the IMAP Info System by undertaking its upgrade into an advanced information system which efficiently supports assessments and ensures the validation of uploaded data, first technically and then scientifically, for potential use at various scales;

11. *Invite* Contracting Parties and donor institutions to provide financial resources for the implementation of the Ecosystem Approach Roadmap with a particular focus on IMAP implementation at national level;

12. *Encourage* the Contracting Parties to undertake the preparation and/or update of Programmes of Measures /National Action Plans to achieve Good Environmental Status, addressing to the extent possible in their entirety the 11 Ecological Objectives adopted under the Ecosystem Approach Roadmap in an integrated way, highlighting the obligation to streamline the requirements of the recent regulatory measures adopted by the Contracting Parties on pollution prevention and biodiversity conservation, promoting circular economy, resource efficiency, and sustainability of human activities, including emerging ones;

13. *Request* the Secretariat to provide timely and effective technical and financial support in line with the adopted UNEP/MAP Programmes of Work and Budget for the implementation of the Ecosystem Approach Roadmap, IMAP and related Programmes of Measures/National Action Plans, as well as 2023 MED QSR assessment findings;

14. *Call upon* the scientific community at national and regional levels to contribute to the implementation of the Ecosystem Approach Roadmap and IMAP based on their comparative advantages and scientific knowledge and competences, with a view to further strengthening the Science Policy Interface for IMAP implementation at all levels.

Annex I

2023 Mediterranean Quality Status Report/ Executive Summary

1. Introduction

1. Further to the initial assessment of the status of the marine environment provided in the first-ever Quality Status Report for the Mediterranean (2017 MED QSR), progress was achieved by preparing the 2023 MED QSR using the findings of the Integrated Monitoring and Assessment Programme (IMAP) implemented for the period 2017-2023. Compared to the 2017 MED QSR, the 2023 MED QSR benefited from a substantive improvement in terms of thematic and spatial data coverage. However, for some Common Indicators, due to data inhomogeneity, and uneven data availability and distribution, it was not possible to obtain GES assessment. The thematic assessments were provided by applying the GES and alternative environmental assessment methodologies ensuring the combined use of (i) available quality-assured datasets reported by the Contracting Parties through the IMAP Info System and (ii) relevant scientific literature.

2. The present document provides a summary of the full 2023 MED QSR focusing on the ~~consists~~ of assessment findings and proposed measures which could be considered by CPs to address the findings towards achieving/maintaining GES.

2. The Mediterranean Sea: environmental characteristics, socioeconomics:

The Mediterranean is a semi-enclosed sea located between Africa, Asia and Europe and is bordered by twenty-one countries. It is connected to the Atlantic through the Strait of Gibraltar, to the Black Sea through the Strait of Dardanelles, and to the Red Sea through Suez Canal. According to the Barcelona Convention, the Mediterranean Sea is “bounded to the West by the meridian passing through Cape Spartel lighthouse, at the entrance of the Straits of Gibraltar, and to the East by the southern limits of the Straits of the Dardanelles between Mehmetcik and Kumkale lighthouses”.

3. The long history of the Mediterranean basin industrialization (especially Europe), high density of coastal populations and also because of its natural characteristics render this area particularly exposed to chemical pollution. This is because intense human activities in bordering countries induce significant inputs of various chemical contaminants, while its semi-closed geography limits possibilities for diluting them.

4. The most striking feature of the underwater geomorphology of the Mediterranean Sea is the presence of abrupt submarine canyons linking the coastal areas to the deep sea. They facilitate exchanges between coastal waters and deep waters. The presence of numerous islands is another striking characteristic of the Mediterranean. According to some reports there are about ten thousand islands in the Mediterranean, most of them are in the Aegean Sea.

5. The average annual sea surface temperature in the Mediterranean show strong gradients from west to east and from north to south, as well as a strong seasonal variation between 10 and 28°C, reaching 30°C in summer. The deep waters of the Mediterranean have a constant temperature around 13°C with an average salinity of 38‰.

6. With a low amplitude of semi-diurnal tides (30-40 cm), except for the northern Adriatic and the Gulf of Gabès where it can reach up to 150 and 180 cm, respectively, the Mediterranean Sea is considered a medium microtidal sea by global ocean standards.

7. In terms of nutrients, the Mediterranean is among the most oligotrophic oceanic systems. The most eutrophic waters are located on the north shore in the western basin and Adriatic at the mouth of the large rivers Rhone, Ebro and Po. The main source of nutrients in the Mediterranean lies in the inflowing Atlantic surface waters at the level of the Gibraltar Strait.

8. Home to 17,000 species of fauna and flora representing respectively 7.5% and 18% of the world's marine flora and fauna, the Mediterranean Sea is a hotspot of biodiversity. The species diversity of the Mediterranean, although unevenly distributed between the eastern and western basins, is higher than in most other regions of the world, due to the geological history of this sea, its close communication with the Atlantic and its position at the junction of three continents: Europe, Asia and Africa which make it a melting pot of biodiversity.
9. The uniqueness of the Mediterranean biotope comes from a combination of morphological, chemical and biotic characteristics reflected by the presence of certain ecosystem building species and assemblages. The meadows formed by *Posidonia oceanica* and the bioconcretions of the coralligenous assemblages are among the most important marine ecosystems of the Mediterranean Sea.
10. Non-indigenous species (NIS) are increasingly present in the Mediterranean Sea generating significant changes in the fauna and flora composition, mainly in the eastern Mediterranean. The NIS in the Mediterranean Sea are linked to four main pathways of introduction: the corridors, shipping (ballast waters and hull fouling), aquaculture, and aquarium trade. Corridors are the most important pathway of introduction (33.7%) followed by shipping (29%) and aquaculture (7.1%).
11. The Mediterranean region climate is characterized by mild winters and hot and dry summers. From the West, the Atlantic Ocean regimes have a great intra-seasonal and interannual variability influences in the Mediterranean reaching mainly the northeast part of the Mediterranean land and sea, whilst the Eastern and Southern climatic regimes provide the characteristics of the southern Mediterranean areas.
12. Climate change is exacerbating already existing vulnerabilities in the Mediterranean region. In its Sixth Assessment Report¹, the IPCC concluded that “during the 21st century, climate change is projected to intensify throughout the region. Air and sea temperature and their extremes (notably heat waves) are likely to continue to increase more than the global average (high confidence)”. Over the last three decades, marine heatwaves (MHWs) in the Mediterranean Sea have caused mass-mortality events in various marine species, and critical losses for seafood industries². In the future, MHWs may undermine many benefits and services that Mediterranean ecosystems normally provide, such as food, maintenance of biodiversity, and regulation of air quality.
13. Sea water acidification is another impact of Climate Change on the Mediterranean Sea where water surface pH has decreased by -0.08 units since the beginning of the 19th century, similar to the global ocean, with deep waters exhibiting a larger anthropogenic change in pH than the typical global ocean deep waters because ventilation is faster³.
14. Nutrient enrichment causes eutrophication and may provoke harmful and toxic algal blooms, trends which will likely increase. Harmful algal blooms may cause negative impacts on ecosystems (red-tide, mucilage production, anoxia) and may present serious economic threats for fisheries, aquaculture and tourism.
15. The Coastal and marine ecosystems of the Mediterranean provide valuable services to human well-being and are the basis for many economic sectors such as tourism, fisheries, maritime transport, etc. All of these activities modify - at least temporarily - the marine and/or coastal environment.

¹ <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>

² Dayan, H., McAdam, R., Masina, S., Speich, S., 2022: Diversity of marine heatwave trends across the Mediterranean Sea over the last decades, in: Copernicus Ocean State Report, issue 6, Journal of Operational Oceanography, 49-56, <https://doi.org/10.1080/1755876X.2022.2095169>

³ MedECC 2020 Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer W, Guiot J, Marini K (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/MAP, Marseille, France, pp 11-40, doi:10.5281/zenodo.5513887.

16. Population growth is acting in the Mediterranean as a multiplier of pressures on the coastal and marine environment. In 2021, the population of the Mediterranean countries reached 531.7 million⁴, increasing by close to 20 million people in only 3 years between 2018 and 2021. An overall increase of 41.4% was recorded between 1990 and 2021, while decade-on-decade growth accelerated (from a rate of 12.5% between 1990 and 2000, to 13.5% between 2000 and 2010 and 17.2% for the last decade). However, decreases in population (on a year-by-year basis) have been recorded for some time sequences or the entire period since 2000 in some of the Mediterranean countries. Some periodic population decreases during the last 20 years can be correlated with periods of conflicts and crises.

17. Human-caused pressures on the coastal and marine environment are stemming from unsustainable production and consumption patterns, and a growing population multiplies these pressures. Fluctuations of population generally impact the weight of overall pressures on the coastal and marine environment, at varying levels depending on the per capita environmental footprint.

18. Current consumption and production patterns in the Mediterranean are characterised by high resource consumption combined with low recycling rates and unsatisfactory waste management. They are unsustainable overall and lead to considerable environmental degradation in the Mediterranean region, including land take and degradation, water scarcity, noise, water and air pollution, biodiversity loss and climate change⁵.

19. Mediterranean countries consume approximately 2.5 times more natural resources and ecological services than the region's ecosystems can provide⁶. The gap between the Mediterranean and the world averages remained substantial: an Ecological Footprint⁷ of 3.4 global hectares per capita is found in the Mediterranean, as compared to 2.8 globally in 2018.

20. In most Mediterranean countries, the regulation of maritime activities, whether through the implementation of international legislation, compliance and enforcement is still not at a level that allows the maritime economy to make a significant contribution to a sustainable blue economy. This economic "openness" stands in contrast with the biological semi-closed character of the Mediterranean Sea (water renewal time of around 80 years). The fragmentation of policies, coupled with the lack of a national policies for the maritime transport systems and the lack of ratification of international maritime instruments and standards, and the associated uneven implementation, compliance and enforcement including sanction measures among countries when these countries have ratified the se instruments and standards are challenges that need to be overcome if maritime activities are to be a major pillar in a sustainable regional blue economy.

21. For the tourism sector, over the past 50 years (1970 – 2019), the number of international tourist arrivals (ITAs) to Mediterranean countries increased by a factor of seven: from around 58 million in 1970 (161 in 1995, 246 in 2005) to 408 million in 2019. During the past decade (2010 – 2019), a cumulative increase of ITAs to the Mediterranean countries was 43.2% and in 2019, close to one third (27.8%) of the global ITAs were recorded in the Mediterranean⁸. The contribution of tourism and travel to GDP has been estimated at USD 943.4 billion, with 18.4 million direct and indirect jobs across the region in 2019⁹. However, the COVID-19 crisis halved the GDP from tourism and travel in the Mediterranean, causing a loss of 3.1 million jobs. A moderate recovery was seen in 2021, with total number of ITAs reaching 45.5% of the 2019 level.

⁴ UN DESA (2022). Population Division, <https://population.un.org/dataportal/>.

⁵ UNEP/MAP and Plan Bleu (2020). State of the Environment and development in the Mediterranean. Nairobi.

⁶ Akcali et al. (2022). Energy Transitions and Environmental Geopolitics in the Southern Mediterranean. Istituto Affari Internazionali.

⁷ The Ecological Footprint measures how much biocapacity humans demand, and how much is available. It does not address all aspects of sustainability, nor all environmental concerns. Biocapacity is the area of productive land available to produce resources or absorb carbon dioxide waste, given current management practices. Global hectares (gha) is a unit of world-average bioproductive area, in which the Ecological Footprint and biocapacity are expressed.

⁸ Data on tourism specifically related to the Mediterranean coastal region is generally not available and data presented here refers to national data (all marine façades included for countries with multiple marine façades).

⁹ <https://www.unwto.org/tourism-statistics/tourism-statistics-database>.

22. Agriculture is a strategic sector in most Mediterranean countries. The main impacts of agriculture on the marine environment are due to the runoff of nutrients and agrochemicals into the sea. Disaggregation of the impact from different sources of land-based pollution is difficult and there is no quantitative data concerning the effect of agriculture on the environment of the Mediterranean Sea. The runoff of inorganic nitrogen and phosphorus fertilizers leads to eutrophication, which in turn negatively impacts coastal and marine ecosystems. The runoff and infiltration of pesticides into the sea affect the marine environment at a slower pace by bioaccumulation higher up the food chain.

23. Fisheries, including aquaculture, is another important economic sector in the Mediterranean using a variety of capture fishery and aquaculture techniques, employed at different scales, including industrial, semi-industrial and small-scale fisheries, as well as industrial and small-scale farming. Four out of five fishing vessels in the Mediterranean are small-scale vessels¹⁰ which are the predominant fleet segment in all Mediterranean fishing sub-regions, in particular in the Eastern and Central Mediterranean. Another important fleet segment are trawlers and beam trawlers, accounting for 7.9% of the total, predominantly used in the Western Mediterranean and the Adriatic; purse seiners and pelagic trawlers make up 5.5% of the fleet¹¹.

24. According to FAO, total employment onboard fishing vessels in the Mediterranean was near 202,000 in 2018. Approximately one third of these jobs are linked to fishing in the Western and Eastern Mediterranean sub-regions; the Central Mediterranean accounts for 24% of the total number of jobs, and the Adriatic Sea sub-region for 9%.

25. Total marine aquaculture production (including Türkiye's Black Sea production) approached one million (994,623) tonnes in 2020 with average annual growth rates of 6.8% and a cumulative increase of around 90% between 2010 and 2020. Marine aquaculture output was not negatively affected by the COVID-19 pandemic: production in 2020 increased by 13.2% compared to 2019.

26. Other economic activities (maritime transport, oil and gas activities, underwater cables and pipelines, etc.) can function independently from the state of the marine environment while generating heavy impacts to the marine environment. The Mediterranean Sea being located at the crossroads of three major maritime crossings¹² constitutes an important transit and trans-shipment area for international shipping, as well as a realm for Mediterranean seaborne traffic (movement between a Mediterranean port and a port outside the Mediterranean) and short sea shipping activities between Mediterranean ports. Despite covering less than 1% of the world's oceans, the Mediterranean Sea accounted for more than a fifth (21-22%) of global shipping activity measured by the annual number of port calls, and around 9% of the annual container port throughput in recent years¹³. The Western Mediterranean and the Aegean-Levantine Sea are the busiest parts of the basin.

27. The Mediterranean region is facing crucial challenges linked to the use of natural resources, in particular water, as well as energy products.

28. The total primary energy demand in the Mediterranean equalled 1,021 Mtoe¹⁴ in 2018 and 1,030 Mtoe in 2019¹⁵, with an overall increase of around 45% compared to 1990. In 2020, a decrease of around 9% was recorded due to the effects of the COVID-19 pandemic, bringing primary energy

¹⁰ Including small-scale vessels 0–12 m with engines using passive gear; polyvalent vessels 6–12 m; and small-scale vessels 0–12 m without engines using passive gear. Polyvalent vessels are all vessels using more than one gear type, with a combination of passive and active types of gear, none of which are used for more than 50 percent of the time at sea during the year.

¹¹ FAO. 2020a. The State of Mediterranean and Black Sea Fisheries 2020. General Fisheries Commission for the Mediterranean. Rome. <https://doi.org/10.4060/cb2429en>

¹² Strait of Gibraltar, opening into the Atlantic Ocean and the Americas; the Suez Canal, a major shipping gateway which connects to Southeast Asia via the Red Sea; and the Dardanelles Strait, leading to the Black Sea and Eastern Europe/Central Asia.

¹³ Randone et al. (2019). Safeguarding marine protected areas in the growing Mediterranean blue economy-recommendations for the maritime transport sector. *Int J Des Nat Eco-Dyn* 14(4):264–274.

¹⁴ Million tons of oil equivalent.

¹⁵ OME (2021). Mediterranean Energy Perspectives to 2050, edition 2021.

demand down to 938 Mtoe. Shares of coal and oil in the total primary energy demand had a downward trend over the past three decades. The most significant uptake of renewables has been recorded in power generation, while the share of renewable sources is still very low in end-use sectors, especially in industry and transport. In 2020, renewable energy technologies made up 43% (686 GW) of the total power generation capacity, deployed predominantly in the North Mediterranean countries. Nevertheless, the development of renewable capacity was very fast in the South and East where it nearly tripled over the period 2005 – 2020.

29. The Mediterranean region is recognised as one of the most water-challenged regions in the world. The pre-existing water scarcity is being aggravated by population growth, urbanization, growing food and energy demands, pollution, and climate change. According to FAO, total freshwater withdrawals in the Mediterranean countries were at the level of 290 billion m³ in 2019 with irrigated agriculture as the most water-demanding sector accounting for nearly 80% in most of the south and east Mediterranean countries. Besides freshwater withdrawals, a total of 6.6 billion m³ of treated wastewater is used across the region, and desalination of sea water is developing¹⁶ in many countries on all rims of the Mediterranean.

30. The 2023 MED QSR provides an analysis of the main socio-economic components that influence the Mediterranean coastal and marine environment, based on available data from a number of different sources, such as UN system, other international organisations, and relevant scientific articles. However, the absence of a comprehensive monitoring system of socio-economic characteristics and of the sustainability of economic activities makes it difficult to establish clear links between the quality status of the Mediterranean Sea and the social and economic pillars of sustainable development. While information on demographic, economic and employment has been collected, literature review did not adequately inform the level of environmental and social sustainability of human activities that impact the coastal and marine environment. A knowledge gap remains in measuring to what extent human activities are compatible or in line with the objective of achieving GES and clear sustainability indicators of human activities are generally lacking.

3. UNEP/MAP-Barcelona Convention: Vision, Goals, and Ecological Objectives

31. The regional cooperation for the Mediterranean Sea started in 1975 when the Mediterranean Action Plan (MAP) was launched as the first Regional Seas Programme within the framework of the United Nations Environment Programme (UNEP). A year later, in 1976, the countries bordering the Mediterranean adopted the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention), thus providing MAP with a legal basis constituting a framework allowing the Contracting Parties to unite their efforts for the preservation of the Mediterranean Sea as a common heritage of the peoples of the region.

32. Following a first period during which the efforts within MAP were mainly oriented to address pollution issues, the action under the Barcelona Convention has evolved towards a broader approach aimed at protecting and enhancing the Region's marine and coastal environment in line with a sustainable development vision. In this context, building on the global momentum created by the landmark 1992 Rio Conference, the MAP Coordinating Unit facilitated a consultation process that led to the adoption by the Contracting Parties, in June 1995, of the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II) and the amended Barcelona Convention, renamed “Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean”.

33. The alignment with the Sustainable Development orientation was reinforced in 2016 when the Barcelona Convention Contracting Parties adopted the Mediterranean Strategy for Sustainable

¹⁶ Desalination is the process of removing salts from water. A by-product of this process is toxic brine which can degrade coastal and marine ecosystems unless treated. For every litre of potable water produced, about 1.5 litres of liquid polluted with chlorine and copper are created in most desalination processes. The toxic brine depletes oxygen and impacts organisms along the food chain when released into the sea. Desalination also comes with a high energy demand. Using renewable energy sources for desalination can be an option to mitigate carbon emissions stemming from desalination.

Development (MSSD) 2016-2025. The MSSD provides an integrative policy framework and a strategic guiding document for all stakeholders and partners to translate the 2030 Agenda for Sustainable Development at the regional, sub regional and national levels. The Strategy is built around the following vision: A prosperous and peaceful Mediterranean region in which people enjoy a high quality of life and where sustainable development takes place within the carrying capacity of healthy ecosystems. This is achieved through common objectives, strong involvement of all stakeholders, cooperation, solidarity, equity and participatory governance. Thirty-four indicators have been agreed in relation to the following six objectives:

- a. Ensuring sustainable development in marine and coastal areas
- b. Promoting resource management, food production and food security through sustainable forms of rural development
- c. Planning and managing sustainable Mediterranean cities
- d. Addressing climate change as a priority issue for the Mediterranean
- e. Transition towards a green and blue economy
- f. Improving governance in support of sustainable Development

34. In 2021, the Contracting Parties adopted the UNEP/MAP Medium-Term Strategy 2022-2027 (MTS) (Decision IG.25/1, COP22, Antalya, Türkiye) as a key strategic framework for the development and implementation of the Programmes of Work of UNEP/MAP. It aims at achieving transformational change and substantial progress in the implementation of the Barcelona Convention and its Protocols, also providing a regional contribution to relevant Global processes¹⁷.

35. Today, the legal and institutional framework put in place over the years by the Contracting Parties to the Barcelona Convention have become an efficient cooperation instrument to which all the riparian countries adhere, despite the challenging geopolitical circumstances prevailing in the region. By adopting, in 2021, the UNEP/MAP Medium-Term Strategy (MTS 2022-2027), the Contracting Parties to the Barcelona Convention and its Protocols, agreed to orient their collaboration during the period 2022-2027 towards the following vision: *“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”*. To this end, the Contracting Parties decided to further strengthen their collaboration to reach a dual long-term goal:

- a) the achievement and maintenance of Good Environmental Status (GES) of the Mediterranean Sea and Coast, and
- b) achieving sustainable development through the SDGs and living in harmony with nature.

36. In 2012, the Contracting Parties adopted 11 Mediterranean Ecological Objectives (EO) to achieve good environmental status (GES).

¹⁷ In particular the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), the UN Decade on Ecosystem Restoration, the UN Decade of Ocean Science for Sustainable Development and the UNEP’s Medium-Term Strategy 2022-2025, approved at UNEA-5 in February 2021.

4. Key Messages, Assessment Findings and Measures:

37. The results of the GES assessments undertaken within the framework of the “2023 MED QSR” in relation to Ecological Objectives and their related Common Indicators are presented hereinafter with the key messages stemming from them as well as the proposed measures. A snapshot of the results of GES and alternative assessments for each Common Indicator is presented in the Appendix of the Executive Summary.

Ecological Objective 5 (EO5): 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

Common Indicator 13: Concentration of key nutrients in water column.

Common Indicator 14: Chlorophyll-a concentration in water column.

Ecological Objective 9 (EO9): Contaminants cause no significant impact on coastal and marine ecosystems and human health

Common Indicator 17: Concentration of key harmful contaminants measured in the relevant matrix (biota, sediment, seawater).

Common Indicator 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established.

Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution.

Common Indicator 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood.

Common Indicator 21: Percentage of intestinal enterococci concentration measurements within established standards.

The Aegean – Levantine Sea Sub-region

Aegean Sea Sub-division

38. **EO 5 - CI 13 (DIN – Dissolved inorganic nitrogen and TP – total phosphorus) and CI 14 (Chla – Chlorophyll a):** Available literature indicates the presence of drivers and pressures with impacts related to eutrophication in the two areas found in non-good status in the present assessment, i.e., in the 1 non-good status subSAUs out of 16 subSAUs. The non-good status in the Izmir province is related to the Izmir Bay and the southern coast of the province. Drivers that could impact eutrophication are: i) urban wastewater discharge, although many treatment plants were put into operation; ii) agriculture; iii) riverine discharge: Küçük, Menderes, Bakırçay and Gediz rivers, as the most important rivers of the Aegean Region. The main tributary of the Gediz River, and the main streams feeding it, are considered to be under pressure in terms of point and diffuse pollution; iv) tourism; v) port operations: Izmir Port is the largest port in Türkiye after Mersin Port and vi) aquaculture. There are 66 fish farms, and 8 mussel farms operating on the coasts of İzmir province. In addition, available literature indicates the presence of drivers and pressures with impacts related to eutrophication in other areas of the AEGS which were classified in non-good status in the present assessment, for example, the Saronikos Gulf and Elfeş Bay, with extensive urbanization, industry and port activities and the Thermaikos Gulf impacted by agricultural discharges from the heavily polluted Axios River, and fish and shellfish mariculture.

39. **EO 9 – CI 17 (TM, Σ_{16} PAHs, Σ_5 PAHs and Σ_7 PCBs in sediments):** Using CHASE+, the AEGS was classified as (i) in-GES for TM in sediments when the contribution of the two very limited affected areas were not taken into account (Elfeş Bay and inner Saronikos Gulf and area near Aliaga and Yenısakran) and (ii) non-GES for Σ_5 . It was not possible to classify the AEGS sub-division for Σ_{16} PAHs and Σ_7 PCBs in sediments, due to insufficient data.

40. Regarding TM in sediments, one of the very limited non-GES area was the Elefsis Bay/ inner Saronikos Gulf. Drivers and pressures in the area are extensive urbanization (metropolitan areas of Athens), Port activities and maritime traffic (Piraeus port), Industries located in the coastal area of the Elefsis Bay, such as oil refineries, steel and cement industries, and shipyards, Discharges of wastewater treatment plant. TM pollution decreased from 1999 to 2018 in some areas due to environmental policy enforcement combined with technological improvements by big industrial polluters. A second limited non-GES area was near Aliaga and Yenisekran. Possible drivers and pressures are port operations, industry, tourism and agriculture. Further to input provided by Türkiye, the possible drivers and pressures are in the expanded area of the Balıkesir district and the Izmir province, where stations were classified as non-GES in this assessment. Those include: i) Urban waste water pressure due to increased population during the touristic summer seasons; ii) Port operations: Izmir Port is the largest port in Türkiye after Mersin Port; iii) Aquaculture is also present at some locations along the coast; iv) Agriculture also generates some pressures; v) Riverine inputs where the main streams generate pressures in terms of point and diffuse pollution.

41. It was not possible to classify the AEGS Sub-division regarding data for Σ_{16} PAHs in sediment due to insufficient data. There are indications that the offshore zone is in GES while the enclosed areas might be found as non-GES. Regarding Σ_5 PAHs in sediments, the AEGS was classified as non-GES. The same limited areas classified as non-GES for TM in sediments are also non-GES for Σ_5 PAHs, with the same drivers and pressures as for TM. Additional stations were found non-GES in the northern and central part of the AEGS, mainly in enclosed areas that are more sensitive to land-based sources pollutants.

42. The AEGS Sub-division could not be classified regarding assessment of Σ_7 PCBs in **sediments** due to lack of data. An affected, non-GES area was identified in the coast around Aliaga, Yenisekran and Candarli, as for TM. Possible drivers and pressures are port operations, industry, tourism and agriculture.

43. **IMPACTS.** No data on biota were available for the AEGS. Drivers and pressures that can impact biota were found in the AEGS.

44. **CI 18 - Level of pollution effects of key contaminants where a cause-and-effect relationship has been established:** Although drivers that could exert pressure and cause impact on CI 18, were identified in the AEGS, no data were available at IMAP-IS to check for impacts in biota. Only two relevant studies in the scientific literature reported data on biomarkers in the AEGS, both for Türkiye. Both showed indications of possible effect of TM and/or pesticides on the molluscs *Mytilus galloprovincialis* and *T. decussatus* collected from Homa Lagoon (Aegean Sea) and in the fish *M. barbatus*, *B. boops* and *T. trachurus* collected off the coast of Türkiye.

45. **CI19. Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution:** The assessment made for the period 2018-2021 using the available relevant datasets showed that the status of the marine environment for CI 19 in the AEGS is assessed as non-GES (Bad class).

46. **CI 20 - Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood.**

47. **CI 21 - Percentage of intestinal enterococci concentration measurements within established standards.**

Levantine Sea Sub-division

48. **EO5 - CI 13 (DIN – Dissolved inorganic nitrogen and TP – total phosphorus) and CI 14 EO5 - CI 13 (DIN – Dissolved inorganic nitrogen and TP (Chla – Chlorophyll a):** Drivers that could impact CIs 13 and 14 are present in the LEVS: Agriculture, Tourism and maritime activities, Coastal urbanization, Sewage discharge, Seawater Desalination, Ports operation and maritime traffic, gas and oil exploration.

49. The complete GES assessment of the AEL Sub-region for CIs 13 and 14 was impossible given the lack of quality-assured, homogenous data that prevented the application of both EQR and simplified EQR assessment methodologies. Therefore, for the 2023 MED QSR preparation, the assessment of eutrophication was performed by evaluating data only for Chla available from the remote sensing COPERNICUS data by applying the simplified G/M comparison assessment methodology. The assessment results show that all evaluated assessment zones can be considered in good status regarding satellite derived Chla.

50. Detailed examination showed that only 1 out of 18 SAUs, in the open waters (OW), was classified in non-good status. The SAU is located in the easternmost part of the southern Levantine Sea. The drivers and pressures in this SAU that could impact CI 14 are related to the area being one of the most densely populated areas in the world. Moreover, untreated or partially treated wastewater are discharged along the shoreline, polluting the coastal zone.

51. **EO 9 – CI 17 (TM in sediments and biota, Σ_{16} PAHs, Σ_5 PAHs and Σ_7 PCBs in sediments):** Using CHASE+, the northern and eastern (NE) LEVS was classified as in-GES for TM in sediments, when the contribution of the two very limited affected areas (off Haifa and off Beirut) were not taken into account. No assessment could be performed for the southern LEVS as no data were available. The NE LEVS was in-GES for Σ_{16} PAHs in sediments in Israel, Greece and Lebanon and in-GES for Σ_5 PAHs in sediments in Israel, Greece and Türkiye. The LEVS could not be classified based on assessment of Σ_7 PCBs in sediments due to lack of data and their uneven spatial distribution.

52. Regarding TM in sediments, non-GES stations were identified across the NE LEVS as follows: 1) In Israel, Northern Haifa Bay was non-GES (moderate status) and the main element contributing to this classification was Hg. The area is known to be still contaminated by legacy Hg, a pressure resulting from industry driver by ways of contaminated wastewater discharge. Even though there was a vast improvement following pollution abatement measures, the area is still contaminated; 2) In Lebanon, the main area in non-GES (moderate and poor) was off Beirut, in particular the Dora region, followed by area in the North Lebanon, with Cd and Hg concentrations contributing equally to the moderate classification. In Beirut, the drivers contributing to the pressures and state of the coast are urban development and industry, discharge of wastewater through marine outfalls and by riverine discharge of the Beirut River. In addition, dumpsites are present in the Dora region. Tripoli, in northern Lebanon, is known for its artisanal fishing and boat maintenance activities, the latter a driver for TM introduction.

53. Stations in moderate status regarding TM in sediments were found in Cyprus in Larnaka Bay, off Zygi and in Chrisochou Bay. Possible drivers are maritime activities and port operations among others. In Greece, two stations were found in moderate status (Koufonisi (S. Crete), Kastelorizo), with Pb and Cd concentrations contributing to this classification. Possible drivers are maritime activities and traffic, and fishing. In Türkiye, 4 stations were classified as in moderate status: Akkuyu, Taşucu, Anamur, Göksu River mouth. Possible drivers are agriculture, marine activities, riverine discharge.

54. Although the areas with data for Σ_{16} PAH in sediments were overall characterized as in-GES, two geographically limited areas with non-GES status were identified. In Israel, at stations close to the locations of gas exploration wells that have been drilled in the past. PAHs are no longer found around wells that have been drilled within the last decade. The driver was defined as maritime activities, offshore platforms of gas exploration. In Lebanon, off in Beirut, the same drivers contributing to the status of TM in sediments apply also for Σ_{16} PAH. While offshore data was limited,

offshore drilling activities are not exclusive to Israel and Lebanon. A wider geographical range of data is needed to fully characterize the regional effects of such offshore activities.

55. The LEVS sub-division could not be classified based on assessment of Σ_7 PCBs in sediments due to lack of data and their uneven spatial distribution. The Dora region off Beirut was affected with possible drivers similar to TM in sediments: urban development and industry, discharge of wastewater through marine outfalls and by riverine discharge of the Beirut River.

56. **IMPACTS.** Although drivers and pressures and non-GES statuses were identified for the CI 17 in the LEVS, essentially no impact was detected in the environmental status classification fish and the NE LEVS was classified as in-GES for TM in *M. barbatus*. The only non-GES station (1 out of 15) in poor status was located off Paphos, Cyprus and this classification was due to the concentration of Hg. No data were available for TM in sediments in this area. It should be emphasized, that concentrations not in-GES do not necessarily imply a biotic effect.

57. **CI 18- Level of pollution effects of key contaminants where a cause and effect relationship has been established:** Although drivers that could exert pressure and cause impact on CI18, were identified in the LEVS, no data were available at IMAP-IS to check for impacts in biota. Only two relevant studies in the scientific literature reported data on biomarkers in the LEVS. Both showed indications of possible effect of TM on various biomarkers in the mollusc *Ruditapes decussatus* from Port Said (Egypt) and in the fish *M. barbatus*, *B. boops* and *T. trachurus* off the coast of Türkiye.

58. **CI19. Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution:** The assessment made for the period 2018-2021 using the available relevant datasets showed that the status of the marine environment for CI 19 in the LEVS is assessed as moderate.

59. **CI 20 - Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood:** The CI 20 DPSIR analysis was performed at the level of the entire AEL Sub-region due to the lack of data for the separate analysis of LEVS and AEGS Sub-divisions. Drivers that could exert pressure and cause impact on CI 20 were detected in the AEL. The examination of CI 17 results showed no impact on biota in the LEVS, while no data were reported for biota in the AEGS. In addition, data reported to IMAP-IS for CI 17 for biota in the LEVS were examined based on the concentration limits for the regulated contaminants in the EU, concentrations higher than those used for the CI 17 assessment. No impact was detected on CI 20.

60. Out of the 23 studies found in the literature for the AEL, 87% reported concentrations of TM and organic contaminants below the concentration limits for the regulated contaminants in the EU, 4% reported concentrations above the limits but without risk to human health and 9% reported concentrations above the limits for the regulated contaminants with probable risk to human health.

61. **CI 21 - Percentage of intestinal enterococci concentration measurements within established standards:** The CI21 DPSIR analysis was performed at the level of the entire AEL Sub-region due to the lack of data for the separate analysis of LEVS and AEGS Sub-divisions. Drivers that could exert pressure and cause impact on CI 21 are present in the AEL, among them: Urban coastal development, Tourism, sporting and recreational activities; ports and maritime works, maritime activities. However, data were available only for Israel (2021) and Lebanon in 2019-2021 in the LEVS. All stations in Israel were in excellent category. In Lebanon, 4 out of 38 stations were classified in bad category, all in the Beirut area. Possible drivers are urban development and industry, discharge of wastewater through marine outfalls and by riverine discharge.

The Adriatic Sea Sub-region

62. **EO 5 – CI 13 (DIN – Dissolved inorganic nitrogen and TP – total phosphorus) and CI 14 (Chla – Chlorophyll a):** The detailed status assessment results show that all the SAUs achieve GES conditions (high and good status). For all three parameters, the results show that all SAUs and sub-SAUs are in GES. The only exceptions are the results for TP in a part of CAS in the Italian offshore coast (Abruzzo region), and the TP on the SAS coastal and offshore zones (Apulia region), that were classified in moderate status. The Abruzzo and Apulia regions were identified as having aquaculture and coastal and maritime tourism. Both drivers were identified as high impact to CIs 13 and 14. Nutrients might be introduced to the area causing pressure and have the possibility to cause eutrophication and impact habitats and biodiversity. In the case of moderate status for TP, it was a localized effect, not affecting the overall assessment status and all SAUs fall under the GES status (high, good). A natural process of nitrogen limitation in the area and subsequent accumulation of phosphorus may be an additional explanation to the moderate assessment. Although the two drivers, aquaculture and coastal and maritime tourism, are present in other areas of the Adriatic Sea, they did not impact CI 13 nor CI 14, as represented by the available data.

63. **EO 9 – CI 17 (TM in sediments and biota, Σ_{16} PAHs in sediments and Σ_7 PCBs in sediments and biota):** Overall, the aggregation of the chemical parameters data per SAU in the Adriatic Sub-region classified 80% of the SAUs as in GES (High or Good status), and 20% of the SAUs as non-GES under moderate status.

64. The detailed status assessment results per contaminant per SAU at the 1st level of assessment (no aggregation or integration) showed that in most cases (80% of SAUs) GES conditions are achieved; 9% of the SAUs are classified in moderate status, 6% in poor status and 5% in bad status.

65. For the sediment matrix, the highest contamination is observed from PCBs, PAHs and Hg resulting in non-GES status for 60%, 57% and 27 % of the sub-SAUs, respectively. For the mussels matrix, the highest contamination is observed from PCBs which results in 39% of sub-SAUs in non-GES status.

66. In the NAS, 19% of sub-SAUs are classified as non-GES. The most affected sub-SAUs in the NAS are HRO-0313-BAZ, HRO-0412-PULP and HRO-0423-RILP in Croatia; Emilia-Romana', 'Friuli-Venezia-Giulia-1' and 'Veneto-1' in Italy. Also, offshore SAUs IT-NAS-O and MAD-SI-MRU-12 are affected. The NAS subdivision suffers from Hg contamination (moderate status) in sediments and mussels and PCBs (poor status) contamination in sediments.

67. In the CAS, 12% of the SAUs are classified as non-GES. The most affected sub-SAUs are HRO-0313-KASP, HRO-0313-KZ, HRO-0423-KOR in Croatia. The CAS sub-division suffers from Hg (poor status) and PCBs (moderate status) contamination in mussels.

68. In the SAS, 22 % of the SAUs are classified as non-GES. The most affected SAUs are HRO-0313-ZUC, HRO-0423-MOP and HRO-0313-ZUC in Croatia; and MNE-1-N, MNE-1-C, MNE-1-S, MNE-Kotor, in Montenegro which are found in poor or bad conditions regarding several contaminants. The SAS sub-division is affected by Pb (moderate status) and PCBs (moderate status) contamination in mussels.

69. The main drivers that could put pressure on TM in sediments are industry (waste discharge and dumping of waste), tourism (litter, domestic waste water discharge), ports and maritime works (accidental discharges, dredging), shipping traffic (accidental discharges, solid waste disposal). Shipping traffic is extensive in the Adriatic Sea. Dumping area for dredging in Emilia Romagna was also identified.

70. In the southern Adriatic Sea, Albania's coast and offshore SAUs are non-GES concerning Hg in sediments. In Montenegro, Hg, Pb, Σ_{16} PAHs and Σ_7 PCBs in sediments were classified as non-GES in

the central coastal SAU as well in the Kotor Bay. The project GEF (*Global Environment Facility*): Adriatic Implementation of the Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning, examined in detail the DPSIR elements for Albania and Montenegro marine environment. Those support the results of the NEAT assessment achieved with IMAP monitoring data. In Albania, about 15% of the coastline is urbanized, and tourism is increasing (drivers and pressure). Status. The initial assessment of pollution shows established significant concentrations of mercury and organochlorinated compounds in some of the assessed areas on the northern and central coast (status). In Montenegro, about 32.5% of the coastline is urbanized, while tourism consists mainly beach goers. Nearshore activities, such as shipyards and ports are also of concern (drivers and pressures). Status. The preliminary assessment of pollution shows higher concentration of contaminants in the coastal area, particularly in Boka Kotorska Bay. The levels of some contaminants exceed the established limit, specifically legacy pollutants such as heavy metals and organohalogen compounds in sediments.

71. **IMPACTS.** Although drivers and pressures and non-GES statuses were identified for CI 17 in the Adriatic Sea, a few impacts were detected in the environmental status classification of the biota. Moreover, the non-GES status of a contaminant in the biota usually did not correspond to a non-GES status for the contaminant in sediment in the same sub-SAU. In the NAS, sub-SAUs for biota were in non-GES status for Hg and PCBs, with no corresponding non-GES status in the sediment or no data for PCBs in sediments. In 3 instances there was a correspondence between non-GES status for Hg in biota and sediment. In several sub-SAUs, Pb in sediments were non-GES while in-GES in biota. In the CAS there was no correspondence between the status of the sediments and the status of the biota. In the SAS, for 2 sub-SAUs, non-GES status for Pb in sediments corresponds to non-GES status for Pb in biota.

72. **CI 18 - Level of pollution effects of key contaminants where a cause and effect relationship has been established:** Although drivers, that could exert pressure and cause impact on CI 18, were identified in the Adriatic Sea, no data were available at IMAP-IS to check for impacts in biota. One study from the scientific literature reported impact of PAHs on some of the biomarkers measured in the specimens of the fish *Mullus barbatus* collected in an important fishery area in the North Adriatic Sea coming from Rimini to Ancona at a depth of 70 m (Frapiccini et al. 2020).

73. **CI19. Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution:** The assessment made for the period 2018-2021 using the available relevant datasets showed that the status of the marine environment for CI 19 is assessed as non-GES (Poor class) in North Adriatic (NADR), and moderate in the other part of the Adriatic Sea (MADR and SADR).

74. **CI 20 - Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood:** Drivers that could exert pressure and cause impact on CI 20 were detected in the Adriatic Sea Sub-region. The examination of CI 17 results showed no impact on biota. In additions, data reported to IMAP-IS for CI 17 for biota were examined based on the concentration limits for the regulated contaminants in the EU, concentrations higher than those used for the CI 17 assessment. No impact was detected on CI 20.

75. Out of the 25 studies found in the literature, 80% reported concentrations of TM and organic contaminants below the concentration limits for the regulated contaminants in the EU, and 8% reported concentrations above the limits but without risk to human health. Possible impact was detected in 12% of the studies that reported concentrations above the limits for the regulated contaminants with probable risk to human health.

76. **CI 21 - Percentage of intestinal enterococci concentration measurements within established standards:** Drivers that could exert pressure and cause impact on CI21 were detected in the Adriatic Sea, and among them the following: Tourism, sporting and recreational activities; ports and maritime works, maritime activities. However, essentially no impact was detected. Most of the

bathing waters in the Adriatic were in the excellent and good GES classifications. A small percentage of bathing waters were classified as poor: 1.7% in Italy and 3.5% in Albania.

The Central Mediterranean Sea Sub-region

77. **EO 5 - CI 13 (DIN – Dissolved inorganic nitrogen and TP – total phosphorus) and CI 14 (Chla – Chlorophyll a):** The complete GES assessment of the CEN Sub-region for CIs 13 and 14 was impossible given the lack of quality-assured, homogenous data that prevented the application of both EQR and simplified EQR assessment methodologies. Therefore, the assessment of eutrophication was performed by applying the simplified G/M comparison assessment for evaluation of Chl *a* available from the remote sensing COPERNICUS data.

78. The assessment results show that despite the good status assigned to the assessment zones, 7 out of 36 sub-SAUs are in the good status i.e., GREA, GREAMB, GREPAT, LBY_E, LBY_W, LBY_W; TUN_B in the Eastern and the Southern parts of the CEN Sub-region.

79. The subSAUs in Greece are located in Bays as Ambracian Gulf (GREAMB), with pressure mainly from agriculture and Gulf of Patras (GREPAT) with pressures that include harbor operations, industries and agriculture. The more Northern subSAU (GREA) is probably influenced by the local sources of pollution (Igumenitsa port and intense aquaculture).

80. Along the Lybian coast, the marine waters in the western part of Libyan OW (subSAU LBYW), are influenced by waters coming from the Gulf of Gabes where human activities contributed to the impact of eutrophication and by the city of Tripoli; in the eastern part of CW (subSAU LBYE). Several pressures that cause impacts of eutrophication are present in the Gulf of Gabes i.e., the subSAU TUNB located in CW: i) Large urban center, ii) untreated domestic discharges, iii) industrial discharges, among them phosphogypsum, iv) agrochemical industry, v) agriculture.

81. **EO 9 – CI 17 (TM, Σ_{16} PAHs, and Σ_5 PAHs in sediments):** It was not possible to classify the Sub-region based on the CHASE+ application due to very limited available data and their uneven areal distribution in the CEN. The assessment was performed by station. Most of the stations were in-GES with respect to TM in sediments. Stations with non-GES status for Σ_{16} PAHs and Σ_5 PAHs in sediments were identified.

82. Non-GES stations regarding Σ_5 PAHs in sediments were located at the north-eastern and south-eastern part of Malta, in particular at the Port il- Kbir off Valetta and at the Operational Wied Ghammieg. Drivers and pressures in these areas are industrial plants and marine traffic. Non-GES stations were also located at the in the Gulf of Patras, Gulf of Corinth and in Kerkyraiki.

83. **IMPACTS.** Drivers and pressures and non-GES statuses were identified for the CI17 in the CEN. However, there were almost no data for contaminants in biota in the CEN. Eight samples of *M. galloprovincialis* were in-GES for TM and 5 samples of *M. barbatus* were classified as non-GES for Hg.

84. **CI 18 - Level of pollution effects of key contaminants where a cause and effect relationship has been established:** Although drivers that could exert pressure and cause impact on CI18, were identified in the CEN, no data were available at IMAP-IS to check for impacts in biota.

85. Examination of the scientific literature on the impact of pollution on biota biomarkers in the CEN found 5 studies for Tunisia and 1 from Italy. Drivers and pressures reported in the studies, encompassed the whole range of them: domestic and industrial discharges, agricultural and riverine runoff, fisheries, harbor and marina utilization, maritime activities, tourism. Studies demonstrated that, in addition to anthropogenic stressors, biomarker responses were influenced also by seasonality, tissue analyzed, spawning status, and on species identity.

86. It should be emphasized that the studies used different biomarkers, with different biota species, measuring in different tissues, and different methodologies. The biomarkers studied were not listed by IMAP, and if listed, not analyzed in the organ or tissue as required by IMAP. Most of the studies measured various biomarkers in the same station, with some showing an effect and others not.¹⁸

87. **CI19. Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution:** The assessment made for the period 2018-2021 using the available relevant datasets showed that the status of the marine environment for CI 19 is assessed as in GES (Good) in Central Mediterranean (CEN).

88. **CI 20 - Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood:** Drivers that could exert pressure and cause impact on CI 20 were detected in the CEN. TM data were present for Hg in 5 specimens of *M. barbatus* in IMAP-IS. The concentrations were higher than the thresholds for CI17 but lower than the limits for the regulated Hg in the EU. No studies were found in the literature.

89. **CI 21 - Percentage of intestinal enterococci concentration measurements within established standards.** Drivers that could exert pressure and cause impact on CI 21 are present in the CEN, among them: Urban coastal development, Tourism, sporting and recreational activities; ports and maritime works, maritime activities. No data were available for CI 21 in IMAP-IS.

The Western Mediterranean Sea Sub-region

90. **EO5 – CI 13 (DIN – Dissolved inorganic nitrogen and TP – total phosphorus) and CI 14 (Chla – Chlorophyll a):** The complete GES assessment of the WMS Sub-region for CIs 13 and 14 was impossible given the lack of quality-assured, homogenous data that prevented the application of both EQR and simplified EQR assessment methodologies. Therefore, the assessment of Common Indicator 14 (Chl-*a*) was undertaken in the three Sub-divisions of the Western Mediterranean Sub-region as follows: i) in the Central Sub-division of the Mediterranean Sea Sub-region (CWMS): the Waters of France and the Southern part of the Central CWMS; the Alboran (ALB) and the Levantine Balearic (LEV-BAL) Sub-division: the Waters of Spain by applying the Simplified G/M comparison assessment methodology on the satellite-derived Chl *a* data; and ii) the Tyrrhenian Sea Sub-division and part of the CWMS: the Waters of Italy by applying both the Simplified G/M comparison assessment methodology on the satellite-derived Chl *a* data and the simplified EQR assessment methodology on *in situ* measured Chl *a* data.

91. Despite the good status assigned to the assessment zones, the assessment findings indicate some sub-SAUs in non-good status. The present assessment of the waters of Spain showed there are 8 out of 70 subSAUs which are non-good status (the evaluation was performed on 70 out of 149 SubSAUs), and which are located close to the Mar Menor; in the Segura River mouth; near Valencia; close to the Ebro River mouth; one area close to the French border; and on the Mallorca Island in the Alcudia Gulf. There is a slight difference between the thresholds calculated from the satellite-derived data used for the present assessment and the assessment criteria calculated from *in situ* measurements, which resulted in the regional assessment findings which do not fully match the eutrophication evaluation performed by Spain by applying the assessment criteria calculated from *in situ* measurements. In the waters of Italy, there are 9 out of 54 subSAUs that are in non-good status, and they are located as follows: in front of the Arno River mouth; in front of the Tiber River mouth; close to the Napoli urban agglomeration and SW part of Sardinia Island. In the waters of France, there is 1 subSAU (Golfe de Porto Vecchio) out of the 46 SubSAU in non-good status. For four subSAUs located in the FRD_E Assessment Zone and two in the Corsica Island assessment zone (FRE), the assessment was reconsidered as in good status. In fact, a discrepancy that appeared between the national and sub-regional assessments was addressed further to the justification provided by France which is based on i)

¹⁸ **NOTE:** The Secretariat proposes the deletion of the text starting as of footnote No18 till the end of paragraph 88 under the rational that only contains information about existing bibliography and does not provide assessment findings.

the presence of WT I in water body DC04; ii) the presence of WT IIIW in water bodies DC06A; DC07I; DC08B; EC01C; EC04B and DC04; iii) the specific national knowledge of the local hydrological and environmental conditions. Among these 6 water masses, four are located in the FRD-E assessment zone namely DC04 (Golfe de Fos), DC06A (Petite Rade de Marseille), DC07I (Cap de L'estéral – Cap de Brégançon) and DC08B (Ouest Fréjus- Saint Raphaël). Two water masses are located in Corsica Island (FRE) and correspond to EC04B (Golfe D'Ajaccio) and EC01C (Golfe de Saint Florent). Water mass DC04 (Golfe de Fos) is a highly modified water mass characterised by a high spatial heterogeneity in chl *a* distribution. For other water masses (DC06A, DC07I and DC08B; EF04B and EC01C in Corsica), hydrodynamic studies revealed a very low annual renewal of water masses thus explaining slight accumulation of low phytoplankton biomass levels.

92. Findings derived from literature sources support the assessment findings which indicate a few spatial assessment units in non-good status¹⁹. Drivers and pressures with impacts on eutrophication are found in the WMS²⁰. The Spanish Mediterranean coastal zone may be affected by eutrophication mainly due to anthropogenic pressures, like agriculture (e.g., in Ebro Delta, rice field cultivation covers up to 65% of the area resulting in outputs of inorganic nutrients to nearby bays through drainage channels and the IMAP sub-SAUs ES100MSPFC32 in the vicinity was likely non-GES), but also by aquaculture, tourism, construction of harbors, intense urbanization, and industrialization. In French Mediterranean coast, the Gulf of Lion is one of the most historically known areas as influenced by natural and anthropogenic inputs of nutrients, receiving a large inputs of rural, urbanized, and industrialized discharges through the Rhone River. However, all sub-SAUs in the area were classified as in good status. The northern coasts of the Balearic Archipelago may be affected by the productivity imported from the Gulf of Lion, showing slightly higher concentration in the offshore north-eastern waters. Indeed, IMAP sub-SAU ES110MSPFMAMCp02 on the Mallorca Island in the Alcudia Gulf was classified as likely non-GES.

93. The Italian Western Mediterranean coast may be affected by riverine discharge e.g., the Arno river (subSAUs ITCWTCd and ITOWTCdoff Livorno), and the Tiber River (sub-SAUs ITCWLZ and ITOWLZC, Rome), as well as by the extensive population, tourism, port operations and industries, like the area of Naples (sub-SAUs ITOWCMC, ITOWCMD, ITCWCMC and ITCWCMD).

94. The Mediterranean Sea hosts around 400 coastal lagoons covering a surface of over 640 000 ha, that are important drivers for regional economies by way of fisheries, aquaculture, tourism. recreation and increased urbanization. One example of a well-studied lagoon is the Mar Menor located in the region of Murcia. The drivers and pressures on Mar Menor include tourism and agriculture along its shoreline and drainage area. In the present assessment the IMAP subSAU. ES070MSPF010300030, located close to the Mar Menor and IMAP subSAU ES080MSPFC017 located near the Segura River mouth were classified in non-good status. In addition, the area of the Gulf of Oristano in western Sardinia, is connected to the Cabras lagoon and may be influence by it (sub-SAU ITCWSDWB).

95. The present regional assessment using satellite-derived Chl *a* classified in non-good status one sub-SAU EC03B close to Golfe de Porto Vecchio, located along the northern part of Corsica coast. As elaborated in the assessment findings, the assignment of non-good status can be explained in the context of the low number of pixels integrated into the assessment based on the use of the satellite-derived data along with the water properties complexified with sediment resuspension resulted in the uncertain computation of the mean Chl-*a* values. Additionally, the enclosed feature of the Gulf of Porto Vecchio with very low water renewal contributes to relatively high Chl concentrations observed in the area.

¹⁹ The present assessment undertaken at the regional level, by using the satellite-derived Chl *a* data, indicates also weakened status in a few assessment areas along the coast of France, however, national authorities found that some regional assessment findings do not fully match the national assessments based on the use of *in situ* measurements. A presence of non-optimal matching of the regional and national assessments was also expressed by the authorities of Spain.

²⁰ Agriculture (runoff and riverine discharge), industry (land-based sources; industrial wastewater discharge), aquaculture (coastal shellfish and fish farming activities), coastal urbanization and tourism (domestic wastewater discharge), seawater desalination, ports and maritime operations (dredging).

96. Mariculture is also well developed in Italian waters, for example off Genoa and in the Gulf of Follonica, the latter south of Livorno that was classified in non-good status in the present assessment (subSAUs ITCWTCD and ITOWTCD).

97. Although the non-good status was not found in the present assessment of the Southern part of the CWMS, it must be recognized that the assessment was impossible at the level of the finest spatial assessment units (subSAUs) due to the absence of finer water bodies delineation and related water typology characterization as for other Sub-divisions in the WMS. Given a less confidential assessment in this part of the WMS, some specific examples of drivers and pressures were mapped from the scientific literature. The Oran harbor (Algeria) which receives the discharge of wastewater, while the Ghazaouet harbor is exposed to chemicals coming mainly from industrial activities. In addition, the high rate of urbanization around the harbor contributes to anthropogenic contamination. Algeria also has seawater desalination plants along its shoreline such as the Bousfer desalination plant in Oran Bay and the Beni Saf desalination plant.

98. **EO 9 - CI 17 (TM in sediments and biota (*M. galloprovincialis*) (ALBS); TM, Σ_{16} PAHs and Σ_7 PCBs in sediments and biota (TYRS); TM, Σ_{16} PAHs and Σ_7 PCBs in sediments and biota (CWMS))**: The assessment was conducted using NEAT in the ALBS and the TYRS Sub-divisions. A simplified application of NEAT (1st level, without any further spatial integration) was applied to the CWMS. Data were available only for some SAUs for the northern coast sub-division (Spain, France, Italy). No data were available for the southern CWMS coast (Algeria and Tunisia). The WMS assessment was made for the coastal zone, as 91% of data were coastal.

99. Overall, the Alboran Sea (ALBS) and the Tyrrhenian Sea (TYRS) were classified as in GES, in good status regarding all available parameters and SAUs. In the Central Western Mediterranean (CWMS) Sub-division, 6 out of 7 SAUs were classified in high or good statuses and one SAU was classified as non-GES, in moderate status regarding all available parameters. A detailed examination of these classifications is presented here-below.

100. The ALBS Sub-division was in GES (high and good statuses) for TM in sediments and for Cd and Pb in biota, and non-GES (moderate status) for Hg in biota sampled along the Spanish coast. In addition, off Morocco, one SAU was in moderate status for Cd in sediments and one in moderate status for Pb in sediments.

101. The TYRS Sub-division was in GES (high and good statuses) for TM, Σ_{16} PAHs and Σ_7 PCBs in sediments and biota. For the Italian coast several non-GES parameters were identified for some SAUs, as follows: one SAU was in moderate status regarding Cd and Hg in sediments, one SAU in moderate status for Cd in sediments and in poor status for Hg in sediments, and one SAU in moderate status for Cd and Σ_7 PCBs.

102. Non-GES SAUs for several parameters were identified in the CWMS sub-division as follows: One SAU with moderate Pb in sediment in Spain; in France, one SAU with poor status of Hg in sediments, moderate status for Cd and Hg in biota and poor status for Σ_{16} PAHs in biota; 2 SAUs with poor and moderate statuses for Σ_{16} PAHs in biota; in Italy, one SAU with moderate status for Cd in sediment and poor status for Σ_{16} PAHs and Σ_7 PCBs in sediments.

103. Drivers and pressures are found in the WMS: Large Ports and maritime traffic, Coastal urbanization, Tourism, Riverine discharge, Agriculture and aquaculture, Desalination. Some specific examples for drivers and pressures can be found in the scientific literature.

104. IMPACTS. Drivers and pressures and non-GES statuses were identified for CI17 in the WMS however, essentially no impact was detected in the environmental status classification of biota. In the CWMS, for France, moderate status was found for Hg and Pb in biota, at the same SAU with poor status for Hg in the sediment. In addition, moderate and poor statuses were assigned to Σ_{16} PAHs in biota in three SAUs. No concentration of Σ_{16} PAHs in sediment were reported. In the ALBS, for Spain,

Hg in biota was in moderate classification. No concentration was reported for Hg in the sediment. It should be emphasized, that concentrations not in-GES do not necessarily imply a biotic effect.

105. CI 18 - Level of pollution effects of key contaminants where a cause and effect relationship has been established: Although drivers that could exert pressure and cause impact on CI18, were identified in the WMS, no data were available at IMAP-IS to check for impacts in biota.

106. Drivers and pressures reported in 15 relevant studies (4 from Algeria, 2 from Italy, 5 from Spain and 4 from Tunisia), encompassed domestic and industrial discharges, agricultural and riverine runoff, fisheries, harbor and marina utilization, maritime activities, tourism. Studies demonstrated that, in addition to anthropogenic stressors, biomarker responses were influenced also by seasonality, tissue analyzed, spawning status, and on species identity.

It should be emphasized that the studies used different biomarkers, with different biota species, measuring in different tissues, and different methodologies. The biomarkers studied were not listed by IMAP, and if listed, not analyzed in the organ or tissue as required by IMAP. Most of the studies measured various biomarkers in the same station, with some showing an effect and others not. All the studies below reported an impact on some of the biomarkers.²¹

107. CI19. Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution: The assessment made for the period 2018-2021 using the available relevant datasets showed that the status of the marine environment for CI 19 is assessed as non-GES (Poor class) in Alboran Sea North Adriatic (NADR), and moderate in the other part of the Western Mediterranean (WMS and TYRS).

108. CI 20 - Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood: Drivers that could exert pressure and cause impact on CI 20 were detected in the Western Mediterranean Sea. The examination of CI 17 results showed no impact on biota. In additions, data reported to IMAP-IS for CI 17 for biota were examined based on the concentration limits for the regulated contaminants in the EU, concentrations higher than those used for the CI17 assessment. No impact was detected on CI-20.

109. Out of the 37 studies found in the literature, 78% reported concentrations of TM and organic contaminants below the concentration limits for the regulated contaminants in the EU and 11% reported concentrations above the limits but without risk to human health. Possible impact was detected in 11% of the studies that reported concentrations above the limits for the regulated contaminants with probable risk to human health.

110. CI 21 - Percentage of intestinal enterococci concentration measurements within established standards: Drivers that could exert pressure and cause impact on CI 21 were detected in the Western Mediterranean Sea, and among them the following: Tourism, sporting and recreational activities; ports and maritime works, maritime activities. However, essentially no impact was detected. Most of the bathing waters in Spain, France and Italy were in the excellent and good GES classifications. A small percentage of bathing waters were classified as poor category: 0.1% in Spain, 1% in France, 1.7% in Italy. In Morocco, 20 out of 131 stations (15%) were classified as in bad status. Data were not available for Algeria and Tunisia.

Measures and actions required to achieve GES for EO5 and EO9

The knowledge gaps common to IMAP Ecological Objectives 5 and 9

111. There was a vast improvement in the spatial coverage of data reported for IMAP Pollution Common Indicators into IMAP IS since the last 2017 MED QSR. However, data availability is

²¹ **NOTE:** The Secretariat proposes the deletion of the text starting as of footnote No22 till the end of paragraph 114 under the rational that only contains information about existing bibliography and does not provide assessment findings.

characterized by significant data inhomogeneity, and uneven data distribution along the Mediterranean region, with areas with satisfactory data availability and with areas for which only a few or no data were reported. The following key observations pertain to specific IMAP Pollution Common Indicators:

- a) CI 13&14. The data most lacking are for total phosphorous. Data for all mandatory parameters i.e., the concentration of ammonium, nitrite, nitrate, total nitrogen, orthophosphate, total phosphorus, orthosilicate and chlorophyll a, temperature, salinity, dissolved oxygen and water transparency (Secchi depth), are needed for the Central Mediterranean Sea Sub-region (CEN); the southern part of the Levantine Sea, the sub-division of the Aegean-Levantine Sea Sub-region; and the southern part of the Central part of the Western Mediterranean Sea Sub-region (WMS) which are underrepresented in the IMAP database.
- b) CI 17. The data most lacking were for organic contaminants in sediments and biota for all four Mediterranean Sub-regions, followed by trace metals in biota (*M. galloprovincialis* and *M. barbatus*). As well as for CIs 13&14, data for all the parameters of CI 17 are needed for the CEN Sub-region; the southern part of the LEVS sub-division; and the southern part of the Central part of the Western Mediterranean Sea (CWMS) sub-division.
- c) CI 18. No data were available in IMAP IS for the preparation of the 2023 MED QSR. Therefore, no improvement in the assessment of CI 18 was achieved since the 2017 MED QSR, and the GES assessment was impossible within the preparation of the 2023 MED QSR. Instead, the assessment was performed based on bibliographic studies, as in the 2017 MED QSR, using newer available scientific literature i.e., the studies on biomarkers in the Mediterranean Sea since 2016. It should also be emphasized that data from studies could not be compared to BACs and EACs values as agreed for CI 18 by Decisions IG.22/7 (COP 19) and IG.23/6 (COP 20) as they were not measured in the specific tissue of *M. galloprovincialis*. Moreover, comparison among the bibliographic studies was mostly impossible. This is due to using different biomarkers, with different biota species, using different tissues, and different methodologies. The confounding factors that hinder environmental status assessment i.e., species, gender, maturation status, season, and temperature were re-confirmed as found in the 2017 MED QSR. In addition, an inherent bias exists in publications toward studies showing an effect. Authors and journals do not usually publish studies showing the lack of effect or response.
- d) CI 20. No data were available in IMAP IS to undertake GES CI 20 assessment within the preparation of the 2023 MED QSR. Therefore, the environmental assessment could only be performed by combining the two approaches: i) assessment of the status based on data reported to IMAP IS for CI 17 contaminants in biota, and ii) assessment of the present status based on bibliographic studies, following the same approach applied for preparation of the 2017 MED QSR; however, by using newer available scientific literature. It should also be recognized that due to the lack of data, the rule was not set for assigning the GES/non-GES to the areas assessed further to the use of the EU maximum levels for certain contaminants in foodstuffs, approved as the assessment criteria for CI 20.
- e) CI 21. Very limited data were available in IMAP IS to undertake GES CI 21 assessment within the preparation of the 2023 MED QSR. Most of the data were available through EEA and not through IMAP IS.

112. The policy measures to address the common knowledge gaps:

- a) Increase of data availability and capacity building programmes to address the knowledge and technical gaps of national IMAP Pollution competent laboratories. In this context, the assessment of the capacities of national IMAP Pollution competent laboratories should continue as a biennial effort aimed at gradual improvement of their performances with a view of reaching optimal compliance of data processing and reporting. To this end, a thorough

- mapping of the specific needs of each CP should be performed with the view of developing and implementing a tailored capacity building process and optimising financial support.
- b) Further harmonize laboratories' performance in line with the IMAP Monitoring Guidelines in order to increase the representativeness and accuracy of the analytical results for generation of quality-assured monitoring data;
 - c) Improve availability of appropriate analytical equipment to strengthen technical capacities of national IMAP Pollution competent laboratories;
 - d) Increase consistency of biota sampling along with the application of Quality Assurance measures;
 - e) Increase accessibility to quality assurance tools, such as inter-laboratory comparisons (ILCs), proficiency tests (PTs), or certified reference materials (CRMs), and ensure overall support and capacity building in a coordinated manner with supporting institutions and laboratories (e.g., organization of training courses and proficiency testing for legacy and emerging contaminants (e.g., metals and organics)).
 - f) Improve DPSIR analysis: DPSIR analysis needs to be improved by supporting the CPs to regularly provide relevant information and share the knowledge which in principle may be ensured by i) reporting information on DPSIR, along with national monitoring data, and compatibly with data reporting for National Action Plans' indicators; ii) ensuring assistance of the local experts, through the CPs, regarding the identification of specific DPs and their impacts; and iii) complementing DPSIR information reporting with data from the scientific literature and national reports.
 - g) Monitor the effectiveness of the technical and policy measures for areas class classified as likely non-GES or non-GES.
 - h) Optimally address the impacts of DPs and tailor the responses within the regional plans and national action plans to the needs of continual improvement of the marine environment status.

The general measures to prevent and abate pollution towards the good environmental status of the Mediterranean:

113. Pollution prevention needs to be encouraged instead of environmental remediation. This could be achieved by reducing and eliminating the use and discharge of known harmful substances, regulating the emergence of new substances with mandatory environmental and social impact assessments, recycling and using biodegradable green compounds, along with planning emergency responses in case of accidental pollution events.

114. Identification of legacy pollutants²² in the environment is needed, whereby it should be ensured that they are not currently being introduced into the environment. While the mitigation of current pollutants entails measures at the source of pollution, the mitigation of legacy pollutants takes place *in situ*. The latter includes the study of transport and distribution of pollutants in the environment, the use of technologies for pollutants removal from the environment, and bioremediation.

115. Strengthened use of the Best available technology (BAT) is needed to prevent and control pollution, along with the Best environmental Practice (BEP) to support the most appropriate combination of environmental control measures and strategies to prevent and control pollution.

116. Transition to the blue economy needs to support the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem.

117. Move towards the circular economy and sustainability needs to support the achievement of zero pollution through recycling. It entails markets that give incentives to reusing products, rather than disposing and then extracting new resources. Major changes in production and consumption patterns are needed, with a focus on climate change concerns, biodiversity protection and ecosystem restoration.

²² Legacy pollutants are substances that remain in the environment long after they were introduced and after pollution abatement measures were applied or their use was banned.

118. Regional policy integration is of utmost importance since marine pollution has no borders, and therefore strengthening regional cooperation is necessary, advocating common environmental policies.

The specific measures to prevent and abate pollution towards the good environmental status of the Mediterranean:

119. Aquaculture. There are several strategies and guidelines developed by FAO to assist a sustainable growth for aquaculture sector, including the Ecosystem-based Approach to Fisheries and Aquaculture aiming to assist and set limits for aquaculture production given the environmental limits and social acceptability of sector. In this context it is recommended to apply the following key three principles of the FAO/GFCM strategy:

- a) Aquaculture development and management should take account the full range of ecosystem functions and services and should not threaten the sustained delivery of these to society;
- b) Aquaculture should improve human well-being and equity for all relevant stakeholders; and
- c) Aquaculture should be developed in the context of other sectors, policies and goals. In this regard, UNEP/MAP-MED POL is preparing a Regional Plan for Aquaculture Management for adoption by COP 23 advocating the below measures.

120. Nutrient reduction, of relevance to addressing several DPs, should follow a more cyclic approach to produce, use and treat nutrients in treatment plants, where recycling and reuse are enhanced instead of environmental discharge. This is true for nitrogen and in particular for phosphorus, which has finite reserves in the environment. Policy and regulatory instruments could include more strict regulation of nutrient removal from wastewater, mandatory nutrient management plans in agriculture, and enhanced regulation of manure.

121. Tourism and Coastal urbanization. Measures should focus on the improvement of waste treatment, sustainable management of coastal areas to reduce disruption of coastal ecosystems, investment in habitat conservation and restoration to provide ecosystem services, along with implementation of the ICZM tools. Sustainable tourism and urbanization require monitoring and decision-making feedback, improvement of communal infrastructure, environmental coastal spatial and marine spatial planning, as well as the optimal environmental impact assessments, carrying capacity, adaptation to impacts of climate changes, etc.

122. Industry. Measures should focus on the improvement of waste treatment and on upgrade of the industry to the use of BAT and BEP. In addition, resources should be used in the context of a circular economy, with the reduction, reuse and recycling of waste, and shifting towards the production and use of greener substances.

123. Agriculture. Responses to the impacts of agriculture are difficult to manage because of the diffusive i.e. non-point sources introduction of nutrients and agrochemicals into the marine environment. Responses should include the management of river runoffs, the reduction of the use of toxic and bio accumulative agrochemicals, the transition to greener fertilizers and biodegradable pesticides and organic farming.

124. Marine traffic and marine and port operations. The responses should focus on improving the technology of ships and ports operations and of ports infrastructure. Use of BAT and BEP to ensure effective onboard and port pollution control facilities, to prevent accidental discharges and spillages. Specifically, for marine traffic, the designation of restricted areas for anchorage and protection of sensitive areas are encouraged. Implementation of the measures related to the designation of the Mediterranean Sea as a Sulphur emission control area (SECA) is expected to generate significant benefits in both pollution reduction and ecosystem protection. However, the introduction of exhaust gas cleaning systems EGCS – scrubbers on ships in the Mediterranean, as alternative abatement technology for air emission of Sulphur region, may generate a new stream of shipping liquid wastes, in

which metals and PAH discharges dominate from ships, that is the chemical air pollution transferred and transformed into marine pollution. This is because the use of open-loop EGCS on ships might be conflicting with Article 195 of United Nations Convention on the Law of the Sea UNCLOS i.e., "duty not to transfer damage or hazards or transform one type of pollution into another", whereas scrubber-equipped vessels accept to transfer and to transform air pollution into marine pollution.

The technical measures specifically related to the knowledge gaps identified for IMAP Common Indicators of Ecological Objectives 5 and 9

125. In addition to the above policy and technical measures that are common at the level of IMAP Pollution and Marine Litter Cluster, the specific knowledge gaps were identified per individual Common Indicators and therefore the specific technical measures are proposed as provided here below.

Common Indicators 13 and 14:

Improve the availability of the assessment criteria for CIs 13 and 14:

126. Upon setting the reference conditions and boundary values for DIN and TP in the Adriatic Sea Sub-region, actions need to be undertaken to improve the availability of the assessment criteria for nutrients in the AEL, the CEN and the WMS Sub-regions. To that purpose three continuous years of monitoring need to be provided with a minimum monthly frequency for Water types I and II and bimonthly to seasonal for Type III. It should also be noted that other supporting parameters (i.e., temperature, salinity and dissolved oxygen) need to be available for defining the water typology. Further update of the assessment criteria for CI 14 should be undertaken as appropriate. The specific knowledge needs to be also built regarding the use of statistical tools for data validation and calculation of the assessment criteria.

Improve the GES assessment:

127. Further to the above elaborated common measures, the GES assessment for CIs 13 & 14 needs to be also improved, including the use of the remote sensing and modelling tools to complement in situ monitoring and adding additional sub-indicator i.e., the satellite-derived Chla data for GES assessment.

Upgrade present policy measures:

128. For the development of the adaptive eutrophication management strategies, the following specific actions should also be undertaken:

- Extend the scope of research and monitoring programs to characterize the effects of eutrophication;
- Implement regulations to mitigate inputs of nutrient to the marine environment, such as standards, technology requirements, or pollution caps for various sectors.
- Preserve and restore natural ecosystems that capture and cycle nutrients.

Common Indicator 17:

Update of Environmental Assessment Criteria (EACs):

129. In order to update EACs, the methodology, as detailed in the European Commission Guidance Document (2018) and in Long et al. (1995), should be considered. This entails the creation of a database of scientific literature which elaborates where adverse biological effects, or no effect, are presented in conjunction with chemical data, in the environment and biota, at the same site and time. Briefly, those include but are not limited to sediment toxicity tests, aquatic toxicity tests in conjunction with equilibrium partitioning (EqP) and field, and mesocosm studies. The literature would then be

analysed by experts and conclusions drawn. Laboratory results on biomarkers (CI18) are also important for the derivation of the EAC values. The emphasis should be given to the Mediterranean Sea biota species.

Undertake regular updates of Sub-regional and regional Background Concentrations (BCs) and Background Assessment Criteria (BACs):

130. As more data will be submitted to IMAP IS, the Sub-regional and regional BCs should be updated. It is proposed to undertake their regular updates at least 2 years prior to the QSRs preparation. This will allow for sufficient time to analyse the data, detect data gaps and ensure the submission of missing data, to perform a more robust update of the criteria for reliable assessments.

131. The methodology for BACs calculation should be revised and updated. BACs are calculated from BCs by applying the multiplication factors. Due to the lack of Mediterranean data, UNEP/MAP adopted the pragmatic methodology used by OSPAR²³. Therefore, the precision of monitoring per CP should be calculated and used to set the multiplication factors specific for the Mediterranean.

Improve the GES assessment:

132. Revision of IMAP needs to support the improvement of the good environmental status assessment and contribute to a more robust analysis, and facilitate integration and aggregation of CI 17 with other CIs and EOs, by undertaking the following priority actions:

- Update list of priority pollutants. Measurements of known contaminants of concern, such as As and Cu, and emerging contaminants of concern, such as pharmaceuticals and flame retardants should be considered for inclusion in the IMAP Pollution monitoring. This process should follow the initial steps undertaken in 2019²⁴. The updated List of Priority Contaminants could provide the basis for a prioritization of substances to be further included in the IMAP Guidance Factsheets related to Ecological Objective 9, and complement presently agreed mandatory or recommended substances for CIs 17 and 20. The decision on which contaminant to add should be based on pilot studies checking the probability of their presence in the Mediterranean Sea sub-regions.
- Extend the list of commonly agreed IMAP Pollution mandatory species. Species, other than species (*M. galloprovincialis* and *M. barbatus*) presently mandatory, should be added to the IMAP list. The species should be chosen based on their presence in the Sub-regions and their relevance as pollution indicators, which in turn will allow for an improved environmental assessment. Harmonization of the use of different species in different Sub-regions needs to be followed by setting the criteria (BCs and BACs) specific to each species.
- Utilize tools to perform Environmental Risk Analysis, to integrate chemical and biological data, as elaborated here-below for CI 18.
- Revise sediments' temporal monitoring requirements. For hot spot stations, the monitoring should remain every year or 2 years, while for other stations, the monitoring once or twice during the 6-year cycle should be considered.
- Harmonize national efforts regarding contaminants monitoring. As a minimum, it is necessary to ensure that every CP reports all mandatory parameters in mandatory matrixes, including the wet weight for mussels, LOD or LOQ values, the grain size of samples for sediments, and spatial and temporal monitoring requirements. The significant differences among the countries in terms of LOD and LOQ values, as well as differences among the areas of monitoring in the

²³ OSPAR calculated the ratio between BAC and BC (the multiplication factor) from known parameters. The pragmatic approach used in order to have 90% probability of concluding that concentration is below provided for BAC, $BAC = BC \exp(3.18 CV)$, where CV is the precision of the monitoring program (per determinant and matrix). In the case of OSPAR, temporal monitoring data from the UK National Marine Monitoring Programme was considered.

²⁴ UNEP/MED WG.463/Inf.4. The List of Priority Contaminants under MAP/Barcelona Convention within the MED POL Monitoring Programme and IMAP have been revised according to the latest lists of priority contaminants development in the EU region and internationally and shows no major changes compared to other RSCs.

same CP, need to be analyzed and drivers of the unsatisfactory analytical performance identified.

Common Indicator 18:

Ensure the GES assessment for CI 18:

133. Revision of IMAP needs to support the good environmental status assessment for CI 18 and facilitate its integration and aggregation with other CIs and EOs, by undertaking the following priority actions:

- Review and update the list of CI 18 biomarkers, along with the monitoring species;
- Review and update, as appropriate, the assessment criteria as adopted by Decisions IG.22/7 (COP 19) and IG.23/6 (COP 20), as well as the assessment methodologies;
- Further to the initial work undertaken in 2021²⁵ towards the development of the Biomonitoring related to IMAP CI 18, the following further actions should be tested:
 - i) An application of new biomarkers should be explored to support the strengthening of CI 18 monitoring and assessment.
 - ii) Use of the Environmental Risk Analysis should be provided by combining the chemical and ecotoxicological data, to support the evaluation of the risk related to marine organisms exposed to contaminated waters and sediments. It should result in objective risk values which allow national and regional policymakers and environmental managers to decide on the actions to decrease marine contamination, or to remediate a polluted area.

Common Indicator 19:

Improve quantity and quality of data for CI 19

- REMPEC to continue soliciting the submission of the report on incidents and spills from the Countries, underlining the importance to make use of the latest version of the Data Dictionary and Data Standard (DD&DS) prepared by REMPEC jointly with INFORAC and providing to any extent possible all the data required in DD&DS, including estimation of quantity and volume of oil or other substances released.
- The Countries to start collecting data on impacts on biota with reference to the above-mentioned updated version of DD&DS for CI 19.
- The UNEP/MAP – REMPEC to align the definition of the minimum threshold for reporting with the one used under other regional sea conventions and in the framework of MSFD.
- UNEP/MAP - REMPEC to continue to integrate newly available Lloyds data in MEDGIS-MAR database. UNEP/MAP - REMPEC to prepare a comprehensive, integrated database, considering also old data, based on these two databases, cross-checking and resolving data duplication and inconsistencies.
- UNEP/MAP - REMPEC to continue acquiring information and understanding about CleanSeaNet dataset and assessing the feasibility to integrate CleanSeaNet data for the Mediterranean in MEGIS-MAR.

Improve the GES assessment of CI 19

- The definition of "acute pollution events" is highly debated under the Marine Strategy Framework Directive and other Regional Sea Programmes and Agreements, in particular the Bonn agreement. It remains a complex issue for which consensus has yet to be reached.
- Additional work should be undertaken by UNEP/MAP - REMPEC and the Contracting Parties to define operational criteria for the identification of acute pollution events. An integrated and

²⁵ UNEP/MED WG.492/6

escalating approach should be adopted, considering, among others, factors like the spilled volume, the nature of the spilled product(s), the proximity and sensitivity of threatened areas and/or human activities, the environmental conditions (i.e. evidence of an environmental impact), and the need for response operations.

- Based on data collected on impacts on biota, UNEP/MAP - REMPEC and the Contracting Parties should work towards the definition of assessment criteria for CI 19 including biota as component, if possible, in coordination with other regional sea conventions.

Common Indicator 20:

Ensure the GES assessment for CI 20:

134. A multidisciplinary approach will be needed to ensure GES assessment for CI 20 by undertaking the following priority actions:

- Agree on the maximal percentage of detected regulated contaminants exceeding regulatory limits in seafood, above which non-GES needs to be assigned to the area assessed;
- Incorporate the risk assessments to human health from consumption of seafood by calculating the estimated daily intake (EDI), the target hazard quotient (THQ), the total health risk (HI), and the cancer risk, among others;
- Incorporate into the overall evaluation the suite of contaminants analysed, together with other factors such as synergy among contaminants, and temporal and spatial scales.
- Harmonize the choice of species among the CPs, whereby data from national reports on seafood safety and cooperation with national health authorities should be used to complement data reporting to IMAP IS;
- Examine and coordinate monitoring protocols, risk-based approaches, analytical testing, and assessment methodologies between the CPs; the national food safety authorities; research organisations and/or environmental agencies;
- Determine the applicability of CI 20 beyond food consumer protection and public health, although it intuitively reflects the health status of the marine environment in terms of delivery of benefits (e.g., fisheries industry).

Common Indicator 21:

Improve the GES assessment for CI 21:

135. An optimal GES assessment for CI 21 needs to be strengthened by optimal data reporting which will ensure the confidence of the assessment. At least, 16 data points for 4 consecutive bathing seasons are needed for the application of the uniform assessment methodology across the Mediterranean; therefore, increasing the comparability and consistency of the assessment findings.

Ecological Objective 10 (EO10) on Marine litter (Marine litter does not adversely affect the coastal and marine environment)

Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines

Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor

Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines

136. A total of 931 beach marine litter surveys were used for the needs of the 2023 MED QSR, reflecting the collection and removal of ~300,000 marine litter items from the Mediterranean coastline. According to the available data and information in relation to the Trends in the amount of litter washed ashore and/or deposited on coastlines (IMAP EO10 CI22), only 16% of the monitored beaches achieve GES, 79% do not achieve GES of which 29% fall into the poor status class and 25% in to the bad one.

137. Concentrations of beach marine litter (items/100m) are highly variable fluctuating between 8 and 47,361 items /100m, whereas the average beach marine litter concentration on the Mediterranean coastline is found equal to 961 ± 3664 items/100 m. On the sub-Region level, the Central Mediterranean appears the least affected by beach litter with 32 % out for the 22 beaches monitored falling into the GES category The Adriatic, Eastern and Western Mediterranean sub-regions show an equal distribution of beaches under GES (14 -16 %) and non-GES (84 -86 %) classes.

138. The most commonly found marine litter items in the Mediterranean are Plastic/polystyrene pieces (2.5 cm – 50 cm), followed by cigarette butts and filters, and plastic caps and lids. These 3 items account for approximately 60% of the recorded marine litter.

Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor

139. The assessment regarding floating microplastics (IMAP EO10 CI23) revealed that almost all stations (99%) that have been monitored do not achieve GES, and most of them fall into the poor (44 %) and bad (49 %) status classes. The Mediterranean region and its subregions suffer from elevated microplastics concentrations in surface waters, reaching up to 100 times and 1000 times higher than the IMAP TV. In particular, in the Eastern Mediterranean, the 44% of monitored stations exceed the bad class with concentrations more than 1000 times the TV and are classified as ‘very bad’. In the Adriatic and Western Mediterranean only 1% and 2 % of stations respectively are found above 1000xTV.

140. Concentrations of floating microplastics (items/m²) are highly variable fluctuating between 0 and 31 items /m², with the average concentration reaching up to 0.355 ± 1.99 items/m². The most recorded categories of floating microplastics are Sheets (37%), followed by Filaments (30%), Pellets (21%), Fragments (7%), Foam (4%), and Granules (1%).

141. Regarding floating mega-litter, the data provided by the ACCOBAMS Aerial Survey Initiative (ASI) showed that during the summer 2018 only 20% of the Mediterranean was free of floating mega-litter. The estimated presence probability was highest in the central and western Mediterranean, in the Tyrrhenian, northern Ionian, and Adriatic Seas and in the Gulf of Gabes (> 80%). The lowest presence probabilities occurred in the Levantine basin, in the southern Ionian Sea and in the Gulf of Lion (< 50%).

142. The ASI data showed also an average encounter rate of 0.8 mega-debris per km, ranging between 0 and 111 litter items per km. The total number of floating mega-litter was estimated at 2.9 million items (80% confidence interval was 2.7 to 3.1 million) and average density 1.5 ± 0.1 items per km². More than two thirds of the recorded items were identified as plastics (68.5%; e.g., plastic bags, bottles, tarpaulins, palettes, inflatable beach toys, etc.), while 1.7% were fishery debris and 1.9% were

anthropogenic wood-trash. The remaining quarter (27.9%) was anthropogenic mega-litter of an undetermined nature.

143. Concentrations of seafloor marine litter (items/km²) are highly variable fluctuating between 0 and 28,228 items /km². Average seafloor marine litter concentration on the Mediterranean coastline is found equal to $570 \pm 2,588$ items/km². For the Seafloor Marine litter component of the IMAP EO10 CI23, the majority (88%) of the seafloor stations monitored do not achieve GES, and most of them fall into the poor and bad status classes (23% and 53% respectively).

144. On the sub-region level the Western Mediterranean appears highly affected by seafloor marine litter since all stations monitored (100%) are classified in the nonGES category. The Central Mediterranean sub-region appears also highly affected with 81% of stations monitored classified under nonGES. The Adriatic and Eastern Mediterranean sub-regions follow with 65 and 68% of the stations monitored falling into the nonGES class respectively. The Eastern Mediterranean is the only area where a considerable percentage (24 %) of trawling stations achieve high status.

145. Up to 10% of the total recorded marine litter is represented by fisheries related items: Synthetic ropes/strapping bands (39%), Fishing nets (polymers) (27%) and Fishing lines (polymers) (25%).

Measures and actions required to maintain/achieve GES EO10

146. A number of measures are proposed to address the assessment findings, including for knowledge gaps as well as for tailored action for specific marine litter items and sources.

147. Monitoring and assessment should be further linked and connected with the implementation of measures. Specific and well-elaborated findings can provide the basis for the implementation of targeted measures.

148. Although the presence of marine litter in the Mediterranean is variable, tackling few items may yield promising and encouraging results pertinent to the health status of the marine and coastal environment.

149. Cigarette butts and filters are predominant in the Mediterranean beaches and primarily require a behavioral change along with the implementation of strong anti-smoking policies and measures, including a strengthen communication campaign linking the damage in human health with the damage in the marine environment. Cigarette filters do not contain only plastic, but also a cocktail of toxic substances (e.g., arsenic, lead, nicotine and pesticides, etc.) for which their effects in the marine biota and the marine environment still are unknown. The engagement of the cigarette companies in this process is of great importance, including their potential inclusion in a “polluters-pay” principle.

150. The vast presence of plastic bottles being documented by the third main item on the Mediterranean beaches, comprising of plastic caps and lids, the introduction of sound alternatives and incentivizing the use of re-use caps could be among the possible options. Strengthening recycling and Extended Producer Responsibility schemes, targeted and tailored to tackle plastic bottles are also part of the solution, including the minimization of the small-sized bottles (<0.5 liters) which are easier to escape in the marine and coastal environment.

151. Microplastics of various types and shapes are escaping into the marine and coastal environment through wastewater treatment plants (WWTP). The Regional Plan on Sewage Sludge Management gives particular attention to the presence and effective management of microplastics on Pharmaceuticals and Personal Care Products (PPCP) (e.g., lotions, soaps, facial and body scrubs and toothpaste) being present in sewage sludge and proposes methods for reduction at the source as provided hereunder:

- a) Regulatory approvals for new products potentially harmful to the environment to be introduced for most/all of personal care materials or detergents. However, the said measure may be difficult to be applied for medication products.
- b) Education on the correct use of substances containing drugs, and especially the use of the right dose without excess, including ecolabels to raise awareness of ecological impacts of PPCPs.
- c) Encouraging the return of unused or expired pharmaceuticals to specific collection points; and
- d) Subjecting wastewater originating from pharmaceutical industries, hospitals or healthcare centres to regulations that limit the concentration of organic pollutants in their effluents.

152. Wastewater treatment plants are essentially taking the microplastics out of the wastewater and concentrating them in the sludge. Therefore, sludge management is of great importance for microplastic removal. Controls should be exercised however on the subsequent use of sludge. Measures that can contribute toward reducing sewage concentrations of microplastics include:

- a) Bans on single-use plastics and microplastics in personal care and cosmetic products;
- b) Behavior changes and campaigns to reduce the use of such products;
- c) Certain textile designs can reduce microfibre generation during washing;
- d) Development of household-based systems to prevent microplastics from being released into sewer lines or directly into the environment; and
- e) Incineration of sewage sludge to avoid soil and water contamination by microplastics. Care should be exercised however to monitor and regulate pollutants in air emissions with a view to minimise these emissions as much as possible.

153. As rivers in most of the cases is the final repository of litter coming from the various land-based sources, the application of measures on land are very relevant for the control and effective management of litter in riverine systems. A Conceptual flow of plastic from production to consumption, waste management and leakage into the environment (i.e., land, rivers and ocean), including possible points of action for policies should be considered. Minimizing leakage on land will subsequently minimize the riverine inputs deriving from wind and rain transportation, as well as from direct dumping and sewerage, and will further reduce the amount of plastics (incl. microplastics) entering the ocean.

154. Storm water is an important contributor of riverine inputs of marine litter especially for the Mediterranean where seasonal, on several occasions extreme, weather events take place such as flash floods. A more systematic approach should be also offered when developing urban storm water management plans. Those plans typically address how urban storm water quantity and quality should be managed to protect ecological, social/cultural, and economic values. Urban storm water management plans are used to assist decision making to ensure that remedial measures (structural and non-structural) in existing developed areas are undertaken in a cost-effective, integrated and coordinated manner, and that decisions in relation to areas of new expansion (including redevelopment) are made with the implications for storm water impacts taken into account in order to achieve the quality goals for water bodies.

155. In addition, it would be valuable to close the knowledge gaps by gathering comparable information across the Mediterranean on the extent of storm water overflows from combined collection systems, which should include inventory of the locations of overflow structures, inventory of functioning of the overflow structures, inventory of sewage storage capacity structures (e.g. starting with agglomerations of more than 100,000 p.e.), with the aim of acquiring better understanding of the occurrence of storm water overflows and their impacts on the quality of receiving water bodies.

156. Promoting Sustainable Urban Drainage Systems (SUDS) is another measure which aims to minimize the impervious cover by promoting infiltration, ponding, and harvesting of storm water runoff. Furthermore, in this decentralized management approach, storm water runoff and pollution are primarily controlled by measures located near the source to strive towards well-integrated measures that perform multiple functions, including flood protection, pollution removal and groundwater recharge, as well as recreation, biodiversity and urban aesthetics.

157. Although most of the marine litter in the Mediterranean region originates from land-based sources, studies confirmed that ship-originated litter are found at sites under major shipping routes and lost fishing gear are also recognized as an important source of marine litter in the region.

158. Through the updated Regional Plan on Marine Litter Management in the Mediterranean, the Contracting Parties of the Barcelona Convention have set measures and a timetable to be implemented in relation to sea-based sources of marine litter, especially related to the establishment of best practices to create incentives for fishing vessels to retrieve derelict fishing gear, collect other items of marine litter, and deliver them to port reception facilities. It also presents incentives to the delivering of waste in port reception facilities such as the non-special fee system.

159. In the past years, considerable attention has been brought to the scale of abandoned, lost and discarded fishing gear (ALDFG), the impacts on the marine environment through ghost fishing, and possible measures for reducing its occurrence like the FAO Voluntary Guidelines on the Marking of Fishing Gear. Given that aquaculture now supplies over half the seafood produced worldwide, it is considered of great importance that this issue is also examined at farm level, especially given the continued expansion of global aquaculture development.

160. Measures targeting specifically aquaculture farming should focus on overall recommendations and to propose measures scoping to reduce marine litter from aquaculture, block the relevant pathways to the marine environment and reduce the contribution to marine plastic pollution by aquaculture. Moreover, a second level of measures should be introduced touching upon the specific requirements and standards to be applied on a mandatory basis for aquaculture practices.

161. Measures that can contribute to reduced generation of marine litter from aquaculture include the following:

- a) Replace to the extent possible plastic infrastructure components with other of physical nature.
- b) Use higher density plastics (e.g., Polyethylene terephthalate (PET) or Ultra-high molecular weight polyethylene (UHMWPE)) which are more resistant to fragmentation, UV-irradiation.
- c) Reduce single-use plastic with the introduction of relevant alternatives and invest in developing recovery, cleaning and re-distribution schemes.
- d) Minimize the use of plastic types with low levels of recyclability.
- e) Reduce to the extent possible the use of equipment consisting of different types of plastic (i.e., different lifespan and different approach for collection and recycling).
- f) Ensure to the extent possible that all packaging is reusable or recyclable.
- g) Reduce to the extent possible packaging and over-packaging to minimize packaging waste.
- h) Develop awareness raising trainings for aquaculture staff similar to those offered from the shipping sector (e.g., HELMEPA).
- i) Reduce to the extent possible the use of single-use plastics and establish relevant policies;
- j) Minimize the use of plastic types with low levels of recyclability;
- k) Reduce to the extent possible the use of equipment consisting of different types of plastic (i.e., different lifespan and different approach for collection and recycling).

162. Moreover, aquaculture should ideally apply a circular approach planning considering the whole life cycle of the used equipment. High procurement standards should be introduced, especially when dealing with purchasing of equipment, packaging, polystyrene boxes and other types of consumables and equipment.

163. The IMO's Marine Environment Protection Committee (MEPC) recently adopted its strategy to address marine plastic litter from ships with substantial actions to reduce marine plastic litter from, fishing vessels; shipping, and improve the effectiveness of port reception facilities and treatment in reducing marine plastic litter. The strategy also aims to achieve further outcomes, including enhanced public awareness, education and seafarer training; improved understanding of the contribution of ships to marine plastic litter; improve the understanding of the regulatory framework associated with marine

plastic litter from ships; strengthened international cooperation; targeted technical cooperation and capacity-building.

164. Under the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031) in its common strategy also addresses the prevention and reduction of litter, in particular plastics entering the marine environment from ships through the fully implementation of the IMO Action Plan and the UNEP/MAP updated Regional Plan on Marine Litter Management in the Mediterranean.

165. When facing plastic pollution at large, the following measures or aspects can be also considered:

- a) Introducing a number of prevention elements/measures at regional, sub-regional and national levels, having a focus to minimize the production, use and consumption of plastics (especially of single-use plastics), as well as to minimize their leakage into the marine and coastal environment (so, before the introduction of effect/impact);
- b) Revising of the current legal framework of the Mediterranean Countries at the National level (e.g., updated/new National Action Plans and/or Programmes of Measures) and development of data base on the production and consumption of plastic products at the national level;
- c) Development of compulsory, legally binding EPR systems for priority products (e.g., food and beverage packaging);
- d) Progressive minimum recycled content in priority products;
- e) Reduction targets in production and consumption of virgin plastic feedstock;
- f) Promote behavioral change for achieving sustainable consumption patterns and increase rates of separation, collection, and recycling;
- g) Develop mandatory requirements with the industry with a focus on specific, priority single-use plastic items (e.g., information on the composition of plastics on the market and even standards to ease the recycling of certain single-use plastic products);
- h) Strengthen the acceptance criteria of the plastics for admission to the organized landfill, facilitating the recycling, reducing plastic disposal at organized landfills, and soliciting and promoting the separation, and recycling at sub-national level (i.e., municipalities, cities, or agglomerations);
- i) Minimize the introduction of incentivized interventions, and rather focus on structural changes at governance/national administration, industry, and society levels.

166. The legally binding Regional Plan on Marine Litter Management in the Mediterranean was introduced in 2013 (Decision IG.21/7, COP18); entered into force in 2014; and updated in COP 22 (Antalya, Türkiye, 7-10 December 2022; Decision IG.25/9) to further reflect global and regional agenda relevant to marine litter management.

167. The Updated Regional Plan on Marine Litter Management includes stronger links to global agenda, i.e. the United Nations Environmental Assembly (UNEA) Resolutions on marine plastic litter, microplastics and single-use plastic products pollution; UNEP marine litter partnerships and initiatives like the Global Partnership on Marine Litter (GPML) and the Clean Seas Campaign; the IMO Action Plan to Address Marine Plastic Litter from Ships; the Basel Convention - Plastic Waste Partnership (PWP); as well as the EU Policies on Marine Litter and Plastic.

Ecological Objective 11 (EO11): Noise from human activities cause no significant impact on marine and coastal ecosystems

Candidate Common Indicator 26: 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

Candidate Common Indicator 27: Levels of continuous low frequency sounds with the use of models as Appropriate.

Candidate Common Indicator 26: 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.

168. For the years 2016, 2017, 2019, 2020, 2021 and for all the 4 cetacean species considered (bottlenose dolphin, fin whale, sperm whale, Cuvier's beaked whale), all subregions are below threshold, i.e., less than 10% of the potentially usable habitat area is affected by noise events as calculated following the adapted assessment methodology.

169. For the year 2018 and for all the 4 species considered (bottlenose dolphin, fin whale, sperm whale, Cuvier's beaked whale), 3 sub-regions are below threshold of affected habitat (ADR, CEN, WMS).

170. Overall, for the Mediterranean Sea region, the environmental status is probably acceptable based on the present preliminary assessment findings, since the whole Mediterranean seems to comply with the 10% GES/non-GES boundary value of impacted habitat of cetaceans selected for this assessment. This conclusion is also supported by the computation of the simple coverage (i.e., without considering the habitat of cetaceans) of the Mediterranean Sea by impulsive noise events, which is below 10% for all year considered.

Candidate Common Indicator 27: Levels of continuous low frequency sounds with the use of models as Appropriate.

171. The computation of the extent of exposure resulted in non-tolerable (i.e. in non GES) for the Western Mediterranean Sea and the Aegean Levantine Sea Sub-regions (i.e., % affected habitat > 20%), while the status is tolerable (i.e., GES) in the Adriatic Sea and Central Mediterranean Sea Sub-regions.

172. The overlap between continuous noise (median noise in July 2020) and the habitat of cetacean species clearly shows the exceedance of the 20% boundary value/threshold of the habitat area affected by continuous low frequency noise in the Western Mediterranean Sea and the Aegean Levantine Seas Sub-regions. Given that the implementation of the methodology for CCI 27 is overall complete for the month of July 2020, it can be concluded that these two sub-regions were in non-tolerable status (i.e., non-GES) during that one month. While it cannot be said much regarding the status during other months, one single month exceeding the 20%, is sufficient to induce non tolerable environmental status, i.e. nonGES for continuous noise, for the entire year. Therefore, the assessment finding for 2020 appears to be non-tolerable status, i.e. non-GES, for WMS and AEL sub-regions.

173. For the Adriatic Sea (ADR) and Central Mediterranean (CEN) sub-regions, the result of the assessment was a tolerable status, i.e. GES for continuous noise, considering that the proportion of habitat of the species considered (bottlenose dolphin) affected by continuous noise was below 20%. The summer months are those with the highest levels of vessel traffic and hence the analysis done on a month of July 2020 can be seen as the worst-case scenario. Therefore, even though quantitative data were not produced for other months, it is possible to conclude that if the month representing the worst-case scenario results in tolerable status, i.e., GES for continuous noise, this result can be generalized for the entire year, i.e., the ADR and CEN sub-regions were likely in GES in 2020.

Measures and actions required to maintain/achieve GES EO11

Improve underwater noise data quality and availability

174. For the improvement of underwater noise data quality and availability, the following specific actions should be undertaken by the Parties:

- A contribution should be provided to the ACCOBAMS regional register for impulsive noise sources, especially by sharing national data, along with the development of a cooperation mechanism to identify the source of long-distance underwater noise in order to address its long-distance effects;
- Reporting noise generating military activities is needed to provide an actual and precise assessment reflecting the real situation;
- An alternative approach needs to be tested by applying specific assessments for species and their habitats. For such an exercise, Important Marine Mammal Areas (IMMA) could be used as defined habitats.

175. Implement International and Regional management measures to reduce underwater noise:

- I. Further to the above there is a need to implement measures to prevent, reduce, and mitigate underwater noise emissions, taking into account well developed guidance (e.g. CMS, IMO, Oceans, ACCOBAMS, etc), including the following:
 - a) Promote the application of vessel speed reductions by supporting for example ship speed limits in the proposed North-Western Mediterranean Particularly Sensitive Sea Areas (PSSA);
 - b) Address the issue of anthropogenic noise in the marine environment, including cumulative effects;
 - c) Integrate the issue of anthropogenic noise in management plans for marine protected areas and avoid or minimize producing noise in MPAs, and in areas containing critical habitat of cetaceans likely to be affected by man-made noise;
 - d) Apply the precautionary approach and envisage the appropriate mitigation measures, including a provision of expert review by specialists and a provision of the action to be taken if unusual events, such as atypical mass strandings, occur;
 - e) Support NETCCOBAMS that would be a crucial tool for monitoring a compliance of the agreed measures, such as vessel speed, mapping temporal and geographical distribution and abundance of whales with comparable data on shipping routes and densities.

176. Apply Best Available Technologies and Best Environmental Practices:

- II. For marine traffic, the following noise related technologies and BATs should be applied:
 - a) Minimize cavitation, e.g., better maintenance and optimizing the propeller design;
 - b) Slow steaming or reduce ship speed;
 - c) Implement underwater noise management plans developed for individual vessels.
- III. For seismic air gun surveys, the following technologies and BATs should be applied:
 - a) Quieting technologies, and controlled sound source, like Marine Vibroseis, tailor-made to the specific environmental conditions and without the damaging sharp rise time of air guns;
 - b) Mitigation measures (avoiding sensitive areas and times and not proceeding in conditions of poor visibility, such as at night)."

marine species are in line with prevailing physiographic, hydrographic, geographic and climatic conditions):

Common Indicator 1: Habitat distributional range

Common Indicator 2: Condition of the habitat's typical species and communities

177. The seabed and its benthic habitats are a key component of the Mediterranean's marine ecosystem. It holds a high diversity of marine communities and species and provides a range of essential ecosystem services including provision of seafood, natural coastal protection and carbon sequestration. For the assessment in relation to the IMAP EO1 CI1 and CI2 (Habitat distribution and condition), given that distribution maps are available for three key habitats (Coralligenous, Maerl/rhodoliths and Posidonia oceanica meadows) in a limited number of countries, it is only possible to present a preliminary approach to seabed habitat assessments for the 2023 Med QSR. This is done at a broad scale and with a focus on assessing the extent of pressures, as a proxy for impacts on habitats. According to the available data and information, the seabed is under severe pressure in the coastal zone where extensive stretches of coast have lost their natural marine habitat through the building of coastal infrastructure and sea defences. Offshore, down to depths of 1000m, the most wide-spread and extensive damage to seabed habitats comes from bottom fishing using trawls and dredges. Below this depth, these fishing practices are banned, thereby providing protection to sensitive deep-sea habitats throughout the Mediterranean. However, as the habitats are generally distributed throughout the Mediterranean (north to south, east to west), it is considered unlikely that distributional range will vary at the Mediterranean Sea scale.

Measures and actions required to maintain/achieve GES for EO1 Common Indicators 1 and 2

178. Although the knowledge base and assessment methodologies are under rapid development, systematic assessment of seabed habitats for the Mediterranean Sea is still at an early stage of development. Therefore, given the limited data availability regarding the distribution of habitats, the main measures and actions proposed here are about improvements in the availability of data:

- a) Habitat maps – these provide the fundamental basis for habitat assessments and need to be further improved in quality and accuracy. The EUSeaMap full coverage map of broad habitat types relies on the quality of the underlying input data, especially on seabed substrates, and needs to be improved across much of the region. Countries should be encouraged to contribute mapping data to help improve the region-wide seabed mapping;
- b) Activities and pressures – the mapping of pressures, using activities as a basis, provides a good means to assess the wider seabed of the region. These data are generally more easily (and cheaply) collected than direct observational data of the seabed, offering a more cost-effective means to undertake assessments. Further, such data are important for management of pressures (i.e., reducing pressures in areas to help achieved GES) and for marine spatial planning; further data collection is needed, particularly in the south and east, to provide an even coverage across the Mediterranean. The current region-wide datasets of activities and pressures (from the EEA/ETC-ICM) are at a 10km-by-10km grid resolution – for use in relation to seabed assessments, the data need to be prepared at a finer resolution;
- c) Monitoring data on the state of the seabed – the traditional collection of direct observations of the seabed (e.g., through video and sampling) remains an important aspect of data collection programmes, providing a means to validate pressure data to assess seabed habitat condition. Monitoring programmes are costly and need to be focused on the needs of assessment and measures to ensure good value. To facilitate pan-regional assessments, the monitoring data need to be compatible between countries, following specified data standards; further data collection is needed, particularly in the south and east, to provide an even coverage across the Mediterranean;
- d) Pressure-state interactions – there is continued need for study of pressure-state interactions, both at research level and through state assessments, to improve confidence in use of pressure data (such as a proxy for broad-scale state assessments);

- e) Climate change – the effects of climate change on the seabed and its communities need to be better understood; of particular importance is assessment of the carbon storage capacity of marine habitats and the contribution this makes to mitigation of climate change effects; the importance of shallow vegetated habitats, such as *Posidonia oceanica* meadows, for blue carbon is often highlighted, but the carbon sequestration capacity of the much more extensive soft sediment habitats of the shelf zone and its disruption by physical disturbance pressures is ultimately a more important knowledge gap;
- f) Assessment methods – further work is needed to develop specific indicators (or test existing indicators available in other regions) for use with the monitoring data, and to bring the assessment methods to a fully operational level. Based on these methods, Contracting Parties need to agree threshold values to provide a clear means to assess the extent to which GES has been achieved;
- g) Assessment results – the availability of seabed assessment results, including visualisation of the extent of GES in each part of the region, provides an important output that demonstrates the work of the IMAP and Contracting Parties, stimulates improvements and helps direct actions towards achieving GES.

CI3: Species distributional range (related to marine mammals, seabirds, marine reptiles)

CI4: Population abundance of selected species (related to marine mammals, seabirds, marine reptiles)

CI5: Population demographic characteristics (body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)

179. For the **Monk Seal**, one of the flag species of the Mediterranean, the current assessment of the status in relation to (CI3, CI4 and CI5), provides insight into both the strengths and limitations of the species across the Mediterranean basin. Most recent data shared by experts, through the survey conducted to produce this assessment, indicate that the species continues to breed in its known breeding zones and there is a moderate expansion of the species' range. The present assessment concluded that for CI3-distribution, GES has not been achieved for all Group B countries (where no monk seal breeding is reported, but repeated sightings were reported), while it has been achieved for most of the Group A countries (countries, where monk seal breeding has been reported after year 2010). However, the lack of a baseline estimates for monk seal population abundance (CI4), makes difficult to validate the (likely) expansion of the species reported in recent years.

180. Concerning the Monk Seal Population demographic characteristics (CI5), various types of data need to be gathered to enable accurate description of Mediterranean monk seal population demographics. Key demographic data and survivorship are logistically difficult to determine, requiring access to the seals in remote locations and long-term uninterrupted monitoring to build individual historical series.

181. The Mediterranean Sea harbours 25 **cetaceans'** species, which are subjects to various human pressures, which reflects on their conservation status. At the present moment, it is not possible to assess whether cetaceans' populations achieved Good Environmental Status (GES) under the EcAp/IMAP framework, since baseline/reference values for the GES assessment were only recently defined, thanks to the data gathered by the ACCOBAMS Survey Initiative in summers 2018 and 2019. However, the 2018 - 2021 IUCN Red-List Assessment shows that the most of cetacean populations in the Mediterranean Sea are significantly threatened, apart from the wide-spread species, such as common bottlenose dolphin (*Tursiops truncatus*) and striped dolphin (*Stenella coeruleoalba*), the status of which has improved since mid-2000.

182. **Seabirds** *sensu lato* form a crucial component of the region's marine biodiversity and ecosystem with many of the relevant taxa being endemic or near endemic in the Mediterranean. Mostly situated on top of marine food webs, these highly mobile organisms come to land to breed, thus contributing to nutrient exchange between marine and coastal areas, by linking sea and land. The integrated Good Environmental Status (GES) of EO1 of three Common Indicators related to seabirds (CI3, CI4 and CI5) reveals that for many populations of various species GES is reached, when taking a modern baseline approach. However, the data quality currently prevents a truly quantitative integrated

GES assessment across the entire region. Furthermore, specifically some of the endemic taxa which are of conservation concern, currently appear to fail to reach GES targets, at least in relation to some of the CIs. These species are facing multiple pressures at land and at sea, seabirds from different functional ecological groups in the region act as indicators and serve as sentinels for the health of the Mediterranean Ecosystem.

183. Combining the findings of this assessment regarding **marine turtles** with literature on research and conservation actions taking place in the Mediterranean, marine turtle can be considered as meeting GES in relation to CI3, CI4 and CI5. Indeed, distribution of turtles across the Mediterranean (CI3) is increasing in loggerhead nesting outside their traditional range. Similarly, green turtle distribution at sea is deemed to be expanding. Nesting levels, a basic proxy for population abundance (CI4), are stable or increasing at all major nesting sites where recent data have been reported and nesting is occurring where there was previously none. At the breeding areas, available data suggest that hatchling sex ratios (CI5) are in favourable condition. This is the one demographic characteristic that is likely to be impacted by climate change, but it is also one that can be adequately monitored and if required mitigated against. However, there are fundamental gaps in monitoring and data reporting for turtles in marine habitats. Monitoring methods and data reporting require standardisation across all CPs. Further research is required for better understanding of turtle populations and improving their conservation status.

Measures and actions required to maintain/achieve GES for EO1 Common Indicators 3, 4 and 5

184. For Monk Seal:

- a) Since GES has not been achieved in relation to CI3-distribution, for all Group B countries, while it has been achieved by Group A countries. Therefore, actions dedicated to facilitating the widespread distribution of the species in all Group B countries should be a priority. Such actions should include not only the set-up of a good monitoring network but also the protection of key habitats for the species and the reduction of any potential threats (e.g., intentional killings, tourism disturbance).
- b) When looking at Mediterranean monk seal population abundance (CI4), the lack of a baseline estimates makes difficult to validate the (likely) expansion of the species reported in recent years. Based on the reported information by regional experts, it seems that most (rough) population estimates come mainly from the minimum photo-identified individuals. However, an approach using pup-multipliers method may be taken as a new way forward for reliable abundance estimates. A common strategy for producing population estimates should be agreed on to be able to compare information among researchers.
- c) Considering that Monk Seal photo-identification is a widespread practice across the region, the creation and implementation of a data-sharing platform would offer great potential to establish reliably information on movements and home range establishment. Such initiative is currently in the portfolio of actions to be supported by the Monk Seal Alliance.
- d) Data reported by regional experts manifests the difficulty to study the population demographic characteristics (CI5). Since key demographic data and survivorship are logistically difficult to determine, new actions should focus on providing opportunities for long-term uninterrupted monitoring to allow building individual historical series, key to assess basic demographic trends. New technologies, combined with the long-term regular use of more traditional methods (e.g., individual tags and photo-identification) may shed light on these aspects.
- e) Recommended topics for research:
 - i. Distribution
 - ii. Abundance
 - iii. Pup production
 - iv. Movements
 - v. Foraging areas
- f) Recommended Conservation Measures:
 - i. Protect critical pupping habitat
 - ii. Regulate human activities

- iii. Improvement of surveillance
- iv. Habitat restoration
- g) Management and Law Enforcement measures:
 - i. Regulation of Fishing activities
 - ii. Public education and awareness
 - iii. Management of tourism
 - iv. Reduce anthropogenic mortality

185. For Cetaceans:

- a) Understanding and addressing pressures/state of cetaceans' linkages:
 - i. Continue the work on definition of pressures/cetaceans' interaction hotspots; particularly extension of anthropogenic noise/cetaceans' hotspots analysis to maritime traffic and identification of marine litter/cetaceans' hotspots.
 - ii. Intensify efforts to improve knowledge on interrelations between climate change and cetaceans, including identification of sensitive cetaceans' species and monitoring of their state related to climate change.
 - iii. Continue efforts in data collection and processing regarding the ship strikes, in cooperation with international organisations on marine traffic, notably IMO and ACCOBAMS.
 - iv. Develop techniques and models to assess cumulative/synergistic effects of pressures and impacts on cetaceans, including underwater anthropogenic noise, chemicals, marine litter, climate change and emerging pathogens, taking into consideration the existing recommendations (such as from the 2021 IWC Intersessional Workshop "Pollution 2025" etc).
 - v. Intensify efforts to implement the existing pressures' mitigation tools, such as guidelines and best practices already developed in the scope of UNEP/MAP, ACCOBAMS and IWC.
- b) GES assessment Methodological issues:
 - i. Reformulate GES definitions and linked GES assessment elements under CI5, as proposed in the 21WG.514/Inf.11, notably to shift human induced mortality assessment to CI12 and focus on actual population demographic characteristics (sex ration, calf productivity etc).
 - ii. Define GES assessment criteria, particularly baseline/reference and threshold values, for CI5, as soon as sufficient data is collected/available. Possibly select representative pilot areas where adequate data could be collected on regular bases.
 - iii. Invest efforts in further quantification of thresholds for CI3.
 - iv. Encourage sub-regional level of cooperation between countries in reviewing and adjusting GES assessment criteria.
- c) Data collection and availability for CI3 and CI4:
 - i. Replicate and conduct regularly regional synoptic surveys and complement with other monitoring efforts.
 - ii. Promote and support research of cetaceans in the southern Mediterranean.
- d) Data collection and availability for CI5:
 - i. At the national level (or where possible at sub-regional level), establish or ensure functioning of the stranding networks, with the particular support of regional agreements/organisations (SPA/RAC, ACCOBAMS) in the segment of capacity building and application of new technologies.
 - ii. Regularly submit national strandings data to MEDACES, including information on causes of mortality.
 - iii. Upgrade MEDACES and ensure MEDACES data availability and easy accessibility (in standard spatial GIS format) via MEDACES website.
 - iv. Intensify research efforts on population genetics, taking into account the ongoing work by other relevant organisations.

186. For Sea birds:

- a) Collection of quantitative monitoring data at national level should be promoted to allow assessments that reflect the impact of pressures on local populations. Indeed, for the current assessment cycle, the data that was made available was patchy, heterogenous, and limited for a robust GES assessment of all indicator species for the three CIs across subregions. It is believed that the IMAP Infosystem will facilitate data reporting and improve efficiency and comparability for monitoring and GES assessments of future cycles.
- b) The lack of representative, comparable subsamples distributed equally across the subregions remains being one of the major challenges for an integrated assessment of the status of marine avifauna in the region, to achieve a robust GES assessment, monitoring data between two cycles should be made fully comparable. This requires monitoring a certain number of same or representative populations as prolonged time series at the finest spatial scale practical.
- c) In order to improve the representativeness of monitoring samples, coordinated monitoring within subdivisions or subregions would further improve overall GES assessments. Mid-winter count data made available by IWC for this assessment cycle as well as transboundary counts of Mediterranean Shag roosts in the Adriatic are good examples highlighting useful outcomes of coordinated and synchronised monitoring efforts.
- d) Enabling coordinated efforts and achieving standardised monitoring at the local level also requires regular transfer of know-how and calibration of monitoring methods within subdivisions, subregions or across the region. Finally, harmonisation between different assessment programmes such as MSFD can be further improved for a more efficient assessment of GES in the Mediterranean.
- e) Quantifying GES for seabird populations in the Mediterranean remains challenging. Seabirds are highly mobile organisms and therefore a robust analysis of their state requires transboundary monitoring. Ensuring communication and information exchange between different assessment programmes and sea conventions within the region and for migratory species which leave the Mediterranean also other seas can help overcome this challenge.
- f) The majority of seabird species in the Mediterranean form metapopulations with discrete local breeding colonies. Without better understanding the demographic connectivity between these colonies, deciding on a meaningful spatial scale at which GES should be assessed remains to some extent arbitrary. Therefore, closing such knowledge gaps will be pivotal for the finetuning of monitoring programmes and for successful GES assessments in the future.
- g) Currently, a strong bias remains in the amount of monitoring data available for the different aspects in the life cycle of the majority of Mediterranean seabirds. This bias means that there is insufficient knowledge regarding the non-breeding season and the periods the birds spend out at sea, often far away from the breeding grounds. To reduce this bias, it is recommended that future assessment cycles increase the effort of monitoring the birds away from the colonies, by means of increased colour ringing and ring-reading, tracking programmes and counts at bottlenecks.

187. For marine reptiles:

- a) The competent authority in each CP needs to understand the data reporting requirements and which entity is undertaking specific monitoring actions. Through doing this it can identify gaps in data acquisition resulting from lack of fieldwork in necessary sites, gaps in reporting at sites where monitoring is carried out and identify entities that could be tasked with additional field monitoring at currently unmonitored sites. In terms of progressing towards adequate reporting, the simplest first step to take is to ensure data from all existing monitoring programmes are collected and reported in a standardised manner. The next most simple change is that in locations where monitoring programs exist, but collection of certain data is lacking, the programs should be adapted to acquire this sought-after information and analyse and report it as required.
- b) It is recommended that each CP has in place some oversight or coordination mechanism to ensure all required monitoring activities are carried out. The coordinator could be a governmental body, scientific institution, or non-governmental organisation, with the important remit that they know what work is being carried out and have the competency to

collect and synthesise the information adequately for each six-yearly Mediterranean Quality Status Report.

- c) This IMAP reporting framework, a requirement of all riparian Mediterranean states does not exist in isolation but coincides with other international reporting requirements such as those for the EU Habitats Directive and its Marine Strategy Framework Directive (MSFD). There is much overlap and synergy between these programs, which means data collected if collected in adequately rigorous manner can be used multiple times and not only for the IMAP. Of note is the recently published article highlighting progress towards a common approach for assessing marine turtle population status at European level within the MSFD, which should be considered when designing and coordinating marine turtle monitoring strategies. The resulting economy of scale lessens the burden on competent authorities as suitable coordinated actions obviate the need to repeat work and simplifies the analysis process.
- d) Research priorities for marine turtles in the Mediterranean:
 - i. Set up long-term in-water monitoring programmes in key foraging areas for assessing sea turtle abundance and trends.
 - ii. Assess distribution and level of nesting activity in Libya.
 - iii. Quantify bycatch (especially in small-scale fisheries), rates and intentional killings in associated mortality key foraging areas and migratory pathways.
 - iv. Understand how climate change might impact sex ratios, geographical range, and phenology.
 - v. Estimate/improve estimates of demographic parameters.
 - vi. Improve population abundance estimates.
 - vii. Assess the movement patterns of adults from key rookeries.
 - viii. Identify development habitats of post-hatchling and small turtles, and dispersal and settlement patterns.
 - ix. Assess the movement patterns of juveniles.
 - x. Develop and test new bycatch reduction methods.
- e) Conservation priorities for marine turtles in the Mediterranean:
 - i. Year-round protection of key feeding and wintering grounds.
 - ii. Continue current conservation methods at nesting areas (in situ protection, relocations, light management, etc.).
 - iii. Educate fishermen on on-board sea turtle handling best practices.
 - iv. Seasonal protection of main migratory corridors.
 - v. Implement TED in bottom trawlers.
 - vi. Trans-boundary large MPA in the Adriatic.
 - vii. Implement LED lights in set nets.

Ecological Objective 2 (EO 2) (Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem):

Common Indicator 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas

188. The results of this assessment regarding EO2 (Non-indigenous species, CI6) indicate that for the past 15-20 years the rates of new introductions per year have been relatively constant in the West Mediterranean and the Adriatic, slightly but not statistically significantly increasing in the East Mediterranean but increasing in the Central Mediterranean. However, even if the annual rate is staying constant the total (cumulative) number of NIS in the basin is increasing steadily, with corridors and shipping the main pathways responsible.

189. At the same time, there has been a notable increase in monitoring effort and reporting, spurred by both policy requirements but also scientific interest coupled with citizen science initiatives, particularly in the southern Mediterranean. Consequently, clear interpretation of these trends is hampered by the lack of long-term standardised monitoring data, as it is not possible to disentangle the confounding effects of differential recording efforts spatially and temporally from real changes in pathway pressure or vector management. Nonetheless there are clear trends of continued new introductions, especially in the eastern Mediterranean. There is also no substantial management or research ongoing to possible mitigation or reduction of new introductions through corridors.

190. Nevertheless, a number of invasive, high-impact NIS have displayed an increased geographic expansion in the last decade or so, which can be deduced even behind the “noise” of increased detection and reporting.

191. NIS species of warm affinities with long-range pelagic dispersal appear to have been favoured by climate change and increased seawater temperatures to penetrate the cooler regions of the Mediterranean. However, anthropogenic dispersal still plays an important role in the spread of most of the invasive species.

Measures and actions required to maintain/achieve GES for EO2 Common Indicator 6

192. With regards to suitable data availability, the majority of the CPs have developed, and many are already implementing IMAP-compliant monitoring programmes. Furthermore, the IMAP Data and Information System is operational and has already started receiving NIS data, such that standardised time series are anticipated to be available for the next assessment cycle. This should make possible the formal quantification of abundance and spatial distribution changes and increase our confidence in the assessment of trends in temporal occurrence. If CPs have not already initiated the process, IMAP can assist in co-ordinating the development of priority NIS lists for monitoring of abundance through risk analysis and risk assessment. Early detection and early warning systems can be informed by regularly updating the spatial distribution information entered into MAMIAS and the IMAP Info System.

193. Threshold values for trends in temporal occurrence have not been set yet but methodologies and approaches are under discussion through regional co-operation. Quantifying/modelling pathway pressure can assist in specifying quantitative targets (percentage reduction) by introduction pathway. Importantly, all these methodological steps need to be adapted for GES assessment at the national level. The effect of reporting lags on new NIS data and trends analysis in this assessment was circumvented by not using the data of the last 3 years (2018-2020), however it would be beneficial to adopt a commonly agreed methodology to deal with this issue in order to avoid loss of information.

194. Next important steps for GES assessment of NIS include the elaboration of the remaining aspects of CI6 that relate to impacts, by further developing assessment criteria and quantitative targets for the most vulnerable/important species and habitats at risk. This is work that ideally should be co-ordinated with the implementation of EO1 Common Indicators CI1 and CI2 and EO6 on sea floor integrity.

195. Besides methodological considerations with regards to IMAP and the assessment of GES, working towards achieving GES requires actions to mitigate and reduce invasion pressure, especially coordinated actions by all the states. Towards that effect, the draft updated Action Plan concerning NIS has already taken consideration the Mediterranean NIS baselines and the results of the MedQSR2023, such that in its proposed actions there is emphasis on preventative measures, including encouraging and facilitating CPs to strengthen their legislative and institutional framework in order to systematically risk assess and manage pathways, as well as elaborate early warning systems, rapid response plans and mechanisms to control intentional introductions. The other axis of focus of the Action Plan relates to the impacts of NIS, where targeted impact studies for priority species are proposed in order to identify density-response relationships and acceptable abundance levels. The implementation of the NIS Action Plan will progress in parallel with the Ballast Water Management (BWM) Strategy for the Mediterranean (2022-2027) which focuses on the management of ship-mediated introductions from ballast water, by facilitating the implementation of the Ballast Water Management Convention, and biofouling, by developing national strategies and action plans to manage this vector.

Ecological Objective 3 (EO3, Populations of commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock)

Common Indicator 7. Spawning stock Biomass

Common Indicator 8. Total landings

Common Indicator 9. Fishing Mortality

Common Indicators 7, 8 and 9

196. The assessment in relation to the EO3 **CI-7** (Spawning stock biomass) indicates that while the biomass of some species under management plans is already increasing as a result of decreased fishing pressure, others have yet to show any improvement. Across the region, 44 percent of the stocks were found to have low relative biomass levels, with 19 percent intermediate and 37 percent high. For Total landings (**CI8**), capture fisheries production in the region has been stalled since the mid-1990s, with a decrease in 2020 likely exacerbated by the COVID 19 pandemic. Landings for the Mediterranean and the Black Sea (2018–2020 average) amount to 1 189 200 tonnes (excluding tuna-like species), very similar to the landings reported in The State of Mediterranean and Black Sea Fisheries 2020 (2016–2018 average). However, landings in 2020 show a 16 percent decline in comparison with 2019, likely related to some extent to the impacts of the COVID-19 pandemic on fleet dynamics, demand and trade. The total production for the Mediterranean Sea alone was 743 100 tonnes (62 percent of the total capture fish production in the region).

197. For Fishing mortality (**CI9**), the overexploitation of stocks has decreased over the past decade, with an accelerated reduction of fishing pressure in the last two years, particularly for key species under management plans. However, most commercial species are still overexploited, and fishing pressure is still double what is considered sustainable. Most stocks for which validated assessments are available continue to be fished outside biologically sustainable limits, and average fishing pressure is still twice the level considered sustainable (average $F/FMSY = 2.25$). Nevertheless, there has been a 10 percent decrease in the percentage of stocks in overexploitation since 2012 and a continuous gradual decrease in fishing pressure since 2012 (a 21 percent decrease since 2012, double what was reported in 2020). Furthermore, for some priority species under management plans, fishing pressure has declined by considerably more over the past decade, including European hake (-39 percent) and common sole (-75 percent). However, fishing pressure continues to increase on certain other stocks, notably commercially important blue and red shrimp in the central and eastern Mediterranean.

Measures and actions required to maintain/achieve GES for EO3 Common Indicators 7, 8 and 9

198. Although the percentage of stocks with validated assessments has continued to increase since the last edition of *The State of Mediterranean and Black Sea Fisheries* (FAO, 2020a), particularly in the western Mediterranean, as has the geographical coverage of assessments, efforts are still required to extend assessment coverage to all GSAs, while the decrease observed in the percentage of landings assessed highlights the need to ensure the regular assessment of key stocks with high landings.

199. The positive signs for fishing pressure provided by this overall analysis are most likely related to the adoption of a significant number of national and regional management measures in the recent past, underpinned by an increase in the quality and coverage of scientific advice, particularly on priority species and key fisheries. Measures consist of adopting multiannual management plans that include effort control measures and/or the introduction of quota-based management for some species, as well as the establishment of fisheries restricted areas (FRAs) and spatio-temporal limits to protect essential habitats and life stages. Nevertheless, the slow recovery in biomass of certain key stocks and the need to honour the objectives of the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea point to the importance of continuing to implement an effective and generalized management framework, including through strengthening existing management plans and defining new ones, as well as ensuring the effective implementation of those in place. Since 2018, research programmes have been incorporated, through specific recommendations, into the GFCM workplans for the Mediterranean. Research programmes share the common aim of improving the scientific basis for the provision of advice on existing and potential management measures through dedicated actions towards increasing the quality and quantity of information on resources and addressing previously identified knowledge gaps and shortcomings in relevant scientific or technical advice. More recently, research programmes have been complemented by pilot studies and projects. Pilot studies and projects rest on similar principles, i.e. conducting scientific data collection and analysis on specific themes, fisheries or species, but have a more limited geographical and temporal scope. In all cases, the core principle is to take full advantage of ongoing research at the country level by providing experts with a regional platform for coordination, knowledge exchange and capacity building enriched by new activities developed based on common methodologies. The data collected through these initiatives are generally aimed at providing the scientific basis for determining the most appropriate management measures for selected fisheries.

200. The correct estimation of fishing mortality requires a precise understanding of riparian states' fishing capacity. Due to the specificities of the Mediterranean fleet, composed of a large majority of small-scale polyvalent vessels, information on fishing capacity is sometimes incomplete or inaccurate. Furthermore, the estimation of robust reference points for fishing mortality requires the use of long time series and the incorporation of environmental and ecosystem variables, as well as the design of robust methods that can integrate information from different sources.

201. The update and adoption of new specific binding recommendations related to the mandatory requirements for data collection and submission, underpinned by the GFCM Data Collection Reference Framework (DCRF) has greatly improved the quality of the data in support of advice, in line with the need expressed by riparian states. The GFCM 2030 strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea is also contributing in this endeavour through specific actions such as, for example, the execution of harmonized scientific surveys-at-sea.

202. The correct estimation of total landings requires a precise knowledge of the fishing activities carried out by the active fishing fleet operating in the Mediterranean. The specificities of the Mediterranean fleet, composed by a large majority of small-scale polyvalent vessels, as well as the existing variety of landing sites, and the different capacity of Mediterranean riparian states to accurately monitor the landings in such sites, make difficult an accurate estimation of landings in the region.

203. The GFCM has proposed a number of solutions to improve the quality of the estimation of total catch. On one hand, the GFCM DCRF provides the technical elements to improve and harmonize the collection of information on fisheries throughout the Mediterranean and on the other the GFCM 2030 strategy provides an effective instrument to guide an increase in the collection of sound information

(e.g. bycatch monitoring programme and a survey of small-scale fisheries), as well as the implementation of dedicated actions to assess and curb IUU fishing, which are expected to largely improve the quality of the estimates for this indicator.

204. Care needs to be taken in interpreting trends in the indicator for total landings because variations in total catch/landing may be a result of various factors, including the state of the stock, changes over time in the selectivity of fishing gear, changes in the species targeted by fishing activities, as well as inconsistencies in the reporting.

Ecological Objective 7 (EO7): Alteration of hydrographical conditions

Common Indicator 15: Location and extent of the habitats impacted directly by hydrographic alterations

Common Indicator 15

205. All countries had difficulties with the monitoring of the CI15 (Location and extent of the habitats impacted directly by hydrographic alterations) of EO7 according to the Guidance factsheet and could not provide monitoring data therefore, the Good Environmental Status has not been assessed. Further simplification of the Guiding Factsheet is therefore needed so to allow countries to report on the physical loss of habitats, i.e., the structures' footprint. GES should be defined in close coordination with the EO1 and EO6.

206. A baseline assessment has been made using data from the national reports prepared in the frame of EcAp MED III and IMAP MPA projects, including some other countries that used the same report format, and from the data provided by scientific partners, Mercator Ocean in particular. Climate change seems to have far bigger impacts on the habitats and marine ecosystems in general than the impacts of hydrographic alterations caused by new structures.

Measures and actions required to maintain/achieve GES for Common Indicator 15

207. Establishment of the national IMAP, monitoring programme that will systematically collect statistically significant data of the hydrographic parameters is required – first, to allow modelling of hydrographic alterations of the planned structures at the very local scale in the EIA/SEA and second, to provide subsequent monitoring data once the structures have been built. A close cooperation has to be established with the authorities that are responsible for planning of such structures including those responsible for EIA. In parallel, mapping of habitats in a surrounding area that could possibly be impacted by such hydrographic alterations should be prepared (link to EO1 and EO6).

208. Creation of a digital spatial database of all data from EIA/SEA including spatial coverage and location of the intervention, existing and planned structures and marine habitats. The Copernicus Marine services, the EMODnet service and the spatial planning information system of individual countries (via WMS or WFS layers) should be used, thus providing necessary data for the CI 15 assessments and monitoring.

209. As the rational possibility, a revision of the existing indicator Factsheet should be considered that will simplify the method to allow countries to report on the physical loss of habitats, i.e., the structure's footprint only.

210. Considerations should also be given to the possibility of proposing a set of climate change related indicators in the frame of IMAP. This could include monitoring of hydrographic parameters (e.g., salinity, temperature, waves and currents) that are changing rapidly due to climate change. The use of hydrographic parameters reported within EO 5 on eutrophication should be taken into account with the use of remote sensing and other available sources for climate change in order to determine the hydrographic alterations in the Mediterranean region. In-situ data are equally important and should be

used to monitor changes in variables due to climate effects that is required also by the EU Marine Strategy Framework Directive (MSFD). Such alterations may have much stronger impacts on marine habitats and ecosystems than those monitored by the CI 15 itself.

Ecological Objective 8 (EO8): Alteration of hydrographical conditions)

Common indicator 16 (CI 16): Length of coastline subject to physical disturbance due to the influence of human-made structures;

Candidate common indicator 25 (CCI 25): Land cover change.

Common Indicator 16 and Candidate Common Indicator 25

211. Monitoring data in relation to CI16 (Length of coastline subject to physical disturbance due to the influence of human-made structures) of EO8 was provided for 57% of the total Mediterranean coastline (31 283 km), out of which 26 658 km (85.2%) of coast is natural and 4 625 km (14.8%) is artificial. This provides a good overview of the baseline situation. However, changes in the percentage or total length of coastline subject to physical disturbance due to the influence of human-made structures could not be assessed because only the first set of monitoring data was provided, except three countries that provided two sets of data. The provided data indicate that the majority of human-made structures belong to ports and marinas.

212. Within the framework of this assessment a pilot study was conducted for the Candidate Common Indicator 25 (Land cover change) of EO8. It covered the Adriatic sub-region (coastal zone of 10 km width) and showed that in 2018 the built-up areas occupy 8.77% (2 500 km²) of the Adriatic coastal zone. The largest land cover change from 2012 is the increase of the built-up area by 27 km² representing a land take trend of 1% in six years. In the 2012-2018 period the land cover changed from forest and semi-natural land (24 km²), water bodies (3 km²) and agricultural land (2 km²) to built-up (27 km²) and wetlands (2 km²). Country-specific GES(s) have not yet been defined so the assessment could not be done.

Measures and actions required to maintain/achieve GES for EO8 Common Indicator 16

213. First, technical issues that have to be considered in future monitoring and assessments of CI 16 are as follows:

- a) Monitoring of the coastline (second and following assessments) should use the same level of details and spatial resolution as the initial assessment (baseline data). Otherwise, monitoring results could be compromised by the fact that coastline length increases by using larger scales, more so on more indented coasts.
- b) The calculation of the length of the coastline varies also due to deformations caused by the choice of the cartographic projection (i.e., calculated in plane by using one of the cartographic projection or by using the ellipsoid). It is recommended to use the ellipsoid lengths calculated on WGS84 as required by the Guidance Factsheet and related Data Dictionaries and Data standards.
- c) Methods of mapping coastline vary between the national reports which results in semantic differences of assessed CI 16, in particular with regard to mapping of the length of artificial structures. This should be taken into account while interpreting aggregate data for the Mediterranean. Classification of artificial structures should be unambiguous, regardless of the monitoring period, country or the method used (visual inspection of aerial images or field survey). A manual that will elaborate on various situations should be prepared so that interpretation is unambiguous, i.e., harmonised.

214. Second, measures and actions to achieve GES include the following:

- a) The country-specific GES should be defined based on the first set of monitoring data in order to allow assessment of changes for the next QSR. Country specificities could significantly

affect the assessment, i.e., interpretation of calculated CI 16. Therefore, issues such as the following need to be taken into account. For example, a country with a significant length of coastline on uninhabited islands, islets and rocks and with a small proportion of artificial coast can be interpreted as a very good condition, while in fact there is a lot of construction on the mainland part of the coast. Another issue is the total length of the coastline per country. If a country has a short coastline than it is expected that the proportion of the artificial coastline will be larger to provide facilities for all human coastal and maritime activities. When defining GES thresholds, these should be considered; i.e., different thresholds could be defined for different parts of coastline. For the definition of country specific GES, the list of assessment criteria and the Guiding document prepared by PAP/RAC can be utilised (PAP/RAC, 2021), including the results of testing the Guiding document in Morocco (PAP/RAC, 2022)..

215. Also, measures and actions to achieve GES should be specified and may, in general, include the following three types:

- a) Particular management actions needed in order to move towards GES.
- b) Measures aimed at obtaining new knowledge for assessing and achieving GES (e.g., scientific research, application of innovative solutions at pilot locations).
- c) Measures with the aim of disseminating knowledge to all stakeholders and involving them in defining measures and actions for achieving GES.

216. Particular management actions regarding coastline artificialisation could include:

- a) Analysis of existing artificial coastlines and their categorization into those that are necessary, those that can be reduced and those that can be returned to nature (e.g., abandoned jetties, etc.).
- b) When planning new artificial structures on the coastline, first analyse whether human needs can be achieved through better management of existing artificial structures and their functional transformations.
- c) Along existing artificial coastlines: improve monitoring of environmental impacts and implement measures to reduce negative impacts (such as pollution, habitat fragmentation, noise, light pollution, water cycle).
- d) For new artificial coastlines, examine the use of nature-based solutions and ensure financial or other benefits for their implementation.
- e) Encouraging the use of coastline in a way that consumes spatial/natural resources as little as possible: e.g., restricting land-take for the second homes.
- f) Protect, restore, conserve and enhance threatened and degraded coastal habitats.

217. Results of above measures and actions could be measured by km of reversed coastline (from artificial to natural), km of recovered coastal habitats, % of nature-based solutions used in e.g., coastal protection, number of innovative projects tested (e.g., beach nourishments without impacts on coastal habitats), number of people involved in GES awareness, number of people actively working on the measures, and alike.

Measures and actions required to maintain/achieve GES for EO8 Candidate Common Indicator 25

218. Varying geographic, socio-economic, cultural and environmental contexts of coastal zones require the application of specific measures and actions in order to achieve GES. First, in order to define GES in a more objective way a technical manual should be prepared that will allow better understanding of concepts of integrity and diversity of coastal ecosystems and landscapes and their importance for ecosystem approach. This will also allow better assessment of land cover changes in the next QSR period, in particular for the areas with significant changes.

219. Second, more objective GES should be prepared either at the sub-regional level or at country level that will allow more objective assessments for the future QSR.

220. The main targets under EO8 could include the following:

- a) Avoid further construction within the setback zone and the flooding prone low-lying coastal zone;
- b) Give priority to low-lying coastal zone when preparing adaptation plans to climate change;
- c) Maintain diverse and harmonised coastal land cover structure, and reverse dominance of urban land cover;
- d) Keep and increase landscape diversity.
- e) These general recommendations should be further elaborated and adapted to particular regions. In general, measures and action could be of the following types:
- f) Particular management actions needed in order to move towards GES;
- g) Measures aimed at obtaining new knowledge about assessing and achieving GES (e.g., scientific research, application of innovative solutions at pilot locations);
- h) Measures with the aim of disseminating knowledge to all stakeholders and involving them in the actions for achieving GES.

221. Particular management actions regarding land cover change could include:

- a) Analysis of existing built-up areas and their categorization into those that are necessary, those that can be reduced and those that can be returned to nature (e.g., abandoned industrial zones, etc.).
- b) When planning new built-up areas, first analyse whether human needs can be achieved through better management of existing built-up areas and their functional transformations.
- c) In existing built-up areas: improve monitoring of environmental impacts and implement measures to reduce negative impacts (such pollution, habitat fragmentation, noise, light pollution, water cycle).
- d) For new construction areas, examine the use of nature-based solutions and ensure financial or other benefits for their implementation.
- e) Encouraging the use of space in a way that consumes spatial/natural resources as little as possible: e.g., restricting land-take for second homes.
- f) Protect, restore, conserve and enhance threatened coastal ecosystems and habitats (e.g., dunes, wetlands and coastal forests and woods, in particular).

Common measures to enhance knowledge gaps:

I. Strengthen the science-policy interface (SPI):

In order to improve the delivery of IMAP the following measures should guide addressing the gaps identified during the preparation of the 2023 MED QSR:

- a) Strengthen the use of unprecedented achievements in science and technology in order to ensure that the growing development demands and a healthy ocean co-exist in harmony by identifying the most relevant innovative knowledge and technologies that are of utmost importance for reliable and cost-effective monitoring and assessment of the state of Mediterranean Sea with a focus on:
 - i. Promotion of inter-disciplinary research aimed at understanding and prediction in the Mediterranean Sea;
 - ii. Mapping of all components of the Mediterranean marine environment, along with the anthropologic pressures across time scales;
 - iii. Application of observing and remote techniques to strengthen the IMAP-based monitoring practices and improve forecasts of the state of the marine environment;
 - iv. Application of holistic view within the “source-to-sea” framework to structure the assessment of the land-based pressures in conjunction with their impacts on the oceans.
- b) Enhance partnerships and support the transfer of ocean knowledge for science-based management, with a focus on strengthening:
 - i. The national capacities related to monitoring and data analysis;
 - ii. The use of the scientific networks to support the objectives of partnerships for the science-policy interface (SPI);
 - iii. The synergies for marine science in the Mediterranean.

II. Improve IMAP InfoSystem database management:

IMAP-IS should be significantly improved. It should be restructured from the repository of data reported by the CPs into an advanced information system which supports integrated assessments and ensure the validation of uploaded data, first technically and then scientifically. It needs to provide a queryable database, with export formats (vertical and horizontal) for scientific evaluation and presentation, therefore allowing IMAP users and data evaluators to sort, retrieve and export data based on any available parameter of the metadata and data. The formats of the extracted data should be compatible, to the extent possible with other standard analysis methodologies and presentation/mapping tools.

Most importantly, the QA/QC mechanism of the IMAP IS needs to be significantly strengthened including operational and scientific quality control of data. The implementation of QC/QA controls and data flagging is necessary. The online tools supporting assessments should also be integrated into IMAP IS.

DDs and DSs should be updated, as appropriate, further to the experience built during the present IMAP cycle of data reporting and the preparation of the 2023 MED QSR Pollution and Marine Litter assessments.

It is also necessary to invest significant resources to ensure IMAP IS interoperability with national databases. This has to be followed by significant improvement of data quality control and quality assurance at the national level.

III. Improve the GES assessment:

For further improvement of the integrated GES assessment of IMAP Pollution and Marine Litter Cluster, it is necessary to continue streamlining the assessment methodologies applied for the environmental status assessment for the Pollution and Marine Litter Cluster within the 2023 MED QSR.

5. Main Regular and Policy Developments by UNEP/MAP Barcelona Convention for the Protection of the Mediterranean Sea and Coast since 2017 Med QSR

222. Since the adoption of MedQSR of 2017, a series of actions and measures were undertaken that supported the efforts made within the framework of UNEP/MAP-Barcelona Convention. The main measures adopted by the Contracting Parties to the Barcelona Convention since 2017 are:

- The **UNEP/MAP Medium-Term Strategy 2022-2027 (MTS)** adopted in 2021 as a key strategic framework for the development and implementation of the Programmes of Work of UNEP/MAP. It aims at achieving transformational change and substantial progress in the implementation of the Barcelona Convention and its Protocols, also providing a regional contribution to relevant Global processes²⁶.
- **Designation of the Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter:** The Contracting Parties to the Barcelona Convention successively adopted two consensual decisions at their 21st meeting (Naples, Italy, 2-5 December 2019) and 22nd meeting (Antalya, Türkiye, 7-10 December 2021) concerning the designation of the Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter (Med SOX ECA), pursuant to Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL).
- **The Regional Plan on Urban Wastewater Treatment.** It applies to the collection, treatment, reuse and discharge of urban wastewaters and the pre-treatment and discharge of industrial wastewater entering collecting systems from certain industrial sectors. Its objective is to protect the coastal and marine environment and human health from the adverse effects of the wastewater direct and or indirect discharges, in particular regarding adverse effects on the oxygen content of the coastal and marine environment and eutrophication phenomena as well as promote resource water and energy efficiency.
- **Regional Plan on Sewage Sludge Management.** It applies to the treatment, disposal and use of sewage sludge from Urban Wastewater Treatment Plants. Its objective is to ensure effective reuse of beneficial substances and exploitation of energy potential of sewage sludge, while preventing harmful effects on human health and the environment.
- **The Updated Regional Plan on Marine Litter Management in the Mediterranean.** The updated version of the Regional Plan further expands the provision of the version adopted in 2013, to include a number of additional elements, i.e., new definitions, expanded scope of measures in 4 principal areas (economic instruments, circular economy of plastics, land-based and sea-based sources of marine litter), and amendments targets for plastic waste and microplastics.
- The under development **Regional Plans on (a) Agriculture, (b) Aquaculture, and (c) Storm Water, Management in the Mediterranean**, which are expected to be approved by COP23 in December 2023.
- **The Common Regional Framework for Integrated Coastal Zone Management.** It provided the Methodological Guidance for Reaching Good Environmental Status (GES) through ICZM. Its objective is to support the implementation of the EcAp in a coordinated and integrated manner so to take all EOs and their GES into account through the implementation of the ICZM Protocol and other Protocols and related key documents.
- Following the emerging need to introduce MSP in the entire Mediterranean Region and to provide a planning tool to assist achieving GES of marine environment, the COP 20 (17-20 December 2017, Tirana, Albania) adopted the **Conceptual Framework for Marine Spatial Planning** as a guiding document to facilitate the introduction of this management tool into the Barcelona Convention framework, with the aim to further support achieving Good Environmental Status (GES) of the Mediterranean Sea and Coasts; investigate in more details connections between land and sea areas; and propose coherent and sustainable land and sea-

²⁶ In particular the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), the UN Decade on Ecosystem Restoration, the UN Decade of Ocean Science for Sustainable Development and the UNEP's Medium-Term Strategy 2022-2025, approved at UNEA-5 in February 2021.

use planning frameworks relating with key economic sectors and activities that may affect the coastal and marine resources.

- In order to provide best assistance to the CPs for the implementation of Marine Spatial Planning a **MSP Workspace** has been prepared and training provided for the region's planners and other MSP practitioners who can access information and tools, and share knowledge, news and insight on MSP (<https://msp.iczmpplatform.org/>).
- The **Post-2020 SAPBIO**²⁷ and the **Post-2020 Regional MCPAs and EOCMs Strategy**²⁸, both adopted in 2021 as action-oriented policies for the preservation of the marine and Coastal Biodiversity that contribute to achieve the respective targets of the Sustainable Development Goals and the CBD Post-2020 Global Biodiversity Framework, through the optic of the Mediterranean context.
- The **Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships** (2022-2031). Adopted in 2021 to enhance the implementation of the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea. It sets seven Common Strategic Objectives addressing key ships related environmental issues (pollution, climate change, air emission, marine litter (plastic and), Nin-Indigenous Species, designation of special areas, emerging issues related to pollution from ships in the Mediterranean). Its implementation is supported by an Action Plan made of 190 specific actions expected to be implemented in the next ten years.
- The **Strategic Action Programme to address pollution from land-based activities** (SAP-MED) adopted in 1997 as a long-term policy (2000-2025) focused on combatting pollution from land-based sources and activities and their impact on marine and coastal environment. Its objective is to improve the quality of the marine environment of the Mediterranean through facilitating the implementation by the Contracting Parties of the LBS Protocol and promoting shared-management of the land-based pollution. The SAP-MED was designed to assist Parties in taking actions individually or jointly within their respective policies, priorities and resources, which will lead to the prevention, reduction, control and/or elimination of the degradation of the marine environment, as well as to its recovery from the impacts of land-based activities.
- The **Ballast Water Management Strategy for the Mediterranean Sea** (2022-2027) adopted in 2021 updates a first strategy in 2012. The overall objectives of this Strategy are to: (i) establish a framework for a regional harmonised approach in the Mediterranean on ships' ballast water control and management which is consistent with the requirements and standards of the Ballast Water Management Convention; (ii) initiate some preliminary activities related to the management of ships' biofouling in the Mediterranean region; and (iii) contribute to the achievement of GES with respect to NIS as defined in IMAP.
- The **Regional Action Plan on Sustainable Consumption and Production in the Mediterranean** adopted in 2016 as a substantive contribution by the Mediterranean Region to the implementation of the 2030 Agenda for Sustainable Development. It defines common objectives and identifies actions guiding the implementation of the sustainable consumption and production at the national level, addressing, as appropriate, key human activities which have a particular impact on the marine and coastal environment and related transversal and cross-cutting issues.

27 The Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO). It was adopted in 2021

28 The Post-2020 Regional Strategy for marine and coastal protected areas and other effective area-based conservation measures in the Mediterranean

223. The UNEP/MAP efforts for the preservation of the Mediterranean Sea and Coast are a contribution from the region to achieve global objectives in relation to the marine environment. In addition to providing a regional contribution to achieve the relevant Sustainable Development Goals, the action of UNEP/MAP is harmonised with the following global processes since 2017:

- UN Decade on Ecosystem restoration (2021-2030).
- UN Decade of Ocean Science for Sustainable Development (2021-2030).
- UNEP Regional Seas Strategic Directions 2022-2025.
- The Ecosystem Approach: Towards a practical application across Regional Seas Conventions and Action Plans.
- UNEP Marine and Coastal Strategy 2020-2030.
- Post-2020 global biodiversity framework (CBD).
- United Nations Environment Assembly: UNEA-3 (December 2017), UNEA-4 (March 2019), UNEA-5 (February 2021).
- The relevant Decisions of UNFCCC COP 27 (Sharm el-Sheikh from 6 to 20 November 2022).
- The Intergovernmental Negotiating Committee (INC) mandated to develop legally binding global treaty to control plastic pollution.

224. In addition to the measures undertaken within the framework of the UNEP/MAP, the conservation of the Mediterranean Sea and Coast benefited from measures adopted as part of European Union policies of relevance for the Mediterranean marine and coastal environment. These included in particular:

- The EU Sustainable blue economy, new approach.
- The EU Biodiversity strategy for 2030.
- The EU Nature restoration Law proposal.
- The EU Circular economy action plan.
- The EU MSP Directive and implementation.
- The EU Green Deal for the Climate neutrality.
- The EU Marine Strategy Framework Directive.
- The EU Plastics Strategy.
- The EU Single-use Plastic Directive.
- The EU Green Deal Policy Framework.
- The EU Waste Framework Directive.
- The EU Revised Port Reception Facilities Directive.

Annex II

**New/Updated IMAP Assessment Criteria for Nutrients, Contaminants and Marine Litter within
the framework of preparation of the 2023 MED QSR**

PART I: Pollution

1. The assessment criteria for Common Indicators 13 and 14²⁹

Table 1. Major coastal water types in the Mediterranean

	Type I	Type II-A, II-A Adriatic	Type III-W	Type III-E	Type Island-W
σ _t (density)	<25	25<d<27	>27	>27	All ranges
S (salinity)	<34.5	34.5<S<37.5	>37.5	>37.5	All ranges

Note: With the view to assess eutrophication, the classification scheme on Chl a concentration (in µg/l) is optimal in coastal waters as a parameter easily applicable by all Mediterranean countries based on the indicative thresholds and reference values presented in Table 3.

Noe: The major coastal water types are also indicative of the part of offshore waters next to coastal waters; however, it should be used with caution in the offshore (open) areas.

Table 2. Coastal water types reference conditions and boundary values in the Mediterranean, along with the new and updated values for coastal and open (offshore) waters in the Adriatic Sea Sub-region³⁰.

(Reference conditions and boundary (Good/Moderate status) values, expressed as G_{mean} annual values, are based on long time series (>5 years) of monthly sampling at least, which differ from type to type on the sub-regional scale, and therefore, were built with different strategies).

Water Typology	Coastal waters					
	Reference conditions of c(Chla) (µg/L)		Boundaries of c(Chla) (µg/L) for G/M status		Reference conditions of c(TP) (µmol/L)	Boundaries of c(TP) (µmol/L) for G/M status
	G _{mean}	90% percentile	G _{mean}	90% percentile		
Type I	1,4	3,33 ^b	6,3	10		
Type I Adriatic	1,4	3,94	5,0 ^a	14,1	0,19 ^a	0,55 ^a
Type II-A-FR-SP ^d	-	1,9	-	3,58	-	-
Type II-A Adriatic	0,33	0,87	1,5	4,0	0,16 ^a	0,48 ^a
Type II-A ^e Tyrrhenian	0,32	0,77	1,2	2,9	-	-
Type III-W Adriatic ^c	-	-	0,64 ^f	1,7 ^f	-	0,26
Type III-W Tyrrhenian	-	-	0,48	1,17	-	-
Type III-W-FR-SP		0,9		1,80	-	-
Type III-E		0,1		0,4		
Type Island-W		0,6		1,2-1,22		

Water Typology	Open (offshore) waters in the Adriatic Sea Sub-region					
	Reference conditions of c(Chla) (µg/L)		Boundaries of c(Chla) (µg/L) for G/M status		Reference conditions of c(DIN) (µmol/L)	Boundaries of c(DIN) (µmol/L) for G/M status
	G _{mean}	90 % percentile	G _{mean}	90 % percentile		
Type I Adriatic	0,15 ^g ; 0,29 ^h	0,42 ^f ; 0,81 ^g	3,1	8,7	0,21 ^g ; 0,66 ^h	22.3
Type II-A Adriatic	0.11	0.29	-	-	-	-
Type III-W Adriatic ^c	-	-	0.64	1.7	-	-

^a From Giovanardi et al, 2018

^b Applicable to Gulf of Lion Type I coastal waters

²⁹ For ease of reference, the Secretariat included the values as approved by Decisions IG.22/7 (COP 19) and IG.23/6 (COP 20) which are shown in shaded cells.

³⁰ The new values are calculated based on data as available by December 2022.

^c The ecological classification scheme would not be suitable for proper and safe classification, and therefore the boundary values for WT III-W Adriatic waters are based on the H/G values for WT II-A Adriatic in coastal waters i.e. 0.64 µg/L for Chla and 0,26 µmol/L for TP

^d Correction of error included to ensure consistency with the classification as provided in Commission Decision 2013/480/EU i.e. Type II -FR-SP, as included in Decision IG.22/7, replaced with Type II -A-FR-SP

^e Correction of error included to ensure consistency with the classification as provided in Commission Decision 2013/480/EU i.e., Type II-A Tyrrhenian replaced Type II-B Tyrrhenian, as included in Decision IG.22/7, since the latter does not exist in the Tyrrhenian Sea

^f values based on the H/G values for WT II-A^c The ecological classification scheme would not be suitable for proper and safe classification, and therefore the boundary values for WT III-W Adriatic waters are based on the H/G values for WT II-A Adriatic in coastal waters i.e. 0.64 µg/L for Chla and 0,26 µmol/L for TP

^g for ME; ^h for HR, IT

^h No pressure – effect relationship was found, and therefore RC for DIN and boundary G/M values for Chla and DIN could not be proposed.

2. The assessment criteria for IMAP Common Indicator 17³¹³²

2.1 The BC and BAC values for IMAP Common Indicator 17

Table 3. The BC and BAC values for trace metals in sediments. The units of concentration are given in µg/kg dry wt, as requested by IMAP.

The BC and BAC values for trace metals in sediments					
The BC values in sediments, µg/kg dry wt					
TM	MED	WMS	ADR	CEN	AEL
Cd	107	140	120	#	78.9
Hg	50.0	90.0	50.0	#	31.5
Pb	15000	16000	15700	1805	15674
The BAC values in sediments, (µg/kg dry wt)					
	Med	WMS	ADR	CEN	AEL
Cd	161	210	180	#	118
Hg	75.0	135	75.0	#	47.3
Pb	22500	24000	23550	2708	23511

#All data points for Cd are **BDL** as well as 72% of the Hg data points.

Table 4. The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments. The units of concentration are given in µg/kg dry wt, as requested by IMAP.

The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments					
PAH compounds	The BC values in sediments, µg/kg dry wt				
	MED	WMS	ADR	CEN	AEL
Naphthalene	2.00	8.0	2.0	#	2.3
Acenaphthylene	(1.0) [#]	#	#	0.4	#
Acenaphthene	(2.0) [#]	#	#	*	#
Fluorene	(2.0) [#]	#	#	0.4	#
Phenanthrene	3.10	14.9	3.5	0.8	3.1
Anthracene	(2.2) [#]	#	#	#	#
Fluoranthene	5.00	#	7.0	0.1	2.7
Pyrene	6.20	24.8	8.0	0.4	3.0
Benzo[a]anthracene	3.38	19.7	4.1	*	1.8
Chrysene	2.70	35.9	4.6	1.6	1.6
Benzo(b)fluoranthene	5.00	8.7	15.0	*	2.6
Benzo(k)fluoranthene	4.00	#	3.0	*	#
Benzo[a]pyrene	(4.0) [#]	#	4.0	#	1.0
Benzo[g,h,i]perylene	(4.2) [#]	#	5.7	*	1.8
Dibenz[a,h]anthracene	(1.0) [#]	7.0	#	*	#
Indeno[1,2,3-c,d]pyrene	(4.0) [#]	#	4.4	*	2.1

³¹ For ease of reference, the Secretariat included the values as approved by Decisions IG.22/7 OF (COP 19) and IG. 23/6 (COP 20) which are shown in shaded cells.

³² The new values are calculated based on data as available by December 2022

The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments					
Sum PAHs	27.4	160	41.0	6.3	21.4
PAH compounds	The BAC values in sediments, µg/kg dry wt				
	MED	WMS	ADR	CEN	AEL
Naphthalene	3.0	12.0	3.0	#	3.5
Acenaphthylene	(1.5) [#]	#	#	0.6	#
Acenaphthene	(3.0) [#]	#	#	*	#
Fluorene	(3.0) [#]	#	#	0.5	#
Phenanthrene	4.7	22.4	5.3	1.2	4.7
Anthracene	(3.3) [#]	#	#	#	#
Fluoranthene	7.5	#	10.5	0.2	4.1
Pyrene	9.3	37.1	12.0	0.6	4.5
Benzo[a]anthracene	5.1	29.6	6.2	*	2.7
Chrysene	4.0	53.9	6.9	2.4	2.4
Benzo(b)fluoranthene	7.5	13.0	22.5	*	3.8
Benzo(k)fluoranthene	6.0	#	4.5	*	#
Benzo[a]pyrene	(6.0) [#]	#	6.0	#	1.5
Benzo[g,h,i]perylene	(6.3) [#]	#	8.6	*	2.7
Dibenz [a,h]anthracene	(1.5) [#]	10.5	#	*	#
Indeno[1,2,3-c,d]pyrene	(6.0) [#]	15.0	6.5	*	3.2
Sum PAHs	41.0	240	61.5	9.5	32.0

#most data (>50%) below detection limit, * no data reported

Table 5. The BC and BAC values for trace metals in mussel (*M. galloprovincialis*) and fish (*M. barbatus*). The units of concentration are given as requested by IMAP.

The BC and BAC values for trace metals in mussel soft tissue (<i>M. galloprovincialis</i>), µg /kg dry wt					
The BC values					
TM	MED	WMS	ADR	CEN	AEL
Cd	710	1030	629	*	942 ^{>}
Hg	77.9	85.0	75.4	*	110 ^{>}
Pb	1100	1260	1000	*	2300 ^{>}
The BAC values					
TM	MED	WMS	ADR	CEN	AEL
Cd	1065	1545	944	*	1413 ^{>}
Hg	117	128	113	*	165 ^{>}
Pb	1650	1890	1500	*	3450 ^{>}

* Only a few data points were available for the CEN. The calculated BCs were lower than in other sub-regions, however, the few data are not representative of the CEN.

> Since new data were not available in the AEL to update BC/BAC values for *M. galloprovincialis*, it was approved to use the values calculated in 2019.

The BC and BAC values for trace metals in fish muscle (<i>Mullus barbatus</i>), µg/kg wet wt					
The BC values					
TM	MED	WMS	ADR	CEN	AEL
Cd	3.9	*	5.3	*	3.6
Hg	40.6	*	120	*	33.7
Pb	18.3	*	40.8	*	13.5
BAC values					
	MED	WMS	ADR	CEN	AEL
Cd	7.8	*	10.6	*	7.2
Hg	81.2	*	240	*	67.4
Pb	36.6	*	81.6	*	27.0

* Given the lack of data, it was not possible to propose values for BC in these sub-regions, therefore it was approved to use the regional MED BC values for the GES assessment

Table 6. The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in mussel (*M. galloprovincialis*). The unit of concentration is given in µg/kg dry wt, as requested by IMAP. No data were available for the CEN and the AEL Sub-regions.

The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in mussel (<i>M. galloprovincialis</i>), µg/kg dry wt			
BC values			
	MED	WMS	ADR
Naphthalene	0.56	0.52	#
Acenaphthylene	(0.05) [#]	#	#
Acenaphthene	(0.50) [#]	#	#
Fluorene	2.50	7.87	#
Phenanthrene	5.35	19.9	2.25
Anthracene	1.12	0.94	#
Fluoranthene	4.83	10.0	#
Pyrene	2.50	5.54	#
Benzo[a]anthracene	0.60	0.69	#
Chrysene	2.54	2.98	#
Benzo(b)fluoranthene	1.00	1.36	#
Benzo(k)fluoranthene	1.00	0.73	#
Benzo[a]pyrene	(1.00) [#]	0.94	#
Benzo[g,h,i]perylene	1.00	0.67	#
Dibenz[a,h]anthracene	(0.10) [#]	#	#
Indeno[1,2,3-c,d]pyrene	(0.63) [#]	0.29	#
Sum 16 PAHs ³³	5.80	5.60	6.60
The BAC values			
	MED	WMS	ADR
Naphthalene	0.84	0.79	#
Acenaphthylene	(0.08) [#]	#	#
Acenaphthene	(0.75) [#]	#	#
Fluorene	3.75	11.8	#
Phenanthrene	8.03	29.8	3.38
Anthracene	1.68	1.40	#
Fluoranthene	7.25	15.0	#
Pyrene	3.75	8.31	#
Benzo[a]anthracene	0.90	1.04	#
Chrysene	3.81	4.46	#
Benzo(b)fluoranthene	1.50	2.04	#
Benzo(k)fluoranthene	1.50	1.09	#
Benzo[a]pyrene	(1.50) [#]	1.42	#
Benzo[g,h,i]perylene	1.50	1.01	#
Dibenz[a,h]anthracene	(0.14) [#]	#	#
Indeno[1,2,3-c,d]pyrene	(0.94) [#]	0.43	#
Sum 16 PAHs	8.70	8.40	9.90

[#]most data (>50%) below detection limit;

Table 7. The BAC values for organochlorinated contaminants (PCBs and pesticides) in sediments and mussel (*M. galloprovincialis*). The unit of concentrations is given in µg/kg dry wt, as requested by IMAP. For sediments, very limited data were available for the CEN sub-region, while for biota no data were available for the CEN and AEL sub-regions. When most (>50%) of the data points were below the detection limit for the sub-regions, BACs were not calculated.

³³ Data dictionary gives 2 additional categories: Sum 4 PAHs Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene and Sum 5 PAHs (Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)perylene, Indeno(1,2,3-cd)pyrene). It is suggested that they be considered for use in the future data reporting.

The BAC values for organochlorinated contaminants (PCBs and pesticides) in sediments and mussel (<i>M. galloprovincialis</i>)					
SEDIMENTS, µg/kg dry wt	MED	WMS	ADR	CEN	AEL
PCBs					
PCB28	0.10	#	#	#	0.09
PCB52	0.07	0.10	0.09	#	0.04
PCB101	0.10	0.16	0.16	*	#
PCB118	0.10	0.46	0.18	#	0.01
PCB138	0.11	0.26	0.24	#	#
PCB153	0.14	0.40	0.28	#	0.02
PCB180	0.09	0.13	0.13	#	#
Sum 7 PCBs	0.40	1.60	0.21	#	0.19
Pesticides					
γ-HCH (Lindane)	(0.1) [#]	#	#	*	0.02
DDE(p,p')	(0.1) [#]	0.23	#	#	*
Hexachlorobenzene	(0.1) [#]	#	#	#	*
Dieldrin	(0) [#]		#	#	#
BIOTA – MG, µg/kg dry wt	MED	WMS	ADR	CEN	AEL
PCBs					
PCB28	0.20	0.07	1.38	*	*
PCB52	0.38	0.3	0.5	*	*
PCB101	1.20	1.1	1.4	*	*
PCB118	1.23	1.5	1.4	*	*
PCB138	2.31	2.4	3.3	*	*
PCB153	3.45	4.6	4.6	*	*
PCB180	0.50	0.3	0.5	*	*
Sum 7 PCBs	18.4	28.6	17.3	*	*
Pesticides					
γ-HCH (Lindane)	(1.0) [#]	#	#	*	*
DDE(p,p')	3.05	3.05	*	*	*
Hexachlorobenzene	(0.5) [#]	#	#	*	*
Dieldrin	(1.0) [#]	#	*	*	*

most data (>50%) below detection limit. * no data reported

2.2 The Environmental Assessment Criteria (EAC) values for IMAP CI 17

Table 8. The Mediterranean EAC values for trace metals in sediments and biota, as endorsed by Decision IG.23/6

The Mediterranean EAC values for trace metals in sediments and biota			
TM	MedEAC*	#MedEAC	#MedEAC
	Sediments, µg/kg dry wt	<i>M. galloprovincialis</i> , µg/kg dry wt	<i>Mullus barbatus</i> , µg/kg wet wt
	IG.23/6	IG.23/6	IG.23/6
Cd	1200	5000	50
Hg	150	2500&	1000
Pb	46700	7500	300

* Med EAC values equal to ERL (Effects Range Low, Long et al. 1995, idem OSPAR values). # Med EAC values equal to the maximum regulatory levels for contaminants in foodstuffs as provided in EC/EU 1881/2006 and 629/2008 Directives

& Not included in EU directives, but adopted by OSPAR

Table 9. The Mediterranean EAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments and biota, as endorsed by Decisions IG.23/6 and IG.22/7, along with a few updated values to ensure consistency with ERL Long et al., and OSPAR EAC values

The Mediterranean EAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments and biota				
PAH compounds	Sediments, µg/kg dw		Biota Mussels, µg/kg dw	
	EAC* IG.22/7 and IG.23/6 - OSPAR and ERLs	ERL Long et al, 1995 [#]	EAC** IG.22/7 and IG.23/6 - OSPAR	OSPAR [#]
Naphthalene		160		340
Acenaphthylene		44		
Acenaphthene		16		
Fluorene		19		
Phenanthrene	240		1700	
Anthracene	85		290	
Fluoranthene	600		110	
Pyrene	660		100	
Benzo[a]anthracene	261		80	
Chrysene	384			
Benzo(b)fluoranthene				
Benzo(k)fluoranthene			260	
Benzo[a]pyrene	430		600	
Benzo[g,h,i]perylene	85		110	
Dibenz[a,h]anthracene		63.4		
Indeno[1,2,3-c,d]pyrene	240			
Sum 16 PAHs		4022		

The Mediterranean EAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments and biota				
	Sediments, µg/kg dw		Biota Mussels, µg/kg dw	
PAH compounds	EAC* IG.22/7 and IG.23/6 - OSPAR and ERLs	ERL Long et al, 1995 [#]	EAC** IG.22/7 and IG.23/6 - OSPAR	OSPAR [#]

* Med EAC values equal to ERL (Effects Range Low, Long et al. 1995, idem OSPAR values)

** Med EAC values equal to OSPAR values

[#] Med EAC values equal to ERL (Effects Range Low, Long et al., 1995) which were not included in Decisions IG.22/7 and IG.23/6.

Table 10. The Mediterranean EAC values for for organochlorinated contaminants (PCBs and pesticides) in sediments and biota, as endorsed by Decisions IG.23/6 and IG.22/7 along with the one updated value

The Mediterranean EAC values for for organochlorinated contaminants (PCBs and pesticides) in sediments and biota					
PCBs	Sediments			Mussel	Fish
	EAC [#] IG.22/7 (µg/kg dry wt) – updated	EAC* IG.22/7 (µg/kg dry wt)	EAC** IG.23/6 (µg/kg dry wt)	EAC** IG.22/7 and IG.23/6 (µg/kg dry wt)	EAC** IG.22/7 and IG.23/6 (µg/kg lipid)
CB28			1.7	3.2	64
CB52			2.7	5.4	108
CB101			3	6	120
CB118			0.6	1.2	24
CB138			7.9	15.8	316
CB153			40	80	1600
CB180			12	24	480
Sum 7 PCBs	67,9				
Pesticides					
γ-HCH (Lindane)		3		1.45	11 µg/kg ww
DDE(p,p')		2.2		5-50	
Hexachlorobenzene		20			
Dieldrin		2		5-50	

* ERL (Effects Range Low, (Long et al., 1995) or used by OSPAR (2009)

** From OSPAR (2009)

[#]The EAC value of 11.5 µg/kg dry wt in Decision IG 22/7 originated probably from Long et al, 1995 as explained in document UNEP/MED 427/Inf.3. However, Long et al.,1995 present the ERL value of 22.7 µg/kg dry wt for Total PCBs in sediments but do not specify which congeners were considered. Moreover, OSPAR has not adopted an EAC value for the sum of 7 PCBs in sediments. Therefore, further to experience related to the preparation of the assessments within the 2023 MED QSR, the EAC value of 67,9 is included to present the sum of 7 individual IMAP PCB congeners.

3. The Environmental Assessment Criteria (EAC) related to IMAP Common Indicator 20

Table 11. The Mediterranean EACs values for CI 20 related to trace metals based on the maximum regulatory levels for trace metals in foodstuffs for the protection of human health, as provided in EC/EU Directives 1881/2006 and its amendments 488/2014 and 1005/2015. The concentrations are presented in mg/kg wet wt.

The EAC CI 20 for trace metals- EU 1881/2006 directive and its amendments 488/2014 and 1005/2015			
matrix	TM, mg/kg wet wt		
	Cd	Hg	Pb
fish muscle	0.05-0.25	0.5-1	0.3
cephalopods	1		1
crustaceans	0.5	0.5	0.5
bivalve mollusc	1		1.5

Table 12. The Mediterranean EAC values for IMAP CI 20 related to Benzo(a)pyrene and sum of four PAHs based on the maximum regulatory levels for these contaminants in foodstuffs for the protection of human health, as provided in EC/EU EC Regulations 835/2011 and 1259/2011 amending Regulation (EC) 1881/2006. The concentrations are presented in µg/kg wet wt.

The EACs values for CI 20 related to Benzo(a)pyrene and sum of four PAHs (benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene) - EC Regulation (EC) 1881/2006 and amendments 835/2011 and 1259/2011		
Matrix	Maximum levels (µg kg ⁻¹ wet wt)	
	Benzo(a) pyrene	Sum of Benzo(a) pyrene, Benzo(a) anthracene, Benzo(a) fluoranthene and chrysene
Smoked fish muscle	2-5	12-30
Smoked bivalve mollusc	6	35
Bivalve mollusk (fresh, chilled or frozen)	5	30

Table 13. The Mediterranean EAC values for CI 20 related to Dioxins and PCBs based on the maximum regulatory levels for these contaminants in foodstuffs for the protection of human health, as provided in EC/EU EC Regulation 1259/2011 amending EC Regulation 1881/2006. The concentrations are presented in wet wt.

The EACs values for CI 20 related to Dioxins and PCBs – EC Regulation 1259/2011 amending EC Regulation 1881/2006			
Foodstuffs	Maximum levels		
	Sum of dioxins (WHO-PCDD/F-TEQ) ⁽¹⁾ pg g ⁻¹ ww	Sum of dioxins and dioxin-like PCBs (WHO-PCDD/F-PCB-TEQ) ⁽¹⁾ pg g ⁻¹ ww	Sum of PCB28, PCB52, PCB101, PCB138, PCB153 and PCB180 (ICES 6) ng g ⁻¹ ww
Fish muscle	3.5	6.5	75
Fish liver	3.5	20	200
Eel muscle	3.5	10	300

(1) Dioxins (sum of polychlorinated dibenzo-para-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), expressed as World Health Organisation (WHO) toxic equivalent using the WHO-toxic equivalency factors (WHO-TEFs)) and sum of dioxins and dioxin-like PCBs (sum of PCDDs, PCDFs and polychlorinated biphenyls (PCBs), expressed as WHO toxic equivalent using the WHO-TEFs). WHO-TEFs for human risk assessment based on the conclusions of the World Health Organization (WHO) (For TEF values see note 31, (EC) Regulation 1259/2011 – Annex 1.1.9.). Where fish are intended to be eaten whole, the maximum level shall apply to the whole fish.

4. The Environmental Assessment Criteria (EAC) values for IMAP CI 18³⁴

Table 14. The Mediterranean BACs and EACs for biomarkers in mussel (*M. galloprovincialis*) as endorsed by Decisions IG.22/7 and IG.23/6.

The Mediterranean BACs and EACs for biomarkers in mussel (<i>M. galloprovincialis</i>)				
Biomarkers/Bioassays and units	BACs IG.23/6 in Mussels (<i>Mytilus galloprovincialis</i>)	EACs IG.23/6 in Mussels (<i>Mytilus galloprovincialis</i>)	BACs IG.22/7 in Mussels (<i>Mytilus galloprovincialis</i>)	EACs IG.22/7 in Mussels (<i>Mytilus galloprovincialis</i>)
Lysosomal membrane stability Neutral Red Retention Assay (minutes)			120 ^{a*}	50 ^{a*}
Lysosomal membrane stability Cytochemical method (minutes)			20 ^{a*}	10 ^{a*}
AChE activity (nmol min ⁻¹ mg ⁻¹ protein) in gills (French Mediterranean waters)			29	20
AChE activity (nmol min ⁻¹ mg ⁻¹ protein) in gills (Spanish Mediterranean waters)			15	10
Stress on Stress (days)	11	5		
Metallothioneins (µg/g digestive gland)	247			
Micronuclei frequency (number of cases /1000 cells) in haemocytes)	1			

^aTechnical annex: assessment criteria for biological effects measurements. Integrated monitoring of chemicals and their effects. ICES Cooperative Research Report No. 315. Davies, I.M. and Vethaak, A.D.Eds.

³⁴ For ease of reference, the Secretariat included the values as approved by Decisions IG.22/7 OF (COP 19) and IG.23/6 (COP 20) which are shown in shaded cells.

**Moore et al., 2006 (Standard values adopted by ICES)*

PART II: Marine Litter

5. Baseline Values (BV) and Threshold Values (TV) for IMAP Common Indicator 23

Table 15: Baseline Values and Threshold Values for IMAP Common Indicator 23 (i.e., seafloor macrolitter and floating microplastic).

IMAP Indicators	Categories of Marine Litter	Baseline Values 2023	Threshold Value TV-2023
Common Indicator 23	Seafloor Macro-litter	135 items/km ²	38 items/km ²
Common Indicator 23	Floating Microplastics	0.044338 items/m ²	0.000845 items/m ²

Annex III

Elements for a Renewed Ecosystem Approach Roadmap/ Policy

Elements for a Renewed Ecosystem Approach Roadmap/ Policy

Introduction

1. The UNEP/MAP EcAp Roadmap 2008-2021 is a holistic policy framework for implementing the ecosystem approach in the Mediterranean Sea and coast. It has been implemented at regional, sub-regional, and national levels, with the objective to achieve and maintain Good Environmental Status (GES). In this framework, the condition of different ecosystem components and the presence and effects of key pressures are monitored through the Integrated Monitoring and Assessment Programme (IMAP).
2. The *Independent evaluation of the implementation of the EcAp Roadmap* (see UNEP/MED WG.567/Inf.4) indicates that the seven steps defined in Decision IG.17/6 (COP 15, 2008) have been implemented by UNEP/MAP in the related Mediterranean Sea policies. Moreover, numerous sub-regional programmes and projects supported the integration of the ecosystem approach and the implementation of national Integrated Monitoring and Assessment Programmes (IMAP).
3. The evaluation of the EcAp Roadmap also reveals that implementation, in particular at national level, needs to be reinforced and that some elements can be suggested for consideration in a process for a renewed Mediterranean EcAp policy.
4. The Analysis of ongoing and recent developments at global and regional level relevant to the ecosystem approach and IMAP (see UNEP/MED WG.567/Inf.5), gives a larger perspective to the elements identified at the Mediterranean level and brings-in additional points to consider.
5. Taking account of the outcomes of the aforementioned studies, elements of interest for a potential future EcAp policy development have been identified and are presented in this document. These elements were prepared in consultation with the UNEP/MAP Executive Coordination Panel (ECP).
6. Based on the analyses indicated above, the following issues have been identified, to be considered in the framework of a potential renewal of the EcAp Roadmap:
 - (a) Climate change and ocean acidification,
 - (b) Marine and coastal ecosystem protection and conservation, and sustainable management,
 - (c) Ecosystem restoration,
 - (d) Supporting nature-based solutions and sustainable consumption and production in national programmes of measures to attain GES,
 - (e) Data acquisition, management and accessibility,
 - (f) Science-Policy Interface (SPI) and communication,
 - (g) Policy coherence, cooperation and efficiency,
 - (h) Include assessment of coastal terrestrial ecosystems in EcAp policy and IMAP,
 - (i) Integrate assessment of human activities sustainability using socio-economic parameters.
7. Table 1 below presents the linkages between the identified elements and the seven steps of the EcAp Roadmap as shown below. Three elements are proposed as cross-cutting thematic issues.
8. EcAp Roadmap seven steps:
 - Step I.** Ecological vision for the Mediterranean
 - Step II.** 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

Table 1. Links between the seven steps of EcAp Roadmap and the proposed elements to be incorporated or reinforced in a renewed EcAp policy

Proposed themes/ EcAp Steps	Step I	Step II	Step II	Step IV	Step V	Step VI	Step VII
Climate change and ocean acidification							
Marine and coastal ecosystem protection and conservation, and sustainable management							
Ecosystem restoration							
Coastal terrestrial ecosystems							
Human activities sustainability through socio-economic parameters							
Supporting nature-based solutions and sustainable consumption and production in national programmes of measures to attain GES							
Cross-cutting thematic issues			Data acquisition, management and accessibility				
			Science-Policy Interface (SPI) and communication				
			Policy coherence, cooperation and efficiency (national policies, EU policies, GFCM, MSP)				

1. Seven steps of the EcAp Roadmap 2008-2021

1.1. Step I. Definition of an ecological vision for the Mediterranean.

The EcAp Roadmap 2008-2021 ecological vision has been defined in Decision IG.17/6 (COP 15, 2008) as:

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

1.1.1. Climate change and ocean acidification

9. This EcAp vision does not refer to climate change concerns. Yet, the Mediterranean Sea is particularly impacted by climate change with rapid changes occurring, threatening its ecosystems and coastal human populations. The Intergovernmental Panel on Climate Change (IPCC) indicates that risks associated with projected climate change are particularly high for people and ecosystems in the Mediterranean Basin (see cross-chapter paper 4 Ali et al., in IPCC, 2022³⁵). Climate change effects

³⁵ IPCC. (2022). *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegria, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)].

include sea warming, destructive marine heat waves, ocean acidification, sea level rise, changes in current circulation patterns, and increased number of extreme climatic events such as floods (MedECC, 2020)³⁶.

10. The Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025, adopted by all Mediterranean countries ([Decision IG.22/2](#)), which translates 2030 Agenda for Sustainable Development and the Strategic Goals at the regional level, includes an objective relative to climate change: “*Addressing climate change as a priority issue for the Mediterranean*”.

11. The overall objective of the Ecosystem Approach roadmap is to achieve and maintain Good Environmental Status (GES) of the Mediterranean Sea and coasts. The status is measured by indicators monitored through IMAP. These indicators should reflect the state of the environment and ecosystems as well as the changes induced by anthropogenic pressures. Climate change is a human induced phenomenon that impacts the physical and chemical nature of the sea which affects its ecosystems functioning and species distribution.

12. Taking these points in account, it is recommended to consider climate change concerns in a renewed EcAp policy and in consequence refer to it in the EcAp vision.

13. The UNEP/MAP Medium-Term strategy (MTS) 2022-2027 vision recognises climate change impacts in its vision: “*Progress towards a healthy, clean, sustainable and climate resilient Mediterranean Sea and Coast...*”. Resilience to climate change could likewise be added in the EcAp vision e.g., “*A healthy Mediterranean with marine and coastal ecosystems that are climate resilient, productive and biologically diverse...*”

1.2. Step II. Setting of common Mediterranean strategic goals.

14. The EcAp Roadmap 2008-2021 strategic goals have been defined in Decision IG.17/6 (COP15, 2008). These are:

- 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.

1.2.1. General points

15. 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.

16. Also, for the Contracting Parties which are EU Member States, the term “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 term used in the next steps of EcAp implementation.

1.2.2. Climate change and ocean acidification

Cambridge, UK and New York, NY, USA: Cambridge University Press. Cambridge University Press. Retrieved from https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf

³⁶ MedECC (2020) Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer W, Guiot J, Marini K (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/ MAP, Marseille, France from <https://www.medecc.org/medecc-reports/climate-and-environmental-change-in-the-mediterranean-basin-current-situation-and-risks-for-the-future-1st-mediterranean-assessment-report/>

17. As mentioned previously, climate change is a human induced phenomenon that modifies the physical and chemical nature of the sea and impacts its ecosystems. It is a global phenomenon but is particularly impacting the Mediterranean Sea. It seems therefore important that a renewed Mediterranean Ecosystem Approach roadmap/policy recognizes climate change impacts and refers to it in its vision and strategic goals. Moreover, it appears difficult to attain the EcAp strategic goal (a) without taking climate change impacts in consideration.

18. If it is decided that climate change resilience/vulnerability should be included in a renewed Mediterranean EcAp policy, this concern could be added in strategic goal (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.*

1.2.3.Ecosystem restoration

19. In Strategic Goal (a), the term “allow recovery” could be replaced by e.g., “enhance environmental conditions allowing recovery” to include passive or active ecosystem restoration actions. .

1.3. Step III. Identification of important ecosystem properties and assessment of ecological status and pressures.

1.3.1.General points

20. Past research has been spatially uneven e.g., less in deeper environments and habitats, uneven in species groups and rare in marine ecosystem functioning. In consequence knowledge on marine ecosystems is uneven.

21. The UNEP/MAP documents [*The Initial Integrated Assessment of the Mediterranean Sea and Coastal Areas*](#) (UNEP/MAP, 2011) and [*Economic and social analysis of the uses of coastal and marine waters in the Mediterranean \(Plan Bleu, 2014\)*](#)³⁷ answer this step at regional and sub-regional level, but lack of precision at national level. Moreover, some ecosystems were not considered.

22. UNEP/MAP work on the implementation of the EcAp roadmap with substantive contribution also from relevant EU financed programmes/projects has contributed to reduce spatial disparity in marine coastal ecosystem knowledge. Many reports though, highlight, (i) the lack of scientific knowledge on species distribution, habitat distribution, ecosystem functioning; (ii) the lack of knowledge on cumulative effects of anthropogenic impacts and on climate change impacts; and (iii) the lack of availability and accessibility of scientific knowledge, including within the science-policy interface. Further, the lack of socio-economic information relevant for assessing human-caused pressures and their level of sustainability has also been reported.

23. This step is essential at national level, especially in view of EcAp implementation and of establishing well designed Marine Spatial Planning. Progress has been made recently in data acquisition in many CPs, but efforts are still needed to acquire, assemble and communicate a clearer image of ecosystem properties and status. **Efforts need to be continued at national level to identify important ecosystem properties and assessment of ecological status and pressures.**

24. Moreover, establishing a mapping system at regional level with the capacity of overlaying ecosystem state, pressures and human activities, using perhaps also modelling methods, could be considered. Such an approach would give a holistic and analytic view at various scales. Some geospatial data, clearly georeferenced, relative to features, habitats, NIS and protected areas as well as

³⁷ Plan Bleu. (2014). *Economic and social analysis of the uses of 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]. Valbonne. Retrieved from https://planbleu.org/wp-content/uploads/2015/08/esa_ven_en.pdf

outcomes from some projects are available in a cartographic viewer³⁸. However, data is overall too fragmented in sublayers, lacks coherence (e.g., in the Mediterranean Biodiversity Platform *Posidonia* beds are represented by different colours depending on the project from which data stems) and often too localised to obtain a picture even at national level. Work of MAP Components on databases, observatories and knowledge management tools should continue in a coordinated manner, while collaborations with partners in data network could be further considered to minimize the investment in mapping technologies and resources while developing an efficient mapping system.

1.3.2. Coastal terrestrial ecosystems

25. Having in mind the geographical coverage of the Barcelona Convention and of the ICZM Protocol in particular, the coastal terrestrial (i.e., non-marine) ecosystems such as wetlands, estuaries, coastal forests and woods and dunes, as well as coastal landscapes, which are in connection with coastal marine ecosystems, should be taken in consideration in a holistic, ecosystem approach. Identification of such important ecosystems, of their ecological status and the pressures they undergo are probably, at least partially, covered by national policies. Such assessments of these coastal areas could be included in a renewed EcAp policy and increase the interconnections between terrestrial and marine ecosystems, in line with LSI in the framework of ICZM Protocol. Moreover, these ecosystems at the interface of land and sea in the Mediterranean are particularly under pressure of human activities and climate change impacts.

1.3.3. Climate change and ocean acidification

(i) Important ecosystem properties and assessment of ecological status regarding climate change concerns

26. Assessment should give the ability to identify vulnerable areas and ecosystems regarding climate change impacts and where resilience could be increased by addressing local impacts and implementing nature-based solutions. Also, some ecosystems have the faculty of mitigating climate change impacts.

27. For example, coastal wetlands, woods, forests and dunes that are at the interface of land and sea have an important nature-based solution role facing climate change impacts. These ecosystems will undergo climate change impacts from land and sea and therefore are also particularly vulnerable.

28. Another example of ecosystem that has a role in mitigating climate change impacts but that is also vulnerable is the *Posidonia oceanica* based ecosystem. These seagrass meadows trap CO₂ and stock large quantities of carbon in the sediments contributing to reduce acidification of the Mediterranean Sea. Seagrass meadows and in particular *Posidonia oceanica* meadows appear therefore as having an important role in climate change mitigation (Monnier et al., 2021³⁹; Hendriks et al., 2022⁴⁰; Monnier et al., 2022⁴¹). In parallel, seagrass meadows act as barriers protecting the coasts from erosion and represent an essential habitat playing a functional role of nursery for many fish.

29. **Better integrating coastal terrestrial ecosystems and acquiring at national and sub-regional level further precise spatialized data on ecosystems that have the ability to mitigate climate change impacts are necessary to evaluate the ecosystems' resilience capacity, measure efficiency of protection measures, and eventually of restoration actions.**

³⁸ [The Mediterranean Biodiversity Platform developed by SPA/RAC](#)

³⁹ Monnier, B., Pergent, G., Mateo, M. Á., Carbonell, R., Clabaut, P., & Pergent-Martini, C. (2021). Sizing the carbon sink associated with *Posidonia oceanica* seagrass meadows using very high-resolution seismic reflection imaging. *Marine Environmental Research*, 170, 105415.

⁴⁰ Hendriks, I. E., Escolano-Moltó, A., Flecha, S., Vaquer-Sunyer, R., Wesselmann, M., & Marbà, N. (2022). Mediterranean seagrasses as carbon sinks: Methodological and regional differences. *Biogeosciences*, 19(18), 4619–4637.

⁴¹ Monnier, B., Pergent, G., Mateo, M. Á., Clabaut, P., & Pergent-Martini, C. (2022). Quantification of blue carbon stocks associated with *Posidonia oceanica* seagrass meadows in Corsica (NW Mediterranean). *Science of The Total Environment*, 838, 155864.

(ii) *Assessment of pressures regarding climate change concerns*

30. Assessment of pressures have been conducted throughout the previously mentioned reports at Mediterranean level (UNEP/MAP, 2011 and Plan Bleu, 2014), and global assessment of climate changes risks has been published by IPCC (2022). However, MedECC 2020 report indicates that “a more comprehensive, systemic and holistic approach to interrelated processes and components would likely make useful contributions to environmental decision-making in the Mediterranean Basin. So far, an adequate and comprehensive assessment of risks posed by climate and environmental changes in the Mediterranean Basin is lacking (Cramer et al. 2018)”.

31. UNEP/MAP Plan Bleu/RAC initiated a meeting that took place in Marseille in October 2022 entitled “*Coastal risks related to climate change in the Mediterranean Sea*”⁴². The outcomes of this meeting, together with Cross-Chapter 4 Mediterranean Region in IPCC (2022)⁴³ relative to climate change risks under different climatic scenarios, could be a starting point for a detailed assessment of risks relative to climate change at regional, sub-regional and perhaps national level. A climate change risk assessment focused on Mediterranean marine and coastal ecosystems and coastal societies by sub-region would help anticipate climate change impacts. Nature-based solutions, by enhancing protection of key climate change mitigating ecosystems, could then be envisaged in a precautionary way.

1.3.4. Human activities sustainability through socio-economic parameters

32. The absence of a comprehensive monitoring system of socio-economic characteristics and the sustainability of economic activities makes it difficult to establish clear links between the quality status of the Mediterranean Sea and the social and economic pillars of sustainable development which are at the origin of pressures and therefore the degradation of the Mediterranean Sea. In particular, while a certain level of information on demographic, economic and employment has been collected as part of the implementation of the EcAp, the level of environmental and social sustainability of human activities that impact the coastal and marine environment has not been adequately informed. A knowledge gap remains in measuring to what extent human activities are compatible or in line with the objective of achieving GES and clear sustainability indicators of human activities are generally lacking. This is a major blind spot for decision makers when designing effective policies aiming at achieving GES.

1.3.5. Marine and coastal ecosystem protection, conservation and sustainable management

33. Recognising that marine and coastal ecosystem protection, conservation and sustainable management were important features in the EcAp Roadmap 2008-2021, additional proposals are made to be taken into consideration.

34. The assessments conducted for this step, concern in majority, marine coastal areas from 0 to 60-80 m depth. Very little is known about deep-sea habitats status and impacts of human pressure on these habitats. **To protect and conserve deep-sea habitats it is proposed that they be assessed and mapped also at sub-regional level, as appropriate. Available data start to be consequent in some sub-regions, but it remains dispersed, so strengthened efforts are required in this respect in coordination with relevant MAP Components.**

35. **Also, analysing the representativeness of benthic habitats across the Mediterranean MCPAs would allow to assess the accomplishment of benthic habitat protection at regional level**

⁴² <https://planbleu.org/en/event/les-rendez-vous-du-plan-bleu-3-coastal-risks-related-to-climate-change-in-the-mediterranean-sea/>

⁴³ IPCC (2022). *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge, UK and New York, NY, USA: Cambridge University Press. Cambridge University Press. Retrieved from https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf

with respect to international conservation goals as well as identify protection gaps either in habitats or biological zones (see approached used for the Azores in Milla-Figueras et al., 2020⁴⁴).

1.4. Step IV. Development of a set of ecological objectives corresponding to the Vision and strategic goals.

36. COP 17 adopted a set of 11 Ecological Objectives (EOs) 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 EOs are in line with the 11 Descriptors of EU Marine Strategy Framework Directive (MSFD).

1.4.1. Climate change and ocean acidification

37. The 11 EOs defined in the EcAp Roadmap 2008-2021 do not address climate change impacts/vulnerability.

38. Yet, the MedECC (2020) report highlights the need for monitoring programmes producing regular quality-assured data on climate-linked parameters even in northern countries of the Mediterranean Sea.

39. Therefore, **the development of an Ecological Objective on climate change/acidification vulnerability/resilience should be considered in a renewed EcAp policy.** The objective would be to maintain the resilience capacities of ecosystems at a level sufficient to cope with known climatic impacts (e.g., increase in water temperature, increased acidification, increasing number of underwater heatwaves and extreme events).

40. A cross-cutting integrated Ecological Objective on climate change/acidification vulnerability/resilience could perhaps be defined based on parameters already monitored in IMAP such as the parameter Low Elevation Coastal Zone within CCI 25, parameters followed under EO 5 and indicators followed in other monitoring programmes. Also, parameters usefully added within an EO already defined (e.g., adding plankton and pelagic habitats in CI1 and 2) could also contribute to define a cross-cutting EO on climate change. Further, indicators or parameters monitored in coastal terrestrial ecosystems, are of interest for a climate change EO. It is recommended to consider these possibilities also perhaps taking into account additional parameters such as hydrological regime, physical chemical parameters etc. Also, collaboration with other Regional Seas Conventions, with experience on climate change monitoring and assessment and ocean acidification, such as OSPAR could be fruitful.

41. If an Ecological Objective on climate change resilience is developed within a renewed EcAp policy, climatic change concerns should be also clearly present in the vision and the strategic goals.

1.4.2. Coastal terrestrial ecosystems

42. The status of coastal terrestrial ecosystems affects the coastal marine ecosystems assessed through IMAP. In many CPs, indicators are already monitored in these ecosystems to assess their state of conservation and the pressures they undergo. If, as proposed, the coastal terrestrial ecosystems are to be taken in consideration in a renewed EcAp policy, it is perhaps not necessary to create a new Ecological Objective but rather to include new parameters/indicators within the existent EOs. Further, cooperation with existing national and regional policies is requested to identify already existing parameters and indicators that can be of interest for IMAP.

⁴⁴ Milla-Figueras, D., Schmiing, M., Amorim, P., Horta e Costa, B., Afonso, P., & Tempera, F. (2020). Evaluating seabed habitat representativeness across a diverse set of marine protected areas on the Mid-Atlantic Ridge. *Biodiversity and Conservation*, 29(4), 1153–1175.

1.5. Step V. Derivation of operational objectives with indicators and target levels.

1.5.1.General points

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

44. Operational Objectives, GES definitions, Common Indicators and related targets still need to be defined for EO 4, EO 6 and for EO 8. EO 11, and its two candidate indicators, is still at an initial phase of development (countries invited to test the two CCIs by developing pilot monitoring of these CCIs). EO 4 on food webs is a complex subject, therefore, the development of operational objectives, indicators and targets for EO 4 may benefit of some extra time. **It is recommended to finalize as soon as possible the development of indicators, define GES for EO 8 which are country-specific, target levels and factsheets for EO 6 and target levels and factsheets for Candidate Common Indicators of EO 11.**

45. Operational Objectives, GES definitions, Common Indicators, Assessment Criteria and related targets for the IMAP Ecological Objectives are dispersed. No synthetic updated document regrouping these elements was found. **Creating a practical online centralised information platform integrated into the MAP InfoSystem that would regroup all the current operational objectives (OO), targets for EOs and also data dictionaries and data standards (DD/DS), threshold values (TV), assessment criteria (AC), guidance factsheets and guidelines and monitoring protocols for the indicators of all EOs (including EO 3) could be considered. This would help CPs to implement IMAP at national level but also enhance Science-Policy Interface.**

1.5.2.Climate change and ocean acidification

46. If it is decided to include climate change concerns within the renewed EcAp policy, derivation of operational objectives and indicators would need to be developed in collaboration with climate change specialists such as MedECC.

47. To better understand resilience/vulnerability of ecosystems to climate change, a first step could consist in collating existing specific assessment and monitoring data stemming from IMAP but also from other policies that require monitoring of relevant environmental parameters. In a second step, improvement in the “climate change” data collection could be defined and could consist of e.g., a few additional easy to measure parameters, specific spatial distribution of the monitoring points or adapt time lapse in monitoring. This would contribute in a cost-effective way to better understand how marine ecosystems’ resilience capacity to climate change can be assessed.

48. Several climate change vulnerability indexes have been developed that could be analysed to give food for thought for an eventual Mediterranean Sea ecosystem approach vulnerability Index. Developing a climate change spatialized vulnerability/resilience index would also contribute to better inform on marine ecosystems when building a Marine Spatial Planning (MSP).

1.5.3.Coastal terrestrial ecosystems

49. Including terrestrial coastal ecosystems in an ecosystem approach of the Mediterranean Sea appears as important considering the situation of this semi-enclosed sea. The ICZM Protocol and MSP cover this interface between sea and coast but do not specifically include monitoring of these coastal ecosystems. At national level, monitoring exists in many CPs through national or European policies. Based on a certain number of existent indicators of these ecosystems and integrating them into IMAP would allow for a holistic and ecosystem-based management to coastal and marine ecosystems, as a first step.

1.5.4. Human activities sustainability through socio-economic parameters

50. The question of the level of target setting within the DPSIR-sequence could be further investigated. It may be effective to set targets at the level of human activities that is to say on the Driver-Pressure side of the DSPIR sequence. As an example, some Mediterranean tourist destinations are setting targets in terms of number of tourists.

1.5.5. Marine and coastal ecosystem protection, conservation and sustainable management

51. The role of IMAP is to regularly assess the state of the environment and marine and coastal ecosystems through parameters and indicators at national level. Depending on the results, a CP should have the information to determine whether GES has been achieved or if measures and changes in management are required to achieve GES. **IMAP and GES can be considered as sensors of the state of the marine and coastal environment in the Mediterranean Sea and therefore as an essential tool to sustainably use and manage the Mediterranean Sea environment and ecosystems.** Technical aspects (monitoring scales, threshold values and measurable targets) of the current IMAP Common Indicators need to be finalised for CPs to be able to assess GES, and to contribute to protection, conservation and sustainable management of marine and coastal ecosystems.

52. For the moment, EO 1 Biodiversity, indicators CI 1 and CI 2 only concern benthic habitats receiving light and not exceeding 60-80 m depth (Coralligenous, maerl/rhodolith habitats and seagrass meadows). In the current IMAP there is a gap regarding the monitoring of deep-sea ecosystems (either pelagic or benthic). **No deep-sea pelagic or benthic habitats are for the moment assessed or monitored within the ecosystem approach.**

53. **Specific pelagic habitats (upwelling areas, fronts and gyres) and pelagic ecosystems (phyto and zooplankton) could be integrated in EO 1 indicators.** Work is ongoing to define parameters allowing the use of phyto and zooplankton for relevant IMAP biodiversity indicators and to define pelagic habitats. Indicators for pelagic habitats are not easy to develop and appear also to be a difficult task for the MSFD⁴⁵.

54. In collaboration with GFCM, **a limited number of fish and cephalopods species could be considered in CI 3 to CI.** These are important components of marine food webs. This could participate in the development of future EO 4 indicators and could also support the development of an eventual EO on climate change.

55. **Mediterranean deep-sea benthic habitats** are diverse, can host high biodiversity and are jeopardised by multiple human threats (e.g., fisheries, pollution, litter, oil and gas exploration and production) (Fanelli et al., 2021 ; Katsanevakis et al., 2020 ; see various chapters in Orejas and Jiménez, 2019). Among these, Vulnerable Marine Ecosystems (VMEs) defined by Food and Agriculture Organisation of the United Nations (FAO) (see FAO, 2009) are particularly sensitive to anthropogenic pressures such as bottom trawling fisheries. Many Mediterranean deep-sea species including corals and sponges are considered as indicator species of VMEs (see document by WGVME Defining Mediterranean VMEs (II), 2017). A GFCM Working Group on VMEs and essential fish habitats (WGVME-EFH) is dedicated to collect information and to advise on Fisheries Restricted Areas (FRAs).

56. In the Mediterranean Sea, deep-sea benthic habitats, benefit little from effective protection measures from bottom trawling fishing. These are limited to the GFCM trawling ban under 1000 m

⁴⁵ 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.

depth (Rec. GFCM/29/2005/1) and 4 FRAs for VMEs. Moreover, **deep-sea benthic habitats are also poorly represented in Mediterranean MPCAs.**

57. **Deep sea habitats and in particular VMEs could be further integrated within the EO 1 Biodiversity, Common Indicator 1 and 2. This would allow data collection at national and Mediterranean level and contribute to better mapping of these ecosystems and therefore their better consideration into MCPAs and marine spatial planning.** Currently, data exist for some Contracting Parties (e.g., Spain, France and Italy) and efforts are made to determine common parameters to assess the state of these habitats.

58. With regards to collateral destructive effects from benthic fishing gear on fragile ecosystems, including habitat forming species on soft bottoms, such as the bamboo coral *Isidella elongata* it is noted that abrasion pressure on benthic habitats by trawling gear is not assessed in the current state of IMAP. It should be included in the upcoming propositions of CIs for EO 6 *seafloor integrity* and would need to be rapidly effective.

59. **It is important to be able to identify abrasion pressure (through EO 6 indicators) on deep-sea habitats especially soft bottom ones, to sustainably manage deep-sea habitats but also fisheries and contribute efficiently to their protection and sustainability, in collaboration with GFCM.**

60. **Moreover, with regard to the development of *Blue Economy* and in particular offshore renewable energy in the Mediterranean Sea, indicators and threshold values for EO 6 “seafloor integrity” are needed.**

1.5.6. Supporting nature-based solutions and sustainable consumption and production in national programmes of measures to attain GES

61. At the Mediterranean level, several policies promote sustainable consumption and production and circular economy and two specifically focus on the subject: the Regional Action Plan on sustainable consumption and production in the Mediterranean (2016-2027) and the set of Regional Measures to Support the Development of Green and Circular Businesses and to strengthen the demand for more sustainable products.

62. **In the framework of a renewed EcAp roadmap, nature-based solutions and sustainable production concerns should be further integrated into the development/update and specification of IMAP indicators and targets, including on EO 3 Harvest of Commercially exploited fish and shellfish, as appropriate with the potential inclusion of a CI relative to discarded marine resources.**

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

1.6.1.General points

63. 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.

64. National monitoring protocols and assessment elements and methods still need to be harmonised and standardized throughout the Mediterranean although much work has been done.

1.6.2.Climate change and ocean acidification

65. Within IMAP, EO 1 CI 1 and 2, *Posidonia oceanica* meadows are monitored following specific parameters. Considering the importance and vulnerability of this ecosystem in the climate change context, the parameters followed could be reviewed to ensure better protection of this essential habitat which have a functional role for many species, limit coastal erosion and contributing to climate change mitigation. Parameters that could inform on their resilience capacity to climate change impacts could perhaps also be studied.

1.6.3.Marine and coastal ecosystem protection, conservation and sustainable management

66. In 2021 a maximum of half the CPs had declared an implemented operational IMAP⁴⁶. Some progress has been made since then also with support from MAP-implemented programmes and EU-funded projects supporting national IMAP implementation, but work is still to be done. **IMAP implementation at national level needs to be more effective so that GES assessment can be an efficient conservation and management tool for marine and coastal ecosystems.** Identifying more precisely the difficulties encountered by the CPs in implementing IMAP, in consultation with them, would allow to more effectively address these difficulties individually or more efficiently.

1.6.4.Human activities causing pressure on the marine and coastal environment

67. Current monitoring under IMAP focuses on ecological parameters and provides information to decision makers that attempts to answer the question “How good/bad is the state of the environment?”. It does not include a specific monitoring programme for human activities but relies on literature review to describe the “socioeconomic characteristics of the Mediterranean Sea”. Achieving a monitoring that is more balanced between the different components of the Drivers-Pressures-State-Impacts-Response (DPSIR) framework, and giving more attention to the human activities that cause the degraded state and the pressures, can be an opportunity for action plans and programmes of measures that would act on the causes of environmental degradation. This can potentially yield better preventive measures, known to be generally more cost-effective than curative measures (Plan Bleu, 2005⁴⁷). It would also switch the attention of decision makers to the question “Which are the sources of what kind of environmental degradation and what can we do to close the tap?”, rather than focusing mainly on trying to increase knowledge about how adverse these impacts are.

⁴⁶ See 2021 survey presented in document UNEP/MED WG.514/Inf.8 (8th Meeting of the Ecosystem Approach Coordination Group, (Videoconference), 9 September 2021)

⁴⁷ Plan Bleu (2005). A Sustainable Future for the Mediterranean: The Blue Plan’s Environment and Development Outlook.

1.7. Step VII. Development and review of relevant action plans and programmes

1.7.1. General points

68. Implementation of National Action Plans still needs to be supported especially concerning Biodiversity cluster.
69. Several Regional Action Plans have been updated taking EcAp and IMAP in consideration. Nevertheless, interrelations could be reinforced between relevant Regional Action Plans to increase an ecosystem and integrated approach.

1.7.2. Climate change and ocean acidification

70. In 2016, the Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas was adopted through Decision IG.22/6. It defines a regional strategic approach to increase the resilience of the Mediterranean marine and coastal natural and socioeconomic systems to the impacts of climate change.
71. Climate change national action plans mainly concern actions for limiting greenhouse gases emissions responsible for climate change from terrestrial activities. At the Mediterranean Sea level ships emissions contribute to these gas emissions. At the regional level, an agreement was adopted in December 2022 concerning Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter (Med SOx ECA) that will enter in force in 2025 and will limit ship emissions.
72. MedECC (2020) states that “4.1.3.2 *All measures that improve marine ecosystem health, resilience or biodiversity have the potential to delay and reduce the adverse effects of climate drivers. These include more sustainable fishing practices, reducing pollution from agricultural activity, sustainable tourism and more effective waste management*”. Further “4.1.3.4 *Developing practical management actions that take into consideration the uniqueness of each species and their responses towards different drivers is crucial to increasing their resilience and plasticity in the context of climate change.*”
73. Under 4.1.3.4 on adaptation strategies for ocean warming and ocean acidification in the Mediterranean Sea, MedECC indicates: “*In conclusion, any kind of action that improves marine ecosystem health, resilience or biodiversity could delay and reduce the adverse effects of climate drivers. This includes the implementation of more sustainable fishing practices as well as reducing pollution from agricultural activity, sustainable tourism and developing more effective waste management. Marine protected areas can potentially have an insurance role if they are placed in locations not particularly vulnerable to ocean acidification and climate change. [...] Adaptation strategies must have medium- to long-term effectiveness. They thus require careful and anticipatory planning to enjoy their benefits reasonably soon, and especially to enable them to tackle problems while they are still manageable. Overall, adaptation strategies are a necessary response to ongoing and expected Mediterranean environmental changes. However, the necessary strategy for reducing climate change impacts needs effective mitigation policies and actions to be implemented.*”
74. Referring to coastal terrestrial ecosystem the MedECC under Chapters 4.2. (4.2.1.1., 4.2.2.1, 4.2.2.2, 4.2.3) and in particular Ch.4.3. provides justification for the integrated approach to all Mediterranean ecosystems, including terrestrial. “*Mediterranean coasts are expected to suffer further severe disturbance due to intensive urbanization and other land uses, which could worsen as land availability decreases and population growth continues. In the future, coastal storms and floods, probably more frequent and intense, will have adverse impacts on ecological balances, as well as human health and well-being, particularly in Mediterranean coastal cities*”. {4.2.2.3}. “*Developing more integrated approaches would support adaptation policies for the entire Mediterranean, involving ecosystem-based management of coastal areas, identifying synergies and conflicts, as well as integrating local knowledge and institutions.*” {4.2.3.6}. “*Drier climate and increased human pressure are expected to cause significant impacts on terrestrial biodiversity, forest productivity, burnt*

area, freshwater ecosystems and agro-systems during the 21st century“.{4.3.2} „*The management of spatial heterogeneity in landscapes can help reduce fire extent under climate warming.*“ {4.3.3.1}

75. It appears that systematically integrating climate change adaptation strategies in action plans and programmes that improve marine and coastal ecosystems' health (protection, restoration, ecosystem management), is an effective pathway to increase marine and coastal ecosystems' resilience to climate change. The timescale of the Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas is 2016-2025, therefore the framework should be soon reconsidered and probably revised in the next biennium, in parallel with the renewal of the EcAp/IMAP.

76. **It is recommended to consider the preparation of the eventual future Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas in synergy with relevant developments at regional and global levels, i.e. Paris Agreement, [EU Strategy on Adaptation to Climate change](#) (2021), UfM relevant activities, etc. and taking into consideration MedECC findings, focusing on protection, conservation and sustainable management actions/programmes to specifically enhance resilience capacities of marine and coastal ecosystems and coastal societies facing climate change impacts.**

1.7.3. Marine and coastal ecosystem protection, conservation and sustainable management

77. Many UNEP/MAP conservation policies have been adopted and have increased the level of protection, conservation and management in the Mediterranean Sea. Still some less known ecosystems need further conservation actions.

78. Increased cooperation between UNEP/MAP and GFCM could result in an action plan focusing on VME conservation that have a very low growth rate and little restoration capacity.

79. Mediterranean VME distribution in space and depth is needed. Modelling VME distribution is also possible but needs initial observation data to be reliable. In the framework of a renewed EcAp policy, **developing a common action plan between GFCM and UNEP/MAP on VME conservation would contribute to acquire information on spatial distribution and a more efficient protection of these deep-sea habitats.**

80. Recent developments and provisions under the new Treaty for the conservation and sustainable use of marine biodiversity beyond national jurisdiction (hereinafter referred to as the BBNJ Treaty) should be also taken into consideration for the development and implementation of new/updated action plans and programmes at regional and national level, especially in relation to biodiversity-related Ecological Objective.

1.7.4. Ecosystem restoration

81. When protection and conservation are mainly proactive actions by preventing ecosystem degradation by human impacts, restoration consist of repairing disturbed ecosystems to bring them towards to a state in which they were before human impacts.

82. 2021-2030 has been declared the decade of ecosystem restoration by the UN which has an overarching objective to restore 20% of degraded priority ecosystems by 2030. In parallel, EU Nature restoration Law should be adopted shortly. Both call for action in restoring marine ecosystems.

83. **No specific Regional Plan on restoration in the Mediterranean Sea exists to date. An action plan at Mediterranean Sea level on marine and coastal ecosystem restoration could provide a common framework for coordinated restoration actions.**

84. The following elements could contribute to design a Mediterranean Action Plan on marine and coastal ecosystem restoration.

- ✓ Restoration objectives should be defined before any action, therefore a minimum of knowledge on the ecosystem/area state before it was disturbed by human activity is necessary.
- ✓ Most appropriate marine and coastal ecosystems and habitats, *priority ecosystems*, for restoration in terms of vulnerability, representativeness and success, need to be defined on selected criteria. Such criteria could include ecosystem services, vulnerability, minimal spatial extent, existence of historical data before degradation etc.
- ✓ The question of whether restoration should be (i) spatially based (that is reducing significantly anthropogenic impacts of an impacted area to restore multiple ecosystems of the area), or (ii) ecosystem/habitat based (e.g., decreasing impacts on a specific habitat sufficiently for the habitat to restore itself) is an important point that will also have consequences on the parameters to monitor to measure restoration.
- ✓ Restoration can be “passive” by giving the opportunity to nature to restore its ecosystems after stopping anthropogenic disturbances. Restoration can be “active” by replanting sessile species or bringing back species that have disappeared. The results of past active restoration projects in the Mediterranean (e.g., for *Posidonia oceanica* or *Pinna nobilis*) are not very encouraging and concern localised, limited surfaces.
- ✓ Restoration is a measure that can be put in place to achieve GES. However, it takes time and needs to be measurable, therefore, long-term monitoring must be set. In consequence, it is essential that all areas where restoration actions are led, be an IMAP monitoring point so that progress towards GES be effectively assessed.

1.7.5. Supporting nature-based solutions and sustainable consumption and production in national programmes of measures to attain GES

85. **Nature-based solutions** benefit both ecosystems and human societies and increase their resilience to climate change impacts, disaster risks and biodiversity loss. Nature-based solutions should be favoured since they are cost-effective and are an integral part of an ecosystem approach.

86. IMAP network, through an ecosystem approach, allows assessment of the state of the marine and coastal environment and ecosystems. UNEP/MAP could further support CPs to develop national Action Plans/ Programmes of Measures (PoMs) based on nature-based solutions in conservation measures, restoration actions and consequently to achieve and maintain GES.

87. **Developing sustainable consumption and production** and favouring circular economy can enhance green economy development. Within the national programmes of measures to achieve GES, measures leading to sustainable consumption (e.g., increasing educational programmes, prohibiting use of plastic bags in commerce) and production and developing the reuse of wastes, should be amongst the preferred leverage policies to implement.

88. **Assembling and disseminating best practices in nature-based solutions and sustainable consumption and production** would be useful for the CPs in addition of developing localised and specific programmes based on these approaches.

1.7.6. Human activities sustainability through socio-economic parameters

89. The uses of the Sea, or more largely human activities, are the main drivers of change of the marine environment. Action plans and programmes address these drivers of change and by doing so, bring change to the uses of the marine and coastal waters, which in turn impact the state of the environment. Socio-economic analysis of action plans and programmes allows to evaluate the changes brought to the uses of the marine and coastal waters, and ultimately human welfare, linked to the transition towards GES. As human wellbeing is explicitly integrated in the EcAp's vision and strategic goals, socio-economic parameters need to be measured in order to make statements about the achievement of the strategic goals and vision.

90. Furthermore, socio-economic analysis can be a way of communicating about GES and can potentially facilitate integration of GES into other policies and initiatives, highlighting better where trade-offs need to be arbitrated. Especially sectoral policies (energy, mobility, tourism, etc.) are likely to use language and metrics that are closer to those used to describe the uses of the Sea than the ecological parameters. Socioeconomic analysis of action plans and programmes can therefore help foster policy coherence.

2. Cross-cutting thematic issues

2.1. Data acquisition, management and accessibility

91. IMAP and EcAp programmes produce spatial and temporal data with many indicators from 21 CPs and from numerous monitoring sites. Acquiring homogeneous and intercalibrated data is a real challenge especially from 21 different CPs.

92. A considerable effort was made for MED QSR 2017 to collate available data on IMAP EOs as data submissions from IMAP were not yet available in the great majority. A comparable and even reinforced effort is currently made for MED QSR 2023 to complete the latest data submissions by the CPs.

93. Acquiring quality data through monitoring programmes represents an important effort at many levels for CPs. These efforts need to be maximized avoiding duplication and using innovative technologies that are cost and effort efficient. Technology development and innovative solutions need to be frequently searched to decrease costs and efforts in monitoring.

94. **Data submission by CPs needs to be improved.** Various impediments to reporting seem to exist including a lack of effective monitoring and data, difficulties of interoperability with other monitoring programmes, inadequacy of the reporting system etc.

95. IMAP InfoSystem being the main platform for the collection, uploading, management, and accessibility of IMAP data should continue being managed and upgraded with a view to providing to the Parties a sustainable, effective and efficient platform. In a monitoring programme such as IMAP, funds and means have to be assured on the long term for such a task. Searching for possibilities of cooperation with already existing long-living platforms dedicated to data management can be an option that should perhaps be studied.

96. The difficulties identified in some CPs in reporting adequate IMAP data reflects that progress can still be done on the subject. Potential next steps to improve the Info System, in agreement with thematic MAP Components and CPs that ultimately process and prepare assessments on the basis of the acquired data, could be to improve (i) facilitate data submission; (ii) increase interoperability with data stemming from other policies; and perhaps (iii) to develop and integrated into the Info System adequate tools for assessment, analysis, and well as to map and disseminate part of the data or metadata. Defining specifically what is needed in terms of data management and process by the CPs and UNEP/MAP, would help identifying what can be expected and feasible by IMAP Info System.

97. **Data acquisition and management in the framework of IMAP is seen as a priority step in the renewed EcAp policy, to ensure a successful development of ecosystem approach and an IMAP able to assess GES.**

98. IMAP generates information, documents, products and data provided by the CPs monitoring programmes that need to be compliant with defined standards (DSs and DDs) 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; and a development to enable geographical visualization of the data is in process. 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, and 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. **INFO/RAC is actually working on ways to improve IMAP Info System. 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.

99. Information on fisheries assessment findings was provided from GFCM to UNEP/MAP for MED QSR 2017 and MED QSR 2023 purposes, but a possible integration of relevant data in the IMAP Info System in the future, in cooperation with GFCM, would allow to cross it with other data sets which could bring important elements into the holistic Mediterranean ecosystem approach.

2.2. Science-Policy Interface (SPI) and communication

100. Within UNEP/MAP framework, much effort has been made to transfer scientific knowledge and enhance exchanges. As an example, the Symposia on marine habitats (seagrass meadows, coralligenous habitats, dark habitats and NIS) regularly organised by SPA/RAC develop an exchange of knowledge and experiences throughout the Mediterranean on these habitats.

101. Science-Policy Interface has been developed within UNEP/MAP with the objective of improving dialogue between scientists and policy makers and contribute to better implement EcAp/IMAP.

102. A prerequisite for the successful implementation of IMAP and the design of national monitoring programmes following the ecosystem approach is bridging the existing gaps between the scientific and policy-making spheres (Plan Bleu, 2019)⁴⁸.

103. Science-Policy Interface could be strengthened, structured and sustained, by being integrated into e.g., the national monitoring programmes, to ensure that ongoing scientific projects can interact and address IMAP national implementation needs. 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.

104. National administrations can contribute by communicating on the objectives, organization etc. of the Barcelona Convention, UNEP/MAP and the EcAp policy and IMAP. Publication of documents such as the French UMS PatriNat 2021 document⁴⁹ should be encouraged but are not sufficient.

105. An inception workshop on the Implementation of the Ecosystem Approach in the Mediterranean: strengthening the SPI was held in December 2015 in Sophia Antipolis France⁵⁰ and a report was published (Plan Bleu, 2016)⁵¹. Several workshops followed to strengthen the implementation of IMAP in 2016 and 2017 in the framework of the EU funded EcAp MED II programme. The technical report elaborated by UNEP/MAP-Plan Bleu, Strengthen, structure and sustain a Science Policy Interface (SPI) for IMAP implementation in the Mediterranean published in

⁴⁸ 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* (No. 18).

⁴⁹ Lizińska, A., & Guérin, L. (2021). *Synthesis and analysis on the current structure and functional organisation of the Barcelona Convention (UNEP/MAP)—Recommendations for biodiversity works and French issues*. (p. 37). UMS PatriNat (OFB, MNHN, CNRS), station marine de Dinard.

⁵⁰ It is astonishing to see that for this workshop on Implementation of the Ecosystem Approach in the Mediterranean, no expert from the French Mediterranean marine stations were present (e.g., Observatoire Océanologique de Villefranche sur mer, IMBE/Station Marine d'Endoume, Marseille; Mediterranean Institute of Oceanography (MIO), Observatoire Océanographique de Banyuls/Mer). This means that progress can be done in SPI for EcAp/IMAP. Perhaps workshops on more specific subjects and at sub-regional level could be more adapted to researchers and IMAP needs.

⁵¹ Plan Bleu. (2016). *Report of the Inception workshop: Implementation of the Ecosystem approach in the Mediterranean: Strengthening Science-Policy interface*. Sophia Antipolis. Retrieved from https://planbleu.org/wp-content/uploads/2017/01/rapport_atelier_ecap-spi_en.pdf

201952, brings together and outlines the main points and underlines needs of SPI for IMAP. The mutual benefits of an increased collaboration of marine researchers and EcAp/IMAP policy were underlined and constructive. The importance of Science-Policy Interface (SPI) and communication within an ecosystem approach has been underlined by documents such as UNEP/MAP/Plan Bleu publication on Science-Policy Interface (Plan Bleu, 2019).

106. SPI could probably benefit of focusing on specific problematics at sub-regional level to increase complementarity and interaction between EcAp/IMAP and scientific research objectives and improve understanding of the needs and possibilities of each.

107. Integrating SPI in a transversal way within a renewed EcAp policy, would contribute to sustain SPI and would benefit to IMAP implementation especially at national level.

2.3. Policy coherence, cooperation and efficiency

(i) Increase coordination with other policies

108. Much work has been done by UNEP/MAP, its components and the Ecosystem Approach Correspondence Groups on Monitoring (CORMONs) to build IMAP Ecological Objectives and Common Indicators in coherence with other policies, especially EU MSFD.

109. **There is room for strengthened synergies and increased interoperability with relevant regional and global instruments and processes, including for the CPs that are EU Member States the relevant EU Directives especially MSFD, WFD and the Habitat Directive, but also national policies to streamline reporting, harmonise the data produced by monitoring programmes and minimise reporting effort and avoid duplications.**

(ii) IMAP in MSP and offshore development

110. At the Mediterranean level, the Conceptual framework for the MSP defines common principals with a step-by-step methodology to implement MSP and the ecosystem approach for a sustainable development. Several conferences and courses organised by UNEP/MAP-PAP/RAC support the implementation of MSP in Mediterranean countries.

111. The articulation of EcAp/IMAP with spatial planning policies and in particular MSP is essential.

112. The GEF Adriatic project is a model that promotes [Marine Spatial Planning processes based on the Ecosystem Approach](#), and it demonstrates the use of IMAP indicators for MSP in particular. 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 used for other countries.

113. Promoting, facilitating and enhancing the integration and interoperability of IMAP in MSP and Integrated Coastal Zone Management (ICZM) as early as possible, is strongly recommended within a renewed EcAp policy. This will increase sustainable development, improve ecosystem management in coastal areas and climate resilience of marine and coastal ecosystems and societies. MSP, but also Strategic Environmental Assessments (SEA) and Environmental Impact Assessments (EIA) at operational level, ICZM and Land Sea Interactions (LSI), as well as the assessment of the sustainability of human activities that impact the Sea and coast and their compatibility with GES, should be key tools within a renewed EcAp policy and in view of effectively implementing IMAP to achieve GES at national level.

⁵² 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* (No. 18).

114. Several reports can be useful to identify further efficient ways to integrate IMAP in spatial planning programmes. The [Pan Adriatic Scope Report on Adriatic-Ionian cooperation towards MSP](#) gives indicative information on the needs and opportunities for the harmonized implementation of MSP at sub-regional level. Other existing guidelines and studies should also be considered to better integrate EcAp and IMAP in spatial planning policies.

115. Moreover different tools on spatial planning are now easily accessible such as the Mediterranean MSP Workspace and AdriAdapt for the Adriatic region and climate change impacts.

116. **IMAP and the 2023 MED QSR will bring useful and needed marine environmental and ecosystem data and information to take into consideration by spatial planning policies such as MSP.** This implies that IMAP data and MED QSR be extractable spatially (at CP and sub-regional level) and by subject, which underlines the importance and the need for allowing the means and funds for IMAP data management and analysis (as already mentioned).

117. **The renewed EcAp and IMAP need to anticipate sustainable *Blue Economy* development in the Mediterranean by integrating MSP in an efficient and effective way.** A few suggested elements for thought that could be considered at national and Mediterranean level to increase integration of EcAp/IMAP in MSP are the following:

- Make use of ecosystem and environmental data needed for spatial planning to fill in EcAp knowledge gaps;
- Make available and easily accessible to stakeholders, pertinent IMAP data through GIS to assess areas with cumulative human impacts and vulnerable ecosystems;
- Facilitate the integration of IMAP indicators/parameters and interoperability in monitoring programmes nationally requested for EIA or SEA (or other) as much as possible;
- Identifying parameters and indicators monitored for various policies that concern the coastal zone either marine (coastal waters) or terrestrial (in wetlands, estuaries, coastal forests and woods and dunes as well as coastal landscapes) and consider integrating them in IMAP to have a comprehensive approach for the ecosystem-based management, in particular for the Land Sea Interface.
- Developing a new set of indicators to monitor the sustainability of human activities and their compatibility with GES
- Make use of new installations and their regular survey by installing physico-chemical (or other) sensors if pertinent or/and cooperate to associate ecosystem surveys to technical surveys (e.g., ROV).

118. Integrating IMAP in spatial planning could be one of the most important elements to work on for a future EcAp policy to ensure IMAP national implementation and achieve GES.

119. Comprehensive MSP can efficiently mitigate the human impacts on marine ecosystems and the environment, and in consequence, support the achievement of GES. It is necessary to identify areas or ecosystems that are particularly important for the functioning of the Mediterranean Sea, to identify the human threats integrate the information in the MSP.

120. The implementation of EO 6 “seafloor” indicators, threshold values, guidelines etc. is urgent in the context of growing *Blue Economy* and the development of offshore installations. Indicators on seafloor integrity are needed to be taken in account in the Mediterranean developing spatial planning but also to protect deep-sea ecosystems (mentioned before in step 5).

121. Indeed, the acceleration of development of offshore units is confirmed by Abanades (2019)⁵³ that indicates that exploitation of subsoil but also marine Renewable Energy (especially offshore

⁵³ Abanades, J. (2019). Wind Energy in the Mediterranean Spanish ARC: The Application of Gravity Based Solutions. *Frontiers in Energy Research*, 7.

wind) in the Mediterranean is bound to develop in the near future. Manea et al. (2020)⁵⁴ approach the subject of ecosystem-based MSP in the deep Mediterranean Sea and the ways to incorporate deep Mediterranean conservation objectives in ecosystem-based MSP.

122. Installation of such units will contribute to reduce greenhouse gases but the impacts on marine ecosystems should be assessed and monitored. Impacts may occur during the drilling activities and installation of the wind turbine in deep-sea, cable installations, and its maintenance and others to be assessed. Moreover, the port receiving the offshore wind farm elements will need to undergo important changes in infrastructure. **The impact of such offshore developments should be monitored, using the appropriate legal basis within the MAP Barcelona Convention framework, while it can also be seen as an opportunity of acquiring additional monitoring data from areas, such as offshore and deep-sea, where monitoring is non-existent or limited because of the difficult access (see Bescond et al., 2022⁵⁵). Here collaborations between environmental/ecosystem monitoring needs and industries may be encouraged at national level but also at regional, Mediterranean level.**

⁵⁴ Manea, E., Bianchelli, S., Fanelli, E., Danovaro, R., & Gissi, E. (2020). Towards an Ecosystem-Based Marine Spatial Planning in the deep Mediterranean Sea. *Science of The Total Environment*, 715, 136884.

⁵⁵ Bescond, T., Blandin, J., & Repecaud, M. (2022). *ECOSYSM-EOF. Projet d'observatoire des écosystèmes marins du golfe du Lion en interaction avec les parcs Eoliens Offshore Flottants.- L4.3—Propositions d'architectures potentielles de réseaux d'observation.*

Annex IV
Terms of Reference for the CORMONs, CORESA and Online Working Groups and Flow of
Interaction between Ecosystem Approach and MAP Governing Bodies

Terms of reference (TORs) for Ecosystem Approach Correspondence Groups on Monitoring (CORMONs), Economic and social analysis (COR ESA) and Online Working Groups (OWGs)

1. Background and rationale

1. Since COP15 (Almeria, Spain, 15-18 January 2008, Decision IG.17/6), Contracting Parties decided to progressively apply the Ecosystem Approach to the management of human activities that may affect the Mediterranean marine and coastal environment for the promotion of sustainable development, with the overall objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea and Coasts. COP15 also set out the governance of the Mediterranean Action Plan Barcelona Convention system, its goals and principles, and the mandates for the CU and the MAP Components (Decision IG.17/5).

2. COP17 (Paris, France, 8-10 February 2012) established the EcAp Coordination Group and adopted 11 Ecological Objectives (EOs) with a suite of associated Operational Objectives and indicators (Decision IG.20/4). The EcAp Coordination Group consists of MAP Focal Points, as per Decision IG.21/3, and its Terms of Reference were agreed by the Bureau (BUR/75/5, July 2012).

3. At their COP19 (Athens, Greece, 9-12 February 2016), the Contracting Parties to the Barcelona Convention adopted the Integrated Monitoring and Assessment Programme and related Assessment Criteria (IMAP), (Decision IG.22/7).

4. COP22 Antalya, Turkey, December 2021 endorsed an updated governance mechanism for the implementation of the ecosystem approach in the Mediterranean in the framework of UNEP/MAP Barcelona Convention (Decision IG.25/03). Contracting Parties agreed to “Renew their commitment to the implementation of the Ecosystem Approach and endorse the Governance Mechanism for the Implementation of the Ecosystem Approach policy in the Mediterranean, set out in Annex I to this Decision”. The Decision, in its Annex I, states, “every effort to be made by the Secretariat to streamline and ensure the technical documents are cleared by the respective CORMON and MAP Component/Thematic Focal Points in line with their mandates, as appropriate, before they are submitted to the decision-making bodies”.

2. Ecosystem Approach Correspondence Groups on Monitoring (CORMONs)

2.1 Composition

5. The Correspondence Groups on monitoring (CORMONs) are established for each thematic cluster – Biodiversity and Fisheries; Pollution and Marine Litter; and Coast and Hydrography.

6. CORMONs are composed of national experts designated by the Contracting Parties possessing the necessary expertise and experience in line with the mandates of respective CORMON for IMAP implementation. They can be designated by the MAP Focal Points/EcAp CG members or by the thematic/MAP Components’ Focal Points, preferably in consultation with each other.

2.2 Operation

7. The CORMONs’ work is supported by the respective MAP Component: MED POL for Pollution and Marine Litter; PAP/RAC for Coast and Hydrography; and SPA/RAC for Biodiversity and Fisheries. Technical and scientifically related tasks may be supported by external experts, during preparation of the documents for consideration of respective CORMONs. The overall coordination of the work of CORMONs remains with the Coordinating Unit and is carried out in accordance with MAP Programme of Work (POW) priorities and implementation of the EcAp Roadmap and Policy.

8. CORMONs may meet physically or by teleconference, depending on the agenda, the volume of work and documents to be considered. Provisions for CORMON meetings numbers, main deliverables and modality are made in the MAP POW.

2.3 CORMON Mandates

9. CORMONs have the primary role to guide and deliver the implementation of technical and scientific aspects of IMAP and delivery of QSR with support from the Secretariat and MAP Components and foster regional and sub-regional collaboration and exchange of best practices and know-how with regards to monitoring and assessment of marine and coastal environment.

10. The operation of the CORMONs should recognise that the implementation of the ecosystem approach is comprehensive in terms of the multidisciplinary and scientific context of the documents that need to be discussed, and therefore iterative in terms of coordination of the results of work within the UNEP/MAP-Barcelona Convention system and at Contracting Party level.

11. Generally, CORMONs are assigned with the preparation and negotiation of the following main types of IMAP products:

- Monitoring guidelines and protocols on, sampling; sample processing analysis/determination; quality assurance (QA); and reporting
- IMAP indicator guidance factsheets
- Areas/scales of assessment, assessment criteria, and guidance for their application
- Assessment methodologies, assessment products and QSR (structure/contents, conclusions)
- Data standards (DS) and data dictionaries (DD)
- Data management QA and QC
- Updates of IMAP & progress reporting on IMAP implementation
- Implementation of national IMAPs
- Proficiency testing
- Capacity building activities
- IMAP related Project outcomes

12. CORMON IMAP products are of a technical and scientific nature, they may impose policy and financial impacts on IMAP implementation. A detailed elaboration of the different levels of responsibilities for consideration and approval of different types of IMAP products is provided in Annex 1.

13. Informal Online Working Groups (OWG) may be established by CORMONs in order to provide specific scientific inputs: OWGs are composed of a restricted number of experts and scientists nominated by the Contracting Parties. In their delivery OWGs may be supported by experts mobilised by the Secretariat and MAP Components in accordance with provisions of the approved MAP POW and budget or related projects as appropriate. The tasks and outcome of the work of OWG are defined by the CORMONs. OWGs report to CORMONs. To this aim the chair of the OWG in consultation with the Secretariat/MAP Components presents the outcome of the OWG to CORMON.

14. The informal OWG do not replace the formal Correspondence Groups.

15. Every effort should be made to maintain geographical balance in the composition of the OWG and mobilise high level expertise.

16. No language interpretation is provided by the Secretariat at the OWG, nor are official meeting documents formally disseminated. Members of the OWG are strongly encouraged to provide scientific and technical inputs and support to the Secretariat/MAP Component work with regards to IMAP implementation and delivery of its products.

3. Correspondence Group on Economic and Social Analysis (COR ESA)

3.1 Composition

17. The Correspondence Group on Economic and Social Analysis (COR ESA) is composed of national experts designated by the Contracting Parties and invited experts and coordinated by Barcelona Convention/UNEP-MAP Coordinating Unit and Plan Bleu/RAC. The Group also includes representatives of the other UNEP/MAP Components as well as international experts selected by the Contracting Parties through Plan Bleu/RAC Focal Points and/or by the Secretariat for their experience in similar initiatives or for their scientific expertise.

3.2 Operation

18. The work of COR ESA is supported by Plan Bleu RAC under the overall coordination of the Coordinating Unit.

3.3 Mandate

19. The COR ESA is responsible for the following:

- Preparing and guiding the socio-economic assessments
- Preparing the socio-economic chapter of the Mediterranean Quality Status Report (QSR)
- Undertaking analyses of the socio-economic aspects of national programmes of measures
- Supporting Contracting Parties to undertake socio-economic analyses at the national level
- Developing methodological tools with regard to socio-economic assessments

4. Effective interaction among different MAP bodies

20. The level of interaction between the bodies of the EcAp governance structure and MAP decision making bodies i.e., MAP Components/Thematic Focal Points, MAP Focal Points and COP depends on the nature of the products as detailed in Annex 1, in line with their respective mandates. Annex also provides information on the type of documents to be reviewed by each body.

Annex 1 Possible products and interaction between EcAp governance bodies.

CORMONs	Component/ Thematic Focal Points (FP)	EcAp Coordination Group (CG)	MAP Focal Points (FP) / COP
1. Monitoring guidelines/ protocols			
Products of a complex scientific and technical nature that may have financial implications for implementation of IMAP	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in the programme of Work (POW)	Coordinating Unit (CU) reports to EcAp CG on progress based on reports of MAP Components	CU reports on progress and related activities of POW and Budget
2. IMAP indicator guidance factsheets			
Products of a complex scientific and technical nature that may have policy and financial implications	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Recommended by CORMONs for no objection procedure	CU reports to EcAp CG on progress based on reports of MAP Components Based on current practice, endorsement by EcAp CG	Approval of the respective provisions in the POW & budget, as appropriate
3. Data dictionaries and data standards (DDs and DSs)			
Products of a technical nature	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Recommended by CORMONs for no objection for their submission to EcAp CG meeting and approval of the related provisions in the POW	CU reports to EcAp CG on progress based on reports of MAP Components Based on current practice, endorsement by EcAp CG, for MAP FP	Approval of the respective provisions in the POW & budget, as appropriate
4. Assessment criteria			
Products of a complex scientific and technical nature that may have policy implications, including allocation of financial resources for implementation of IMAP	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Review and endorsement for submission to EcAp CG meeting	CU reports to EcAp CG on progress based on reports of MAP Components Review and endorsement for submission to MAP FP	Review and approval for submission to COP COP Decision

5. Assessment methods & products, QSR structure, contents & conclusions			
Scientific products with recommendations for COP consideration	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW No objection from the scientific point of view; endorsement of recommendations. Recommendation for transmission to EcAp CG meeting.	CU reports to EcAp CG on progress based on reports of Map Components Endorsement of key findings and recommendations for submission to MAP Focal Points.	General review of main findings and recommendations and approval for submission to COP. In depth review of the related draft Decision body for submission to the COP. COP Decision
6. Thematic assessments			
Thematic assessments prepared and approved.	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Overall discussion and feedback on assessment recommendations. Endorsement for publication	CU report on the progress; review of recommendations as appropriate. Endorsement of key findings and recommendations for submission to MAP Focal Points as appropriate.	Review of potential activities included in the POW. Review and endorse as appropriate of the key findings and recommendations.
7. IMAP development and update			
Scientific and policy products	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Review and approval for transmission to EcAp CG meeting	CU reports to EcAp CG on progress based on reports of MAP Components Review and endorsement for submission to MAP FP	Responsible for approving all updates of IMAP implementation and approving the financial resources to address the needs as proposed by the respective CORMON and Component FPs. Review and approval for submission to COP, COP Decision
8. Implementation of National IMAPs			
National IMAPs are of a technical nature with the implications for financial and policy aspects. The respective CORMON should be responsible for providing the recommendations in relation to (i) the effectiveness of implementation of the National IMAPs related to the relevant IMAP Cluster; (ii) the gaps identified in the process of the National IMAPs implementation; (iii) the needs to be addressed, including technical, human resources, governance and financial aspects; (iv) harmonisation of National IMAPs implementation; and (v) mechanisms/sources/means that could provide solutions and be used to improve implementation of National IMAPs	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Report on the progress, POW provisions as appropriate	CU reports to EcAp CG on progress based on reports of MAP Components	CU reports on progress and related activities of POW and Budget as appropriate

9. Proficiency Testing			
Proficiency Testing (PT) is of a technical nature, based on the complex scientifically related procedures; however, with certain implications for policy decision-makers.	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Review of the outcome of Proficiency testing and delivery of recommendations to Focal Points; consideration of their outcome in the design of the POW as appropriate	CU reports to EcAp CG on progress based on reports of MAP Components	CU reports on progress and related activities of POW and Budget as appropriate
10. Capacity Building Activities			
Products of a technical character.	MAP Components report on progress to their Focal Points Focal Points review proposed activities by CORMONs for their inclusion in POW	CU Report on the progress	CU reports on progress and related activities of POW and Budget
11. Data management/QA/QC			
Products of a technical nature.	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW as appropriate	CU reports to EcAp CG on progress based on reports of MAP Components	CU reports on progress and related activities of POW and Budget as appropriate

COR ESA	Component/ Thematic Focal Points	EcAp Coordination Group	MAP Focal Points / COP
Review of relevant assessments/studies			
COR ESA is responsible for reviewing analyses and assessments carried out for EcAp that are of relevance for social and economic considerations. In particular:	Report on the progress	Report on the progress	Report on the progress
Socio-economic assessments	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW	CU reports to EcAp CG on progress based on reports of MAP Components Endorsement of assessment by the EcAp CG Possible recommendations to MAP FP meeting	CU reports on progress and related activities of POW and Budget Approval of assessment
Socio-economic chapter of the Mediterranean Quality Status Report (QSR)	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW No objection from the scientific point of view	CU reports to EcAp CG on progress based on reports of MAP Components Review and Endorsement of the chapter	Overall endorsement of the chapter as part of the relevant 2023 MED QSR endorsement COP Decision
Analyses of the socio-economic aspects of national programmes of measures	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW	CU reports to EcAp CG on progress based on reports of MAP Components Endorsement of analyses, Possible recommendations to MAP FP	Report on the progress. Submission of COR ESA recommendations by the EcAp CG to MAP Focal Points/COP as relevant
Provide guidelines to support Contracting Parties to undertake socio-economic analyses at the national level	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Review and Endorsement and recommend submission to EcAp CG	CU reports to EcAp CG on progress based on reports of MAP Components Review and endorsement	Report on the progress
Methodological tools with regard to socio-economic assessments	MAP Components report on progress to their Focal Points Focal Points review proposed activities for their inclusion in POW Review and Endorsement and recommend submission to EcAp CG	CU reports to EcAp CG on progress based on reports of MAP Components Review and endorsement	Report on the progress

Decision IG.26/4

Amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their 23rd Meeting,

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

Recalling further, General Assembly resolution A/RES/73/284 of 1 March 2019, entitled “United Nations Decade on Ecosystem Restoration (2021–2030)”,

Recalling also the United Nations Environment Assembly resolution UNEP/EA.5/Res.5 of 7 March 2022, entitled “Nature-based solutions for supporting sustainable development”,

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

Recalling the Kunming-Montreal Global Biodiversity Framework (GBF), its goals A and B and targets 4, 5 and 9 and other important decisions underpinning its implementation adopted by 15th Conference of the Parties (COP-15) to the Convention on Biological Diversity (CBD) (Montreal, Canada 7 - 19 December 2022),

Having regard to Article 10 of the Barcelona Convention, and the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and in particular Articles 14 and 16 thereof, on the procedure to amend the annexes to the Protocol and the adoption of common criteria for the inclusion of additional species in the annexes to the Protocol respectively,

Recalling Decision IG.17/14 on the Common Criteria for proposing amendments to Annexes II and III of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, adopted by the Contracting Parties at their 15th meeting (COP 15) (Almeria, Spain, 15-18 January 2008),

Reaffirming the need to ensure that the lists of species appearing in Annexes II and III to the Protocol are updated, taking into account the evolution of the conservation status of species, the need for additional protection and the emergence of new scientific data,

Considering the proposal submitted by France at the 16th Meeting of Specially Protected Areas and Biological Diversity Focal Points (Malta, 22-24 May 2023) to amend Annexes II and III to the Protocol to include:

- a) Six species of cartilaginous fishes in Annex II “List of endangered or threatened species”: *Aetomylaeus bovinus* (Geoffroy St. Hilaire, 1817), *Alopias superciliosus* (Lowe, 1841), *Bathytoshia lata* (Garman, 1880), *Dasyatis pastinaca* (Linnaeus, 1758), *Myliobatis aquila* (Linnaeus, 1758) and *Rhinoptera marginata* (Geoffroy St. Hilaire, 1817), listed in the International Union for Conservation of Nature Red List as “critically endangered”, “endangered”, “vulnerable”, “vulnerable”, “vulnerable” and “critically endangered”, respectively, and
- b) Three species of cartilaginous fishes in Annex III “List of species whose exploitation is regulated”: *Dasyatis marmorata* (Steindachner, 1892), *Hexanchus griseus* (Bonnaterre, 1788), and *Pteroplatytrygon violacea* (Bonaparte, 1832), listed in the International Union for Conservation of Nature Red List as “near threatened”.

Recalling also with regard to Decision IG.25/11 on the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO), and its goals aiming to reduce the threats to biodiversity and ensure that biodiversity is preserved and maintained or enhanced in order to meet people's needs, targets and actions, adopted by the Contracting Parties at their 22nd Meeting (COP 22) (Antalya, Türkiye, 7-10 December 2021),

Recalling the mandate of the Regional Activity Centre for Specially Protected Areas (SPA/RAC), as laid down in Decision IG.19/5 on the Mandates of the Components of MAP, adopted by the Contracting Parties at their 16th Meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009), and its relevance to the implementation of this Decision,

Having considered the report of the 16th Meeting of Specially Protected Areas and Biological Diversity Focal Points (Malta, 22-24 May 2023),

1. *Adopt* the amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, as set out in the Annex to the present decision¹;
2. *Request* the Depositary to communicate without delay to all Contracting Parties the adopted amendments, pursuant to Article 23 (2) (iii) of the Barcelona Convention;
3. *Urge* the Contracting Parties to take, at national level, the necessary measures for the effective implementation of conservation of the species included in the annexes II and III to the SPA/DB Protocol;
4. *Request* the secretariat (SPA/RAC) to assist the Contracting Parties, based on the available budget, in the implementation of the necessary conservation and management measures of the species included in the annexes II and III to the SPA/DB Protocol, including through resource mobilisation activities.

¹ Reservation by Libya, Morocco and Tunisia. The European Union also raised a reservation for one species in Annex II (*Myliobatis Aquila*).

Annex

**Amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and
Biological Diversity in the Mediterranean**

Annex II:

List of endangered or threatened species

Magnoliophyta
<i>Cymodocea nodosa</i> (Ucria) Ascherson <i>Posidonia oceanica</i> (Linnaeus) Delile <i>Zostera marina</i> Linnaeus <i>Zostera noltii</i> Hornemann
Chlorophyta
<i>Caulerpa ollivieri</i> Dostál
Heterokontophyta
<i>Cystoseira</i> genus (except <i>Cystoseira compressa</i>) <i>Fucus virsoides</i> J. Agardh <i>Laminaria rodriguezii</i> Bornet <i>Sargassum acinarium</i> (Linnaeus) Setchell <i>Sargassum flavifolium</i> Kützinger <i>Sargassum hornschurchii</i> C. Agardh <i>Sargassum trichocarpum</i> J. Agardh
Rhodophyta
<i>Gymnogongrus crenulatus</i> (Turner) J. Agardh <i>Kallymenia spathulata</i> (J. Agardh) P.G. Parkinson <i>Lithophyllum byssoides</i> (Lamarck) Foslie (Synon. <i>Lithophyllum lichenoides</i>) <i>Ptilophora mediterranea</i> (H. Huvé) R.E. Norris <i>Schimmelmanna schousboei</i> (J. Agardh) J. Agardh <i>Sphaerococcus rhizophylloides</i> J.J. Rodríguez <i>Tenarea tortuosa</i> (Esper) Lemoine <i>Titanoderma ramosissimum</i> (Heydrich) Bressan & Cabioch (Synon. <i>Goniolithon byssoides</i>) <i>Titanoderma trochanter</i> (Bory) Benhissoune et al.
Porifera
<i>Aplysina</i> sp. plur. <i>Asbestopluma hypogea</i> Vacelet & Boury-Esnault, 1995 <i>Axinella cannabina</i> (Esper, 1794) <i>Axinella polypoides</i> Schmidt, 1862 <i>Geodia hydronium</i> (Jameson, 1811) <i>Petrobiona massiliana</i> (Vacelet & Lévi, 1958) <i>Sarcotragus foetidus</i> Schmidt, 1862* (synon. <i>Ircina foetida</i>) <i>Sarcotragus pipetta</i> (Schmidt, 1868)* (synon. <i>Ircinia pipetta</i>) <i>Tethya</i> sp. plur.
Cnidaria
<i>Antipathella subpinnata</i> (Ellis & Solander, 1786) <i>Antipathes dichotoma</i> (Pallas, 1766) <i>Antipathes fragilis</i> (Gravier, 1918) <i>Astroides calycularis</i> (Pallas, 1766) <i>Callogorgia verticillata</i> (Pallas, 1766) <i>Cladocora caespitosa</i> (Linnaeus, 1767) <i>Cladocora debilis</i> (Milne Edwards & Haime, 1849) <i>Dendrophyllia cornigera</i> (Lamarck, 1816) <i>Dendrophyllia ramea</i> (Linnaeus, 1758) <i>Desmophyllum dianthus</i> (Esper, 1794) <i>Ellisella paraplexauroides</i> (Stiasny, 1936) <i>Errina aspera</i> (Linnaeus, 1767) <i>Isidella elongata</i> (Esper, 1788) <i>Leiopathes glaberrima</i> (Esper, 1792) <i>Lophelia pertusa</i> (Linnaeus, 1758) <i>Madrepora oculata</i> (Linnaeus, 1758)

<i>Parantipathes larix</i> (Esper, 1790) <i>Savalia savaglia</i> Nardo, 1844 (synon. <i>Gerardia savaglia</i>)
Bryozoa
<i>Hornera lichenoides</i> (Linnaeus, 1758)
Mollusca
<i>Charonia lampas</i> (Linnaeus, 1758) (= <i>Ch. Rubicunda</i> = <i>Ch. Nodifera</i>) <i>Charonia tritonis variegata</i> (Lamarck, 1816) (= <i>Ch. Seguenzia</i>) <i>Dendropoma petraeum</i> (Monterosato, 1884) <i>Erosaria spurca</i> (Linnaeus, 1758) <i>Gibbula nivosa</i> (Adams, 1851) <i>Lithophaga lithophaga</i> (Linnaeus, 1758) <i>Luria lurida</i> (Linnaeus, 1758) (= <i>Cypraea lurida</i>) <i>Mitra zonata</i> (Marryat, 1818) <i>Patella ferruginea</i> (Gmelin, 1791) <i>Patella nigra</i> (Da Costa, 1771) <i>Pholas dactylus</i> (Linnaeus, 1758) <i>Pinna nobilis</i> (Linnaeus, 1758) <i>Pinna rudis</i> (= <i>P. pernula</i>) (Linnaeus, 1758) <i>Ranella olearia</i> (Linnaeus, 1758) <i>Schilderia achatidea</i> (Gray in G.B. Sowerby II, 1837) <i>Tonna galea</i> (Linnaeus, 1758) <i>Zonaria pyrum</i> (Gmelin, 1791)
Crustacea
<i>Ocypode cursor</i> (Linnaeus, 1758) <i>Pachylasma giganteum</i> (Philippi, 1836)
Echinodermata
<i>Asterina pancerii</i> (Gasco, 1870) <i>Centrostephanus longispinus</i> (Philippi, 1845) <i>Ophidiaster ophidianus</i> (Lamarck, 1816)
Pisces
<i>Acipenser naccarii</i> (Bonaparte, 1836) <i>Acipenser sturio</i> (Linnaeus, 1758) <i>Aetomylaeus bovinus</i> (Geoffroy St. Hilaire, 1817) <i>Alopias superciliosus</i> (Lowe, 1841) <i>Aphanius fasciatus</i> (Valenciennes, 1821) <i>Aphanius iberus</i> (Valenciennes, 1846) <i>Bathytoshia lata</i> (Garman, 1880) <i>Carcharias taurus</i> (Rafinesque, 1810) <i>Carcharodon carcharias</i> (Linnaeus, 1758) <i>Cetorhinus maximus</i> (Gunnerus, 1765) <i>Dasyatis Pastinaca</i> (Linnaeus, 1758) <i>Dipturus batis</i> (Linnaeus, 1758) <i>Galeorhinus galeus</i> (Linnaeus, 1758) <i>Gymnura altavela</i> (Linnaeus, 1758) <i>Hippocampus guttulatus</i> (Cuvier, 1829) (synon. <i>Hippocampus ramulosus</i>) <i>Hippocampus hippocampus</i> (Linnaeus, 1758) <i>Huso huso</i> (Linnaeus, 1758) <i>Isurus oxyrinchus</i> (Rafinesque, 1810) <i>Lamna nasus</i> (Bonnaterre, 1788) <i>Lethenteron zanandreae</i> (Vladykov, 1955) <i>Leucoraja circularis</i> (Couch, 1838) <i>Leucoraja melitensis</i> (Clark, 1926) <i>Mobula mobular</i> (Bonnaterre, 1788) <i>Myliobatis aquila</i> (Linnaeus, 1758)

<i>Odontaspis ferox</i> (Risso, 1810) <i>Oxynotus centrina</i> (Linnaeus, 1758) <i>Pomatoschistus canestrini</i> (Ninni, 1883) <i>Pomatoschistus tortonesei</i> (Miller, 1969) <i>Pristis pectinata</i> (Latham, 1794) <i>Pristis pristis</i> (Linnaeus, 1758) <i>Rhinobatos cemiculus</i> (E. Geoffroy Saint-Hilaire, 1817) <i>Rhinoptera marginata</i> (Geoffroy St. Hilaire, 1817) <i>Rhinobatos rhinobatos</i> (Linnaeus, 1758) <i>Rostroraja alba</i> (Lacépède, 1803) <i>Sphyrna lewini</i> (Griffith & Smith, 1834) <i>Sphyrna mokarran</i> (Rüppell, 1837) <i>Sphyrna zygaena</i> (Linnaeus, 1758) <i>Squatina aculeata</i> (Dumeril, in Cuvier, 1817) <i>Squatina oculata</i> (Bonaparte, 1840) <i>Squatina squatina</i> (Linnaeus, 1758) <i>Valencia hispanica</i> (Valenciennes, 1846) <i>Valencia letourneuxi</i> (Sauvage, 1880)
Reptiles
<i>Caretta caretta</i> (Linnaeus, 1758) <i>Chelonia mydas</i> (Linnaeus, 1758) <i>Dermochelys coriacea</i> (Vandelli, 1761) <i>Eretmochelys imbricata</i> (Linnaeus, 1766) <i>Lepidochelys kempii</i> (Garman, 1880) <i>Trionyx triunguis</i> (Forskål, 1775)
Aves
<i>Calonectris diomedea</i> (Scopoli, 1769) <i>Ceryle rudis</i> (Linnaeus, 1758) <i>Charadrius alexandrinus</i> (Linnaeus, 1758) <i>Charadrius leschenaultii columbinus</i> (Lesson, 1826) <i>Falco eleonora</i> (Géné, 1834) <i>Gelochelidon nilotica</i> (Gmelin, JF, 1789) <i>Halcyon smyrnensis</i> (Linnaeus, 1758) <i>Hydrobates pelagicus ssp. Melitensis</i> (Schembri, 1843) <i>Hydroprogne caspia</i> (Pallas, 1770) <i>Larus armenicus</i> (Buturlin, 1934) <i>Larus audouinii</i> (Payraudeau, 1826) <i>Larus genei</i> (Breme, 1839) <i>Larus melanocephalus</i> (Temminck, 1820) <i>Microcarbo pygmaeus</i> (Pallas, 1773) <i>Numenius tenuirostris</i> (Viellot, 1817) <i>Pandion haliaetus</i> (Linnaeus, 1758) <i>Pelecanus crispus</i> (Bruch, 1832) <i>Pelecanus onocrotalus</i> (Linnaeus, 1758) <i>Phalacrocorax aristotelis ssp. desmarestii</i> (Payraudeau, 1826) <i>Phoenicopiterus roseus</i> (Pallas, 1811) <i>Puffinus mauretanicus</i> (Lowe, PR, 1921) <i>Puffinus yelkouan</i> (Brünnich, 1764) <i>Sternula albifrons</i> (Pallas, 1764) <i>Thalasseus bengalensis</i> (Lesson, 1831) <i>Thalasseus sandvicensis</i> (Latham, 1878)
Mammalia
<i>Balaenoptera acutorostrata</i> (Lacépède, 1804) <i>Balaenoptera borealis</i> (Lesson, 1828) <i>Balaenoptera physalus</i> (Linnaeus, 1758) <i>Delphinus delphis</i> (Linnaeus, 1758)

Eubalaena glacialis (Müller, 1776)
Globicephala melas (Trail, 1809)
Grampus griseus (Cuvier G., 1812)
Kogia simus (Owen, 1866)
Megaptera novaeangliae (Borowski, 1781)
Mesoplodon densirostris (de Blainville, 1817)
Monachus monachus (Hermann, 1779)
Orcinus orca (Linnaeus, 1758)
Phocoena phocoena (Linnaeus, 1758)
Physeter macrocephalus (Linnaeus, 1758)
Pseudorca crassidens (Owen, 1846)
Stenella coeruleoalba (Meyen, 1833)
Steno bredanensis (Cuvier in Lesson, 1828)
Tursiops truncatus (Montagu, 1821)
Ziphius cavirostris (Cuvier G., 1832)

Annex III:
List of species whose exploitation is regulated

Porifera
<i>Hippospongia communis</i> (Lamarck, 1813) <i>Spongia (Spongia) lamella</i> (Schulze, 1872) (synon. <i>Spongia agaricina</i>) <i>Spongia (Spongia) officinalis adriatica</i> (Schmidt, 1862) <i>Spongia (Spongia) officinalis officinalis</i> (Linnaeus, 1759) <i>Spongia (Spongia) zimocca</i> (Schmidt, 1862)
Cnidaria
<i>Antipathes</i> sp. plur. <i>Corallium rubrum</i> (Linnaeus, 1758)
Crustacea
<i>Homarus gammarus</i> (Linnaeus, 1758) <i>Maja squinado</i> (Herbst, 1788) <i>Palinurus elephas</i> (Fabricius, 1787) <i>Scyllarides latus</i> (Latreille, 1803) <i>Scyllarus arctus</i> (Linnaeus, 1758) <i>Scyllarus pygmaeus</i> (Bate, 1888)
Echinodermata
<i>Paracentrotus lividus</i> (Lamarck, 1816)
Pisces
<i>Alopias vulpinus</i> (Bonnaterre, 1788) <i>Alosa alosa</i> (Linnaeus, 1758) <i>Alosa fallax</i> (Lacépède, 1803) <i>Anguilla anguilla</i> (Linnaeus, 1758) <i>Carcharhinus plumbeus</i> (Nardo, 1827) <i>Centrophorus granulosus</i> (Bloch & Schneider, 1801) <i>Epinephelus marginatus</i> (Lowe, 1834) <i>Dasyatis marmorata</i> (Steindachner, 1892) <i>Heptranchias perlo</i> (Bonnaterre, 1788) <i>Hexanchus griseus</i> (Bonnaterre, 1788) <i>Lampetra fluviatilis</i> (Linnaeus, 1758) <i>Mustelus asterias</i> (Cloquet, 1821) <i>Mustelus mustelus</i> (Linnaeus, 1758) <i>Mustelus punctulatus</i> (Risso, 1826) <i>Petromyzon marinus</i> (Linnaeus, 1758) <i>Pteroplatytrygon violacea</i> (Bonaparte, 1832) <i>Prionace glauca</i> (Linnaeus, 1758) <i>Sciaena umbra</i> (Linnaeus, 1758) <i>Squalus acanthias</i> (Linnaeus, 1758) <i>Thunnus thynnus</i> (Linnaeus, 1758) <i>Umbrina cirrosa</i> (Linnaeus, 1758) <i>Xiphias gladius</i> (Linnaeus, 1758)

Decision IG.26/5

Specially Protected Areas (SPAs), Specially Protected Areas of Mediterranean Importance (SPAMIs) and Ecosystem Restoration

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their 23rd Meeting,

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

Recalling also, General Assembly resolution A/RES/73/284 of 1 March 2019, entitled “United Nations Decade on Ecosystem Restoration (2021–2030)”,

Recalling further the United Nations Environment Assembly resolution UNEP/EA.5/Res.5 of 7 March 2022, entitled “Nature-based solutions for supporting sustainable development”,

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

Recalling the Kunming-Montreal Global Biodiversity Framework (GBF), its goals A and B and targets 1,2,3,4, 5,6,8,9 and 11 and other important decisions underpinning its implementation adopted by 15th Conference of the Parties (COP-15) to the Convention on Biological Diversity (CBD) (Montreal, Canada 7 - 19 December 2022),

Having regard to Article 10 of the Barcelona Convention, the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and in particular Articles 4, 5, 6, 8, 9, 11 and 12, thereof, whereby Contracting Parties shall, individually or jointly, take all appropriate measures to protect and preserve biological diversity, rare or fragile ecosystems, as well as species of wild fauna and flora which are rare, depleted, threatened or endangered and their habitats, in the Mediterranean Sea Area,

Having also regard to Decision IG.25/11 on the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) and its goals aiming to reduce the threats to biodiversity and ensure that biodiversity is preserved and maintained or enhanced in order to meet people’s needs, targets and actions, adopted by the Contracting Parties at their 22nd Meeting (COP 22) (Antalya, Türkiye, 7-10 December 2021),

Noting Decision IG.17/12 on the Procedure for the Revision of the Areas included in the Specially Protected Areas of Mediterranean Importance (SPAMI) List, adopted by the Contracting Parties at their 15th Meeting (COP 15) (Almeria, Spain, 15-18 January 2008),

Having regard to Decision IG.24/6 on the Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance, adopted by the Contracting Parties at their 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019),

Having also regard to Decision IG.25/12 on 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, adopted by the Contracting Parties at their 22nd Meeting (COP 22) (Antalya, Türkiye, 7-10 December 2021),

Appreciating the support provided by the Ad hoc group of Experts for Marine Protected Areas in the Mediterranean to the Secretariat and the Contracting Parties during the current biennium,

Recalling Decision IG.22/7, on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016),

Recalling also Decision IG.25/13, on Action Plans for the conservation of species and habitats under the Protocol concerning Specially Protected Areas and Biological Diversity in the

Mediterranean, adopted by the Contracting Parties at their 22nd Meeting (COP 22) (Antalya, Türkiye, 7-10 December 2021),

Taking into account the results of the assessments of the status of implementation of the Action Plan for the conservation of bird species listed in Annex II to the SPA/BD Protocol and the Action Plan concerning species introductions and invasive species in the Mediterranean Sea, as well as the Report of the multidisciplinary group of experts nominated by the Contracting Parties to define parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators and elaborate the List of Reference of Pelagic Habitat Types in the Mediterranean Sea,

Taking also into account the alarming situation of the population of *Pinna nobilis* in the Mediterranean, and the need and urgency of action in terms of monitoring, studying and restoring the species as soon as possible, in a coordinated manner and with a proven scientific approach,

Committed to further streamlining the Mediterranean Action Plan Ecological Objectives and associated Good Environmental Status and Targets, as well as the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria into the Regional Action Plans for the conservation of endangered and threatened species and key habitats adopted within the framework of the SPA/BD Protocol,

Recalling the mandate of the Regional Activity Centre for Specially Protected Areas (SPA/RAC), as laid down in Decision IG.19/5 on the Mandates of the Components of MAP, adopted by the Contracting Parties at their 16th Meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009), and its relevance to the implementation of this Decision,

Having considered the report of the 16th Meeting of Specially Protected Areas and Biological Diversity Focal Points (Malta, 22-24 May 2023),

1. *Invite* the Secretariat, to conduct a mid-term assessment of the collective implementation of the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) by 2025, and the Contracting Parties to review their National Biodiversity Strategies and Action Plans accordingly to ensure the achievement of the Post-2020 SAPBIO objectives by 2030;
2. *Adopt* the Evaluation and Monitoring Framework for the Post-2020 Regional Strategy for Marine and Coastal Protected Areas and Other Effective Area-based Conservation Measures in the Mediterranean, set out in Annex I to this Decision, on the basis of which the Secretariat (SPA/RAC) shall undertake its mid-term and final evaluations, in 2026 and 2030 respectively;
3. *Decide* to include the Specially Protected Area of Mediterranean Importance of the Habibas Islands (Algeria) in a period of provisional nature of a maximum of six years and request Algeria to launch the necessary and adequate corrective measures and report on the progress made to the 17th Meeting of SPA/BD Focal Points.
4. *Request* the Secretariat (SPA/RAC) to support as a matter of priority Algeria in identifying and launching the necessary corrective measures and encourage other Contracting Parties, other SPAMIs and appropriate funding mechanisms to contribute to their implementation;
5. *Adopt* the Format for the periodic review of Specially Protected Areas of Mediterranean Importance, set out in Annex II to this Decision, and request the Secretariat (SPA/RAC) to reflect it accordingly in the online Evaluation System of the Specially Protected Areas of Mediterranean Importance;
6. *Request* the Secretariat (SPA/RAC) to work with the relevant designated national authorities in Albania, Cyprus, France, Italy, Lebanon, Monaco, Slovenia, Spain and Tunisia to carry out ordinary and extraordinary reviews for the 25 Specially Protected Areas of Mediterranean Importance listed below, and bring the outcome of these reviews to the attention of the Contracting Parties at their 24th Meeting (COP 24):
7. The Karaburun Sazan National Marine Park (Albania) is to be subject to an ordinary review that was expected to take place in 2022 and that was exceptionally postponed to 2024 at the latest;

8. The following five Specially Protected Areas of Mediterranean Importance are to be subject to an ordinary review in 2024:
 - La Côte Bleue Marine Park (France),
 - Les Embiez Archipelago - Six Fours (France),
 - Capo Carbonara Marine Protected Area (Italy),
 - Penisola del Sinis - Isola di Mal di Ventre Marine Protected Area (Italy), and
 - Porto Cesareo Marine Protected Area (Italy);
9. The following fourteen SPAMIs are to be subject to an ordinary review in 2025:
 - Lara-Toxeftra Turtle Reserve (Cyprus),
 - Port-Cros National Park (France),
 - Cerbère-Banyuls Marine Nature Reserve (France),
 - Pelagos Sanctuary for the Conservation of Marine Mammals (France, Italy and Monaco),
 - Egadi Islands Marine Protected Area (Italy),
 - Landscape Park Strunjan (Slovenia),
 - Alboran Island (Spain),
 - Cabo de Gata-Nijar Natural Park (Spain),
 - Cap de Creus Natural Park (Spain),
 - Columbretes Islands (Spain),
 - Mar Menor and Oriental Mediterranean zone of the Region of Murcia coast (Spain),
 - Medes Islands (Spain),
 - Sea Bottom of the Levante of Almeria (Spain), and
 - Cetaceans Migration Corridor in the Mediterranean (Spain);
10. The following five SPAMIs are to be subject to an extraordinary review in 2025 at the latest:
 - Palm Islands Nature Reserve (Lebanon),
 - Tyre Coast Nature Reserve (Lebanon),
 - La Galite Archipelago (Tunisia),
 - Kneiss Islands (Tunisia), and
 - Zembra and Zembretta National Park (Tunisia);
11. *Adopt* the 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, set out in Annex III to this Decision;
12. *Adopt* the Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea, set out in Annex IV to this Decision;
13. *Adopt* the Restoration Programme of *Pinna nobilis*, set out in Annex V to this Decision;
14. *Urge* the Contracting Parties to take the necessary measures for the effective implementation of the Action Plans and Programme and to report on their implementation, using the online Barcelona Convention Reporting System;
15. *Request* the Secretariat (SPA/RAC), in coordination with other relevant regional and international organizations, where appropriate, to continue to provide technical support to the Contracting Parties for the effective implementation of the Action Plans and Programme, through technical cooperation and capacity-building activities, including resource mobilization activities;
16. *Request* the Secretariat (SPA/RAC) to update (i) the Action Plan for the Conservation of the Coralligenous and Other Calcareous Bio-concretions in the Mediterranean Sea, (ii) the Action Plan for the Conservation of Mediterranean Marine Turtles, (iii) the Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea, and (iv) the Regional Strategy for the Conservation of Monk Seal in the Mediterranean Sea, and submit them for consideration of COP 24;
17. *Adopt* the Conditions and criteria for the award of the title of Regional Action Plan Partner, set out in Annex VI to this Decision;

18. *Request* the Secretariat (SPA/RAC) to draw up a list of the Regional Action Plans' Partners and update it for each meeting of SPA/BD Focal Points;

19. *Adopt* the Conclusions and recommendations of the Multidisciplinary group of experts nominated by the Contracting Parties to define parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators and elaborate the List of Reference of Pelagic Habitat Types in the Mediterranean Sea, set out in Annex VII to this Decision, so that they can be used, where necessary, as a basis for identifying reference pelagic habitats to be monitored and assessed at the national level under the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria;

20. *Request*, the Secretariat (SPA/RAC) to continue the work of the Multidisciplinary group of experts to advance in the development of the indicator using phytoplankton and zooplankton for relevant IMAP biodiversity indicators, based on the outcomes of relevant ongoing projects in the region and in collaboration with relevant regional research centres.

Annex I

Evaluation and Monitoring Framework for the Post-2020 Regional Strategy for Marine and Coastal Protected Areas and Other Effective Area-based Conservation Measures in the Mediterranean

Evaluation and Monitoring Framework for the Post-2020 Regional Strategy for Marine and Coastal Protected Areas and Other Effective Area-based Conservation Measures in the Mediterranean

Appendix II –Evaluation and Monitoring Framework for the Post-2020 Regional Strategy for MCPAs and OECMs in the Mediterranean, including indicators, mid-term and final targets.

Output	Indicator	Mid-term target 2026	Final target 2030	Means of verification
The Strategy overall target: By 2030, at least 30 per cent of the Mediterranean Sea is protected and conserved through well connected, ecologically representative and effective systems of marine and coastal protected areas and other effective area-based conservation measures, ensuring adequate geographical balance, with the focus on areas particularly important for biodiversity				
--	% coverage of MCPAs and OECMs in the Mediterranean Sea	15% of the Mediterranean Sea	30% of the Mediterranean Sea	MAPAMED database ¹
Strategic Outcome 1: Governance arrangements for MCPAs and OECMs are inclusive and effective in delivering conservation and livelihood outcomes				
Output 1.1: Legal frameworks and institutional arrangements of MCPAs and OECMs allow for opportunities for participatory management	Number of Contracting Parties with legal frameworks and institutional arrangements of MCPAs allowing for opportunities for participatory management.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	National reports
	Number of Contracting Parties with legal frameworks and institutional arrangements of OECMs allowing for opportunities for participatory management, considering the objectives of such OECMs.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	Official data provided by the Contracting Parties
Output 1.2: Governance arrangements for MCPAs and OECMs are inclusive and equitable	Number of Contracting Parties with governance structures and mechanisms (e.g., a national commission or other) for MCPAs established and functional, that facilitates inclusive and equitable governance.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	National reports Official data provided by the Contracting Parties

¹ SPA/RAC should ensure that the MAPAMED database is expanded to cover all the indicators agreed upon under this Evaluation and Monitoring Framework, and includes coastal protected areas, provided that relevant data and information are shared by the Contracting Parties to inform the MAPAMED database for these indicators.

	Number of Contracting Parties with appropriate procedures and mechanisms for the effective participation of and/or coordination with other stakeholders in OECM processes.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	
Output 1.3: National, regional, transboundary and cross sectoral co-operation for the establishment and management of MCPAs and OECMs are strengthened	Number of Contracting Parties with multi-sectoral cooperation tools (e.g., committees, consultations, agreements, etc.) for MCPAs or OECMs established. Number of transboundary co-operation agreements for MCPAs or OECMs.	11 States Contracting Parties to the Barcelona Convention 3 Agreements	All States Contracting Parties to the Barcelona Convention 5 Agreements	National reports Official data provided by the Contracting Parties
Output 1.4: Adaptive planning and management frameworks of MCPAs and OECMs that anticipate, learn from and respond to changes in decision-making are strengthened	Number of MCPAs that have management plans. % of MCPAs applying adaptive management. % of OECMs that have flexible procedures in place to ensure that results from monitoring, evaluation, consultation, and multiple knowledge sources are used to inform management and planning processes.	50% of MCPAs 50% of MCPAs 50% of OECMs	100% of MCPAs 100% of MCPAs 100% of OECMs	MAPAMED database
Strategic Outcome 2: MCPA coverage increased through the expansion of soundly-designed, ecologically representative and well-connected systems of MCPAs				
Output 2.1: Areas of importance for biodiversity and ecosystem services are identified	Number of Contracting Parties that have identified areas of importance for biodiversity and ecosystem services, serving to inform MCPAs establishment process.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	National reports Official data provided by the Contracting Parties
Output 2.2: Distribution of MCPA systems across the Mediterranean Sea is balanced	The unbalanced MCPA distribution between the 4 Mediterranean sub-regions (Adriatic Sea; Aegean - Levantine Sea; Ionian Sea and Central Mediterranean Sea; and Western Mediterranean Sea) is reduced.	The unbalanced distribution is reduced by 50%	The distribution is balanced	MAPAMED database

	<u>Baseline: % coverage of MPAs per Mediterranean sub-region²:</u> Adriatic Sea: 4.8% Aegean - Levantine Sea: 2.1% Ionian Sea and Central Mediterranean Sea: 1.8% Western Mediterranean Sea: 20.4%			
Output 2.3: M CPA coverage in areas beyond national jurisdiction is increased	The coverage of MPAs in ABNJ ³ is increased. <u>Baseline: % coverage of MPAs in ABNJ: (less than 1.85%)⁴</u>	The coverage of MPAs in ABNJ is increased by 50%	The coverage of MPAs in ABNJ is increased by 100%	MAPAMED database
Output 2.4: The number and coverage of MCPAs with enhanced protection levels is increased	% coverage of NTZs ⁵ within MCPAs/OECMs. <u>Baseline: % cumulative surface of no-go, no-take or no-fishing area⁶: 0.04%</u>	2% of the Mediterranean Sea	5% of the Mediterranean Sea	MAPAMED database National reports
Strategic Outcome 3: Marine and coastal OECMs in the Mediterranean are identified, recognized and reported towards post-2020 global and regional targets				
Output 3.1: Awareness in Contracting Parties and stakeholders on OECMs enhanced and guidance for the application of OECM criteria provided	Number of Contracting Parties that established processes to evaluate the application and identification of OECMs, applying the guidance for application of OECM criteria.	50% of the States Contracting Parties to the Barcelona Convention	100% of the States Contracting Parties to the Barcelona Convention	National reports Official data provided by the Contracting Parties
Output 3.2: OECMs identified, recognized and reported to regional and global databases by Contracting Parties and regional organizations	Surface of OECMs recognized and reported.	OECM surface complementing MPA surface to 15%	OECM surface complementing MPA surface to 30%	MAPAMED database

² Source: SPA/RAC and MedPAN, MAPAMED 2019 edition.

³ The extent of ABNJ in the Mediterranean depends on the number of EEZs declared by coastal States. If all the coastal States declare their EEZ, there will be no more ABNJ.

⁴ Figure to be updated by SPA/RAC on the following versions of the draft document (information requested from the Pelagos Agreement Permanent Secretariat).

⁵ No-Take Zones are geographically defined zones within marine protected areas that do not allow any fishing, mining, drilling, or other extractive activities.

⁶ Source: MedPAN: The Mediterranean MPA management database, 2021.

Output 3.3: Effectiveness of identified OECMs is enhanced, including through prioritization in cross-sectoral marine spatial planning	Number of OECMs included within MSP measures adopted by the Contracting Parties using OECMs to contribute to the 30% target for the Mediterranean. Number of projects to evaluate the effectiveness of OECMs.	3 OECMs 3 projects	6 OECMs 6 projects	National reports Official data provided by the Contracting Parties
Output 3.4: New OECMs are established and recognized OECMs expanded	Guidance document on future OECM designation, recognition and reporting Number of new OECMs established at Mediterranean level contributing to the 30% collective target on protected areas and OECMs.	1 10 OECMs	-- 20 OECMs	Guidance document MAPAMED database
Strategic Outcome 4: MCPAs are effectively managed and their conservation outcomes successfully delivered				
Output 4.1: All MCPAs have adaptive management plans adopted, effectively implemented and periodically reviewed	MCPAs have adaptive management plans adopted, effectively implemented and periodically reviewed.	50% of MCPAs	100% of MCPAs	MAPAMED database
Output 4.2: Sufficient and sustainable resources for the establishment and management of MCPAs in the Mediterranean are mobilized	% of MCPAs where financial constraints are not threatening the capacity of management to achieve the site's objectives.	50% of MCPAs	100% of MCPAs	MAPAMED database
Output 4.3: Individual and institutional capacity for MPCA management is enhanced	% of MPCAs with adequate numbers of appropriately trained staff provided by the responsible entity. Number of Contracting Parties with MPCA institutions in place.	50% of MCPAs 11 States Contracting Parties to the Barcelona Convention	100% of MCPAs All States Contracting Parties to the Barcelona Convention	MAPAMED database National reports Official data provided by the Contracting Parties

Output 4.4: Surveillance and enforcement in MCPAs are strengthened and ensured, and user compliance is promoted	% MCPAs having regular surveillance.	50% of MCPAs	100% of MCPAs	National reports MAPAMED database
Output 4.5: Monitoring of conservation outcomes and evaluation of management effectiveness are strengthened across the MCPA system	% MCPAs with regular monitoring identifying biological threat and socio-economic indicators	50% of MCPAs	100% of MCPAs	MAPAMED database
	% MCPAs carrying out regular site-level management effectiveness evaluations	50% of MCPAs	100% of MCPAs	
Strategic Outcome 5: Actions and support for MCPAs and OECMs are mobilized				
Output 5.1: Awareness, understanding and appreciation of the values of, and threats to, MCPAs and OECMs across government and non-government stakeholders, the private sector, the youth and wider society	Number of Contracting Parties with targeted communication and awareness strategies as standalone or as part of other national activities.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	National reports
	Number of CPs having education programmes including MCPAs and OECMs.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	Official data provided by the Contracting Parties
	% of positive attitudes towards MCPAs/OECMs across wide stakeholder groups.	30% positive attitudes towards MCPAs/OECMs	60% positive attitudes towards MCPAs/OECMs	Stakeholder survey
Output 5.2: Political support for the establishment and management of MCPAs and biodiversity conservation is increased	% of MCPAs receiving regular adequate funds from government budgets for management.	50% of MCPAs	100% of MCPAs	National reports
	Number of Contracting Parties that consider MCPAs in Environmental Impact Assessments (EIAs) and Spatial Planning processes.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	Official data provided by the Contracting Parties
Output 5.3: The contribution of MPCAs and OECMs to sustainable development goals, the blue economy, climate change mitigation and	Number of Contracting Parties with MCPA/OECM considerations included into national plans and policies for climate change mitigation and adaptation.	11 States Contracting Parties to the Barcelona Convention	All States Contracting Parties to the Barcelona Convention	National reports Official data provided by the

adaptation, and the wider society are recognized and accounted for	Number of Contracting Parties with MCPA/OECM considerations included into national plans and policies for sustainable blue economy growth. Number of national Public Relation (PR) and awareness initiatives in relation with MCPA/OECM targeting the wider society	11 States Contracting Parties to the Barcelona Convention 1 per Contracting Party	All States Contracting Parties to the Barcelona Convention 2 per Contracting Party	Contracting Parties Media produced (social media platforms, videos, etc.)

Annex II

Format for the periodic review of Specially Protected Areas of Mediterranean Importance

Format for the periodic review of Specially Protected Areas of Mediterranean Importance

SPAMI Name:	

SECTION I: CRITERIA WHICH ARE MANDATORY FOR THE INCLUSION OF AN AREA IN THE SPAMI LIST

1. MEDITERRANEAN VALUE OF THE SPAMI

	Score
1.1. The SPAMI still fulfils at least one of the criteria related to the regional Mediterranean value as presented in the SPA/BD Protocol's Annex I. Assessment scale: 0 = No 1 = Yes	?
Score justification:	

	Score
1.2. Level of adverse changes occurred during the evaluation period for the habitats and species considered as natural features in the SPAMI presentation report submitted for the inclusion of the area in the SPAMI List. Assessment scale: 0 = Significant changes 1 = Moderate changes 2 = Slight changes 3 = No adverse change	?
Score justification:	

	Score
1.3. Are the objectives, set out in the original SPAMI application for designation, actively pursued? Assessment scale: 0 = No 1 = Only some of them 2 = Yes for most of them 3 = Yes for all of them	?
Score justification:	

2. LEGAL AND INSTITUTIONAL ARRANGEMENTS

	Score
2.1. The legal status of the SPAMI (with reference to its legal status at the date of the previous evaluation report). Assessment scale: 0 = Significant negative change in the legal status of the SPAMI 1 = Slight negative change in the legal status of the SPAMI 2 = The SPAMI has maintained or improved its legal status	?
Score justification:	

	Score
2.2. Are competencies and responsibilities clearly defined in the texts governing the area? Assessment scale: 0 = competencies and responsibilities are not clearly defined 1 = The definition of competencies and responsibilities needs slight improvements 2 = The SPAMI has clearly defined competencies and responsibilities	?
Score justification:	

	Score
2.3. Does the area have a management body, endowed with sufficient powers? (Not applicable for multilateral (transboundary high sea) SPAMIs) Assessment scale: 0 = No management body, or the management body is not endowed with sufficient powers 1 = The management body is not fully dedicated to the SPAMI 2 = The SPAMI has a fully dedicated management body and sufficient powers to implement the conservation measures	?
Score justification:	

In the case of multilateral (transboundary high sea) SPAMIs:

	Score
2.3. Does the area have governance bodies in line with the original application for inclusion in the SPAMI List? Assessment scale: 0 = No governance bodies 1 = Only some governance bodies are in place 2 = The governance bodies are in place, but they are not functioning on a regular basis (e.g.: no regular meetings or works) 3 = The SPAMI has fully dedicated governance bodies and sufficient powers to address the conservation challenges	?
Score justification:	

3. MANAGEMENT AND AVAILABILITY OF RESOURCES

	Score
3.1. Does the SPAMI have a management plan? Assessment scale: 0 = No management plan 1 = The level of implementation of the management plan is assessed as “insufficient” 2 = The management plan is not officially adopted but its implementation is assessed as “adequate” 3 = The management plan is officially adopted and adequately	?

implemented	
Score justification:	

	Score
3.2. Assess the adequacy of the management plan taking into account the SPAMI objectives and the requirements set out in article 7 of the Protocol and Section 8.2.3 of the Annotated Format (AF⁷). Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	?
Score justification:	

	Score
3.3. Assess the adequacy of the human resources available to the SPAMI. Assessment scale: 0 = Very low/Insufficient 1 = Low 2 = Adequate 3 = Excellent	?
Score justification:	

	Score
3.4. Assess the adequacy of the financial and material means available to the SPAMI (<i>Not applicable for multilateral (transboundary high sea) SPAMIs</i>) Assessment scale: 0 = Very low 1 = Low 2 = Adequate 3 = Excellent	?
Score justification:	

In the case of multilateral (transboundary high sea) SPAMIs:

	Score
3.4.1. Assess the adequacy of the financial and material means available for the implementation of the SPAMI conservation/management measures at national level. Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	?
Score justification:	

⁷ Annotated format for the presentation reports for the areas proposed for inclusion in the SPAMI List.

In the case of multilateral (transboundary high sea) SPAMIs:

	Score
3.4.2. Assess the adequacy of the financial and material means available to the multilateral governance bodies of the SPAMI. Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	?
Score justification:	

	Score
3.5. Does the area have a monitoring programme? Assessment scale: 0 = No monitoring programme 1 = The level of implementation of the monitoring programme is assessed as “insufficient” 2 = The monitoring programme needs improvement to cover other parameters that are significant for the SPAMI 3 = The monitoring programme is adequately implemented and allows the assessment of the state and evolution of the area, as well as the effectiveness of protection and management measures	?
Score justification: <i>If the TAC identified important parameters that are not covered by the monitoring programme of the SPAMI, these should be listed here with the related rationale.</i>	

	Score
3.6. Is there a feedback mechanism that establishes an explicit link between the monitoring results and the management objectives, and which allows adaptation of protection and management measures? Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	?
Score justification:	

	Score
3.7. Is the management plan effectively implemented? Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	?
Score justification:	

	Score

3.8. Have any concrete conservation measures, activities and actions been implemented? Assessment scale: 0 = Low 1 = Medium 2 = Good 3 = Excellent	?
Score justification:	

SECTION II: FEATURES PROVIDING A VALUE-ADDED TO THE AREA

(Section B4 of the Annex I, and other obligatory for a SPAMI, and Art. 6 and 7 of the Protocol)

4. THREATS AND SURROUNDING CONTEXT
4.1. Assess the level of threats within the site to the ecological, biological, aesthetic and cultural values of the area (B4.a Annex I).

Under section 4.1, questions are asked in two parts: part a) enquiring on the existence of threats within the site, and part b) asking about the response made to mitigate such threats. If the answer to part a) is “no threats”, part b) is not applicable. Whereas, when threats are reported under part a), part b) should be answered. The score achieved in response to part b) is considered as a bonus and has no impact on the score evaluation and consequently the result of the review.

In particular:

	Score
4.1.1. a) Unregulated exploitation of natural resources (e.g., sand mining, water, timber, living resources) See 5.1.1. in AF Score: 0, 1, 2 or 3 0 means “very serious threats” ; 3 means “no threats” <i>(If the answer is “no threats”, pass directly to question 4.1.2. a).)</i>	?
Score justification:	

	Score (bonus)
4.1.1. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the unregulated exploitation of natural resources (e.g., sand mining, water, timber, living resources) See 5.1.1. in AF Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.1.1. a) is “no threats”).</i>	?
Score justification:	

	Score
4.1.2. a) Threats to habitats and species (e.g., disturbance, desiccation, pollution, poaching, introduced alien species) See 5.1.2. in AF Score: 0, 1, 2 or 3 0 means “very serious threats”; 3 means “no threats”	?

<i>(If the answer is “no threats”, pass directly to question 4.1.3. a).)</i>	
Score justification:	

	Score (bonus)
4.1.2. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the threats to habitats and species (e.g., disturbance, desiccation, pollution, poaching, introduced alien species) See 5.1.2. in AF Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.1.2. a) is “no threats”.)</i>	?
Score justification:	

	Score
4.1.3. a) Increase of human impact (e.g., tourism, boats, building, immigration...) See 5.1.3. in AF Score: 0, 1, 2 or 3 0 means “very serious threats”; 3 means “no threats” <i>(If the answer is “no threats”, pass directly to question 4.1.4. a).)</i>	?
Score justification:	

	Score (bonus)
4.1.3. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the increase of human impact (e.g., tourism, boats, building, immigration...) See 5.1.3. in AF Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.1.3. a) is “no threats”.)</i>	?
Score justification:	

	Score
4.1.4. a) Conflicts between users or user groups. See 5.1.4. and 6.2. in AF Score: 0, 1, 2 or 3 0 means “very serious threats”; 3 means “no threats” <i>(If the answer is “no threats”, pass directly to question 4.1.5.)</i>	?
Score justification:	

	Score (bonus)
4.1.4. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the conflicts between users or user groups. See 5.1.4. and 6.2. in AF Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.1.4. a) is “no threats”.)</i>	?
Score justification:	

4.1.5. Please include here a prescriptive list of threats (not evaluated or mentioned above) that are of concern and are evaluated individually:

4.2. Assess the level of external threats to the ecological, biological, aesthetic and cultural values of the area (B4.a of the Annex I) and the efforts made to address/mitigate them. See 5.2. in the AF

Under section 4.2, questions are asked in two parts: part a) enquiring on the existence of external threats, and part b) asking about the response made to mitigate such threats. If the answer to part a) is “no threats”, part b) is not applicable. Whereas, when threats are reported under part a), part b) should be answered. The score achieved in response to part b) is considered a bonus and has no impact on the score evaluation and consequently the result of the review.

In particular:

	Score
4.2.1. a) Pollution problems from external sources including solid waste and those affecting waters up-current. See 5.2.1. in the AF. Score: 0, 1, 2 or 3 0 means “very serious threats”; 3 means “no threats” <i>(If the answer is “no threats”, pass directly to question 4.2.2. a).)</i>	?
Score justification:	

	Score (bonus)
4.2.1. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the pollution problems from external sources including solid waste and those affecting waters up-current. See 5.2.1. in the AF. Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.2.1. a) is “no threats”.)</i>	?
Score justification:	

	Score
4.2.2. a) Significant impacts on landscapes and on cultural values. See 5.2.2 in AF. Score: 0, 1, 2 or 3 0 means “very serious threats”; 3 means “no threats” <i>(If the answer is “no threats”, pass directly to question 4.2.3. a).)</i>	?
Score justification:	

	Score (bonus)
4.2.2. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the significant impacts on landscapes and on cultural values. See 5.2.2 in AF. Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.2.2. a) is “no threats”).</i>	?
Score justification:	

	Score
4.2.3. a) Expected development of threats upon the surrounding area. See 6.1. in AF. Score: 0, 1, 2 or 3 0 means “very serious threats”; 3 means “no threats” <i>(If the answer is “no threats”, pass directly to question 4.2.4.)</i>	?
Score justification:	

	Score (bonus)
4.2.3. b) Efforts (actions) undertaken during the evaluation period to address/mitigate the expected development of threats upon the surrounding area. See 6.1. in AF. Score: 0, 1, 2 or 3 0 means “no effort”; 3 means “significant effort” <i>(If applicable: Not applicable if the answer to question 4.2.3. a) is “no threats”).</i>	?
Score justification:	

4.2.4. Please include here a prescriptive list of threats (not evaluated or mentioned above) that are of concern and are evaluated individually:

4.2.5. Please include the list of threats (not evaluated or mentioned above) that were of concern

and were eliminated or solved:

4.3. Is there an integrated coastal management plan or land-use laws in the area bordering or surrounding the SPAMI? (B4.e Annex I). See 5.2.3. in AF

	Score
Score: 0 = No 1 = Yes	?
Score justification:	

4.4. Does the management plan for the SPAMI have influence over the governance of the surrounding area? (D5.d Annex I). See 7.4.4. in the AF

	Score
Score: 0 = No 1 = Yes	?
Score justification:	

5. ENFORCEMENT OF PROTECTION MEASURES

5.1. Assess the degree of enforcement of the protection measures

In particular:

	Score
5.1.1. Are the area boundaries adequately marked on land and, if applicable, adequately marked at sea? See 8.3.1. in AF (Not applicable for multilateral (transboundary high sea) SPAMIs) Score: 0 = No 1 = Yes	?
Score justification:	

In the case of multilateral (transboundary high sea) SPAMI:

	Score
5.1.1. a) Is the area officially depicted on international marine / terrestrial maps? Score: 0 = No 1 = Yes	?
Score justification:	

In the case of multilateral (transboundary high sea) SPAMI:

	Score
5.1.1. b) Is the area officially reported on the marine / terrestrial maps of	?

each SPAMI Member State? Score: 0 = No 1 = Yes	
Score justification:	

In the case of multilateral (transboundary high sea) SPAMI:

	Score
5.1.1. c) Are the coordinates of the area easily accessible (maps, internet, etc.)? Score: 0 = No 1 = Yes	?
Score justification:	

	Score
5.1.2. Is there any collaboration from other authorities in the protection and surveillance of the area and, if applicable, is there a coastguard service contributing to the marine protection? <i>See 8.3.2. and 8.3.3. in AF</i> Score: 0 = No 1 = Yes	?
Score justification:	

	Score
5.1.3. Are third party agencies also empowered to enforce regulations relating to the SPAMI protective measures? <i>(Not applicable for multilateral (transboundary high sea) SPAMIs)</i> Score: 0 = No 1 = Yes	?
Score justification:	

	Score
5.1.4. Are there adequate penalties and powers for effective enforcement? <i>See 8.3.4. in AF</i> Score: 0 = No 1 = Yes	?
Score justification:	

	Score
5.1.5. Is the field staff empowered to impose sanctions? <i>See 8.3.4. in AF</i> Score: 0 = No 1 = Yes	?
Score justification:	

	Score
5.1.6. Has the area established a contingency plan to face accidental pollution or other serious emergencies? (Art. 7.3. in the Protocol, Recommendation of the 13th Meeting of Contracting Parties) Score: 0 = No 1 = Yes	?
Score justification:	

6. COOPERATION AND NETWORKING

	Score
6.1. Are other national or international organizations collaborating to provide human or financial resources? (e.g. researchers, experts, volunteers...). See 9.1.3. in the AF Score: 0 = No 1 = Weakly 2 = Fairly 3 = Excellent	?
Score justification:	

	Score
6.2. Assess the level of cooperation and exchange with other SPAMIs (especially in other nations) (Art. 8, Art. 21.1, Art. 22.1., Art. 22.3 of the Protocol, A.d in Annex I) Score: 0 = No 1 = Insufficient 2 = Fairly 3 = Excellent	?
Score justification:	

SECTION III: FOLLOW-UP OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATION(S) (If applicable: Not applicable for SPAMIs undergoing their first ordinary periodic review)

7. IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATIONS

7.1. Assess to what extent the recommendations possibly made by the previous evaluations were implemented: Recommendations made by the TAC(s) and/or approved by the Focal points for SPAs regarding Section I

	Score
Assessment scale: 0 = 'No' for all of them 1 = 'Yes' for some of them 2 = 'Yes' for most of them 3 = 'Yes' for all of them	?

Score justification:	

7.2. Assess to what extent the recommendations possibly made by the previous valuations were implemented: Recommendations made by the TAC(s) and/or approved by the Focal points for SPAs regarding Section II

	Score
Assessment scale: 0 = 'No' for all of them 1 = 'Yes' for some of them 2 = 'Yes' for most of them 3 = 'Yes' for all of them	?
Score justification:	

CONCLUSIONS AND RECOMMENDATIONS

SECTION I: CRITERIA WHICH ARE MANDATORY FOR THE INCLUSION OF AN AREA IN THE SPAMI LIST		
1. MEDITERRANEAN VALUE OF THE SPAMI		
Total Score:		?
Coastal national SPAMI - max: 7 Multilateral (transboundary high sea) SPAMI - max: 7		
2. LEGAL AND INSTITUTIONAL ARRANGEMENTS		
Total Score:		?
Coastal national SPAMI - max: 6 Multilateral (transboundary high sea) SPAMI - max: 7		
3. MANAGEMENT AND AVAILABILITY OF RESOURCES		
Total Score:		?
Coastal national SPAMI - max: 24 Multilateral (transboundary high sea) SPAMI - max: 27		
SECTION II: FEATURES PROVIDING A VALUE-ADDED TO THE AREA		
4. THREATS AND SURROUNDING CONTEXT		
Total Score:		?
Coastal national SPAMI - max: 37 Multilateral (transboundary high sea) SPAMI - max: 37		
5. ENFORCEMENT OF PROTECTION MEASURES		
Total Score:		?
Coastal national SPAMI - max: 6 Multilateral (transboundary high sea) SPAMI - max: 8		
6. COOPERATION AND NETWORKING		
Total Score:		?
Coastal national SPAMI - max: 6 Multilateral (transboundary high sea) SPAMI - max: 6		
SECTION III: FOLLOW-UP OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATION(S)		
7. IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATIONS (Not applicable for SPAMIs undergoing their first ordinary periodic review)		
Total Score:		?
National SPAMI - max: 6 Multilateral (transboundary high sea) SPAMI - max: 6		
GRAND TOTAL SCORE:		?
Coastal national SPAMI - max: 78 without bonus (<i>92 with bonus</i>) Coastal national SPAMI subject to its first ordinary periodic review - max: 72 without bonus (<i>86 with bonus</i>) Multilateral (transboundary high sea) SPAMI - max: 84 without bonus (<i>98 with bonus</i>) Multilateral (transboundary high sea) SPAMI subject to its first ordinary periodic review - max: 78 without bonus (<i>92 with bonus</i>)		

Score evaluation:

The TAC will propose to include the SPAMI in a period of provisional nature (in accordance with paragraph 6 of the Procedure for the revision of the areas included in the SPAMI List) if the SPAMI has:

- a score < **1** in one or more of the following questions: **1.1, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6;**
- a score < **2** in one or more of the following questions: **1.2, 1.3, 7.1 and 7.2.**

Furthermore, considering that the sites included in the SPAMI List are intended to have a value of example and model for the protection of the natural heritage of the region (Paragraph A.e of Annex 1 to the SPA/BD Protocol), the TAC shall also propose to include the SPAMI in a period of provisional nature if:

- the total score of the evaluation is less than **54** for a **coastal national SPAMI** (= 70% of the maximum total score without bonus: 78);
- the total score of the evaluation is less than **50** for a **coastal national SPAMI subject to its first ordinary periodic review** (= 70% of the maximum total score without bonus: 72);
- the total score of the evaluation is less than **58** for a **multilateral (transboundary high sea) SPAMI** (= 70% of the maximum total score without bonus: 84);
- the total score of the evaluation is less than **54** for a **multilateral (transboundary high sea) SPAMI subject to its first ordinary periodic review** (=70% of the maximum total score without bonus: 78).

The bonus will count only in the case where the SPAMI has not reached the minimum score without the bonus. Then, the bonus will be added to the total score achieved by the SPAMI.

CONCLUSION (BASED ON THE SCORE EVALUATION) BY THE TAC FOR THE PRESENT EVALUATION:
RECOMMENDATIONS BY THE TAC FOR THE FUTURE EVALUATION:

Recommendation 1:

Recommendation 2:

etc.

SIGNATURES:

National Focal Point:	Independent Experts:
SPAMI Manager(s):	National Expert:

Annex III

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

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

Foreword

In 1995, the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) adopted a new Protocol concerning Specially Protected Areas and Biological Diversity (SPA/BD Protocol) in the Mediterranean. Annex II of this new protocol lists endangered or threatened species found in the Mediterranean.

Subsequently a series of nine Action Plans were also adopted by the Parties to the Barcelona Convention. They also urge and encourage co-ordination and co-operation amongst Mediterranean states towards the achievement of conservation of a species or a group of species within this region.

During their meeting in Monaco in November 2001 the Contracting Parties had asked SPA/RAC to draw up a draft action plan for the bird species appearing in Annex II, which listed 15 endangered or threatened bird species.⁸ Consequently, in 2003, the Parties to the Barcelona Convention adopted an Action Plan for the conservation of the bird species listed in Annex II. The main purpose of the Action Plan was to maintain and/or restore their population levels to a favourable conservation status and to ensure their long-term conservation. The Action Plan also aimed to contribute to the sharing of knowledge and expertise between the Mediterranean countries and to co-ordinate efforts among the countries and other relevant initiatives and agreements. It also inspired a synergic approach among the Mediterranean countries in the protection of these bird species and their habitats and encouraged research to fill the many gaps in our knowledge concerning coastal and pelagic birds in the Mediterranean, particularly seabirds' distribution and their movements, as well as their feeding, moulting and wintering areas at sea.

The development of the Action Plan for the conservation of these species followed various initiatives taken by other organisations, such as BirdLife International partners in Mediterranean countries, WWF, IUCN, Medmaravis, and Tour du Valat, on the conservation of birds and their important sites and habitats. Various actions have been taken at national level by the competent authorities and at species level by several non-governmental organisations (particularly BirdLife International partners) in their respective countries, to counteract some of the threats, which were being faced by several species covered by the Action Plan.

In 2005, the first Mediterranean Symposium on the ecology and conservation of the bird species listed in Annex II, was held in Villanova I la Geltrú (Spain) with the participation of 31 ornithologists and experts from 16 Mediterranean countries. The participants made several recommendations to SPA/RAC, including the addition of 10 new marine and coastal bird species to the list of Annex II⁹. In November 2009, the 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention, held in Marrakech (Morocco), adopted the addition of the 10 species of marine and coastal birds in Annex II, bringing up the total number of bird species to 25. Ten years after the Villanova Mediterranean Symposium it was appropriate to hold another symposium; SPA/RAC, in partnership with the Tunisian NGO Les Amis des Oiseaux (AAO/BirdLife Tunisia), Medmaravis, Tour du Valat Biological Station and the Conservatoire du Littoral, organised the 2nd Symposium on Marine and Coastal Birds in the Mediterranean in Hammamet, Tunisia, in February 2015¹⁰ (a) to update the knowledge on the status of

⁸ The original number of species was 15, but two subspecies (*Puffinus yelkouan yelkouan* and *Puffinus yelkouan mauretanicus*) of one of the species (Mediterranean Shearwater *Puffinus yelkouan*), were given species status by taxonomists, namely Yelkouan Shearwater *Puffinus yelkouan* and Balearic Shearwater *Puffinus mauretanicus*. The latter is one of the 10 added bird species to Annex II in 2009

⁹ UNEP/MAP- SPA/RAC. 2006. *Proceedings of the first symposium on the Mediterranean action plan for the conservation of marine and coastal birds*. Villanova i la Geltrú, (Spain), 17-19 November 2005, (Ed. Aransay, N.) SPA/RAC, Tunis.

¹⁰ Yesou, P., Sultana, J., Walmsley, J. & Azafaf, H. (Eds.) 2016. *Conservation of Marine and Coastal Birds in the Mediterranean*. Proceedings of the UNEP-MAP-SPA/RAC Symposium, Hammamet 20-22 February 2015, Tunisia.

marine and coastal birds; (b) to assess the effect of new regulations, conventions and research tools; and (c) to call for a closer cooperation among the countries that adopted the list of 25 bird species of Annex II of the SPA/BD Protocol. Subsequently, the Action Plan for the Conservation of Bird Species listed in Annex II to the SPA/BD Protocol has been updated to include the new added species (COP19, Decision IG22/12) and adopted by the 20th Conference of the Parties to the Barcelona Convention, held in Albania in December 2017. Decision IG.23/08) After more than five years from this update, a second update has been requested by the COP 21 (Decision IG.25/13) to review the results of the activities undertaken between 2018-2022 to ensure the effective implementation of the Action Plan.

Following the request made for SPA/RAC during the 22nd Meeting of the Contracting Parties to the Barcelona Convention (Decision IG.25/13), the Action Plan for the conservation of bird species drafted in 2003, revised in 2013, is updated during the biennium 2022-2023

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7.8	<u>Dalmatian Pelican (<i>Pelecanus crispus</i>)</u>	49
7.9	<u>Great White Pelican (<i>Pelecanus onocrotalus</i>)</u>	51
7.10	<u>Kentish Plover (<i>Charadrius alexandrines</i>)</u>	52
7.11	<u>Greater SandPlover (<i>Charadrius leschenaultii</i> ssp. <i>Columbinus</i>)</u>	53
7.12	<u>Slender-billed Curlew (<i>Numenius tenuirostris</i>)</u>	54
7.13	<u>Slender-billed Gull (<i>Larus genei</i>)</u>	55
7.14	<u>Mediterranean Gull (<i>Larus melanocephalus</i>)</u>	57
7.15	<u>Audouin’s Gull (<i>Larus audouinii</i>)</u>	58
7.16	<u>Armenian Gull (<i>Larus armenicus</i>)</u>	60

<u>7.17</u>	<u>Little Tern (<i>Sternula albifrons</i>)</u>	61
<u>7.18</u>	<u>Common Gull-billed Tern (<i>Gelochelidon nilotica</i>)</u>	62
<u>7.19</u>	<u>Caspian Tern (<i>Hydroprogne caspia</i>)</u>	63
<u>7.20</u>	<u>Lesser Crested Tern (<i>Thalasseus bengalensis ssp. Emigrates</i>)</u>	64
<u>7.21</u>	<u>Sandwich Tern (<i>Thalasseus sandvicensis</i>)</u>	65
<u>7.22</u>	<u>Osprey (<i>Pandion haliaetus</i>)</u>	66
<u>7.23</u>	<u>Pied Kingfisher (<i>Ceryle rudis</i>)</u>	67
<u>7.24</u>	<u>White-breasted Kingfisher (<i>Halcyon smyrnensis</i>)</u>	68
<u>7.25</u>	<u>Eleonora's Falcon (<i>Falco eleonora</i>)</u>	69

INTRODUCTION

1. Birds have captivated humans for millennia due to their beauty, song, flight, and ecological roles. Despite their significance, human activities have threatened many bird species in the Mediterranean and beyond. The Mediterranean region is home to several hundred bird species, some of which are exclusive to this climatic zone. Pelagic bird species are limited, but breeding colonies of Scopoli's Shearwater (*Calonectris diomedea*), Yelkouan Shearwater (*Puffinus yelkouan*), and the subspecies of the European Storm-petrel (*Hydrobates pelagicus melitensis*) may be found along sea-cliffs or on small isolated rocky islands and islets.

2. Coastal seabirds, including the subspecies *emigratus* of the Lesser Crested Tern (*Sterna bengalensis*), whose breeding area is restricted to Libya, are found in river deltas and inland saltwater lagoons. Many other coastal species, however, are found breeding in sub-optimal and man-modified habitats such as salinas, while others rely on municipal waste dumps and discards from fishing boats for their food.

3. Ten new bird species have been added to Annex II, including the critically endangered Balearic Shearwater (*Puffinus mauretanicus*), and the near-threatened Armenian Gull (*Larus armenicus*), whose population trend has been assessed by the IUCN as decreasing. Although the rest of the new species are regarded globally as least concern (LC), their breeding range in the Mediterranean is restricted to a few countries, particularly eastern ones. Furthermore, the population trend of some of them, such as Kentish Plover (*Charadrius alexandrinus*), Greater Sand Plover (*Charadrius leschenaultii*), Mediterranean Gull (*Larus melanocephalus*), and Common Gull-billed Tern (*Gelochelidon nilotica*) has also been assessed as decreasing globally.

4. The ornithological calendar of the Mediterranean is dominated by the seasonal migrations of birds from Europe to Africa in autumn and vice versa in spring, and several species which breed in Europe over-winter in the Mediterranean basin. Nonetheless, the Mediterranean is the home of several hundred bird species, some of which occur exclusively in this climatic zone. The seabirds found along the crowded coastal zone and the islands of this almost land-locked sea are quite resilient, including the comparatively rare and localised Audouin's Gull *Larus audouinii*.

PRESENT STATUS OF MARINE AND COASTAL BIRDS LISTED IN ANNEX II TO THE SPA/BD PROTOCOL

1.1. Bird Species listed in Annex II to the SPA/BD Protocol: List of Endangered or Threatened Species

5. The sequence and nomenclature follow del Hoyo, J. & Collar, N.J. (2014). HBW and BirdLife International Illustrated Checklist of the Birds of the World. Volume 1: Non- passerines. Lynx Edicions, Barcellona.

English Name	French Name	Scientific Name
Greater Flamingo	Flamant rose	<i>Phoenicopterus roseus</i>
European Storm-petrel	Océanite tempête	<i>Hydrobates pelagicus</i> ssp. <i>melitensis</i>
Scopoli's Shearwater	Puffin de Scopoli	<i>Calonectris diomedea</i>
Yelkouan Shearwater	Puffin yelkouan	<i>Puffinus yelkouan</i>
Balearic Shearwater	Puffin des Baléares	<i>Puffinus mauretanicus</i>
Pygmy Cormorant	Cormoran pygmée	<i>Microcarbo pygmaeus</i>
European Shag	Cormoran huppé	<i>Gulosus aristotelis</i> ssp. <i>desmarestii</i>
Dalmatian Pelican	Pélican frisé	<i>Pelecanus crispus</i>
Great White Pelican	Pélican blanc	<i>Pelecanus onocrotalus</i>
Kentish Plover	Pluvier à collier interrompu	<i>Charadrius alexandrinus</i>
Greater Sandplover	Pluvier de Leschenault	<i>Charadrius leschenaultii</i> ssp. <i>columbinus</i>
Slender-billed Curlew	Courlis à bec grêle	<i>Numenius tenuirostris</i>
Slender-billed Gull	Goéland railleur	<i>Larus genei</i>
Mediterranean Gull	Mouette mélanocéphale	<i>Larus melanocephalus</i>
Audouin's Gull	Goéland d'Audouin	<i>Larus audouinii</i>
Armenian Gull	Goéland d'Arménie	<i>Larus armenicus</i>
Little Tern	Sterne naine	<i>Sternula albifrons</i>
Common Gull-billed Tern	Sterne hansel	<i>Gelochelidon nilotica</i>
Caspian Tern	Sterne caspienne	<i>Hydroprogne caspia</i>
Lesser Crested Tern	Sterne voyageuse	<i>Thalasseus bengalensis</i>
Sandwich Tern	Sterne caugek	<i>Thalasseus sandvicensis</i>
Osprey	Balbuzard pêcheur	<i>Pandion haliaetus</i>
Pied Kingfisher	Martin-pêcheur pie	<i>Ceryle rudis</i>
White-breasted Kingfisher	Martin-chasseur de Smyrne	<i>Halcyon smyrnensis</i>
Eleonora's Falcon	Facoun d'Éléonore	<i>Falco eleonora</i>

1.2. Overview of threats

6. In general birds are threatened by habitat loss and disturbance and also from contamination by oil pollutants. Fish farms and wind farms close to seabird colonies, as well as intensive deep-water fishing may constitute serious threats to some bird species.

7. Among the 25 species listed in Annex II as endangered or threatened one finds those:

- which are globally threatened;
- which are endemic to the region and have an unfavourable conservation status;
- whose populations are not concentrated in the Mediterranean, but which have an unfavourable conservation status and/or a restricted range in the region;
- whose populations are not concentrated in the Mediterranean, have a healthy conservation status but are regarded as flagship species.

8. However, they all have something in common. They are all endangered by a number of threats, including:

- Contamination by oil pollutants
- Direct and indirect depletion of food resources
- Non-sustainable forms of tourism
- Disturbance
- Direct persecution including illegal hunting and the use of poison
- Mortality from bycatch
- Wind farms
- Loss of habitats
- Degradation of habitat, particularly wetlands and small islands of high biological importance
- Introduction of and predation by alien species
- Climate change
- Marine litter (plastics)

1.3. Ecology and status of the species

9. The biology, ecology, distribution and conservation status of the fifteen bird species in the original Action Plan (2003) had been presented in an information document entitled “List of Threatened Bird Species as Adopted by the Barcelona Convention”. It was composed of an annotated List compiled by Medmaravis and edited by J. Criado, J. Walmsley and R. Zotier (April 1996) and gave the status, population size and trends, ecology, threats and conservation measures for each species. This was complemented by other national, regional and global contributions, particularly by BirdLife International.

10. The additional 10 species, which were originally proposed in 2005 during the first Mediterranean Symposium on the ecology and conservation of the bird species listed in Annex II, held in Villanova I la Geltrú (Spain), were presented by Xavier Monbailliu on behalf of Medmaravis, using a scientific criterion to screen possible candidate species. They are species of particular importance for coastal habitats in the Mediterranean. Their biology, ecology, distribution and conservation status were based on BirdLife International’s publication *Birds in Europe: Population estimates, Trends and Conservation status* (2004).

11. Several ornithological studies have been carried out in the Mediterranean in the last twenty to thirty years, as can be noted particularly in the proceedings of various symposia including those organised by SPA/RAC, Medmaravis, Conservatoire du Littoral, Tour du Valat, and national NGOs in the Mediterranean countries. Despite all these studies, there are still many gaps in the knowledge of coastal and pelagic birds and their habitats in the Mediterranean, particularly seabird movements and their distribution at sea. There is an urgent need for mapping of breeding, feeding, moulting and wintering areas of pelagic birds in the whole region.

1.4. Geographical scope of the Action Plan

12. The geographical scope of the action plan is the entire semi-closed sea and the Mediterranean bio-climate parts of its bordering countries. Some of the species, such as Balearic Shearwater *Puffinus mauretanicus* and Yelkouan Shearwater *Puffinus yelkouan*, have a restricted breeding range in the Mediterranean. Others, such as Eleonora's Falcon *Falco eleonora*, have migration routes and/or wintering areas outside the Mediterranean. Other species, such as White Pelican *Pelecanus onocrotalus*, Greater Flamingo *Phoenicopterus ruber*, Osprey *Pandion haliaetus*, Sandwich Tern *Sterna sandvicensis* and Little Tern *Sterna albifrons*, are widespread elsewhere, but have a limited range and/or a small population in the Mediterranean. For Slender-billed Curlew *Numenius tenuirostris*, which is a globally Critically Endangered species, the Mediterranean used to be part of its wintering range, but now its population is estimated less than 50 according to BirdLife International species factsheet (2016) and there have been no recent confirmed records in the Mediterranean. Apart from the Armenian Gull *Larus armenicus*, which is Near Threatened, and the Balearic Shearwater, which is Critically Endangered, the other newly added species to Annex II are of Least Concern, according to BirdLife International. However, their breeding population and/or range in the Mediterranean are quite restricted.

ACTION PLAN OBJECTIVES AND TARGETS

1.5. The main objective

13. The main purpose of the Action Plan is to maintain and/or restore the population levels of bird species listed in the Annex II of SPA/BD Protocol to a favourable conservation status and to ensure their long-term conservation.

1.6. Other objectives

- To share information, knowledge and expertise between Mediterranean countries and organisations dealing with the bird species listed in Annex II.
- To co-ordinate efforts among Mediterranean countries and other relevant organisations, initiatives and agreements, so as to ensure the implementation of this Action Plan.
- To encourage a synergetic approach among Mediterranean countries in the protection of the 25 listed bird species and their habitats.
- To encourage research to fill the many gaps which still exist in knowledge of coastal and pelagic birds in the Mediterranean, particularly of seabird distribution and movements, and of their feeding, moulting and wintering areas at sea.

STRATEGIC APPROACH

14. In the implementation of this Action Plan there are three levels of priority:

At Species level

- To implement this Action Plan for all species in Annex II of the SPA/BD Protocol.
- To consider the conservation of globally threatened species as one of the main priorities of the present Action Plan.
- To give priority to the conservation of other species, which have an unfavorable conservation status at regional level.

At National level

- To map the distribution of the species on land as well as at sea.
- To identify sea and coastal important bird areas, particularly for feeding and breeding.
- To identify and control threats for birds and their habitats.
- To protect and monitor Important Bird Areas (IBAs).
- To carry out proper Environment Impact Assessments for all proposed development where any of the species occur.
- To develop and implement appropriate legislation for the protection of birds and their

habitats.

- To pursue the principles and adhere to the requirements of Agreements and Conventions related to bird conservation.

At Mediterranean level

- To strengthen co-operation and exchange of information and experience in research.
- To disseminate information.
- To promote and support the identification of coastal and sea areas which are important for birds.
- To promote the creation and monitoring of protected areas of coastal and marine important birds areas.
- To prevent and/or control the expansion of invasive species, particularly on small islands of high biological importance for birds.
- To identify and monitor migratory hotspots.
- To seek, whenever appropriate, collaboration at a broader international level with relevant Conventions/Agreements such as the Berne Convention, the Bonn Convention, and in particular with the Afro-Eurasian Waterbird Agreement (AEWA).

ACTIONS TO ACHIEVE THE OBJECTIVES OF THE ACTION PLAN

1.7. Protected areas

- Important bird marine areas should be identified and given legal protection status.
- Breeding sites of all threatened species should be legally established as protected areas with an adequate management plan.
- Coastal and marine protected important bird areas should be continuously monitored and properly managed.

1.8. Legislation

- Throughout the Mediterranean, species should be afforded legal protection by the Contracting Parties in countries where they breed, winter or occur during migration, as per the guidelines provided by SPA/RAC (see para. 5).
- Legislation should include dissuasive penalties.
- Assessment of environmental impact on these species and their habitats by any type of development should be legally obligatory.

1.9. Research

- In view of the existing gaps in knowledge of coastal and pelagic birds and their habitats in the Mediterranean, especially of their movements and distribution at sea, priority must be given to the mapping of breeding, feeding, moulting and wintering areas of the species concerned.
- Resources should be made available for researchers to fill the gaps in knowledge, such as for the establishment of a Mediterranean seabirds' atlas, and for monitoring population size and breeding success of less well-known species.
- In relation to the threats facing bird species, such as marine litter and climate change. It would also be good to carry out regular gap analyses to understand what research is needed and to prioritise research efforts.

1.10. Monitoring Activities

15.A major component of the Ecosystem Approach implementation in the Mediterranean is related

to the monitoring and assessment of the status of the marine and coastal environment. In view of establishing a coherent region-wide framework, the Contracting Parties adopted in 2016 the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) (COP 19 Decision IG.22/7). IMAP sets out all the required elements to cover in an integrated manner monitoring and assessment of biodiversity and fisheries, pollution and marine litter, and coast and hydrography.

16. In relation to seabirds, IMAP proposes to monitor and assess the following common indicators (CIs):

- CI 3: Species distributional range (EO1);
- CI 4: Population abundance of selected species (EO1);
- CI 5: Population demographic characteristics (EO1, e.g. body size, age class structure, sex ratio, fecundity rates, survival/mortality rates).

17. IMAP recommends monitoring and assessing those common indicators for a selection of 11 representative species from the List of endangered and threatened species (annex II of the SPA/BD Protocol) and organised into 5 functional groups.

18. In this context, Contracting Parties to the Barcelona Convention should

- with the support of the SPA/RAC, update their national monitoring programmes for biodiversity and or develop one in line with IMAP and report regularly quality assured data.
- with the help of national, regional or international organisations, undertake, when appropriate, joint monitoring initiatives on a pilot basis, with the aim to share and exchange best practices, using harmonized methodologies, and ensuring cost efficiency.
- support and take part in regional initiatives and projects led by competent partner organizations that will contribute to the implementation of the IMAP in order to strengthen strategic and operational regional synergies.

19. The SPA/RAC should work further and create more opportunities with relevant partner organizations, in order to strengthen technical support that countries might need to implement the IMAP at national level.

20. Moreover, The MSFD requires EU Member States to monitor the state of their marine waters and to take measures to achieve Good Environmental Status (GES). This includes monitoring of bird populations and their habitats, according to the criteria designed to allow assessment of the conservation status of seabird populations at the EU level.

21. Therefore, it is strongly recommended to harmonize, as appropriate, the ongoing monitoring work within the framework of the IMAP/EcAp Process and MSFD with regard to monitoring guidelines and protocols as well as the bird species list to be monitored.

1.11. Awareness, Education & Training

- Contracting Parties should promulgate legislation concerning endangered bird species.
- Contracting Parties should seek and/or provide the training of personnel for monitoring, conserving and managing protected important bird areas.
- The organisation of ornithological training courses *in situ* for trainers, important bird areas staff and relevant personnel should be supported by SPA/RAC and the partners of the Action Plan.
- Public awareness and education programmes and campaigns highlighting the vulnerability of threatened species, directed particularly at stakeholders and decision makers, should be

planned and implemented in co-operation with non-governmental organisations.

- Conduct regular capacity building needs assessments to identify the skills required in each country, divided by target group.

1.12. National Action Plans

- Contracting Parties should formulate National Action Plans for the conservation of endangered and threatened bird species in the Mediterranean.
- National Action Plans should take into consideration the implementation of the specific actions relevant to the particular countries proposed in this Action Plan.
- New and updated National Action Plans should address the current factors causing loss or decline of the bird species in Annex II; suggest appropriate subjects for legislation; give priority to the protection and management of sites; and ensure continued research and monitoring of populations and sites.
- Contracting Parties should apply and implement their Action Plans.

IMPLEMENTATION

1.13. Regional co-ordination structure

22. Regional co-ordination of the implementation of the present Action Plan will be guaranteed by the Mediterranean Action Plan's (MAP) secretariat through the Specially Protected Areas Regional Activity Centre (SPA/RAC).

23. The main functions of the co-ordinating structure shall consist in:

- Promoting co-operation among Contracting Parties in those actions executed in trans-boundary areas and at sea in national waters and beyond.
- Promoting the development of a regional network for monitoring populations and distribution of threatened Mediterranean bird species, in co-ordination with other organisations.
- Supporting and collaborating with Contracting Parties in the establishment of important bird areas at sea.
- Providing detailed guidelines to assist countries in their efforts to afford adequate legislative protection to endangered species.
- Elaborating guidelines for monitoring and management plans in collaboration with experts and other interested organisations.
- Urging and supporting the Contracting Parties to create and/or update their national monitoring programmes in line with the guidelines and protocols elaborated within the IMAP/ EcAp process (Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria) and report regularly quality assured data.
- Supporting actions toward the harmonization as appropriate, of the Monitoring guidelines and protocols developed in the framework of the IMAP/EcAp Process and the MSFD
- Assisting countries in the monitoring and conservation of the species listed in Annex II according to the proposed actions by this Action Plan.
- Organising meetings of experts on specific subjects relating to the ecology and conservation of the bird species found in Annex II.
- Preparing progress reports on the implementation of this Action Plan.
- Encouraging complementary work, done by other international organisations with the same objectives, and promoting co-ordination to avoid possible duplication of effort.

1.14. Participation

24. Any interested international, regional and/or national organisation is invited to participate in

actions necessary for the implementation of this Action Plan, while links with other bodies responsible for Action Plans dealing with one or more bird species listed in Annex II should be made, to strengthen co-operation and avoid duplication of work.

1.15. “Action Plan Partners”

25. To encourage and reward contributions to the work of applying the Action Plan, the Contracting Parties may at their ordinary meetings grant the title of “Action Plan Partner” to any organisation (governmental, nongovernmental, economic, etc.) that has to its credit concrete actions likely to help the conservation of birds in Annex II of the Protocol. Conditions for the awarding of the Partner title shall be adopted by the Contracting Parties following advice given by the meeting of National Focal Points for SPAs. The co-ordination structure shall set up a mechanism for regular dialogue between the participating organisations and where necessary, organise meetings to this effect. However, any dialogue could also be done by mail/email and webinars (online conferences).

1.16. Assessment and revision

26. National Focal Points for SPAs, in collaboration with national experts, will be expected to:

- Assess progress in implementing the Action Plan during their meetings.
- Suggest recommendations to be submitted to the Contracting Parties.
- Suggest adjustments to the implementation timetable.

1.17. Timing

27. The actions advocated by the present Action Plan have to be carried out over a five- year period, starting from when the Action Plan is adopted by the Contracting Parties. At the end of this period, SPA/RAC will:

- Prepare a report on the progress made so far in implementing the advocated actions
- Suggest adjustments to action and its implementation timetable, if appropriate
- Submit the updated action plan to the national focal points for spa, who will make follow-up suggestions to the parties.

1.18. Timetable

Action	Deadline	By whom
1. Organisation of the fourth Mediterranean Symposium on ecology and conservation of the bird species in Annex II.	By end of 2029	SPA/RAC & Partners
2. Protect legally all bird species in Annex II	1 year after adoption	Contracting Parties
3. Establish/support research and monitoring programmes to track changes in the trends and to fill gaps in knowledge of threatened species in partnership with other organizations	From 2024 to 2029	Contracting Parties, SPA/RAC, AP, Partners, AEWA, BirdLife International
4. Revision of the directory of organisations and experts concerned with the threatened and endangered bird species in the Mediterranean.	By end of year 2029	SPA/RAC
5. Creation and implementation of National Action Plans for the conservation of endangered and threatened bird species in the Mediterranean; and update them every 5 years from the date of their creation.	From 2024 to 2029	Contracting Parties & SPA/RAC
6. Application and implementation of any Action Plans/monitoring Programmes of the bird species listed in Annex II.	From 2024 to 2029	SPA/RAC & Contracting Parties
7. Participation in promotion of a regional network for monitoring populations and distribution of Mediterranean threatened bird species, in co-ordination with other organisations.	From 2024 to 2029	SPA/RAC , AP Partners, AEWA, BirdLife International
8. Legal establishment of protected areas important for bird species listed in the Annex II of the SPA/BD Protocol, with adequate management plans at breeding sites	By end of year 2029	Contracting Parties
9. Support Contracting Parties and Partners to produce and publish relevant scientific documentation contributing to update knowledge and enhance conservation action taken on the Annex II species.	From 2024 to 2029	SPA/RAC, AP Partners, AEWA, BirdLife International, ICCAT, GFCM
10. Identification of areas important for the birds listed in the Annex II of the SPA/BD Protocol, on land and at sea (mapping of breeding, feeding, roosting, resting, molting and wintering areas).	From 2024 to 2029	Contracting Parties, AP Partners, AEWA, Birdlife International
11. Mapping of breeding, feeding, moulting and wintering areas of pelagic species.	From 2024 to 2029	Contracting Parties
12. Produce progress reports in the implementation of the Action Plan.	By end of year 2029	SPA/RAC
13. Assess capacity building needs, organize trainings, and report results of specific training courses and workshops in coordination/synergy with international and/or national NGOs	From 2024 to 2029	SPA/RAC, Partners & Contracting Parties
14. Optimize synergies with international agreements and organisations dedicated to bird conservation	From 2024 to 2029	Contracting Parties
15. Raise public awareness, provide educational programmes, and advocate for policy changes to stimulate the implementation of the Action Plan	From 2024 to 2029	Contracting Parties, SPA/RAC, AP Partner, ICCAT, GFCM

PROPOSED SPECIFIC PLANS

28. The hereafter listed Specific Action Plans for the 25 bird species listed in the Annex II of the SPA/BD Protocol should be implemented in all Mediterranean states where the species breed, winter or occur on migration. They should be reviewed and updated every three years. If sudden major environmental changes happen which may affect any of the species' populations in the Mediterranean, an emergency review should be immediately undertaken. The current status given below covers the countries that have a Mediterranean coast. Proposed actions, which apply to all species, should include inter alia the initiation of public awareness campaigns on the status of these species and the preparation of National Action Plans. Other on-going Action Plans, which have been developed by other institutions, and which cover some of the species, are listed below, and should be taken in consideration and implemented where these species occur.

1.19. Greater Flamingo (*Phoenicopterus roseus*)

Current status

29. In the Mediterranean, it breeds in localised sites in suitable wetlands, mainly in Spain, France, Turkey, Italy as well as in Algeria. Breeding colonies are established at sites free from human disturbance and secure from terrestrial predators. Breeding is irregular with numbers fluctuating from one season to another. Substantial numbers also occur in Tunisia, Greece and Cyprus but breed rarely. Mediterranean population seems to be separated from Asiatic populations, with minimal exchange and overlap in Libya and Egypt.

Current factors causing loss or decline

30. Urban development; habitat loss for tourism development; disturbance; and illegal killing.

Status under international instruments

- Class A - African Convention on the Conservation and Natural Resources (1968).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
- Listed in the AEWA Action Plan (Column B Category 2a)

Current Action Plans

None

Action Plan objectives and target

31. To maintain healthy breeding populations and maintain wetlands where the species overwinter.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies.
- Monitor and warden breeding colonies.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Restore wetlands where the species used to breed.
- Maintain wetlands where the species overwinter.

1.20. European Storm-petrel (*Hydrobates pelagicus* ssp. *Melitensis*)

Current status

32. This pelagic colonial species breeds in small to very large colonies mainly on islets and in caves along the coast. Subspecies *melitensis* is endemic to the Mediterranean. Important breeding colonies are found in Malta, Sardinia and Sicily. Breeding surveys are totally lacking for the Adriatic and eastern Mediterranean. A general decline has been recorded.

Current factors causing loss or decline

33. Loss of habitat; disturbance; predation by *Rattus* sp. and Yellow-legged Gull *Larus cachinnans*; possibly contamination by oil pollutants of the sea.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Annex I - European Union Directive on the conservation of wild birds (79/409/EEC/1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

None

Action Plan objectives and target

34. To halt the decline and maintain healthy breeding colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor and warden colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes, which may result in loss of habitat and the introduction and/or spread of invasive species, particularly mammals (*Rattus* sp.) and Yellow-legged Gull *Larus michahellis*.
- Control and/or eradicate rats at all breeding colonies.
- Prevent the introduction of alien predatory species.
- Prevent oil spills and chemical pollution of the sea.
- Identify areas at sea important for the species.

1.21. Scopoli's Shearwater (*Calonectris diomedea*)

Current status

35. This pelagic, colonial species is restricted to the Mediterranean, nesting in sea-cliffs, on rocky islands and islets. Breeds in Algeria, Croatia, France, Greece, Italy, Malta, Spain, Turkey and Tunisia where the breeding population has been recently estimated at 140,000 pairs. The majority of the population spends the non-breeding season in the Atlantic. Its recent conservation status according to IUCN is of Least Concern (LC) but its population is thought to be in slow decline overall, although more research is required particularly in the eastern part of the Mediterranean and in the Adriatic.

Current factors causing loss or decline

36. Introduced mammals, such as *Rattus* sp., which affect breeding success; illegal hunting; taking of eggs and/or chicks; mortality from bycatch (longlines); development close to colonies and disturbance, and possibly oil spills and chemical pollution of the sea.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

None

Action Plan objectives and target

37. To halt the decline of the population and maintain healthy colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean. Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and warden colonies under threat of disturbance.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Prevent oil spills and chemical pollution of the sea.
- Monitor levels of mercury and chlorinated hydrocarbons in populations.
- Develop and implement management projects targeting the conservation of the breeding habitat and strict control of introduced mammals, as well as preventing the introduction of alien predatory species.
- Identify important bird areas at sea for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch (longlines, gear nets).
- Reduce fishing harvest (small pelagic fishes)

1.22. Yelkouan Shearwater (*Puffinus yelkouan*)

Current status

38. This pelagic colonial species breeds on rocky islands and islets. Population estimated at less than 33,000 pairs, with 95% of the population breeding along the Mediterranean shores of South European countries, with main breeding colonies in Greece Italy and Malta. Some pairs breed along the North African coast. Breeding surveys in the eastern Mediterranean are lacking and for a number of countries the population is very poorly known.

Current factors causing loss or decline

39. Lack of food resources; lack of protection of breeding colonies; predation by Rats *Rattus* sp, Yellow-legged Gulls *Larus michahellis*, and locally by feral cats and dogs; disturbance and illegal hunting; some mortality from bycatch (longlines, gear nets); and possibly contamination by oil pollutants at sea.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- EU European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

40. National action plan is in place and is being implemented in France. BirdLife International partners are currently working on a LIFE project to produce an action plan.

Action Plan objectives and target

41. To halt the decline of the species, to restore its numbers to former status and to increase the knowledge about its biology.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor the population dynamics of the species and warden colonies.
- Control and if possible, eradicate rats in breeding colonies.
- Prevent the introduction of alien predatory species.
- Ensure the protection of the breeding habitat and create SPAs where breeding colonies exist. Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Promote adequate fishing practices, which take into account the conservation of the species.
- Reduce fishing harvest (small pelagic fishes)
- Prevent oil spills and chemical pollution of the sea.
- Undertake surveys of colonies and research on the conservation biology of the species.
- Identify areas at sea important for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

1.23. Balearic Shearwater (*Puffinus mauretanicus*)

Current status

42. This pelagic, colonial species is restricted to the Balearic Islands; breeding on rocky islands and islets. It is the most threatened species in Europe. Current official population is estimated at 1989-2883 breeding pairs, but recent research at sea shows a much larger population of individual birds.

Current factors causing loss or decline

43. Predation by introduced carnivores (Genet, Pine Marten and feral cats); bycatch; and possibly oil spills and chemical pollution of the sea.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

44. A national Action Plan is in place and is being implemented in Spain. A National Action Plan (PNA) was launched in 2021 by the Ministry of Ecology (MTE) for a period of 5 years. It is led by the French Office for Biodiversity. (Website: <https://oiseaux-marins.org/accueil/projets/pna-puffin>)

Action Plan objectives and target

45. To halt the decline of the species and restore its numbers to former status.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor the population dynamics of the species and warden colonies.
- Control and if possible, eradicate rats and predators in the colonies and prevent any introduction of terrestrial mammals in breeding colonies.
- Ensure the protection of the breeding habitat and create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Promote adequate fishing practices, which take into account the conservation of the species.
- Prevent oil spills and chemical pollution of the sea.
- Undertake surveys of colonies and research on the conservation biology of the species.
- Identify the marine important areas for the species.
- Reduce fishing harvest (small pelagic fishes)
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

1.24. Pygmy Cormorant (*Microcarbo pygmaeus*)

Current status

46. The main breeding populations in the Mediterranean of this globally threatened species are found in Montenegro, Serbia, Greece, and Turkey, with some pairs in Albania, Bosnia and Herzegovina, Israel and Italy. It is restricted to lowland freshwater and brackish habitats, and in winter frequents coastal lagoons, deltas, rivers and riparian forests. The whole population of the Mediterranean countries probably numbers 11,000-13,000 breeding pairs.

Current factors causing loss or decline

47. Degradation and loss of wetland habitat; disturbance and illegal hunting; destruction of breeding colonies and bycatch with abandoned fish nets.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
- Listed in the AEWA Action Plan (Column B Category 1)

Current Action Plans

- Action Plan for the Pygmy Cormorant *Phalacrocorax pygmeus* in Europe prepared by BirdLife International on behalf of the European Commission (February 1996).
- Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International EU Life-Nature (1996).
- Italy has a national Action Plan.

Action Plan objectives and target

48. To maintain the recent increase of the species' population size and distribution.

Proposed action

- Afford strict protection to the species and its habitat, particularly from hunting, disturbance and development.
- Manage wintering and breeding sites in order to meet the species' requirements.
- Monitor breeding and wintering populations.
- Monitor water levels and quality at breeding sites.
- Create SPAs where breeding colonies exist.
- Research its feeding and dispersal ecology.
- Develop education campaigns for hunters.
- Restore degraded wetlands used by the species.

1.25. European Shag (*Gulosus aristotelis ssp.desmarestii*)

Current status

49. This Mediterranean endemic subspecies of the European Shag *Phalacrocorax aristotelisdesmarestii* is present in the western Mediterranean (Balearic Islands, Corsica and Sardinia), and the Adriatic, Aegean and Black Seas, breeding along the coast on rocky islands and islets. The Mediterranean population numbers less than 9,000 pairs.

Current factors causing loss or decline.

50. Human disturbance; oil pollution; habitat loss; mortality from bycatch; Seine net fishing and long-line hauling close to colonies and moulting areas.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979) (79/409/EEC/1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

No national action plans, but a Species Action Plan for the Mediterranean Shag *Phalacrocorax aristotelis desmarestii* in Europe was prepared by BirdLife International on behalf of the European Commission (final draft December 1999).

Action Plan objectives and target

51. To ensure the survival of Mediterranean populations.

Proposed action

- Compile an inventory of breeding sites and map critical habitats.
- Confer strictly protected status on the species.
- Prohibit all types of disturbances to the breeding colonies.
- Carry out rat-eradication programmes at breeding colonies.
- Monitor populations.
- Create SPAs where the species breeds, and encourage buffer zones surrounding breeding areas including adjacent sea area.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to breeding sites.
- Take measures to influence fishing policies in order to avoid negative effects on food stocks and food availability, and to avoid mortality from bycatch.
- Prevent oil spills and chemical pollution of the sea.
- Identify important bird areas at sea for the species.

1.26. Dalmatian Pelican (*Pelecanus crispus*)

Current status

52. This species is vulnerable and globally threatened. In the Mediterranean, small populations (totalling 2500-2700 breeding pairs) are found mainly in Albania, Montenegro, Greece and Turkey. Breeds on inland and coastal wetlands and nests on floating islands of reeds and on bare ground on islands, isolated from mainland to be safe from mammalian predators. Up to about 3000 birds winter in Albania, Greece, Syria and Turkey.

Current factors causing loss or decline

53. Wetland drainage resulting in a sharp decline of available breeding sites; collisions with electric wires; persecution due to competition with commercial fisheries; illegal hunting and disturbance.

Status under international instruments

- Class A - African Convention on Conservation and Natural Resources (1968).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats(1979).
- Appendix I & II - Convention on the Conservation of Migratory Species of Wild Animals(1979).
- Appendix I - Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
- Listed in the AEWa Action Plan (Column A Category 1a/1c).

Current action plans

Action Plan for the Dalmatian Pelican *Pelecanus crispus* prepared by BirdLife International on behalf of the European Commission (April 1996).

Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International – EU Life-Nature (1996).

A new Species Action Plan is under development through EU funded LIFE Euro SAP Project 2014-2018.

Albania has a NAP, but it is only partly implemented, while a NAP is in preparation in Turkey.

Action plan objectives and target

54. To prevent any declines and to increase the population size to a level at which it can be regarded as safe.

Proposed action

- Confer strictly protected status on the species and its habitats during breeding and wintering periods in all range states.
- Establish supervised buffer zones around breeding colonies.
- Prohibit all types of disturbance to the breeding colonies.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.

- Manage in a sustainable way or restore where necessary all wetlands where the species occurs.
- Replace overhead electricity wires by thick cables or lay them underground.
- Monitor continually the breeding and wintering populations.
- Develop education campaigns for local fishermen and hunters, and decision-makers.

1.27. Great White Pelican (*Pelecanus onocrotalus*)

Current status

55. In the Mediterranean this species breeds in Turkey and Greece. Numbers have declined in the last thirty years, and now the breeding population in the Mediterranean is down to less than 1000 pairs (810-940bp). It nests on the ground in large reedbeds, bare earth or rocky islands, in isolation from the mainland to be safe from mammalian predators.

Current factors causing loss or decline

56. Habitat loss and destruction; depletion of fish stocks; persecution and disturbance; pollution; flooding; disease; illegal killing, and collision with electric power lines.

Status under international instruments

- Class A - African Convention on Conservation and Natural Resources.
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix I (Pal.) II (Western Pal.) - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean Current Action Plans (1626/94 (EC) 1994).
- Listed in the AEWA Action Plan (Column A Category 1a/3c).

Current Action Plans

57. National action plan is in place and is being implemented in Israel.

Action Plan objectives and target

58. To reverse the decline of the breeding populations in the Mediterranean.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies and their habitat.
- Monitor and supervise breeding colonies.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of (a) coastal development and infrastructure that impacts and/or fragments habitats; (b) pollution; and (c) overexploitation of fish stocks.
- Develop education campaigns aimed at local fishermen.
- Restore degraded wetlands used by the species.
- Create artificial nesting sites close to foraging sites.

1.28. Kentish Plover (*Charadrius alexandrinus*)

Current status

59. This predominantly coastal small wader species has an extremely large global range and hence is evaluated by IUCN as of Least Concern. However the overall population trend is decreasing. It prefers sparsely vegetated, sandy or dry mud areas when breeding. While some populations of this species are sedentary or only disperse short distances, most inland and northern coastal populations have distinct separate breeding and wintering ranges. Small breeding populations breed in most Mediterranean countries with some 5000 pairs in Tunisia, up to nearly 2000 pairs in Spain, Greece, and Italy, and 'several thousands' in Morocco.

Current factors causing loss or decline

60. Disturbance of coastal habitats; degradation and loss of wetland habitat; land reclamation; declining river flows; urbanisation and predation by foxes, feral cats and dogs.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Current Action Plans

61. National action plan is in place and is being implemented in Slovenia.

Action Plan objectives and target

62. To reverse the decline of the breeding populations and of the number of migrant birds in the Mediterranean.

Proposed action

- Control of recreation activities and human disturbance at breeding sites.
- Reduce/ban debris removal from beaches during the breeding season (February-July)
- Reverse the abandonment of salt pans.
- Promote the traditional management of salt pans (as opposed to industrial management), including the permanence of stable water levels and of small sand banks in parts of salt pans suitable for breeding
- Stop pollution of wetland habitats, land reclamation, and infrastructure development at breeding sites.

1.29. Greater SandPlover (*Charadrius leschenaultii* ssp. *Columbinus*)

Current status

63. This species has an extremely large global range and population size. According to IUCN criteria it is of Least Concern. However, in the Mediterranean the subspecies *columbinus* is known to breed only in Turkey (probably 800-1200bp) and Syria (400-1000bp). As a migrant it is fairly common in Israel, and very scarce or vagrant in some other eastern Mediterranean countries. During the breeding season this species is predominantly found in open, dry, treeless areas and rocky plains. In Turkey the species frequents heavily grazed saline steppe and usually breeds near water but exceptionally also some kilometres away from it.

Current factors causing loss or decline

64. Hunting & disturbance.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Current Action Plans

None

Action Plan objectives and target

65. To ensure the safeguarding and to prompt an increase of the present few breeding populations in the Mediterranean, as well as to provide it with safe passage and wintering grounds where it occurs in other Mediterranean countries.

Proposed action

- Confer strictly protected status on the species and on its “lookalike” species, where it occurs on passage and during winter.
- Prohibit all types of disturbance to breeding areas and their surroundings.
- Monitor, warden and afford appropriate protection and management of all breeding, passage and wintering grounds.
- Train wardens, inexperienced ornithologists and hunters in the identification of the species to assist in recording it.
- Increase public awareness of the species’ rare status in the Mediterranean.

1.30. Slender-billed Curlew (*Numenius tenuirostris*)

Current status

66. This is a globally threatened species, which is possibly extinct. Once described as common in the Mediterranean region, it is now one of the rarest and least known species in the Western Palearctic. Used to migrate from Siberia across eastern and southern Europe to winter in North Africa. On passage, occurs in a wide range of habitats: salt marshes, salt pans, brackish lagoons, dry fishponds, steppe and freshwater marshes. Last confirmed documented record in the Mediterranean was in Greece in 1999

Current factors causing loss or decline

67. Habitat loss at migrating and wintering areas. Other factors unknown.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix I - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Appendix I - Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
- Memorandum of Understanding concerning Conservation Measures for the Slender-billed Curlew under the Bonn Convention (CMS) (1994).
- Listed in the AEWa Action Plan (Column B Category 1a/1b/1c).

Current Action Plans

International Action Plan for the Slender-billed Curlew prepared by BirdLife International on behalf of the European Commission (February 1996).

Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International – EU Life-Nature (1996).

Italy has a national action plan.

Action Plan objectives and target

68. To provide safe passage and wintering grounds in the Mediterranean.

Proposed action

- Confer strictly protected status on the species and on its “lookalike” species, where it occurs on passage and during winter.
- Monitor and warden wintering sites
- Afford appropriate protection and management of all passage and wintering grounds.
- Plan, regulate and/or manage activities and processes of development near wintering sites.
- Train wardens, unexperienced ornithologists and hunters in the identification of the species to assist in recording it.
- Increase public awareness of the species’ critically threatened status amongst politicians, decision-makers and hunters.
- Ratify the AEWa Agreement by those countries which have not yet done so.

1.31. Slender-billed Gull (*Larus genei*)

Current status

69. This gull is both resident and/or migratory in the Mediterranean. It breeds colonially on sandy islands in salt pans at the coastal zone but also (as in Tunisia) in inland wetlands including salt lakes. It is found breeding at widely isolated scattered localities in some countries. It is presently known to breed in Spain (1650-1950bp), France (ca. 1000bp), Italy (3000-5000bp), Greece (100-130bp) and Turkey (2000-3000bp). In Tunisia, up to 4000bp have been recorded breeding in Thyna salt-pans, and 10,560bp have been recorded breeding in the Golfe of Bou Grara, apart from other scattered sites. It also breeds in Egypt but numbers are unknown; formerly bred in Morocco; and there is no evidence of breeding in Algeria. The European population seems to be decreasing.

Current factors causing loss or decline

70. Disturbance of coastal habitats; degradation and loss of wetland habitats; human disturbance and illegal hunting; predation by feral dogs; eggs and chicks of this species are preyed upon by other gull species especially where colonies are frequently disturbed by humans; subsistence egg collecting by local people; pollution and flooding.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II of the Convention on Migratory Species and listed under the African Eurasian Waterbird Agreement.

Current Action Plans

None. Regional management plans for seabirds including this species are in place and implemented in Spain.

Action Plan objectives and target

71. To maintain and increase a healthy breeding population and increase the number of its colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the North African Mediterranean countries.
- Increase management in breeding areas.
- Prevent disturbance from tourism and recreational activities.
- Develop education campaigns for decision makers.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.

- Control or eradicate invasive competitive species and terrestrial mammals at colonies.
- Prevent oil spills and chemical pollution of the sea.
- Identify marine important areas for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

1.32. Mediterranean Gull (*Larus melanocephalus*)

Current status

72. This gull breeds in dense colonies at lagoons, estuaries, coastal as well as inland saltmarshes, and on large steppe lakes and marshes in open lowland areas. It breeds mainly on the Black Sea coast of Ukraine and at scattered localities throughout Europe. In the Mediterranean it breeds in Spain, southern France, Italy, Greece, and Turkey. The Mediterranean also hosts in winter a substantial number of the European population. The Mediterranean breeding population is estimated to be 9400-15,700 pairs

Current factors causing loss or decline

73. Tourist disturbance at breeding colonies; habitat loss resulting from development; possibly contamination by oil spill and chemical discharges at sea; bycatch from long-line fishing; and the taking of adults and eggs by fishermen.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979). Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II of the Convention on Migratory Species and listed under the African Eurasian Waterbird Agreement.

Current Action Plans

None

Action Plan objectives and target

74. To maintain and increase a healthy breeding population; increase the number of its colonies; and give total protection to the wintering population

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies.
- Identify site-based threats and necessary management actions of protected areas.
- Increase existing management in breeding areas.
- Prevent disturbance from tourism and recreational activities.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Create where possible artificially constructed nesting sites in coastal locations.

1.33. Audouin's Gull (*Larus audouinii*)

Current status

75. This is an endemic Mediterranean species, with its main breeding populations occurring in the western Mediterranean in coastal and island sites; an average of 16,800 breeding birds in Spain in the years 2004-2016 being the largest. Other colonies occur in other parts of the Mediterranean including Greece, Turkey, Tunisia and Sardinia. It was close to extinction in the 1970s, but better enforcement of protection measures has resulted in an increase in the breeding population. In 2020, this species relapsed and was moved by Birdlife from LC to NT, based on information that it had a sharp decline in Spain.

Current factors causing loss or decline

76. Habitat alterations at breeding sites; changes in fishing practices in reference to fishing waste management policies; bycatch from fishing gear; competition with the Yellow-legged Gull *Larus michahellis*; egg collection; rat predation; human persecution and disturbance; and possibly depletion of food resources and contamination by oil pollutants.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix I & II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979). European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
- Listed in the AEWA Action Plan (Column A Category 1a/3a).

Current Action Plans

International Action Plan for Audouin's Gull *Larus audouinii* prepared by BirdLife International on behalf of the European Commission (March 1996).

Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International – EU Life-Nature (1996).

Action Plan to restore the Audouin's Gull *Larus audouinii* by Government Committee of Palm Islands Nature Reserve in Lebanon.

Official Working Group in Spain (Ministry of Environment) to review status and propose conservation actions for *Larus audouinii*.

A national action plan is in place and implemented in Italy; another is in preparation in Turkey and regional implemented management plans are on-going for a number of colonies in Spain.

Action Plan objectives and target

77. To halt the decline of the species and maintain a healthy breeding population and increase the number of colonies.

Proposed action

- Conduct research to understand the reason for the recent sharp decline in population.
- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean.
- Confer strictly protected status on the species.

- Prohibit all types of disturbance to breeding colonies, particularly the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Set an Action plan to reduce the dominance of the Yellow-legged Gull over the Audouin's Gull to restore the latter.
- Control or eradicate invasive competitive species and terrestrial mammals at colonies.
- Prevent oil spills and chemical pollution of the sea.
- Identify marine important areas for the species.
- Reduce fishing harvest (small pelagic fishes)
- Develop an Action Plan to reduce mortality at sea especially from bycatch and the illegal use of poison for fishing by fishermen.

1.34. Armenian Gull (*Larus armenicus*)

Current status

78. This species nests colonially in huge aggregations. Its European population has declined rapidly and it was listed by IUCN as Near Threatened. In 2021, the BirdLife International changed the rank of the species from NT to LC following a genuine increase in numbers of individuals of the Armenian Gull (BirdLife International, 2023). In the Mediterranean it breeds in western Turkey where it is resident, with a breeding population of 8000-10,000 pairs. In the Mediterranean it winters in the eastern part but numbers are not known. It is a common winter visitor and passage migrant to Israel where numbers have also decreased drastically. The species inhabits both coastal and inland waters, frequenting lakes, reservoirs, ponds and rivers. It breeds along the stony and grassy shores of mountain lakes, nesting and foraging in reed-beds and on beaches. In its winter range the species may also forage in agricultural fields and on fish-ponds.

Current factors causing loss or decline

79. Persecution (due to the damage it inflicted to fisheries); egg harvesting; and loss of habitat quality.

Status under international instruments

- Appendix II of the Convention on Migratory Species and is covered by the African Eurasian Waterbird Agreement.

Current Action Plans

None

Action Plan objectives and target

80. To maintain the conservation status of the species and maintain a healthy breeding population.

Proposed action

- Identification and designation of important sites for this species.
- Education programmes to fishers to reduce persecution.
- Carry out studies to understand its ecology, including its diet and population trends.
- Compile an inventory of breeding sites and map critical habitats supporting the colonies, in the eastern part of the Mediterranean.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Develop an Action Plan to halt the decline of the species and maintain a healthy breeding population.

1.35. Little Tern (*Sternula albifrons*)

Current status

81. This coastal seabird is a strongly migratory species which usually fishes in very shallow water. It has the most inshore distribution of all terns. It breeds in solitary pairs or in very small groups sometimes amidst colonies of other terns. Its European breeding population is estimated at 36,000-53,000 pairs. However the breeding population in all the Mediterranean countries is estimated at 11,000-14,500 breeding pairs with the highest populations in Turkey (3000-5000bp), Spain 2641-2691bp), Italy (2000-3500bp), Greece (1500-2000bp), France (700bp), Albania (200-500bp), and Israel (300bp). The overall global population trend is decreasing.

Current factors causing loss or decline

82. Habitat loss and destruction of breeding sites; human disturbance; and predation (feral cats and dogs and foxes).

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats(1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- European Union Regulation laying down certain technical measures for the conservation offishery resources in the Mediterranean (1626/94 (EC) 1994).
- Listed in the AEWA Action Plan (Column A Category 3/a).

Current Action Plans

None; but national implemented action plans exist in Israel & Slovenia.

Action Plan objectives and target

83. To maintain healthy breeding colonies and to fill the gaps of knowledge in quantitative dataof breeding populations in a number of countries.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies, particularly in the eastern Adriatic and eastern Mediterranean countries where quantitative data are lacking.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Eliminate predation.
- Monitor and warden colonies under threat of disturbance.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Establish population size and trends.
- Restore wetlands where the species is known to breed.

1.36. Common Gull-billed Tern (*Gelochelidon nilotica*)

Current status

84. This species has an extremely large global range, but its breeding population in the Mediterranean is only 5800-7150 pairs: Spain (3185-3435bp), Turkey (1000-2000bp), France (873bp), Italy (550bp), Greece (180-280bp), Tunisia (150-350bp) and Libya (12bp). It breeds in a variety of locations not only in coastal areas, but also at inland lakes, rivers, marshes and swamps.

Current factors causing loss or decline

85. Deterioration and loss of habitat, e.g. through wetland drainage, agricultural intensification, pesticide pollution and fluctuating water levels; Development close to breeding and/or at foraging sites; and human disturbance at breeding colonies.

Status under international instruments

- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Current Action Plans

None

Action Plan objectives and target

86. To safeguard the breeding areas; maintain a healthy breeding population and possibly increase it.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies.
- Ensure breeding sites protection from disturbance, development and modification.
- Confer strictly protected status on the species.
- Eliminate predation.
- Monitor and warden colonies under threat of disturbance.
- Prevent erosion of islet complexes,
- Create SPAs where breeding colonies exist.

1.37. Caspian Tern (*Hydroprogne caspia*)

Current status

87. This species has an extremely large cosmopolitan but scattered distribution. Some populations are sedentary while others are strongly migratory. It prefers nesting on sandy, shell-strewn or shingle beaches, sand-dunes, flat rock-surfaces, sheltered reefs or islands. In the Mediterranean the breeding population is less than 500 breeding pairs, and is restricted to a few countries in the eastern part: Turkey (150-300bp), Syria (100-200bp), Greece (up to 10bp). It is said that it breeds in Egypt, but no numbers are given.

Current factors causing loss or decline

88. Loss and deterioration of breeding habitat, human disturbance at nesting colonies, contamination by oil spills and marine pollution and bycatch in fishing gears.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).

Current Action Plans

None, but it is listed in the AEWA Action Plan (Column A Category 1a/3a).

Action Plan objectives and target

89. To strictly protect the small breeding population and possibly to increase it.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies.
- Ensure breeding sites protection from disturbance, development and modification.
- Confer strictly protected status on the species.
- Eliminate predation.
- Monitor and warden colonies under threat of disturbance.
- Prevent erosion of islet complexes,
- Create SPAs where breeding colonies exist.

1.38. Lesser Crested Tern (*Thalasseus bengalensis* ssp. *Emigratus*)

Current status

90. This Mediterranean endemic subspecies is currently confined to Libya, at 4 colonies: Garah Island (2000 pairs), Ftiha Island (12 pairs) Ulbah Island (16 pairs) and Sabkhat Julyanah (70 pairs). Occasional breeding was recorded in former years in France, Greece, Italy and Spain.

Current factors causing loss or decline

91. Occasional disturbance by fishermen; probably predation by Yellow-legged Gull *Larus cachinnans*; and possibly contamination by oil pollutants and toxic chemicals.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - (African pops.) Convention on the Conservation of Migratory Species of Wild Animals (1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
- Listed in the AEWA Action Plan (Column A Category 1/c).

Current Action Plans

None. However, a national action plan is in place in Libya but it is not yet implemented.

Action Plan objectives and target

92. To safeguard the breeding areas; maintain a healthy population; and possibly increase its population.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies regularly.
- Create SPAs where the species' breeding colonies exist and prohibit access to known sites except for scientific purposes.
- Investigate whether local fisheries impact on breeding success.
- Prevent oil spills and chemical pollution of the sea.
- Establish population size and trends.
- Provide small artificial islands at Sabkhat Julyanah to encourage an increase of the colony size in the lake.

1.39. Sandwich Tern (*Thalasseus sandvicensis*)

Current status

93. This species can be found in Europe, Africa, western Asia, and the southern Americas. Whilst the European population is estimated at 79,900-148,000 pairs, the breeding population in the Mediterranean is estimated to be 6300-8800 pairs, nesting in colonies mainly in river deltas, on sandbanks and in salinas. Also migrates from elsewhere into the Mediterranean for wintering.

Current factors causing loss or decline

94. Degradation and loss of habitat mainly due to coastal development; disturbance by humans, animals predation and hunting; and possibly reduction of small pelagic fish abundance.

Status under international instruments

- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- Listed in the AEWA Action Plan (Column A Category 3a/3c).

Current Action Plans

None

Action Plan objectives and target

95. To maintain healthy breeding colonies and stop the loss of habitat.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean, where breeding surveys are lacking.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor and supervise colonies under threat of disturbance.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development that impact on wetlands and other breeding habitats.
- Restore wetlands where the species breeds.

1.40. Osprey (*Pandion haliaetus*)

Current status

96. This is a cosmopolitan species, which is vulnerable in several regions. Whilst the European population is estimated at 8,400-12,300 pairs, less than 120 pairs breed in the Mediterranean (mainly Balearic Islands, Corsica, Morocco and Algeria). Some local small populations have disappeared from other islands (e.g. Ibiza, Sicily & Sardinia). The newly established Italian population (<10 pairs) originates from Corsican individuals released in 2006-2010.

Current factors causing loss or decline

97. Habitat destruction and disturbance at breeding sites related to tourism. Mortality occurs mainly from illegal poaching, electrocution and collisions.

Status under international instruments

- Class B - African Convention on Conservation and Natural Resources (1968).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
- Annex I - European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).
- European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

None; but a regional species action plan is in place in Spain. France submitted to CMS a National Action Plan for Osprey as an instrument on 30 October 2019.

Action Plan objectives and target

98. Reverse the decline of the breeding population in the Mediterranean.

Proposed action

- Make an inventory and map critical habitats supporting the remaining breeding pairs.
- Confer strictly protected status on the species.
- Prohibit the destruction of its habitat, disturbance, and the taking or trade of the species.
- Use area-based measures to protect and restore its habitats.
- Create SPAs where it breeds.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known breeding sites.
- Research the causes of the decline of the species.

1.41. Pied Kingfisher (*Ceryle rudis*)

Current status

99. This species has an extremely large range. However in the Mediterranean it is restricted to a few countries and is only known to breed in Israel (2500bp), Turkey (100-200bp) and in Syria and Egypt where breeding numbers are unknown. Decreases in populations have been noted in Syria, Israel, and Egypt. It inhabits small and large lakes, large rivers, estuaries, coastal lagoons and sandy and rocky coasts, dams and reservoirs with either fresh or brackish water with available waterside perches. It is generally sedentary with some local movements due to changes in the supply of food.

Current factors causing loss or decline

100. Use of poisons and pesticides; water storage developments; and bioaccumulation of pollution and toxins in the fish they eat.

Status under international instruments

- Appendix II -Convention on the Conservation of European Wildlife and Natural Habitats(1979).

Current Action Plans

None

Action Plan objectives and target

101. Reverse the decline and maintain a healthy breeding population in the Mediterranean.

Proposed action

- Compile an inventory of the breeding areas and populations.
- Protect legally the species and all its key breeding sites.
- Carry out research on the species' range, ecology, habitat requirements and movements, to be used for the necessary conservation measures.
- Assess the potential threats and their impacts in order to develop appropriate response.
- Develop Regional Action Plans for the protection and management of the species' key sites.

1.42. White-breasted Kingfisher (*Halcyon smyrnensis*)

Current status

102. This kingfisher has a very large global range. However, in the Mediterranean it is restricted to a few countries, and is only known to breed in Israel (15,000bp), Turkey (170-250bp) and Egypt (> 10,000bp, but no proper estimates). It inhabits various habitats ranging from water bodies to farmland and palm plantations.

Current factors causing loss or decline

103. Use of pesticides; habitat degradation from various factors; gaps in knowledge of the species' ecology and behaviour and of the threats facing this species.

Status under international instruments

- Appendix II -Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Current Action Plans

None

Action Plan objectives and target

104. Reverse the decline and maintain a healthy breeding population in the Mediterranean.

Proposed action

- Compile an inventory of breeding areas and populations.
- All breeding sites should be strictly protected and supervised.
- Prohibit any development that would degrade the species' breeding sites.
- Carry out research on species ecology and habitat needs for future conservation measures.
- Assess the potential threats and their impacts in order to develop appropriate responses.
- Develop Regional Action Plans for the protection and management of the species' key sites.

1.43. Eleonora's Falcon (*Falco eleonora*)

Current status

105. This falcon breeds in colonies along the coast of the mainland or on rocky islands, which are often uninhabited. In Europe, which covers >95% of the breeding range, the population has been estimated recently at 14,300-14,500 pairs – the largest number of breeding pairs are found in Greece (12,360), followed by Italy (638-704), Spain (655), Cyprus (90-145) and Turkey (35-50). The North African population has been estimated at approximately 250 pairs (ca.72% of which are found in Tunisia). The current population trend is increasing. Almost all the entire population breeds on rocky Mediterranean islands.

Current factors causing loss or decline

106. Predation by cats and rats; human disturbance in colonies; habitat degradation; taking of eggs and young; hunting; and accidental poisoning from pest control methods.

Status under international instruments

- Class B - African Convention on Conservation and Natural Resources (1968).
- Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
- Appendix II - Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973).
- Annex I European Union Directive on the Conservation of Wild Birds (79/409/EEC/1979).

Current Action Plans

International Species Action Plan Eleonora's Falcon *Falco eleonora* prepared by BirdLife International on behalf of the European Commission (final draft December 1999). A regional implemented species action plan for the Balearics, which host most of the breeding population in Spain, is in place.

Action Plan objectives and target

107. To safeguard the present colonies and encourage the increasing trend, through preserving the breeding sites particularly the uninhabited islands and eliminating any negative impacts on the species.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies, including the taking of eggs and young.
- Monitor and warden colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes, which may result in loss of habitat and the introduction/spread of invasive species.
- Control and/or eradicate species that have become invasive.
- Carry out breeding surveys in eastern Mediterranean countries. Prevent poisoning through awareness campaigns and cooperation with farmer.

Annex IV

Updated Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea

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Updated Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea

1. Introduction

1. In 1975, 16 Mediterranean countries and the European Community adopted the Mediterranean Action Plan (MAP), the first-ever Regional Seas Programme under UN Environment's umbrella. In 1976 these Parties adopted the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention). Seven Protocols addressing specific aspects of Mediterranean environmental conservation complete the MAP legal framework.

2. Currently, MAP has been adopted by 21 countries bordering the Mediterranean Sea, and the European Union. The Contracting Parties to the Barcelona Convention give priority to the conservation of the marine environment and to the components of its biological diversity. This has been confirmed on several occasions, particularly by the adopting (Barcelona, 1995) of the new Protocol concerning specially protected areas and biological diversity in the Mediterranean (SPA/BD Protocol) and of its Annexes. The SPA/BD Protocol invites the Contracting Parties to take "all appropriate measures to regulate the intentional or non-intentional introduction of non-indigenous or genetically modified species into the wild and prohibit those that may have harmful impacts on the ecosystems, habitats or species" (Article 13.1). For established alien species, the SPA/BD Protocol stipulates that "the Parties shall endeavour to implement all possible measures to eradicate species that have already been introduced when, after scientific assessment, it appears that such species cause or are likely to cause damage to ecosystems, habitats or species" (Article 13.2).

3. To that effect, the Contracting Parties adopted in 2003 the first Regional Action Plan concerning species introductions and invasive species in the Mediterranean Sea, which was further updated in 2017. The main objective of the 2017 NIS Action Plan was to promote the development of coordinated efforts and management measures throughout the Mediterranean region in order to prevent as appropriate, minimise and limit, monitor, and control marine biological invasions and their impacts on biodiversity, human health, and ecosystem services, through a series of actions to be carried out between 2017 and 2020. Coinciding with the adoption of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP), which aims to assess the status of the Mediterranean sea and coast as a basis for enhanced action, the focus of the 2017 Action Plan was to strengthen the capacity, and the institutional and legislative framework of Mediterranean countries so that they can deal with issues of alien species, conduct baseline studies and establish monitoring programmes, foster regional co-operation and data sharing infrastructure and produce guidelines and other necessary technical documentation; goals which have been achieved to a large extent.

4. As our baseline knowledge and understanding of marine bioinvasions has been increasing and the regulatory and institutional framework to combat NIS are continuously developing, the post-2020 international and regional policy framework is moving towards more concrete actions for the management of pathways and the drastic reduction in invasive alien species populations and their impacts.

5. The first draft of the Post-2020 Global Biodiversity Framework (GBF) addresses alien species with Target 6: Manage pathways for the introduction of invasive alien species, preventing, or reducing their rate of introduction and establishment by at least 50 per cent, and control or eradicate invasive alien species to eliminate or reduce their impacts, focusing on priority species and priority sites.

6. Similar stipulations are reflected in the Draft Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region" (Post-2020 SAPBIO), which aims to reduce the threats to biodiversity by alien species with its Target 1.2 on alien invasive species, by sharing databases and controlling introduction pathways and impacts in the most vulnerable areas. Furthermore, it stipulates that "Invasive alien species and pathways must be regularly identified in all countries, listing priority species to be controlled or eradicated".

7. The EU Biodiversity Strategy for 2030, calls for an enhanced implementation of NIS-relevant legislation aiming to minimise, and where possible eliminate, the introduction and establishment of alien species in the EU environment. One of the Strategy's key commitments is the management of established invasive alien species and a 50% reduction in the number of Red List species they threaten (EC, 2020)
8. The Mediterranean Sea, with about 1000 alien species reported in its waters up to now, is one of the most invaded ecosystems in the world. The trend of new introductions of alien species, which exhibited a steep increase after the mid-1990s, shows no sign of decline and is moreover accompanied by an accelerating rate of spread and establishment in the last decade, with almost seventy percent of the species being considered established (Zenetos & Galanidi, 2020; Zenetos et al., 2022a). Some of these species have become invasive with serious negative impacts on biodiversity, human health, and ecosystem services. The main pathways by which human actions have introduced alien invasive species into the Mediterranean Sea are shipping (by means of ballast waters and hull fouling), corridors, aquaculture, trade in live marine organisms (aquarium trade and live food trade) and others (e.g. fishing activities and aquarium exhibits).
9. Elaborating and implementing action plans to confront the threats to biological diversity is an effective way of guiding, coordinating and stepping up the efforts made by the Mediterranean countries to safeguard the region's natural heritage. In the 2022-2027 period, significant actions for the management of shipping vectors are planned within the framework of the Ballast Water Management Strategy for the Mediterranean Sea and its Action Plan. The present NIS Action Plan takes this into consideration with complementary actions addressing the remaining important pathways, as well as a focus on the impacts of priority invasive species on priority native species and habitats, in line with existing regional and international policies; it will be adapted and updated, if necessary, to reflect the latest policies on invasive species and new data available.
10. The actions advocated by the present Action Plan are to be carried out over a five-year period, starting from when the Action Plan is adopted by the Contracting Parties. At the end of this period, SPA/RAC will prepare a report on the progress so far made in implementing the advocated actions and will submit it to the National Focal Points for SPAs, who will make follow-up suggestions to the Parties.
11. Considering the world-wide scope of the issue of alien species introduction, it is important that the implementation of the present Action Plan be done in consultation and collaboration with the initiatives undertaken in this field in other regions and/or by other international organisations.

2. Objectives of the Action Plan

12. The main objective of the present Action Plan is to promote the development of coordinated efforts and management measures throughout the Mediterranean region in order to make progress towards Good Environmental Status in relation to non-indigenous species. These efforts can be organized along two main axes corresponding to the two main operational objectives of the Ecosystem Approach (EcAp) and IMAP with respect to Ecological Objective 2 (EO2) and Common Indicator 6 (CI6).

13. Operational objective 2.1 requires that “Introduction and spread of NIS linked to human activities are minimised, in particular for potential IAS” and addresses trends in temporal occurrence, spatial distribution, and abundance of NIS, as well as preventative measures for introduction and spread. Here, the main goals of the Action Plan for the next five years should be:

- Continuing to support the implementation of IMAP and the operationalization of its indicators
- Developing a regional early-warning system within the framework of MAMIAS
- Continuing to elaborate guidelines and technical documentation
- Strengthening the institutional and legislative framework for pathway management, allowing for synergies with the Mediterranean BWM Strategy (2022-2027)
- Supporting the implementation of the Mediterranean BWM Strategy (2022-2027), through technical cooperation and capacity building activities
- Promoting voluntary codes of conduct for pathways where a mandatory legal framework is not yet in place

Operational objective 2.2 states that “The impact of non-indigenous, particularly invasive species, on ecosystems is limited” and requires prioritization and impact quantification that can be achieved in a three-step process of:

- Risk assessment and prioritization with an emphasis on prevention and mitigation.
- Identification of invasive population levels that elicit unacceptable effects
- Elaborating and executing rapid response plans and management plans for the most invasive NIS

3. Priorities

1. At National level

14. Considering the lack of the data and knowledge necessary for impact and risk assessments, horizon scanning, and the implementation of management actions for prevention, control and eradication, priority at national level should be given to:

- Conducting regular NIS monitoring as specified in their monitoring programmes
- Supporting the regional Digital Data infrastructure by providing updated baselines and any other new information to MAMIAS and by submitting yearly monitoring data to the IMAP Info System
- Focusing on invasive species impacts through systematic prioritization, risk assessment and targeted species impact research
- Performing data-based assessments of the NIS introduction and spread risks associated with the aquaculture, ornamental trade and live food trade sectors
- Elaborating an early warning system and rapid response plans
- Developing training and raising awareness programmes on risks, legal issues, best practices, and management actions for prevention and mitigation of impacts.
- Ratify and implement the BMW convention and enact the BMW strategy for the Mediterranean and its Action Plan

2. At Regional level

15. Considering the existing progress in monitoring and baseline information and the activities planned under the BWM Action Plan concerning ballast water and fouling management, priority at the regional level should be given to:

- Further develop criteria for the identification and prioritization of pathways based on international standards and assess their economic impact
- Further refinement of IMAP targets and development of impact related aspects of CI6 indicator
- Supporting cooperation at international level and ensuring harmonization with related policies
- Activating the updated version of MAMIAS and developing an early warning system
- Co-ordinating the application of risk assessment methodologies for priority species
- Training and capacity building for status assessments of the aquaculture, ornamental trade and live food trade sectors
- Training as needed and co-ordination of targeted NIS impact studies
- Support the implementation of the Ballast Water Management Strategy for the Mediterranean and its Action Plan, in cooperation with REMPEC

4. Actions required to attain the objectives of the Action Plan

1. At National level

a). IMAP implementation

- Consolidate/implement IMAP compliant monitoring programmes (if not already in place) and adapt as necessary as new data emerges and IMAP refinement progresses;
- Regularly update the national baselines, informed by national monitoring, research projects and the literature.
- Endeavour to increase the level of confidence in pathways and vectors of introduction and spread and refine relevant baseline information to support the BWM Action Plan.

b). Prioritisation and planning

- Conduct Horizon Scanning for existing NIS and potential future introductions at the national level in order to compile priority lists of high-risk species and to inform an early warning system. High-risk species should be prioritized for spatial distribution and abundance monitoring.
- Perform risk assessments of priority species following well established protocols and taking into account the potential for management
- Quantify and map impacts of priority species at the national level by employing CIMPAL. Such analysis allows the identification of hotspots of highly impacted areas, and augments the prioritization of sites, pathways and species for management actions.
- Perform risk analysis and status assessments of sectors (aquaculture operations, ornamental trade and live food trade)
- Conduct Environmental Impact Assessments before actions on pathways that could increase NIS

c). Initiate and support research on NIS impacts

- Focused impact studies (field and laboratory experiments, modelling studies) for priority species to identify acceptable abundance levels

d). Support the regional Digital Data Infrastructure

- Regularly submit monitoring data to the IMAP Info System, following the designated procedures and Data Standards
- Support MAMIAS with updated baselines, pathway information, results of impact studies and any other new information.

e). Legislation

16. Those Contracting Parties which have not yet enacted national legislation for controlling the introduction of marine species must do so as quickly as possible. All the Contracting Parties are strongly recommended to take the necessary steps to express in their national laws the provisions of the pertinent international treaties, especially the IMO Convention on the management of ballast waters, and guidelines and codes adopted on the subject within the context of international organisations.

f). Institutional framework

- Set up reporting mechanisms for NIS sightings, especially among actors and stakeholder groups most likely to first notice new species introductions (e.g. fishers, divers, aquaculture operators, border officials, etc.). Disseminate information about species anticipated to arrive in the near future. Provide links of this early warning system to the regional MAMIAS system and cooperate with the concerned authorities in neighbouring states regarding new NIS detections;
- Elaborate rapid response and management plans for invasive NIS, including eradication or population control measures as appropriate; it is important that such plans are specific with clear procedures, jurisdictions and resource allocation;
- Conduct research on methods to mitigate invasions through existing pathways.
- Develop and disseminate best practice guidelines and codes of conduct for pathways not already covered by the BWM Action Plan
- Strengthen and where necessary set up systems to control the intentional import and export of alien marine species;
- Promote citizen science programmes for data collection;
- Undertake awareness raising activities for targeted stakeholder groups and the general public.

2. At Regional level

a). IMAP implementation/refinement and operationalization of its indicators

17. Evaluation of CI6 is currently based on operational objective 2.1 (“Invasive non-indigenous species introductions are minimized”), addressing trends in abundance, temporal occurrence and spatial distribution of NIS, notably in risk areas; however due to the lack of suitable data, significant progress has only been made in assessing trends in temporal occurrence. With national monitoring programmes being increasingly implemented and making data available, further elaboration of CI6 elements will be possible, more specifically:

- Setting reference conditions and threshold values for trends in temporal occurrence, in collaboration with other Regional Seas Conventions and the EU
- Elaborating methodologies and quantitative targets for trends in spatial distribution
- Elaborate quantitative targets for trends in abundance, in conjunction with operational objective 2.2 (“The impact of non-indigenous, particularly invasive species on ecosystems is limited) and its state target “Abundance of NIS introduced by human activities reduced to levels giving no detectable impact.
- Elaborate scales of aggregation for CI6 assessment and integration with other Ecological Objectives and Common Indicators
- Furthermore, develop an early warning system within MAMIAS and link with national early warning systems.

Finally, liaise with REMPEC on monitoring and data collection in ports and baseline surveys in ports to ensure integration with IMAP monitoring programs.

b). Implementation of the BWM Strategy (2022-2027)

18. SPA/RAC is already committed in its PoW for 2024-2025 to provide assistance to Contracting Parties to implement target measures to control and manage ships' ballast water and biofouling in order to minimize

the transfer of invasive aquatic species, as an active participant in the implementation of the BWM Strategy. This can be achieved through:

- Participation in the regional online BWM Working Group, established and coordinated in cooperation with REMPEC, to drive the process towards harmonization of BWM measures in the region;
- Liaising with REMPEC regarding monitoring and data collection at ports and port baseline surveys to ensure integration with IMAP monitoring programmes.
- Assisting, with data and methodological approaches, in developing and implementing port risk assessments and a comprehensive Regional Procedure for the Granting of Exemptions under the BWM Convention as stipulated in the BWM Action Plan;
- Co-ordinating, together with REMPEC, the preliminary activities to address the threat of biofouling on ships and provide assistance to Contracting Parties in implementing them, as stipulated in the BWM Action Plan (i.e., organize a regional workshop, conduct National Status Assessments and national strategies and action plans to manage biofouling)

c). Training and Capacity Building

- Produce an updated guide for risk analysis to assess NIS impacts. Organise a training session focusing on the application of risk analysis, risk assessment for priority species and for pathways and environmental impact assessments and co-ordinate the systematic application of region-wide agreed methodologies. Considering that a regional risk assessment of key ports in the Mediterranean Sea as well as National Status Assessments for biofouling are planned to be undertaken within the framework of the BWM Action plan, the focus should be on species, as well as risk analyses of other contributing pathways, most notably corridors, aquaculture, the ornamental trade and live food trade. Collaborate with Contracting Parties on data requirements and availability and with REMPEC to support ballast and biofouling management with NIS related data.
- Provide guidance and training as needed for experimental field studies and modelling studies and translating results into policy targets, co-ordinate pilot studies for specific NIS in order to elucidate their density-impact relationships.

d). Public education and awareness

19. With particular focus on stakeholders and decision-makers, prepare and circulate guidelines with best practices for activities and sectors that exert strong pressure as vectors of introduction and particularly spread of NIS

5. Regional Coordination

20. Regional coordination of the implementation of the present Action Plan will be guaranteed by the Mediterranean Action Plan's (MAP) Secretariat through the Regional Activity Centre for Specially Protected Areas. The main functions of the coordinating structure shall consist in:

- taking in hand the implementation of those actions required at regional level to attain the present Action Plan's objectives (Section C.2 above);
- insofar as its means permit, assisting the Contracting Parties in implementing the actions required at national level to attain the present Action Plan's objectives (Section C.1 above);
- regularly reporting to the National Focal Points for SPAs about the implementation of the present Action Plan, and preparing a report on the progress made in reaching its objectives at the end of the 5-year implementation period;

- collaborating with the concerned organisations and endeavouring to ensure that the Mediterranean region is involved in the pertinent international and/or regional initiatives;
- promoting exchanges among Mediterranean specialists.

6. Participation in the Implementation

21. Implementing the present Action Plan is the province of the national authorities of the Contracting Parties. The concerned international organisations and/or NGOs, laboratories and any organisation or body are invited to join in the work necessary for implementing the Action Plan. At their ordinary meetings, the Contracting Parties may, at the suggestion of the meeting of National Focal Points for SPAs, grant the status of «Action Plan Partner» to any organization or laboratory which so requests, and which carries out, or supports (financially or otherwise) the carrying out of concrete actions (conservation, research, etc.) likely to facilitate the implementation of the present Action Plan, taking into account the priorities contained therein.

22. In addition to collaborating and coordinating with the Secretariats of the relevant Conventions, SPA/RAC should invite other MAP components and RACs to join and contribute to the implementation of the present Action Plan, in particular REMPEC and INFO/RAC. It will set up a mechanism for regular dialogue between the participating organisations and, where necessary, organise meetings to this effect.

7. Implementation timetable

Action (* in tandem with the BWM Action Plan)	Deadline	Responsible
1. establish a working group nominated by Contracting Parties to Further develop criteria for the identification and prioritization of pathways based on international standards and assess their economic impact	2024	SPA/RAC & Contracting Parties
2. Consolidate/implement IMAP compliant monitoring programmes	2024	Contracting Parties
3. Increase the level of confidence in pathways and vectors of introduction and spread	2024	Contracting Parties
4. Prepare and circulate guidelines with best practices for activities and sectors that exert strong pressure as vectors of introduction	2024	SPA/RAC
5. Produce an updated guide for risk analysis to assess NIS impacts	2024	SPA/RAC
6. Organise a training session for risk assessment of species and pathways	2024	SPA/RAC
7. Develop and adopt a regional protocol for sampling of ballast water for purposes of Port State Control*	2024	REMPEC & SPA/RAC
8. Develop a regional protocol for port baseline surveys *	2024	REMPEC & SPA/RAC
9. Review and adapt the IMAP Guidance Fact Sheet for CI 6 under EO 2 to ensure integration of data in the IMAP Info System*	2024	REMPEC & SPA/RAC
10. Develop and adopt a regional protocol for port risk assessment *	2024	REMPEC & SPA/RAC
11. Undertake a regional risk assessment of key ports in the Mediterranean Sea *	2025	REMPEC & SPA/RAC
12. Develop, adopt, and implement a comprehensive Regional Procedure for the Granting of Exemptions under the BWM Convention *	2025-2028	REMPEC & SPA/RAC
13. Develop an early warning system in the framework of MAMIAS	2025	SPA/RAC
14. Conduct Horizon Scanning for existing NIS and potential future introductions taking into consideration the increased risk of establishment of IAS due to climate change	2025	Contracting Parties
15. Perform risk assessments of priority species	2025	Contracting Parties
16. Map impacts of priority species with CIMPAL	2025	SPA/RAC, Contracting Parties
17. Workshop to initiate biofouling-related activities in the region *	2024	REMPEC & SPA/RAC
18. Undertake National Status Assessments of Biofouling *	2025	Contracting Parties
19. Develop national strategies and action plans to manage biofouling *	2025-2028	Contracting Parties
20. Perform risk analysis and status assessment of aquaculture, ornamental trade and live food trade sectors	2026	Contracting Parties
21. Set up a mechanism to promote and coordinate the actions listed in section C.1.6. (Institutional framework)	2025	Contracting Parties
22. Launch the procedures for enacting or strengthening national legislation governing the control of alien species introduction	2026	Contracting Parties
23. Develop national early warning and reporting systems	2026	Contracting Parties
24. Elaborate rapid response and management plans for invasive NIS	2026	Contracting Parties
25. Preparation of material for public education and awareness	2025-2028	SPA/RAC, Contracting Parties

26. Develop programmes to raise the awareness of the general public and target groups, including decision-makers, concerning the risks associated with species introduction and disseminate best practice guidelines	2028	Contracting Parties
27. Strengthen and where necessary set up systems to control the intentional import and export of alien marine species	2027	Contracting Parties
28. Support the regional Digital Data Infrastructure as set out in section C.1.4	2024-2028 (annually)	Contracting Parties
29. IMAP CI6 target refinement, setting of thresholds, further indicator development regarding impacts	2024-2028	SPA/RAC
30. Organise a symposium every 3 years	From 2024	SPA/RAC

Annex V

Restoration Programme of *Pinna nobilis*

Restoration Programme of *Pinna nobilis*

FOREWORD

1. Elaborating and implementing action plans to conserve one species or group of species and or restoration programme is an effective way of guiding, coordinating and strengthening the efforts that the Mediterranean countries are making to safeguard the natural heritage of the region and fulfil their obligation under the new 1995 Barcelona Convention Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol).

2. *Pinna nobilis* is a long-lived Mediterranean endemic species, considered one of the biggest bivalve molluscs in the Mediterranean Sea. It has a wide distribution across coastal areas, occurring mainly in seagrass meadows, but also present in other habitats such as rocky bottoms, coarse sand or rhodoliths beds.

3. A mass mortality event affecting *Pinna nobilis* populations was first detected in 2016 along the Spanish coast. The still ongoing mortality outbreak has been found to be caused by a pathogen, which rapidly spread throughout the Mediterranean Sea causing mortality rates of 80-100% across many regions.

4. In 2018, a First online meeting of 33 researchers and representatives from the public administrations from 13 Mediterranean countries to coordinate a response to *Pinna nobilis* crisis, facilitated by IUCN-Med, to present the latest mortality data and progress to recover the Critically Endangered (CR) populations of *Pinna nobilis*, now included on the IUCN Red List of Threatened Species. The role of unaffected populations for a potential recovery, established with a network of larval collector stations to enhance larval dispersal from unaffected sites and potential recolonization through recruitment of resistant juveniles was also discussed.

5. In this context, the Specially Protected Areas Regional Activity Centre (SPA/RAC) of the United Nations Environment Programme / Mediterranean Action (UNEP/MAP) Barcelona Convention, implemented a project funded by the UNEP Regional Seas Programme - 2021 Swedish International Development Cooperation Agency (SIDA) allocation in the Mediterranean sub-basin, to contribute to the restoration of *Pinna nobilis* a species of the Annex II “List of endangered or threatened species” of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean of the Barcelona Convention.

6. This project had two major actions. The first was related to the elaboration of draft restoration programme for *Pinna nobilis* and its discussion and validation during a two-day regional workshop (Tunisia, 20-21 June 2022). The second action was related to the organisation of a regional hands-on training on juveniles’ collection from identified sites and their transportation in rearing sites (Kerkennah Islands, Tunisia, 28-30 June 2022).

7. In the implementation of its project, SPA/RAC in partnership with the Life Pinna Project consortium “Conservation and re-stocking of the *Pinna nobilis* in the western Mediterranean and Adriatic Sea” coordinated by the regional agency for the protection of the Ligurian environment (Italy) and supported by the European Union (EU) Life Programme, drafted a proposal for a restoration programme for *Pinna nobilis*, which was discussed during the regional workshop, held in Tunis, Tunisia from 20 to 21 of June 2022.

8. During the two-day regional workshop, the participants made an overview of the situation of *Pinna nobilis* in their respective countries and shared information on some restoration activities implemented in few countries confirming the regional alarming situation and the need and urgency to act for

monitoring, studying and the restoration of the species as soon as possible in a coordinated manner with proven scientific approach.

9. The workshop urged the establishment of the Pan-Mediterranean task force to implement, propose and assess the translocation of potentially resistant individuals and any other matters in relation with the restoration of *Pinna nobilis*.

10. Due the alarming situation of *Pinna nobilis*, the participants recommend that SPA/RAC, the Contracting Parties, and relevant partners such as IUCN, research institutions and NGOs contribute to the implementation of the draft restoration programme as appropriate.

11. The Participants also call upon the relevant donors and national and international funding agencies to support the restoration programme of *Pinna nobilis* due to the urgency of its situation.

12. Participants thoroughly discussed the proposed draft *Pinna nobilis* restoration programme, main objectives, national and regional priority actions as well as timetable implementation. A final version has been validated, and participants have agreed/recommend submitting the amended version to the Barcelona convention Contracting Parties for consideration.

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INTRODUCTION

1. The fan mussel *Pinna nobilis* (Linnaeus, 1758) is the largest endemic bivalve of the Mediterranean Sea. *P. nobilis* occurs in soft-bottom habitats of transitional water ecosystems and in marine coastal zones at depths between 0.5 and 60 m, mostly in seagrass meadows of *Posidonia oceanica* or *Cymodocea nodosa* (Zavodnik et al. 1991, Richardson et al. 1999, García March et al. 2007, Orfanidis et al. 2007, Coppa et al. 2010; 2013, Prado et al. 2014), but also in bare sandy bottoms (Katsanevakis 2005). This species is an important benthic filter feeder contributing to water clarity, and a “conservation species”, playing the roles of flagship, key and umbrella species.
2. The *Pinna nobilis* facies that could characterize the infralittoral sands or muddy sands is part of the reference list of species and habitats to be monitored in the framework of the Barcelona Convention’s Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (Decision IG.22/7).
3. Due to its ecological relevance, *P. nobilis* has recently been suggested as being a reliable bioindicator for benthic coastal ecosystems according to the Descriptor 1 “Biological diversity” and 4 “Status of the single structural components of ecosystems” of the EU Marine Strategy Framework Directive (MSFD 2008/56/EC).
4. In addition, the fan mussel represents the host for two crustacean symbionts (i.e., *Pontonia pinnophylax* and *Nepinnotheres pinnotheres*) (Rabaoui et al. 2008) and it is also predated by other species, such as for instance *Octopus vulgaris* and or other small molluscs (e.g., *Hexaples trunculus*), playing a key role in the trophic web.
5. During the 80s, populations of *P. nobilis* greatly declined due to several human activities (i.e., fishing, ornamental harvesting, anchoring, and trawl nets). Therefore, *P. nobilis* is nowadays a protected species under Annex II “List of endangered or threatened species” to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean of the Barcelona Convention and. the Annex IV of the EU Habitats Directive 92/43/EEC (EEC 1992).
6. In a few decades, this full regime protection led to a complete recovery of the species in the whole Mediterranean, as it was also evidenced by molecular analyses (Sanna et al. 2013; 2014). Unfortunately, in early autumn 2016 a mass mortality event (MME) impacted *P. nobilis* populations in the south-western Mediterranean Sea (Vázquez-Luis et al. 2017). Since then, the situation has worsened, gradually affecting the coasts of many Mediterranean countries. In Italy for example, from Sardinia to Sicily, from Apulia to Tuscany, fan mussels are dying. The protozoan *Haplosporidium pinnae*, a pathogenic micro-organism that affects the digestive system of the mollusk progressively reducing the feeding of the animal and causing its death, was initially imputed as the main cause of this mass mortality (Catanese et al. 2018, Panarese et al. 2019). However, recently several bacteria species have been also invoked as pathogens involved in the mass mortality of this species (Carella et al. 2019, Prado et al. 2020, Scarpa & Sanna et al. submitted) suggesting that the real causes of the mortality are not completely understood and that a multifactorial disease may be the most probable responsible factor.

RESTORATION PROGRAMME

7. The restoration programme aims to establish the main steps to be followed to start a recovery process for the pen shell. The difficulties of operating with distances that are too great for actions such as transporting individuals make it necessary for the programme to have focal points that can carry out the main actions in each of the regions where it is intended to operate. The technical-scientific expertise also required for some of the proposed analyses makes it appropriate to identify one or more competent structures that can carry out this task for the benefit of the peripheral locations and stand in for the lacking these skills. For all actions also, it will be necessary to initiate training, perhaps available online on a shared e-learning platform, to school the personnel who will be dedicated to operations such as the setup of the collectors, their placement, and the sorting of the collected material, as well as the collection and translocation of individuals in a practical and safe way that could meet the criteria required for authorization under each state's implementation of the 92/43/CEE directive.

8. Considering the analysis of all the projects (see annexe I: case studies & state of the art) and the preliminary results of some of the most recent research, it is not possible to indicate a unique solution to facilitate the restoration of *Pinna nobilis*. The experimental trials conducted so far, as well as the evolving knowledge on the causes of mass mortality, warn us against illusory solutions and suggest going step by step on a precautionary approach under continuous monitoring and assessment.

9. The actions implemented by the different projects have some shared points that deserve to be considered as priorities in the *Pinna nobilis* Restoration programme; in particular, these are actions concerning the setup of collectors for collecting larvae, environmental assessments of the health conditions of sites with live Pinna, monitoring of implanted juveniles (when replanting from the project is envisaged), continuous updating of all the methodologies used, growth of juveniles in aquaria and/or in facilities also at sea, transport of individuals to 'safe' sites and extensive monitoring actions also through Citizen Science. On some actions to be taken, on the other hand, there does not seem to be total agreement; however, these are choices determined by whether or not to have provided for translocating individuals between different sites: in fact, where it has been decided to implement only collector collection practices, replanting has been favoured in places such as lagoons where individuals, not necessarily resistant, nevertheless seem to survive because of unfavourable conditions for pathogens. In these places, it would not make sense to implement monitoring techniques with environmental sentinels as envisaged when individuals are to be transferred between even very distant sites whose suitability must be evaluated in advance to avoid wasting valuable time and biological resources.

10. The proposed programme is based on what was developed under the LIFE Pinna project and supplemented with the support of documentation collected from the other existing projects.

Objectives:

11. The main objective aimed at by the present Restoration programme are to reduce threats and promote the conservation and restoration of *Pinna nobilis* populations particularly by:

- Reducing the threats impacting this species through the implementation of sustainable fishing practices, reduce pollution and protect its habitat
- The conservation of the seagrass meadows, and of other vegetal assemblages of importance for the marine environment, as marine habitats that are essential to the survival of many Mediterranean species and in particular *Pinna nobilis*, and keeping them in favourable conservation status;
- Improving the knowledge on the status of *Pinna nobilis*
- Ensuring conservation of genetic diversity of Mediterranean populations of *Pinna nobilis* as the primary source for the species' resilience

- The recovery of *Pinna nobilis* according to their specificities and best available science and by addressing the identified threats
- The restocking is a possible solution only when ensuring at the same time good environmental condition of the receiving sites as well as genetic diversity of the reintroduced individuals. This implies ensuring that the habitat and ecological processes necessary for the species' survival are present and properly functioning, as well as minimizing or eliminating threats.

Priorities and action required to attain the objective of the restoration programme:

12. At National Level:

- Continuous mapping and monitoring of the situation to determine the population's status and whether any recruitment is taking place even after mortality has occurred.
- Precise mapping of existing populations, implementation of systematic monitoring with sampling campaigns for diseases detection, genetic studies, systematic marking campaigns for fan mussels in shallow areas and establishment of protective cages around the most exposed individuals
- Establish maps/catalogue of hotspots and sites with favourable environmental conditions for repopulation and assess their sustainability.
- Promote localised translocation of individual from sites of low survival probability to more protected sites in line with most recent and approved procedures.
- Identification and mitigation of anthropic pressures experienced by existing populations.
- Establish of marine protected areas or expansion of existing ones with effective management and enforcement of measures to aid in the preservation of new *Pinna nobilis* individuals that appear to be resistant to the parasite's impact if certain protective measures are applied.
- Update the management Plan of existing MPA where *Pinna nobilis* is present by taking into consideration specific management measures for the species.
- Exclude boating or establish ecological mooring systems in areas frequented by boaters to limit the impact of anchors on fan mussel populations and seagrass beds, where juveniles and sub-adults settle.
- Elaboration and implementation of appropriate legislation
- Develop public and professional awareness actions on the status of the species and promote citizen science
- Establish national network of all relevant actors including national task force with legal expertise to establish procedure for captive breeding and other restoration activities
- Creation a directory of institutions working on captive breeding to promote implementing project
- Establish national DNA bank and database

13. At Regional Level:

- Establish a Pan-Mediterranean task force coordinated by SPA/RAC to implement the present restoration programme (focal point for *Pinna nobilis*/by theme who will establish the national network, propose, and assess the translocation of resistant individuals)
- make sure updated information on the status of populations is well circulated at real-time
- Elaborate guidelines, recommendations and standardised Protocol to monitor, study populations, for translocation and/or rescue ex-situ and captive breeding.
- setting up reproductive broodstocks for captive breeding, and take register with genetic record (DNA fingerprinting)
- Promote the installation of larval collectors in strategic locations.
- Organise regional/national training and exchange visit as appropriate.
- Strengthening cooperation and exchange of cooperation between Contracting Parties, concerned actors and project.

- Establish a new pan-Mediterranean type of protection called “important area for *Pinna nobilis*” and create a coordinated network of these sanctuaries for the species.
- Invite countries to include *Pinna nobilis* in the implementation of national monitoring programme of habitat component of their national IMAP (Integrated monitoring and assessment Programme)
- Assist Mediterranean countries to establish national DNA bank/database and promote sharing of information.
- Establish a regional directory of Experts/institutions working on *Pinna nobilis* to promote networking.

14. At population level:

- The programme envisages development in phases and has two main targets for action: *Pinna nobilis* adult individuals and juveniles obtained by collectors or through searching actions in places such as marinas or transition water, zones where the chance of finding them seems to be greater. For each of the actions to be taken, it is considered appropriate to evaluate carefully and always whether it is preferable to leave the individuals in place or to relocate them based always on scientific analysis that justifies the move for safety reasons (the place for example might be subject to hazards such as mechanical threats due to anchoring) or for the improvement of the individual's health status: the individual is in a place that still has a high presence of pathogens and therefore would benefit from being moved to a place that is pathogen-free. This type of action must be carried out with great care as it may accidentally introduce the parasite into healthy areas and encourage its spread. Especially since it is not possible to decontaminate an area or to ensure with certainty the absence of the parasite in the environment.
- A priority should be given to study the pathogens responsible of the mass mortality, their life cycles, propagation and possible treatments for the diseases.
- Study in deep the resistance of the individuals to pathogens and the natural hybridization between *Pinna rudis* and *Pinna nobilis*¹¹ and promoting the establishment of genetic diversity database of resistant individuals.

Target ONE - juveniles

The main strategy and efforts of the restoration programme should be devoted to identifying locations free of the pathogens identified so far as causes of the mass mortality and collecting juvenile individuals and larvae also in order to increase the chances of restoration.

The actions to be taken, after checking that you are following the latest protocols¹², are as listed below:

1. Search for juveniles

- Extensive action to search for juveniles; this involves initiating, also with the help of citizen science, an effective and extensive search for juvenile individuals that might be found in estuarine areas but also in places such as marinas and harbors where calm sea conditions seem to be favorable for settlement.

2. Collectors

- Recruitment and collection of fan mussel juveniles using artificial devices following the methodologies from Kersting & Hendriks (2019) or new published protocols.
- After the collection of juveniles there is two ways forward, the first is transport and rearing if facilities are available and the second one is directly put into water after assessment of the juveniles conditions with use of cages or exclusions of predators and mechanical damages

3. Transport and rearing if needed and facilities are available

¹¹ M. Vázquez-Luis, E. Nebot-Colomer, S. Deudero, S. Planes, et E. Boissin, « Natural hybridization between pen shell species: *Pinna rudis* and the critically endangered *Pinna nobilis* may explain parasite resistance in *P. nobilis* », Mol. Biol. Rep., vol. 48, no 1, p. 997-1004, 2021.

¹² If more updated protocols will be available in the future, or more relevant ones, Parties should follow,

- Once juvenile individuals have been collected, they must be immediately placed in a box filled with seawater to be conducted, in the safest way, to the location prepared for their growing and rearing. Before moving juveniles in tanks, operators will check the integrity of the shell and byssus. Whether byssus can regrow, big damages on the shell will affect *P. nobilis* ability to close itself. This is important in the next phases, where fan mussel specimens will have to be transferred to other sites and they'll need to close their valves to avoid stress and the loss of inner water. Checked *P. nobilis* individuals will be set in aquarium tanks, where they will spend the initial period of growth. Due to the stressful condition individuals may be in, they will be kept under observation for a first period (about 1 month). This is necessary to restore organism optimal conditions and to rebuild the byssus. It is necessary to proceed very carefully during the insertion of the juvenile specimens in the aquarium, paying attention to the physical and chemical conditions of the water in which specimens will be placed (acclimation phase). According to dimension and conditions, individuals can be placed directly in sediment-free support, in the soft bottom or in small support such as Petri dishes filled with coarse sediment or on small, open jute bags. Once ready, the organisms can be placed in baskets attached to the mussel farm's longline and will thus remain suspended in the aquatic medium for a period necessary for the growth and rear of fan mussel specimens. Operators will conduct periodic monitoring (twice a month) to check the state of health of individuals. Also, the correct location of the lantern-nets will be checked, since some extreme marine phenomena could affect the right attachment of the basket to the longline rope. At the end, *P. nobilis* specimens will be transported to the restocking sites, after having reached the escape size (6, 12 and 18 months).

4. Identification of receiving sites¹³

- Priority receiving sites should be the sites that are naturally healthy due to environmental conditions that are unfavourable for the parasite (temperature and Salinity)
- Additional receiving sites will be identified after a careful analysis of the environmental characteristics of the receiving areas that display suitable environmental conditions for the survival of restocked individuals and where the pressure regime (both natural and human-induced) is as low as possible and with low hydrodynamics. The receiving pilot sites must be selected, where possible, in the habitat of *Posidonia oceanica* seagrass meadows or *Cymodocea nodosa/Zostera spp.* beds. Prior an action for monitoring the presence of pathogens also will have to be conducted through one of the most recent, scientifically proved analysis to verify presence of parasites in the donor and receiving sites. Genetic characterisations must be conducted in each donor and receiving site to avoid/exclude genetic erosion. As probably there are no more individuals in the receiving site, assessment should be based to the closer geographical population and/or on past sampling, retrievable from the DNA banks and database. To assess the best sites where fan mussels can be restocked within the seagrass meadows or on coarse sandy bottoms, field activities through underwater scuba diving must be performed by scientific divers. The best areas of the meadows, or of the sandy bottom, that will be likely to support a successful restoration will be chosen according to the occurrence of a matte substrate or a proper substrate, according to the ecological condition of the meadow, which must show high ecological quality (assessed through the adoption of ecological indices as requested by the D.Lgs. 152/2006 that has received the European Directive 2000/60/EC), high coverage of the bottom and high shoot density. According to MERCES results the presence of seagrass meadows and density of *Pinna nobilis* specimens will cooperate in best results. The sites need to meet the characteristics of safety from physical damage (anchoring extreme weather conditions etc), and absence of pathogens. Therefore, sites such as protected areas that guarantee through their prohibitions the highest degree of safety at least for mechanical hazards will be preferred.

¹³ the deliverable A2 of PINNARCA project compiled the criteria of optimal receiving sites.

5. Translocation of juveniles

- Once at the destination sites, *P. nobilis* specimens will be placed into the marine environment. The most critical phase, after the transport is the transplantation in the aquatic environment characterized by different water values of salinity and temperature, respect of those one occurs in the transport (and even earlier, with respect to biophysical and chemical parameters in the growth and reproduction tanks). Particular attention must be paid to the handling of specimens. It's very important to not damage the byssus and to not break the shell of the specimens. In fact, *P. nobilis* needs byssus to anchor itself to the seabed, while the intact shell permits the tightly closing of the organism and preserves the internal water, held between the valves, during the installation operations. Before any transplanting operations, between the transport and the installation, there will be an intermediate phase, to avoid as much stress as possible to the organisms and to facilitate their acclimation to the new site. This adaptive step involves the storage of the organisms in specific tanks that reproduce the chemical and biophysical conditions of the transplant site. With the aim of transplanting as many juveniles as possible and keeping them alive during installation operations, the group of juveniles to translocate will be splitted in different sub-groups. In this way, different sessions of acclimation will be carried out. Therefore, it is of fundamental importance to be able to transplant as many juveniles as possible in at least one protected area, to support the division of the group to be transplanted into different sub-groups and then into different receiving sites. After the acclimation phase, the organisms will be placed by experienced dive operators in the receiving sites placing them in the different types of substrates, either Posidonia matte, Cymodocea meadows or coarse sand. The specimens of *P. nobilis* will be placed at a certain distance from each other, to avoid external criticalities that could ruin the transplantation experiment, such as abusive nets, emergency anchoring, presence of pelagic large animals etc. Cages/devices for the exclusion of predators and damages must be set up. Each transplanted organism will be tagged in order to ensure monitoring operations and the geographical location (geographic coordinates) will be recorded via GPS.

Target TWO - Adults

The search for adults is aimed at finding spawners and verifying their health conditions to ensure that they are not in potentially dangerous and pathogen-free locations. Mapping and a geographic analysis of the data may also provide insight into whether or not they should be transplanted or not to a single location at a distance that facilitates fertilization. The actions to be pursued will therefore be aimed at finding and protecting live individuals and assessing their health conditions. This will require:

1. Search for adults

- Extensive action to search for live adults; The research activities of adult individuals conducted in many places in recent years have proven how effective citizen science actions are that succeed in guaranteeing a large number of observers who, if properly trained, can provide very precise indications, greatly reducing the effort of researchers engaged therefore in the sole actions of verification of the species and monitoring of health conditions.

2. Molecular characterization of surviving individuals of *Pinna nobilis*

Molecular analysis of surviving individuals of *Pinna nobilis* are carried out in order to:

- i. Acquire the proper knowledge of the genetic make-up of the species and their possible correlation with diseases resistance.
- ii. Assess their population genetics parameters and compare them with the already existing data on scientific literature also to help in the choice of the most compatible receiving site from genetical point of view
- iii. Search for possible etiological agents in the fan mussel analysed

This last step represents a crucial point, since the introduction of “pathogens-free” recruited specimens is the critical condition that allows to increase the chances of success for restocking activities and avoid any

unintentional spread of pathogens as explicitly recommended by the IUCN conservation measures for the species¹⁴.

3. Mapping of surviving individuals of *Pinna nobilis*

- Mapping is a crucial aspect in order to be able to properly assess the appropriateness of moving the specimens; a comparative analysis of the distances between individuals, possible risks from mechanical damage, and the main oceanographic features of the sites will in fact be able to provide the best guidance on how to proceed. If the condition of the individuals is sufficiently safe and the site conditions good one can simply mark the individuals and maintain their monitoring over time. If, on the other hand, it is appropriate to move the individuals, it will be necessary to proceed with the steps of receiving site identification and transplantation.

4. Identification of receiving sites

- Priority receiving sites should be the sites that are naturally healthy due to environmental conditions that are unfavourable for the parasite (temperature and Salinity)
- Additional receiving sites will be identified after a careful analysis of the environmental characteristics of the receiving areas that display suitable environmental conditions for the survival of restocked individuals and where the pressure regime (both natural and human-induced) is as low as possible. The receiving pilot sites must be selected considering previous information on the occurrences of *Pinna nobilis*, where possible, in the habitat of *Posidonia oceanica* seagrass meadows or *Cymodocea nodosa*/*Zostera spp.* beds. To assess the best sites where fan mussels can be restocked within the seagrass meadows or on coarse sandy bottoms, field activities through underwater scuba diving have to be performed by scientific divers. The best areas of the meadows, or of the sandy bottom, that will be likely to support a successful restoration will be chosen according to the occurrence of a matte substrate or a proper substrate, according to the ecological condition of the meadow, which must show high ecological quality (assessed through the adoption of ecological indices as requested by the D.Lgs. 152/2006 that has received the European Directive 2000/60/EC), high coverage of the bottom and high shoot density. According to MERCES results the presence of Seagrass meadows and density of *Pinna nobilis* specimens will cooperate in best results. The sites need to meet the characteristics of safety from physical damage (anchoring, extreme weather conditions etc) and absence of pathogens. Therefore, sites such as protected areas that guarantee through their prohibitions the highest degree of safety at least for mechanical hazards will be preferred. An action for monitoring the presence of pathogens also will have to be conducted through one of the most recent, scientifically proved analysis to verify presence of parasites in the donor and receiving sites. Genetic characterisations have to be conducted in each donor and receiving site to avoid/exclude genetic erosion. As probably there are no more individuals in the receiving site, assessment should be based to the closer geographical population and/or on past sampling, retrievable from the DNA banks and database.

5. Transport and transplantation of adults¹⁵

- Collected individuals have to be immediately placed in a box filled with seawater in order to be conducted, in the safest way, to the destination site. Before moving, operators will check the integrity of the shell and byssus. Any storage phase between adult collection and transfer should be of short duration and carried out in such a way as not to expose the animals to stressful conditions and should be carried out by keeping the removed organisms in a water environment with sufficient exchange of

¹⁴ Kersting, D., Benabdi, M., Çiżmek, H., Grau, A., Jimenez, C., Katsanevakis, S., Öztürk, B., Tuncer, S., Tunesi, L., Vázquez-Luis, M., Vicente, N. & Otero Villanueva, M. 2019. *Pinna nobilis*. The IUCN Red List of Threatened Species 2019: e.T160075998A160081499. <http://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T160075998A160081499.en>

¹⁵ Several protocols for transplantation of adults *Pinna nobilis* already exists, also knowledge on surviving percentage of translocated individuals

water. Replanting should take place within two days of harvesting the animals and in the shortest possible time. Once at the destination sites, *P. nobilis* specimens will be placed into the marine environment. The most critical phase, after the transport, is the transplantation in the aquatic environment characterized by different water values of salinity and temperature, respect of those that occur in the transport (and even earlier, with respect to biophysical and chemical parameters in the growth and reproduction tanks). Particular attention must be paid to the handling of specimens. It's very important to not damage the byssus and to not break the shell of the specimens. In fact, *P. nobilis* needs byssus to anchor itself to the seabed, while the intact shell permits the tightly closing of the organism and preserves the internal water, held between the valves, during the installation operations. Before any transplanting operations¹⁶, between the transport and the installation, there will be an intermediate phase, in order to avoid as much stress as possible to the organisms and to facilitate their acclimation to the new site. This adaptive step involves the storage of the organisms in specific tanks that reproduce the chemical and biophysical conditions of the transplant site. With the aim of transplanting as many individuals as possible and keeping them alive during installation operations, the group of individuals to transplant will be splitted in different sub-groups. In this way, different sessions of acclimation will be carried out. Therefore, it is of fundamental importance to be able to transplant as many individuals as possible in at least one protected area, to support the division of the group to be transplanted into different sub-groups and then into different receiving sites. After the acclimation phase, the organisms will be placed by experienced dive operators in the receiving sites placing them in the different types of substrates, either *Posidonia* matte, *Cymodocea* meadows or coarse sand. The specimens of *P. nobilis* will be placed according to MERCES outcomes with density of maximum 1 ind/m². Each transplanted organism will be tagged in order to ensure monitoring operations and the geographical location (geographic coordinates) will be recorded via GPS.

¹⁶ Pilot study case of translocation of resistant individuals performed in Spain, 2018:
<https://www.youtube.com/watch?v=hQbIYak1gQk&t=6s>

WORK PROGRAMME AND TIMETABLE FOR 2023-2028

Action	Deadline	To be implemented by
Elaboration and implementation of appropriate legislation	First year	Contracting Parties & SPA/RAC
Continuous mapping and monitoring of the situation to determine the population's status and whether any recruitment is taking place even after mortality has occurred.	Continuous	SPA/RAC, Contracting Parties, research institutions, NGOs,
Develop a publicly available repository of all relevant documents regarding <i>Pinna nobilis</i>	Continuous	SPA/RAC & Pan-Mediterranean Task force
Establish national/regional network and a mailing list of all relevant actors including national task force with legal expertise to establish procedure for captive breeding and other restoration activities and create a directory of institutions/researchers working on captive breeding to promote implementing project	First Year	Contracting Parties, research institutions & SPA/RAC
Precise mapping of existing populations, implementation of systematic monitoring with sampling campaigns for diseases detection, genetic studies, systematic marking campaigns for fan mussels in shallow areas and establishment of protective cages around the most exposed individuals	Continuous	Contracting Parties, research institutions and NGOs
Define criteria to assess populations and sites with favourable conditions and identify the sites which shelter high population numbers of the species	First Year	SPA/RCA, relevant Partners and research institutions
Establish maps/catalogue of hotspots and sites with favourable environmental conditions for repopulation and assess their sustainability	First year Establishment and updated yearly	Contracting Parties, research institutions and SPA/RCA
Promote localised translocation of individual from sites of low survival probability to more protected sites in line with most recent and approved procedures.	Continuous with the establishment of the procedure the first year	Contracting Parties, research institutions & SPA/RAC
Establish of marine protected areas or expansion of existing ones with effective management and enforcement of measures to aid in the preservation of new <i>Pinna nobilis</i> individuals that appear to be resistant to the parasite's impact if certain protective measures are applied and update the management Plan and regulations of existing MPA where <i>Pinna nobilis</i> is present by taking into consideration specific management measures for the species in line with the relevant strategies (Post 2020 SAPBIO, 2030 European Strategy etc...)	Continuous	Contracting Parties,
Avoid any disturbance and establish ecological systems (ie mooring etc.) in areas frequented by boaters to limit the human impact on fan mussel populations and seagrass beds, where juveniles and sub-adults settle;	Continuous	Contracting Parties and NGOs
Develop public and professional awareness actions and advocacy on the status of the species and promote citizen science	Continuous	Contracting Parties, research institutions & NGOs

Establish a Pan-Mediterranean task force coordinated by SPA/RAC to implement and assess the implementation/update of the present restoration programme, propose, and assess the translocation of resistant individuals (Genetic, translocation, ecotoxicology, parasitology, benthic and Ecology, MPA management, captive breeding)	First year	SPA/RAC & Contracting Parties
Organise a special session for <i>Pinna nobilis</i> during the Mediterranean Key habitats and NIS symposia	Each 3 years	SPA/RAC & Pan-Mediterranean Task force
Elaborate guidelines, recommendations, and standardised Protocol to monitor, study populations, for translocation and/or rescue ex-situ and captive breeding.	First year - Continuous	SPA/RAC, Pan-Mediterranean Task force & research institutions
Promote the installation of larval collectors in strategic locations	Continuous	SPA/RAC, Pan-Mediterranean Task force & research institutions
Organise regional/national training and exchange visit as appropriate	Continuous	SPA/RAC & Contracting Parties
Organise and promote academic studies for students through master type courses, encouraging post graduate studies on <i>Pinna nobilis</i> biology and restoration	Continuous	Contracting Parties and academic institutions
Invite countries to include <i>Pinna nobilis</i> in the implementation of national monitoring programme of habitat component of their national IMAP (Integrated monitoring and assessment Programme) and in projects relevant to the species or habitats related to <i>Pinna nobilis</i>	First Years	SPA/RAC & Contracting Parties
Invest in studies of the Pathogens responsible of the Mass mortality, its life cycle and propagation as priority	First year and Continuous	Pan-Mediterranean Task force & Research institutions
Study in deep the resistance of the individuals to pathogens and using of innovative approach such as modelling	Continuous	Research Institutions
Promoting the establishment of genetic diversity database of <i>Pinna nobilis</i> populations including resistant individuals	First year – continuous	SPA/RAC, Pan-Mediterranean Task force & research institutions
Actions devoted to <i>Pinna nobilis</i> restoration at “population level” both for juveniles and adults. Some actions focused on assessing connectivity and identifying sink/source area is very important.	Continuous	SPA/RAC, Pan-Mediterranean Task force & research institutions, MPA and NGOs

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ANNEX I - CASE STUDIES & STATE OF THE ART

MERCES project – Croatia, Italy, Turkey

1. MERCES project “Marine Ecosystem Restoration in Changing European Seas”, coordinated by the Università Politecnica delle Marche (Italy), has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No-689518. The project was focused on the restoration of different degraded marine habitats, with the aim of 1) assessing the potential of different technologies and approaches; 2) quantifying the returns in terms of ecosystems services and their socio-economic impacts; 3) defining the legal-policy and governance frameworks needed to optimize the effectiveness of the different restoration approaches. Specific aims include a) improving existing, and developing new, restoration actions of degraded marine habitats; b) increasing the adaptation of EU degraded marine habitats to global change; c) enhancing marine ecosystem resilience and services; d) conducting cost-benefit analyses for marine restoration measures; e) creating new industrial targets and opportunities. To achieve these objectives, MERCES created a multi-disciplinary consortium with skills in marine ecology, restoration, law, policy and governance, socioeconomics, knowledge transfer, dissemination and communication. MERCES started from the inventory of EU degraded marine habitats (WP1), conducted pilot restoration experiments (WP2, WP3, WP4), and assessed the effects of restoration on ecosystem services (WP5).
2. MERCES Work Package 2 (WP2) focuses on shallow soft-bottom habitats, especially seagrass meadows and bivalve reefs. Using a combination of field surveys, aquarium and field experiments, and case studies, WP2 aimed to:
 - (a) determine the factors affecting seagrass restoration success,
 - (b) test whether integrating feedbacks and interactions in restoration increases success rates, and
 - (c) provide recommendations for managers and policymakers.
3. MERCES WP2 included 9 research groups in 7 countries (Croatia, Estonia, Finland, Italy, Netherlands, Norway, Turkey). In Northern European seas (Baltic Sea, North Sea, Wadden Sea), test species include eelgrass (*Zostera marina*), dwarf eelgrass (*Z. noltii*), blue mussels (*Mytilus edulis*) and Baltic clams (*Macoma balthica*). In Southern Europe (Adriatic Sea, Eastern Mediterranean), researchers are restoring the seagrasses *Cymodocea nodosa* and *Posidonia oceanica* and the endangered noble pen shell *Pinna nobilis*.
4. Considering the Southern Europe pilot actions several activities have been conducted. Among them very interesting was the Seagrass-bivalve co-restoration using *Pinna nobilis*, *Cymodocea* and *Zostera*. The main question was if planting seagrass and *P. nobilis* together could increase the survival and growth of either or both species? Can transplantation of *P. nobilis* in existing meadows increase the growth/survival of the seagrasses? The experiments were conducted in two different sites (Italy and Croatia).
5. In Italy, *P. nobilis* transplanting was performed using U-shaped stainless-steel rods. First of all, a housing for the transplanting bivalve was prepared in the seabed using a corer. After that, the hole was partially filled with pebbles and the bivalve was anchored with the steel rod. Nine *P. nobilis* specimens have been transplanted in three experimental plots (1x1m): three specimens in bare sediments, three specimens in natural seagrass meadows and three specimens in transplanted seagrasses. *P. nobilis* abundance: 1 ind./m² per each experimental plot. Seagrass transplantation using biodegradable bags. The experimental treatments included transplanting seagrass, transplanting seagrass and *P. nobilis* and existing seagrass as a control. Each experimental plot (1x1 m, n=3). The presence of seagrass favoured the survival of *P. nobilis* specimens while the severe hydrodynamic conditions occurred immediately after the beginning of the experiment have limited the success of the seagrass transplanting. The proposed method of anchorage for *P. nobilis* specimens resulted to be efficient. Plots with *P. nobilis* into existing seagrass meadows showed higher organic matter concentrations immediately after the translocation of bivalves. No differences among experimental plots in

terms of meiofaunal abundance and diversity were observed immediately after the beginning of the experiment. Environmental conditions immediately after translocation play a key role in the survival of *P. nobilis* and transplanted seagrasses. The presence of natural seagrass acts as a barrier for *P. nobilis* reducing the severe hydrodynamic conditions and avoiding possible burial effects. The presence of *P. nobilis* may increase the availability of food for benthic fauna associated with seagrasses meadows. Considering the results of Croatian site transplanting *P. nobilis* within seagrass meadow enhances its survival in exposed areas, given that transplantation is (ideally) carried out during early summer, thus providing enough time for pen shells to regenerate byssus and anchor well, prior to winter storms. Furthermore, transplanting pen shells in high density (e.g., 5 ind./m²) may enhance *C. nodosa* growth through a putative fertilization effect.

6. A further question was addressed by the project: Can covering with cage help *Pinna* establish after translocation? For the experiment conducted in Turkey, *P. nobilis* translocation was done by collecting small individuals from the vicinity and digging out with 50 cm radius and 50-60 cm deep sediment to protect the byssus as much as possible. All individuals were then transferred by covering the attached sediment with a plastic bag and carried underwater. They were placed and covered with their original sediment, and no support was used. After 1x1x0.5 m cages were used to cover the individuals. Transplanted *P. nobilis* individuals were alive and healthy after the winter and spring periods. Some new individuals were observed in spring on both cage covered and uncovered plots and few on the frame of the cages. However, in July 2018, due to parasite infection all individuals were either looking unhealthy (slowly closing their shell) or even dead. It was observed that cages help pen shells to anchor after translocations and promote recruitment of new individuals, but a solid conclusion cannot be made due to disease outbreak that wiped out a large portion of the Mediterranean *P. nobilis* population.
7. Main conclusion for MERCES (Manual of restoration measures in soft bottoms based on surveys and experiments WP2 Deliverable 2.1) was that in southern European habitats (Mediterranean), mutual facilitation of *P. nobilis* and a seagrass was observed and transplanting *P. nobilis* within seagrass meadow enhances seagrass survival, especially in exposed areas. Furthermore, transplanting *P. nobilis* at a density of 5 ind./m² may enhance *C. nodosa* growth through fertilization. The presence of natural seagrass acts as a barrier reducing the severe hydrodynamic stress for *P. nobilis* and avoiding possible burial effects. Conversely, the presence of *P. nobilis* may increase the availability of food for benthic fauna associated with seagrasses meadows. In other words, bivalve facilitation may not only enhance seagrass restoration, but the interactions between bivalves and seagrass proved positive for both species.

RESTORFAN project – Italy

8. Thanks to the MedPAN Small Projects financial contribution, in 2019 the RESTORFAN project was carried out within the Miramare Marine Protected Area (MPA), in Italy. All the specific objectives of the project were based on the currently available information and the experts knowledge gathered during several meetings; the proposal aimed to satisfy all the IUCN recommendations and results of the first meeting of Mediterranean partners to coordinate a response to *Pinna nobilis* crisis (online, February 2021), as the Northern Adriatic Sea and particularly the Gulf of Trieste (Italy) represent key areas for early action and rapid implementation of conservation measures.
9. The specific objectives were:
 1. Increasing international scientific knowledge (by means of new research and papers) on the species.
 2. Test of an experimental hatchery/culture, with specimens coming from mussel farms, finalized to the organization of a Rescue Programme as requested by IUCN Guidelines. Indeed, according to IUCN guidelines, the development of a rescue programme close to the affected areas is paramount and it should be developed as soon as possible in areas where there is an important density of *Pinna nobilis* and the parasite has confirmed not arrived.

3. According to the goal - “raise the issue at national level and advocate for the development of a rescue programme”, Miramare MPA was proponent of several meetings among all the local main actors, to promote the development of a rescue programme. Within this context RESTORFAN developed a protocol, in compliance with IUCN guidelines, for the local/basin rescue programme for *Pinna nobilis*.
 4. “Collaborate in the identification of *Pinna nobilis* hotspots” in the entire region. A density map has been prepared to represent the most relevant hotspots at Friuli Venezia Giulia scale to support the future evaluations. A proposal of a monitoring programme for these “hot sites” has been produced and delivered to regional authorities (Friuli Venezia Giulia, Italy).
10. Among the main results of the project is certainly the development of the protocol for the recovery and transplantation of the juvenile specimens collected in the mussel farmers' longlines. The arrival of mass mortality during the project strongly influenced the actions by pushing for a strong action of awareness raising and search for survivors. The data collected were used for the realization of thematic maps of the gulf of Trieste. A further result of the project was the network of relationships with researchers and MPAs that led to the preparation of the LIFE Pinna project, which was then financed by the LIFE programme.

LIFE IP INTEMARES project

11. LIFE IP INTEMARES project, coordinated by the Biodiversity Foundation of the Ministry for the Ecological Transition and the Demographic Challenge. It receives financial support from the European Union's LIFE programme (LIFE15 IPE ES 012).
12. In this project the Spanish Ministry has been involved through RESCUE actions and elaborating the Conservation Strategy of *Pinna nobilis*. Moreover, the research institution IEO has developed several actions in the sanctuary populations of *Pinna nobilis* in the Mar Menor lagoon.

LIFE PINNA project – Italy, Slovenia

13. Funded by the contribution of the LIFE programme, the European Union's financial instrument supporting environmental, nature conservation and climate action projects. The aim of the LIFE PINNA 17project is to repopulate the areas identified in the project with healthy individuals, survivors of the mass die-off that started in 2016. In particular, the areas involved are the Gulf of Trieste, as a donor site, the MPA of Bergeggi (Liguria, Italy) and the MPA of Asinara (Sardinia, Italy) as recipient sites. Survivors are likely to be characterized by natural resistance to the pathogens responsible for the disease outbreak. Some analysis of the level of pathogenic infection in the tissues of surviving or dying individuals will be conducted to identify microorganisms that are involved in the disease. In addition, considering that proper identification of the pathogens causing mass mortality is a crucial point in setting up adequate recovery plans for this species, it is also important to assess the level of contamination/infection occurring where the mussels died and where they survived. Repopulation actions will be carried out with transplantation of juvenile organisms, and in parallel protocols for captive breeding of adult organisms will be developed. The organisms derived from this artificial insemination will be used to repopulate the affected areas.
14. The specific objectives include:
 - ☐ Analysis and selection of marine or transitional areas appropriate for restocking.
 - ☐ Molecular characterisation of surviving specimens and selection of the best candidates to be reproduced.

¹⁷ website: <http://lifepinna.eu/>

- ☐ Development and implementation of the most suitable repopulation techniques, through translocation of self-recruited juveniles and captive breeding of *P. nobilis* in order to release a large number of specimens into the wild in a few years;
- ☐ Maintenance of a good level of genetic variation among the individuals used for restocking in order to obtain offspring that will be the founders of new future populations with good fitness in the long term;
- ☐ Monitoring of donor sites to evaluate the status of *P. nobilis* (including citizen science actions);
- ☐ Monitoring of “sentinel” organisms for the infection level of pathogens responsible for mass mortality of *P. nobilis*, to quickly detect anomalous values that are potentially dangerous for the species’ survival.
- ☐ Public engagement to increase awareness on *P. nobilis* and influence sea users’ behavior; and
- ☐ Transfer and replication of skills and methodologies to areas where the fan mussel is decreasing.

LIFE PINNARCA project – France, Greece, Italy, Spain

15. LIFE PINNARCA¹⁸ is a European project devoted to the protection and restoration of the fan mussel *Pinna nobilis* populations in the Mediterranean Sea. It has been conducted with the contribution of the LIFE programme, the European Union’s financial instrument supporting environmental, nature conservation and climate action projects.
16. To project team focus on three main objectives:
- 1) Increasing awareness on a global scale, to reduce the possibility of vandalism and illegal collection of the remaining fan mussels, but also to call for broad public collaboration. Actions will be oriented at schools and the general public, including the production of a video, international workshops and volunteering actions.
 - 2) Gathering all existing information on the remaining populations and resistant individuals into a database integrated within the project’s website, to provide information to other countries planning mitigation and recovery actions. This objective will be achieved by implementing a comprehensive census of areas where resistant individuals or unaffected populations are found, as well as installing larvae collectors to assist successful recruitment.
 - 3) Developing active recovery actions, focused both on resistant individuals and the remaining non-resistant populations, to increase the probabilities of recovery of the species. This objective involves efforts to aggregate resistant individuals, translocate vulnerable individuals to safer areas, exchange genetic information among remaining populations, identify locations with optimal conditions to repopulate with healthy fan mussels, maintain individuals in indoor facilities, and develop active measures to improve the environments where healthy non-resistant individuals are still found.
17. All project selected areas host habitats appropriate for *Pinna nobilis* populations, including from healthy *Posidonia oceanica* meadows (in all of them except the Columbretes Islands, Spain) to enclosed bays with gentle hydrodynamic conditions or deeper maërl beds, with optimum substrate and conditions for maintaining fan mussels. These areas also hosted dense fan mussel populations before the mass mortality event (MME) and had some permanent monitoring stations that were periodically surveyed. Therefore, a priori information about the distribution of fan mussels is available and the probability of finding resistant fan mussels in these areas is higher than in other sites not considered Special Areas of Conservation (SAC).

The “Conservation of *P. nobilis* in the Adriatic Sea” – A Croatian national project

18. Nowadays, in the Mediterranean the most far-reaching national project is the one currently being carried out in Croatia: “Conservation of *Pinna nobilis* in the southern part of the Adriatic Sea”. The project was

¹⁸ website: <https://www.lifepinnarca.com/>

launched in late 2020 harmonizing actions carried out by institutions involved in the protection of the mollusc along the Croatian Adriatic. The project is implemented within the framework of the national programme for the conservation of *Pinna nobilis* in the Adriatic Sea, coordinated by the Institute for Environmental and Nature Protection of the Ministry of Economy and Sustainable Development of the Republic of Croatia. The total value of the project is HRK 335325,00 €, of which the Fund for Environmental Protection and Energy Efficiency co-finances 80%, while 20% of funding is provided by project partners. Main partners are public institution “National Park Brijuni”, Public institution “Nature Park Telašćica” and public institution for the management of protected parts of nature in the Split-Dalmatia County “Sea and Karst”). The estimated duration of the project was until 2022 when it was extended until 2025. Total value of the new upcoming period of this project is 368,000 €.

19. The funds of past and upcoming period are intended for the implementation of in situ activities, such as setting up larvae collectors, protection of larvae and adult living individuals from predators and anthropogenic impact, marking sites for protection, monitoring of survivors' positions, maintenance of adult individuals and larvae in controlled conditions (ex-situ) and raising public awareness through various educational activities. Activities in the upcoming period also include: Control of the marine environment of *Pinna nobilis* habitat, scientific research and activities for the recovery of the *Pinna nobilis* population; reintroduction/repopulation of the *Pinna nobilis*
20. The coordinator Institute for Environmental and Nature Protection of the Ministry of Economy and Sustainable Development of the Republic of Croatia. Project is implemented through three subprojects, coordinated by three main partners: Public institution “National Park Brijuni”, Public institution “Nature Park Telašćica” and Public institution for the management of protected parts of nature in the Split-Dalmatia County “Sea and Karst”. Project partners are Croatian Veterinary Institute, Institute of Oceanography and Fisheries, Public Institution for the Management of Protected Areas of Nature of the Dubrovnik-Neretva County, Public Institution "Lastovo Islands Nature Park", Public Institution "National Park Mljet", Public institution Lokrum Reserve, Natural History Museum and Zoo of the City of Split, University of Dubrovnik. Public institution “Natura Histrica”, Public institution for protected area management “Natura” of Primorje-Gorski Kotar County, Public institution “Kamenjak”, Ruđer Bošković Institute, CROREEF Marine Aquaristic, University of Zadar, University of Zagreb Faculty of Science, Public institution “Natura” of Šibenik-Knin County, “20000 Leagues” Marine Explorers Society, Public institution “Natura Jadara”, Public Institution “National Park Kornati”. All partners signed cooperation agreement, Aquarium of Pula officially became a partner of the project, as the main institution in Croatia in charge of maintaining juvenile and adult *Pinna nobilis* under controlled (ex-situ) conditions.

Other relevant or recent activities/studies – Malta, Spain, Turkey

21. The following other relevant or recent activities/studies are to be mentioned:

Country	Year	Activity / Title	Reference
Malta	2022	Ocean literacy and scientific data acquisition through citizen science campaigns: a mixed approach in the Maltese Islands to collect information on <i>Pinna nobilis</i> and <i>Pinna rudis</i> .	https://ejournals.epublishing.ekt.gr/index.php/hcmr-med-mar-sc/article/view/26623

Spain	2015	Embryological Development of <i>Pinna nobilis</i> in Controlled Conditions	https://link.springer.com/chapter/10.1007/978-3-319-13878-7_42
Spain	2021	Breeding, planktonic and settlement factors shape recruitment patterns of one of the last remaining major population of <i>Pinna nobilis</i> within Spanish waters	https://link.springer.com/article/10.1007/s10750-019-04137-5
Spain	2021	Natural hybridization between pen shell species: <i>Pinna rudis</i> and the critically endangered <i>Pinna nobilis</i> may explain parasite resistance in <i>P. nobilis</i>	https://pubmed.ncbi.nlm.nih.gov/33394229/
Greece	2021	Population, aquaculture and transplantation applications of critically endangered species <i>P. nobilis</i> (Linnaeus 1758) in the Mediterranean Sea	https://doi.org/10.33714/masteb.627562
Turkey	2011	Culture of fan mussel (<i>Pinna nobilis</i> , Linnaeus 1758) in relation to size on suspended culture system in Izmir Bay, Aegean Sea, Turkey	https://vetdergikafkas.org/uploads/pdf/pdf_KVFD_1032.pdf
Turkey	2021	Population, Aquaculture and Transplantation Applications of Critically Endangered Species <i>Pinna nobilis</i> (Linnaeus 1758) in the Mediterranean Sea	https://dergipark.org.tr/en/pub/masteb/issue/64818/627562

STATE OF THE ART

22. The table below shows the main actions undertaken in the different projects in order to better evaluate in a comparative way which strategy is the most shared and therefore what should be focused on in order to propose common actions not only on a national scale but also on a Mediterranean scale.

ACTION	MERCES	RESTORFAN	LIFE PINNA	PINNAR CA LIFE	HR Project
Environmental status assessment of seagrass meadows and <i>Pinna nobilis</i> populations in donor and receiving areas	X	X	X	X	X
Molecular characterization of sentinel species in the putative pilot sites of restocking			X		
Molecular characterization of surviving individuals of <i>Pinna nobilis</i>		X	X	X	
Monitoring of pathogens in restocking sites by using sentinel species			X		X

Monitoring of implanted juveniles	X	X	X		
Monitoring of the project's impact on the <i>P. nobilis</i> status	X	X	X	X	X
Report with suggested correction measures that could be implemented	X	X	X	X	X
Location of optimum sites				X	
Collection and growth of <i>Pinna nobilis</i> self-recruited, collectors-recruited individuals		X	X	X	X
Adaptation, breeding and where possible reproduction for active restocking			X		X
Collection and transport (translocation) of specimens from self-capture to receptor sites	X	X	X	X	X
Installation of the specimens of <i>Pinna nobilis</i> at the pilot areas	X		X		
Exhaustive shallow and deep census		X	X	X	X
Actions for environmental improvement in fan mussel sanctuary areas				X	
Treatment assays and analysis				X	

23. The actions implemented by the different projects have some shared points that deserve to be considered as priorities in the *Pinna nobilis* Restoration programme; in particular, these are actions concerning the setup of collectors for collecting larvae, environmental assessments of the health conditions of sites with live *Pinna*, monitoring of implanted juveniles (when replanting from the project is envisaged), continuous updating of all the methodologies used, growth of juveniles in aquaria and/or in facilities also at sea, transport of individuals to 'safe' sites and extensive monitoring actions also through Citizen Science. On some actions to be taken, on the other hand, there does not seem to be total agreement; however, these are choices determined by whether or not to have provided for transplanting individuals between different sites: in fact, where it has been decided to implement only collector collection practices, replanting has been favoured in places such as lagoons where individuals, not necessarily resistant, nevertheless seem to survive because of unfavourable conditions for pathogens. In these places, it would not make sense to implement monitoring techniques with environmental sentinels as envisaged when individuals are to be transferred between even very distant sites whose suitability must be evaluated in advance to avoid wasting valuable time and biological resources.
24. However, many things in common can be found in the harvesting, translocation and replanting protocols that are the result of the many completed or ongoing projects. Here are some of them that may be useful in the operational implementation phase of the Restoration Programme:

RESTORFAN protocol

25. A protocol for the handling, capture, and restoration of *Pinna nobilis* was developed during the project. The protocol is attached to this document (Annex 1). Specifically, the protocol is divided into 4 parts that deal respectively for uptake (1), for collection and extraction from sediment (2), for the housing and growth of organisms (3) and for the re-implantation of organisms (4). During the project larval collectors have been successfully realized and tested according to IUCN Protocol.

A proposed protocol for larval collection (Kersting & Hendriks 2019)

26. Larval collectors consisted of a series of plastic mesh bags containing entangled nylon filament or onion bags (see De Gaulejac et al., 2003; Cabanellas-Reboredo et al., 2009; Kersting and García-March, 2017; Vicente, 2020, for more details). Thus, covering the main reproduction and settlement period of the species (Cabanellas- Reboredo et al., 2009; Deudero et al., 2017; Kersting and García- March, 2017). Observation of *P. nobilis* recruits was undertaken with the naked eye, allowing the detection of recruits of sizes down to 0.3 cm antero-posterior length. Recruits extracted from the collectors were either installed in aquaria (García-March et al., 2020; Vicente, 2020) or in growth cages in the field following Kersting and García-March (2017). The complete protocol is attached to this document (Annex 2).

Paper on state of art in Greece, “Population, aquaculture and transplantation applications of critically endangered species *P. nobilis* (Linnaeus 1758) in the Mediterranean Sea”Acarli 2021

27. The population of fan mussel, *Pinna nobilis* across the Mediterranean Sea has been affected by factors such as overfishing, fisheries processes, environmental pollution, destruction of habitat, tourism, etc. Therefore, the species *P. nobilis* was taken under protection by the Decisions of the Council of Europe and the Barcelona Convention. However, its mortality rates of 100% have been reported to be due to *Haplosporidium pinnae*, a parasite in different Mediterranean regions. The status of *P. nobilis* has thus been revised to increase its category of risk from “Vulnerable” to “Critically Endangered” and the importance of all the studies on the species further increased. The aim of the study is to present the current status of *P. nobilis*, the native to the Mediterranean, by combining the relevant studies on ecology, aquacultural process (larvae, spat settlement and rearing), culture methods and transplantation. The study has provided comprehensive knowledge on the current status of the *P. nobilis* population, aquaculture and transplantation activities. Except for studies to determine stocks, in particular, those on collecting young individuals from nature and planting and growing them in predetermined sites as well as their production through various cultures from their larval phase onwards are of great importance in terms of rehabilitation and sustenance of the damaged *P. nobilis* population. Therefore, alternative, and potential habitats should be created thanks to transplantation and aquaculture. Marine protected areas should be determined to enable a healthy *P. nobilis* population to be sustained.

ANNEX 2 – The RESTORFAN Protocol



***Pinna nobilis*, Protocols for manipulation, captation and restoration (2019)**

1. Protocol for uptake
2. Protocol for collection and extraction from sediment
3. Protocol for the housing and growth of organisms
4. Protocol for the re-implantation of organisms

1. PROTOCOL FOR *PINNA NOBILIS* JUVENILE COLLECTION

The populations of *Pinna nobilis* in the Gulf of Trieste reach a gonadal maturity in the period between August and November. During this period it is possible to observe the fans emitting gametes into the water column.

The operations of captation must be conducted during this period.

We then proceed with the preparation of the captation structure (Figure 1) consisting of 1 ballast, a rope with a maximum length of 2 meters, a float and the collector. Among the 2 collection systems tested (vertical and horizontal) the horizontal system was preferred. A circular lantern-net (plastic devices used in oystre maricultures) is therefore used on which it is possible to fix various types of textile material to increase the efficiency of collection. Simplest method is put inside the lanternet some textile material like potato-bag, jute bag, ropes etc. This method help juveniles to attached holding larvae.

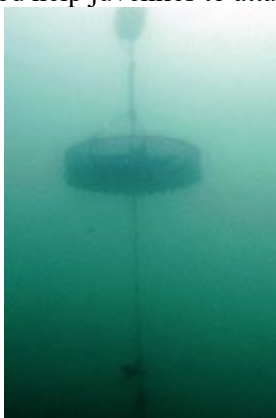


Figure 1 Horizontal collector

2. PROTOCOL FOR THE COLLECTION OF JUVENILES OF *PINNA NOBILIS* ORGANISMS

The juvenile organism is harvested as soon as it reaches a height of 1-2 cm (Figure 2) as it is slightly more resistant during the diver's harvesting operations.

Once collected, the organism is transported in a box paying particular attention to not stress it.



Figure 2 Juvenile *Pinna nobilis*

Harvesting operations are carried out in the same way on the longlines of mussel farms (Figure 3). After a careful analysis of the longline by the diver, once the individual is identified, the collection is carried out. Often the operation is not easy because the organisms are found among other specimens of *Mytilus galloprovincialis* or sponges and ascidians. In this case we try to remove first the organisms around the *Pinna nobilis* and then we try to cut the byssus without damaging the gland responsible for the production of byssus. Once collected the specimens should be placed in a closed rigid container (Figure 4) paying attention to not stress it.



Figure 3 *Pinna nobilis* on longline



Figure 4 Plastic-box for collected organism

IMP: Temperature and salinity data must be collected on site to reproduce them in laboratory.

In case of extraction of organisms from the sediment, a small sorbonne is used (Figure 5), i.e., an instrument that is operated with air coming from a compressor or a scuba bottle allows to remove the sediment around the fin without damaging the organism. After removing most of the sediment around the organism you should see the byssus attached to the solid substrate. Usually, the fin sticks to a few little solid bodies, which can be a rock or a very large rock. In case the byssus is attached to a removable stone

we proceed with the extraction of the fin with the whole stone. If the fin is attached to a rock, then proceed by cutting the byssus in the proximity of the rock without damaging the byssus gland.



Figure 5 Sorbonne

3. PROTOCOL FOR BREEDING AND GROWTH OF *PINNA NOBILIS*

Once reached the laboratory in the shortest possible time, we proceed with the insertion of juvenile organisms in the enclosures.

First of all it is important to verify that the chemical-physical properties of the tanks-enclosure are equal to the conditions of the sampling area. Good practice for the insertion of organisms in the tanks is however to proceed gradually, inserting small amounts of water from the aquariums into the boxes with the collected organisms. This operation can be completed within half an hour.

Once you have inserted the organisms in the tanks you can choose whether to insert them in the free sediment or put some gross sediment inside a petri dish and then insert the organism (it is valid for very small ones), otherwise you can also use small open bags made with jute, inserting first the sediment and then the organism (Figure 6).

It is good practice together with the sediment to also insert a stone on which the juvenile of *Pinna nobilis* is able to fix the byssus. This practice helps the *Pinna nobilis* in a subsequent transplant operation as it would avoid a second splitting of the byssus. It should be remembered that the cutting of the byssus cloth brings anyway a stress to the organisms, debilitating it and reducing the chances of survival.



Figure 6 Jute bag and Petri dish

For stabling and growth operations, attention must be given above all to maintaining the optimal chemical-physical conditions. Although the *Pinna nobilis* is a very resistant and adaptable bivalve mollusc (it survives even for short periods out of the water) we try not to produce large fluctuations in the tanks during normal maintenance operations. The photoperiod should be adjusted according to the seasonality of collection and gradually varied according to the progress of the seasons. As far as the growth is concerned, it is possible to proceed with the insertion of nutrients or, if the tank already has a started ecosystem (at least 5 cm of sediment, different stones, vegetable and animal organisms present) then it is also possible not to insert nutrients for the fans. If the tanks instead are only filled with water without any kind of ecosystem started, then it is recommended to insert once a week a microalgal culture concentrate in the tank.

To choose the most suitable algal culture for feeding *P. nobilis* you can proceed with monocultures (i.e. *Dunaliella tertiolecta*) or mix of algae monocultures available on the market. Usually available algae cultures are used because they are selected and free of other organisms. It is also possible to proceed with the culture starting from a sampling in seawater in the juvenile organisms sampling area, but this method does not guarantee the purity of the final result. Inside the taken water there are many predatory organisms of the seaweed and maybe even pathogenic organism for the fin, which in culture could even increase their population.

4. PROTOCOL FOR THE RESTORATION OF THE *PINNA NOBILIS*

The organisms, once they reach 10 cm in size inside the tanks, can be re-implanted in the final site. For the re-implantation of both juveniles and transplanted adult organism, it is sufficient to proceed with the choice of a suitable site for the transplantation of the organisms. In particular, it is important to make sure that the turbulence is not excessive in case of sea storms, as it could undermine the newly planted organisms.

We proceed with the excavation of a hole in the sediment either with sorbonne or by hand that is at least 1/3 of the total length of the organism. If, on the other hand, the organism has passed the "growth phase" in a jute bag, you can proceed with the insertion of the whole bag in the sediment. Within a few weeks the jute degrades.

5. PROTOCOL FOR THE COLLECTION OF MATERIAL FOR THE GENETIC ANALYSIS

This kind of protocol is intended for the detection of *Haplosporidium pinnae* infection. The material detected for genetic analysis is the faeces and pseudofaeces of the organisms. A diver dives into the site where the organisms to be monitored are located, equipped with 60 mL syringes and tubes for the collected material (10 mL tubes are sufficient) (Figure 7). The diver moves slowly to the living organism so as not to provoke a reaction in the body and thus miss the opportunity to collect the material. Once the syringe and tube are prepared, the syringe can be brought closer to the body and the pseudo-faeces present on the edge of the valve opening opposite the hinge can be aspirated. At that point the gills secrete this mucus which serves as protection against excessive sedimentation. If you want to take the fecal pellets you will have to pay attention to the exit of the cloacal channel of the organism that is more or less near them. If the organism does not emit, you can try knocking on a valve, in this way the organism will close and emit fecal

pellets. After sampling, biological material are conserved in alcohol (90°) and put in freezer at -80°C, ready for the genetic analysis.



Figure 7 Underwater operations

**ANNEX 3 – SHORT GUIDANCE FOR THE CONSTRUCTION, INSTALLATION AND
REMOVAL OF *PINNA NOBILIS* LARVAL COLLECTORS**



**SHORT GUIDANCE FOR THE
CONSTRUCTION, INSTALLATION AND
REMOVAL OF *PINNA NOBILIS* LARVAL
COLLECTORS**



D. K. Kersting^{1,2}, I. E. Hendriks³

¹ Departament de Biologia Evolutiva, Ecologia i Ciències Ambientals, Facultat de Biologia, Institut de Recerca de la Biodiversitat (IRBIO), Universitat de Barcelona, Spain.

² Working Group on Geobiology and Anthropocene Research, Institute of Geological Sciences, Freie Universität Berlin, Germany.

³ Global Change Research Group, Mediterranean Institute for Advanced Studies (IMEDEA, CSIC-UIB), Esporles, Spain

CONTEXT

An unprecedented mass mortality event is impacting *Pinna nobilis* populations throughout the Mediterranean Sea¹⁹ (Vázquez-Luis et al. 2017). The eventual recovery of impacted populations will depend mainly on the existence of unimpacted populations, resistant individuals and recruitment. Therefore, it is extremely important to assess larval recruitment to evaluate if larvae coming from unaffected sites or resistant individuals are reaching the impacted areas, thus potentially contributing to eventual recoveries.

Larval collectors have been successfully used to assess *P. nobilis* recruitment in different contexts and areas (Cabanellas-Reboredo et al. 2009, Kersting & García-March 2017, Wesselmann et al. 2018). Additionally, if needed, this methodology might eventually be used to provide juveniles to restock populations (Kersting & García-March 2017).

Here we describe how to construct, install and remove larval collectors in order to assess larval settlement in *P. nobilis*.

CONSTRUCTION

Collector bags

The collector bags consist of entangled nylon filament, onion bags or any similar material composed of fine filaments that endure underwater, placed inside polyethylene (or similar plastic) mesh bags (Fig. 1). Different designs can be applied here, the important thing is to have entangled filaments (settlement substratum for larvae) and a plastic mesh bag containing that substratum that acts as a protection against predators (but allows larvae to access the inner filaments). The outer plastic mesh bag must be securely closed using cord or nylon cable ties. At one of the ends the same cord used to close the bag can be used to anchor the bag to the main rope (see next step).

Entangled nylon can be obtained by recycling old trammel nets (or similar); usually fishermen throw them away when old or broken. This material can be reused many times if rinsed in water and dried after each use as larval collector. Onion or vegetable nets/bags can be obtained by recycling used ones or can be bought in gardening or agriculture shops (as well in internet shops).

¹⁹ <https://www.iucn.org/news/mediterranean/201907/mediterranean-noble-pen-shell-crisis-pinna-nobilis-june-2019-update>



Fig. 1. Two different bag designs. Left. Entangled nylon (trammel net) inside plastic mesh bags. Right. A similar outer plastic bag but using onion nets as substrata inside. Photographs: D. K. Kersting, I. Hendriks.

Main rope

The bags are attached to a main rope (Fig. 2). The whole system is fixed to a small concrete mooring (or similar, but it must be heavy enough to prevent dislocation by waves and currents) and the rope is kept vertical by a submerged buoy. Submerged buoys (depth > 3m) prevent the whole system to be seen from the surface and potential entanglements with boats.



Fig. 2. Collectors' bags attached to the main rope and buoy ready to be deployed. Photograph: D. K. Kersting.

There are several ways to distribute the bags along the rope. In deeper sites the bags can be attached in approx. 1,5 m intervals throughout the rope (Fig. 3), thus covering a wider depth range. In shallow sites the bags can be attached in a single point (Fig. 3). It has been observed that *P. nobilis* larvae settle in collectors in a wide depth range, so both deeper (for example 15 m) and shallower (for example 5 m) collector installations are possible.



Fig. 3. Larval collector bags attached in 1,5 m intervals in a deep site (left) and a shallow site installation (rightly). Photographs: D. K. Kersting, I. E. Hendriks.

INSTALLATION AND REMOVAL

Where?

The collectors should be preferably placed in a location exposed to open waters, as *P. nobilis* larvae are transported by currents. Of course, they can be installed as well in other sites if needed, for example to check for potential recruitment in semi-enclosed lagoons.

The presence of adult *P. nobilis* populations is not a prerequisite to install the collectors. They can be installed in locations where the species is not present or in areas where the ongoing mass mortality event has killed all individuals. *Pinna nobilis* larvae can travel long distances transported by currents, therefore the larvae arriving to a certain site may come from distant areas.

When?

The main reproduction period of *P. nobilis* is from May to August and the main settlement period is estimated to occur between July and September (in the W Mediterranean). These periods could change depending on environmental conditions (for example water temperature) in the different Mediterranean regions. We suggest installing the collectors in June and remove them in October-November. While this would be the ideal installation and removal period, later installations and removals are possible. It must be taken into account that later installations will lower the possibility of covering the whole main larval settlement period. While the main problem of a later removal of the collectors is a higher exposure to storms in some regions and the fact that at some point juveniles might not have enough room between the filaments to keep growing.

How to remove settled juveniles?

The collectors should be carefully removed, avoiding crushing the bags. The bags should be preferably maintained underwater until the removal of the juveniles.

At the end of the installation period juveniles' sizes (antero-posterior length) may range approx. from 0,5 – 9 cm. In general, they can be seen by the naked eye inside the tangled fibers (Fig. 4). They have to be removed carefully in order not to break the fragile valves. Juveniles should be immediately placed in seawater after their extraction from the collector bag (Fig. 4).



Fig. 4. *Pinna nobilis* juveniles settled inside the collectors. Notice different morphologies and sizes. Juveniles have to be kept in seawater immediately after extraction from the bags. Photographs: D. K. Kersting.

What to do with the juveniles?

Juveniles can be placed in protection cages in the field where they will continue growing, giving the possibility of re-implanting them in suitable substrata when a certain size is reached (Fig. 5). See Kersting & García-March (2017) for further information.

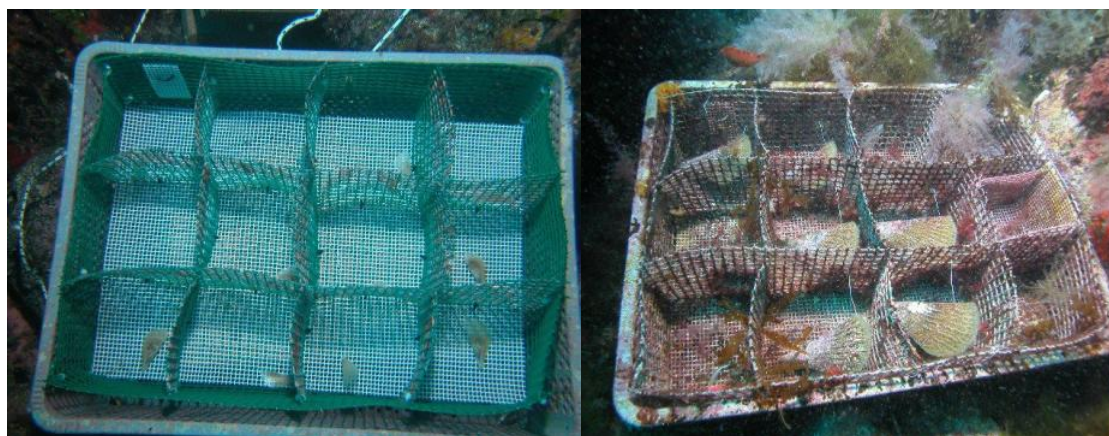


Fig. 5. Left. Juveniles just extracted from the collectors and placed in the protection cage (in the field). Right. *Pinna nobilis* individuals of approx. 2-3 years of age in the protection cage. Notice the photographs have been taken without the mesh protection covering the cages. Photographs: D. K. Kersting.

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Annex VI

Conditions and criteria for the award of the title of Regional Action Plan Partner

Conditions and criteria for the award of the title of Regional Action Plan Partner

BACKGROUND

1. In accordance with its mission, the Specially Protected Areas Regional Activity Centre (SPA/RAC) of the Mediterranean Action Plan (UNEP/MAP) is assisting the Contracting Parties to the Barcelona Convention in fulfilling their obligations under the SPA/BD Protocol, the Post-2020 Strategic Action Programme for the Conservation of Biological Diversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-200 SAPBIO) and the regional Action Plans and strategies to protect vulnerable habitats, endangered species, and areas of conservation interest.
2. Elaborating and implementing regional action plans to address threats to biological diversity within a common framework, namely the Barcelona Convention, is an effective way to step up efforts by the Mediterranean countries to safeguard the region's natural heritage. Although they do not have a binding legal character, these action plans set out the priorities and activities to be undertaken as defined and agreed with the Contracting Parties.
3. In all the action plans, coordination of efforts, cooperation and solidarity are a fundamental point. This approach has indeed proved necessary to ensure the conservation and sustainable management of biodiversity in the Mediterranean as a whole.
4. The Contracting to Barcelona Convention adopted the following Regional Action Plans:
 - Action Plan for the management of the Monk Seal
 - Action Plan for the conservation of marine turtles
 - Action Plan for the conservation of cetaceans
 - Action Plan for the conservation of marine vegetation
 - Action Plan for the conservation of bird species registered in Annex II of the SPA/BD Protocol
 - Action Plan for the conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean Sea
 - Action Plan concerning species introduction and invasive species
 - Action Plan for the conservation of the coralligenous and other calcareous bio-concretions in the Mediterranean Sea
 - 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
5. To encourage and reward contributions to the work of applying the Action Plans, the Contracting Parties may at their ordinary meetings grant the title of "Action Plan Partner" to any organization (governmental, NGO, economic, etc.) that has to its credit concrete actions likely to help the conservation and the protection of the species/group of species in question.
6. Within the PoW 2022-2023, SPA/RAC is requested to develop conditions and criteria for the award of the title of Regional Action Plan Partner (Activity 5.4.4.a). These Conditions and criteria for the awarding of the Partner title are submitted for review by the sixteenth SPA/BD Focal Points meetings, the MAP Focal Points and adoption by the 23rd Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (COP 23).
7. The following draft criteria take into consideration the decision on MAP/Civil society cooperation and Partnership (UNEP(DEPI)/MED WG 337/8) adopted by 16th meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (COP 16).

CONDITIONS AND CRITERIA FOR THE AWARD OF THE TITLE OF REGIONAL ACTION PLAN PARTNER

The present conditions and criteria will apply to the evaluation of proposals for the awarding and the renewal of the awarding of the title of Regional Action Plan Partner.

No limit is set on the total number of the Partner to the Regional Action Plan. However, Parties agree that the awarding will be based the following criteria. Any Organization can request the title of Partner for more than one Action Plan.

1. General conditions and criteria

1.1. Types of organizations eligible for the title of Regional Action Plan Partner:

- International and regional organizations
- International and regional NGOs
- National organisations
- National and local NGOs from Mediterranean riparian states.
- Research institutions/Laboratories
- Private organizations/ companies (environmental responsibility)
- Any other organization which so requests, and which carries out, or supports (financially or otherwise) the carrying out of concrete actions (conservation, research, etc.) likely to facilitate the implementation of the concerned Action Plan, taking into account the objectives and priorities contained therein.

1.2. General conditions of candidate partners:

- a) be representative in the field(s) of their competence and fields of action related to the concerned Action Plan(s)
- b) be able, through their work and specific project or programme, to support the achievement of the objectives and the implementation of the concerned Action Plan(s)
- c) be able to make known the concerned Action Plan(s) in the region and/or their respective countries and to contribute, through a specific event or manifestation linked to public awareness-raising.
- d) be able to provide, through their specific activity or experience, expert advice and/or best practices on the definition of objectives, priorities and actions for the concerned Action Plan(s)
- e) be able to provide information or views related to their own area(s) of expertise, either on their own initiative or at the SPA/RAC request.

2. Specific conditions and criteria

2.1. Awarding criteria:

Candidate partners at the time of submitting request to become an action plan partner should fulfil the following criteria:

1. to have legal status; terms of reference, objectives and scope of activities related to one or more SPA/RAC areas of activity and objectives and the scope genuinely related to the concerned Action Plan(s)

2. to have existed for at least 5 years.
3. to submit financial and activity reports from the last two years.
4. to have their regional office or headquarters in a Mediterranean country.
5. to demonstrate proof of general or specialized, technical or scientific competence on issues related to the activities of SPA/RAC and the concerned Action Plan(s)
6. to demonstrate what contributions the partner could make the concerned Action Plan(s).

2.2. Awarding procedure:

- a) The concerned organization should send a request to SPA/RAC, using the form in Annex 1, at least 90 days before the Meeting of SPA/BD Focal Points. The proposal must be submitted either in English or in French.
- b) SPA/RAC will consult with the concerned focal point about the received request of National organisations, National and local NGOs and research institutions/laboratories
- c) SPA/RAC will then forward a copy of the proposal in its original version with the recommendation of the concerned focal Point, to the MAP Coordinator.
- d) SPA/RAC will proceed to the translation of the original version so that the proposal may be submitted in English and French at least a month before the Focal Points meeting, which will proceed to evaluate it in the light of the above agreed criteria using the table in annex II.
- e) The meeting of SPA/BD Focal Points will examine the request accompanied by the evaluation by the Centre and will decide where to award or not the Regional Action Plans Partner title.
- f) Once approved by meeting of SPA/BD Focal Points, the candidate partner will be notified by official communication from SPA/RAC, including duration of the award and a request to nominate a contact person to ease coordination with the Centre.

2.3. Renewal of awarding:

- a) Award will be renewed every five years, when the implementation of the concerned Action Plan (s) is assessed and the Action Plan updated, the partner organisation should request the Centre to renew their awarding of the Regional Action Plan Partner title.
- b) The request should show what contribution the partner organisation has made to the implementation of the concerned Action Plan (s)

2.4. Awarding Renewal procedure:

The same procedure as the initial awarding applies.

2.5. Effects of awarding

- a) SPA/RAC shall draw up a list of Action Plan's partners and update it for each meeting of SPA/BD Focal Points, drawing a distinction between the category of the organisation.
- b) SPA/RAC shall set up a mechanism for regular dialogue between the Partners and, where necessary, organize meetings to this effect. Dialogue should be made mainly by email and tele-conference.

- c) Selected partners can be invited to attend expert meetings to update an action plan, and/ or invited to the meetings of SPA/BD Focal Points to provide expert inputs with status of observers in the meeting.

2.6. Partner title award levels

- a) **Bronze partner:** A partner of regional action plan, during the first 5 years of partnership,
- b) **Silver partner:** A partner who completed the bronze partner period, for the implementation of respective Action Plan. The silver badge should be granted for 5 years.
- c) **Golden partner:** A partner who completed the silver partner period for the implementation of respective Action Plan. The Golden badge should be granted for 10 years, with progress assessment at the 5th year.
- d) **Associate/Affiliate partner:** is the final level that granted to a Golden Action Plan partner, who successfully maintained a continuous commitment in action plan implementation for 10 consecutive years.

2.7. Withdrawal of awarding

A Total lack of participation in the implementation of the concerned Action Plan (s) over a period of 5 years will lead to the awarding being automatically cancelled following a hearing with the concerned Partner.

Following a formal request from the partner organisation in question if it deems that the partner organisation is no longer meets the accreditation criteria or has shown no further interest in Action Plan implementation related activities, the meeting of SPA/BD Focal may withdraw the awarding of title. The concerned organization should send the request to SPA/RAC, at least 90 days before the Meeting of SPA/BD Focal Points

1. Annex I : Application form for the Action Plan Partner title

Part A	Select an Action Plan	
☐ Action Plan for the management of the Monk Seal	☐ Action Plan for the conservation of marine turtles	
☐ Action Plan for the conservation of bird species registered in Annex II of the SPA/BD Protocol	☐ Action Plan for the conservation of marine vegetation	
☐ Action Plan concerning species introduction and invasive species	☐ Action Plan for the Conservation of the Coralligenous and Other Calcareous Bio-concretions in the Mediterranean Sea	
☐ 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)	☐ Action Plan for the conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean Sea	
	☐ Action Plan for the conservation of cetaceans	
Part B	General Information	
1.	Name and acronym of the organization (in English and French)	
2.	Organization HQ address	
	Street	
	City & Zip Code	
	Country	
	Tel	
	Email	
	Web site	
3.	Year of foundation	
4.	Type of organization (Association; federation, foundation, professional organization, umbrella organization)	
5.	Organizational status	
	President of the organization Name: Surname: Address: Tel: Email:	
	Secretary General of the organization Name: Surname: Address: Tel: Email:	
	Structure and functioning of directing bodies	
	Staff	

	Number of members	
6.	Funding	
a)	Membership fees	
b)	Public funding	
c)	Private donations	
d)	Other, please specify	
7.	Purpose <i>Please describe briefly the goals, mandate or mission of your organization</i>	
8.	Activities of your organization <i>Please describe activities of your organization</i>	
9.	Constituency <i>Please describe briefly the support base (members/supporters/donors) of your organization</i>	
10.	Accreditations <i>Accreditation with other international intergovernmental organizations</i>	
11.	Publications	
	<i>Titles/Numbers</i>	
	Does your organization publish an annual report?	☐ Yes ☐ No
	Does your organization produce a list of available publications and or educational matters?	☐ Yes ☐ No
Part C	Areas of possible cooperation with SPA/RAC	
	Please indicate the areas of your organization's activities which correspond to the SPA/RAC programme of activities and Action Plans	
	☐ Governance for environment and development	
	☐ Integrating environment in development	

	☐ Legal aspects of implementation of the Barcelona Convention and its Protocols	
	☐ Pollution control and prevention	
	☐ Biodiversity conservation	
	☐ Integrated coastal zone management/Ecosystem management	
	☐ Scientific Research	
	☐ Sustainable management of natural resources and efficient use of resources	
	☐ Public participation and awareness	
Part D	Modalities of Cooperation with SPA/RAC	
1.	In what ways does your organization think it can support SPA/RAC activities and the objectives of the selected Action Plan? <i>(Please describe: Studies, reports, previous work in the field concerned, expertise of its members, etc)</i>	
2.	What practical cooperation has already been established with SPA/RAC and/or other RACs? <i>(Please describe joint activities, comments on draft documents, exchange of information, participation as experts, participation at SPA/RAC meeting and events, etc)</i>	
3.	In what ways and audiences will your organization promote the work and development of the SPA/RAC?	

Name:

Position in the Organization:

Date:

Stamp & Signature:

Please send your completed form and required documents by email to: car-asp@spa-rac.org

Please enclose all the documents required to support your application for action plan partner title:

Submission checklist:

- ☐ Cover letter addressed to the SPA/RAC Director
- ☐ Read and endorsed the action plan partner conditions and criteria
- ☐ Completed application form
- ☐ Copy of the statute
- ☐ Financial reports of the past two years
- ☐ Annual reports of the past two years, highlighting the activities
- ☐ Copies of the organization's publications

2. Annex II: Evaluation table for applications to Action Plan partner title status

	Requirement	Check
Part A	One Action Plan is selected	☐
Part B	General Information	
1.	Name and acronym of the organization (in English and French)	☐ ☐
2.	Organization HQ address	☐
3.	Year of foundation	☐
4.	Type of organization (Association; federation, foundation, professional organization, umbrella organization)	☐
5.	Organizational status	☐
	President of the organization details provided	☐
	Secretary General of the organization details provided	☐
	Structure and functioning of directing bodies	☐
	Staff details provided	☐
6.	Funding details provided	☐
8.	Activities of your organization provided	☐
9.	Constituency information provided	☐
10.	Proof of other Accreditations provided	☐
11.	Publication's list provided	☐
	Copies of the organization's annual reports provided?	☐ Yes ☐ No
	Copies of the organization's publications provided?	☐ Yes ☐ No
Part C	The organization provided enough information on areas of possible cooperation with SPA/RAC	☐ Yes ☐ No
Part D	The organization provided enough information modalities of Cooperation with SPA/RAC	☐ Yes ☐ No

Annex VII

Conclusions and recommendations of the Multidisciplinary group of experts nominated by the Contracting Parties to define parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators and elaborate the List of Reference of Pelagic Habitat Types in the Mediterranean Sea

Conclusions and recommendations of the Multidisciplinary group of experts nominated by the Contracting Parties to define parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators and elaborate the List of Reference of Pelagic Habitat Types in the Mediterranean Sea

Definition of parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators

1. Overall, while there has been progress in developing indicators based on phytoplankton and zooplankton, continued research and development are needed to define these indicators and improve their usefulness for assessing and managing pelagic habitats.
2. First, the relationships between changes in these organisms and broader ecosystem health can be complex and variable depending on the pressure and the considered spatial and temporal scales. For example, in some cases, high phytoplankton abundance may be indicative of eutrophication and poor water quality, while in other cases, it may simply reflect natural seasonal variability and associated processes (e.g., winter convection in the north-western Mediterranean Sea). Therefore, more research is needed to define specific indicators that are the most informative for different types of pressures, to better understand and study how these indicators reflect to different pressures (at different spatio-temporal scales) and how they should be interpreted. In addition, there is a strong need for collaboration among experts from different scientific fields and marine regions to define common indicators and thresholds and, finally, to investigate the links between indicators, environmental variables, and anthropogenic pressures.
3. The main pressures identified so far on pelagic habitats are:
 - hydroclimatic conditions and shifts that should be considered in light of climate change;
 - Eutrophication;
 - Biological invasions;
 - Contaminants (chemicals and marine litter);
 - Overfishing;
 - Aquaculture;
 - Physical disturbance due to the influence of man-made structure (wind farms, desalination plants, hydrocarbon drilling, marinas etc.);
 - Acidification;
 - Maritime traffic.
4. As pelagic habitats are closely linked to several Ecological Objectives of the EcAp like EO5 Eutrophication and EO9 Pollution, it is important to enhance synergy and better integration among Ecological objectives (by improving data collection and sharing, data harmonization and interoperability, etc.)
5. Monitoring and assessing phytoplankton and zooplankton communities can be logistically challenging. Therefore, there is a need to develop efficient, harmonised and cost-effective monitoring methods that can be applied across the region. Specific workshops should be organised for harmonizing sampling strategies and protocols. Ensuring parameter comparability is also crucial and can be achieved through the use of comparable acquisition methods and/or intercomparison/intercalibration exercises. This is necessary to evaluate whether and how the results obtained are influenced by the acquisition methods used.
6. Long-term series of data are critical for using indicators based on phytoplankton and zooplankton effectively. Without sufficient long-term data, it is impossible to distinguish between natural variability and anthropogenic impacts, making it challenging to identify trends or changes. It is also critical to provide associated metadata wherever available in to ensure the quality and comparability of the data collected over time to validate whether observed changes are not explainable

by changes in acquisition techniques (e.g., to verify whether observed changes are not explainable by changes in methodologies (sampling techniques, sample processing, different analysts)).

7. ABIOMMED project, and in particular the Activity 2, is related to pelagic habitat and the use of the plankton communities to properly address the status of pelagic habitat and relevant spatio-temporal scales and pressures. Under this concept, ABIOMMED is expected to provide a comprehensive input and the essential resources to contribute to the development of relevant IMA biodiversity indicators based on phytoplankton and zooplankton.

8. The following parameters can be used to effectively use these organisms as indicators:

- Biomass (Chla, Carbon)
- Abundance (per species/genus or groups)
- Size and biovolume

9. Setting thresholds is a difficult task and could be challenging (Varkitzi et al. 2018²⁰). Using trends, i.e., considering plankton indicators as surveillance indicator (e.g., Shephard et al. 2015²¹; Bedford et al. 2018²²) with the addition of expert knowledge following indicator computation, could be a reasonable alternative and was recently proposed by McQuatters-Gollop et al. (2022)²³ for biodiversity assessment.

10. Monitoring frequency should be adapted to integrate Seasonal and long-term temporal variability and rely on existing data.

11. Abiotic parameters could be measured at the relevant space and time to interpret the changes in plankton communities:

- Water Temperature
- Salinity
- Transparency
- Oxygen
- Turbidity
- pH
- Nutrients concentration
- Meteorological data (air temperature, precipitation, wind intensity and direction, etc.)

²⁰ Varkitzi, I., Francé, J., Basset, A., Cozzoli, F., Stanca, E., Zervoudaki, S. et al. (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.

²¹ Samuel Shephard, Simon P. R. Greenstreet, GerJan J. Piet, Anna Rindorf, Mark Dickey-Collas, Surveillance indicators and their use in implementation of the Marine Strategy Framework Directive, *ICES Journal of Marine Science*, Volume 72, Issue 8, September/October 2015, Pages 2269–2277, <https://doi.org/10.1093/icesjms/fsv131>

²² Jacob Bedford, David Johns, Simon Greenstreet, Abigail McQuatters-Gollop, Plankton as prevailing conditions: A surveillance role for plankton indicators within the Marine Strategy Framework Directive, *Marine Policy*, Volume 89, 2018, Pages 109-115, ISSN 0308-597X, <https://doi.org/10.1016/j.marpol.2017.12.021>.

²³ A. McQuatters-Gollop, L. Guérin, N.L. Arroyo, A. Aubert, L.F. Artigas, J. Bedford, E. Corcoran, V. Dierschke, S.A.M. Elliott, S.C.V. Geelhoed, A. Gilles, J.M. González-Irusta, J. Haelters, M. Johansen, F. Le Loc'h, C.P. Lynam, N. Niquil, B. Meakins, I. Mitchell, B. Padegimas, R. Pesch, I. Preciado, I. Rombouts, G. Safi, P. Schmitt, U. Schückel, A. Serrano, P. Stebbing, A. De la Torriente, C. Vina-Herbon, Assessing the state of marine biodiversity in the Northeast Atlantic, *Ecological Indicators*, Volume 141, 2022, 109148, ISSN 1470-160X, <https://doi.org/10.1016/j.ecolind.2022.109148>.

The measurement of weather conditions cannot be considered only on the day of collection of the plankton community. Conditions that prevailed prior to data collection (t-1) can explain the structure and dynamics of the communities at time t.

Elaboration of the List of Reference of Pelagic Habitat Types in the Mediterranean Sea

12. The meeting confirmed that the modified classification of pelagic habitat types in the epipelagic layer (0-200 m) proposed in UNEP/RAC/SPA (2013)²⁴, can be used, where necessary, as a basis for identifying reference pelagic habitats to be monitored and assessed at the national level under IMAP. This reference list could be further developed at national level to consider national features and specificities.

13. The group of experts did not reach a conclusion concerning whether the typology defined for pelagic habitats will be computed at seasonal scale or more frequently over a given period (i.e., 6-year cycle) and recommended that the point be discussed in the future.

14. It will be necessary to phase the typology definition for pelagic habitats with the areas of assessment defined for other Ecological Objectives (EO 5 Eutrophication – EO 9 Pollution) given eutrophication and pollution can act as pressures that should be considered in coherent spatial scales.

15. Frequency of the sampling depends on the proposed typology, on the resources available and on plankton dynamics and should be adapted at a minimum to the temporal scale of the typologies used.

16. Satellite-derived products for chlorophyll-a are valuable tools for acquiring data offshore because they are regularly validated and calibrated with in-situ data and account for reprocessing phases undertaken by NASA and ESA. These products rely on look-up tables to convert satellite measurements into estimates of chlorophyll-a concentrations, making them an effective way to complement in-situ data collection. However, it is important to note that satellite-derived products have limitations, such as limited spatial and temporal resolution, and should be used in combination with in-situ data to provide a more comprehensive understanding of pelagic habitats. Different products developed for Eutrophication (Common Indicator 14) were provided for the QSR Med Assessment 2023. They concern distinct contracting parties and rely on CMEMS product, French products developed by Argans and Spanish products (for the Alboran Sea). Ongoing works aim to compare the results given by these different products on eutrophication assessment (Chl a – Common Indicator 14).

17. The Draft reference list of pelagic Habitat Types for the epipelagic layer (0-200m) is as follows:

Draft reference list of pelagic Habitat Types for the epipelagic layer (0-200m) *

	Pelagic Habitat Types	Water mass	Comments**
A.1.	Reduced salinity water	coastal lagoons	WFD correspondence ²⁵
A.2.	Variable salinity water – high surface or subsurface CHL (>3 mg/m ³)	estuaries, river plumes	Transitional waters with

²⁴ UNEP/RAC/SPA, 2013: http://www.rac-spa.org/nfp11/nfpdocs/working/WG_382_11_ENG_1706.pdf

²⁵ European Commission Decision 2018/229/EU establishing, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, the values of the Member State monitoring system classifications as a result of the intercalibration exercise, and repealing Commission Decision 2013/480/EU (notified under document C (2018) 696) <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018D0229&from=PL>

			WFD correspondence ²⁶ (Values should be revised)
A.3.	Marine water: neritic - medium surface or subsurface CHL (0.5-3 mg/m ³)	upwellings, re-suspension in shallow waters and outskirts of river plumes, winter mixing areas	WFD water type II, type III
A.4.a	Marine water: oceanic - medium surface or subsurface CHL (0.5-3 mg/m ³)	Upwellings, and winter mixing areas	WFD water type III
A.4.b	Marine water: oceanic - low to medium surface CHL (~0.1-1.0 mg/m ³)	Hydrological features (fronts and gyres)	WFD water type III
A.5.a.	Marine water: oceanic - very low surface CHL (<0.1 mg/m ³) with deep CHL maximum	euphotic depth > mixed layer depth	WFD water type III
A.5.b.	Marine water: oceanic - very low surface CHL (<0.2 mg/m ³) without deep CHL maximum	euphotic depth < mixed layer depth	WFD water type III

* This list can be used, where necessary, as a basis for identifying reference pelagic habitats to be monitored and assessed at the national level under IMAF. This reference list could be further developed at national level to consider national features and specificities.

**Each country should specify the range of CHLa, Salinity, depth and if annual/seasonal values are used

²⁶ WFD Annex 2 part 1.2.3. defines Transitional waters. see also Guidance document n.o 5 , Transitional and Coastal Waters, Typology, Reference Conditions and Classification Systems and Water Framework Directive Intercalibration Technical Report - Part 3: Coastal and Transitional Waters

Decision IG.26/6

**Regional Plan on Agriculture Management in the Framework of Article 15
of the Land-Based Sources and Activities Protocol (LBS Protocol)**

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

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

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility,”

Recalling also the United Nations Environment Assembly resolution of 15 March 2019, UNEP/EA.4/Res. 21, entitled “Towards a pollution-free planet,”

Recalling further the United Nations Environment Assembly resolutions of 6 December 2017, UNEP/EA.3/Res.10 “Addressing water pollution to protect and restore water-related ecosystems;” of 15 March 2019, UNEP/EA.4/L.12 “Protection of the marine environment from land-based activities;” and of 2 March 2022, UNEP/EA.5/Res.2 “Sustainable nitrogen management;” UNEP/EA.5/Res.7 “Sound management of chemicals and waste;” as well as UNEP/EA.5/Res.11 “Enhancing circular economy as a contribution to achieving sustainable consumption and production,”

Having regard to the Barcelona Convention and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities (LBS Protocol), specifically Article 5 thereof, providing for the elaboration of national and regional action plans and programmes, containing measures and timetables for their implementation; and Article 15 (paragraph 3) thereof, stipulating the legally binding nature of measures and timetables,

Recalling Decision IG.24/10 on the Main Elements of the Six Regional Plans to Reduce/Prevent Marine Pollution from Land-Based Sources adopted by the Contracting Parties at their 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019),

Noting with concern the excessive levels of nutrients and pollutants originating from agriculture that significantly impact terrestrial, freshwater, coastal and marine ecosystems,

Conscious of the urgent need to enhance action in synergy with relevant regional and global initiatives, such as UNEP’s Global Partnership for Nutrient Management (GPNM), the European Green Deal (2019), and UfM Water Agenda,

Recalling Decision IG.19/5 on Mandates of the Components of MAP (COP 16) (Marrakesh, Morocco, 3-5 November 2009), and in particular the mandate of the Mediterranean Pollution Assessment and Control Programme (MED POL),

Having considered the report of the MED POL Focal Points Meeting (Athens, 24-26 May 2023), as well as the reports of the First and Second Meetings of the Working Groups of Designated Experts for Developing the Regional Plans on Agriculture, Aquaculture and Urban Stormwater Management in the Mediterranean (Athens, October 2022 and May 2023),

1. *Adopt* the Regional Plan on Agriculture Management in the framework of Article 15 of the LBS Protocol, set out in Appendix I to this decision;
2. *Take note of* the workplan with timetable for implementation of articles of the Regional Plan on Agriculture Management, set out in Appendix II to this decision;
3. *Call upon* the Contracting Parties to effectively implement the Regional Plan on Agriculture Management and to report to the Secretariat, accordingly, as provided for in its Article 8;
4. *Request* the Secretariat (MED POL) to provide, upon request and subject to availability of funds, the necessary assistance to the Contracting Parties for the implementation of the measures provided for in the Regional Plan on Agriculture Management;
5. *Urge* the Contracting Parties, intergovernmental organizations and donor agencies to contribute to the implementation of the Regional Plan on Agriculture Management based on their specific mandates.

APPENDIX I
Regional Plan on Agriculture Management

Regional Plan on Agriculture Management

ARTICLE I Definition of Terms

For the purpose of this Regional Plan on Agriculture Management; hereinafter referred to as the “Regional Plan”:

- a. “Anaerobic digestion” is a process through which bacteria break down organic matter—such as animal manure, wastewater biosolids, and food wastes—in the absence of oxygen.
- b. “Annual crop” is any plant that completes its life cycle in a single growing season. The dormant seed is the only part of an annual that survives from one growing season to the next. Annuals include wildflowers, garden flowers and vegetables.
- c. “Bio-energy” means energy for industrial or commercial use that is derived from biological sources (such as plant matter or animal waste).
- d. “Uptake curve, nutrient” means the measurement of growth and consumption of nutrients by crops at various physiological stages: vegetative, flowering period and fruit development.
- e. “Extended Producer Responsibility” means a set of measures taken by Contracting Parties to ensure that producers of products bear financial responsibility or financial and organizational responsibility for the management of the waste stage of a product’s life cycle.
- f. “Fertigation” means the practice of applying fertilizers together with irrigation water and not in a separate operation, more often advocated for use with drip irrigation systems than with conventional flood irrigation. In principle, all required nutrients including micronutrients can be applied through fertigation.
- g. “Fertilizer”: any material, applied or intended to be applied on plants or their rhizosphere or on mushrooms or their mycosphere, or intended to constitute the rhizosphere or mycosphere, either on its own or mixed with another material, for the purpose of providing the plants or mushrooms with nutrient or improving their nutrition efficiency.
- h. “Framework conditions” entail the creation of knowledge, market conditions, access to finance, regulations and support mechanisms.
- i. “Good Agricultural Practices (GAP)” are collection of principles to apply for on-farm production and postproduction processes, resulting in safe and healthy food and non-food agriculture products, while taking into account economic, social and environmental sustainability.
- j. “Integrated Pest Management (IPM)” means careful consideration of all available plant protection methods and subsequent integration of appropriate measures that discourage the development of populations of harmful organisms and keep the use of plant protection products and other forms of intervention to levels that are economically and ecologically justified and reduce or minimize risks to human health and the environment.
- k. “Irrigation” is the artificial application of water to land to assist in the growing of crops and pastures. It is carried out by irrigation methods under pressure (such as sprinkler, drip and spray irrigation) or by pumping water onto the land (flood irrigation).
- l. “Manure”, for the purpose of this Regional Plan, means waste products and organic matter excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed forms.

- m. “Percolation” means the downward movement of fluid (water or waste effluent) in soil.
- n. “Permanent crops” are non-rotational crops other than permanent grasslands and permanent pasture that occupy the land for five years or more, and that yield repeated harvests, including nurseries and short rotation coppice.
- o. “Pesticide” means chemical substance used to control harmful insects, small animals, wild plants, and other unwanted growth of organisms. The pesticides that farmers spray on their crops control pests; they may also damage people's health and biodiversity.
- p. “Precision agriculture” means the application of external inputs, including but not restricted to water, fertilizers and pesticides, following the temporal and spatial variability of crop requirements.
- q. “Runoff” means water that runs off the soil surface instead of infiltrating: the process of running off.
- r. “Tillage, soil” means mechanical manipulation of soil to control weeds and pests and to prepare for seeding.
- s. “Trend monitoring” is to detect site-specific temporal trends of selected contaminants at designated hotspot sites in the coastal marine environment with the aim to monitor the effectiveness of control measures taken at pollution hotspots with long-term data of several decades or more.

ARTICLE II

Scope and Objective

1. The area to which the Regional Plan applies is the area defined in accordance with Article 3 of the LBS Protocol, consisting of the Mediterranean Sea Area as defined in Article 1 of the Convention; the hydrologic basin of the Mediterranean Sea Area; waters on the landward side of the baselines from which the breadth of the territorial sea is measured and extending, in the case of watercourses, up to the freshwater limit; brackish waters, coastal salt waters including marshes and coastal lagoons; and ground waters communicating with the Mediterranean Sea.
2. The Regional Plan shall apply to the agricultural sector in the coastal regions or hydrologic basins discharging pollutants into the Mediterranean Sea.
3. The objective of the Regional Plan is to reduce and further prevent pollution caused or induced by fertilizers, pesticides and waste generated from agricultural activities, as well as to promote aspects related to sustainable agriculture.

ARTICLE III

Preservation of Rights

4. The provisions of this Regional Plan shall be without prejudice to stricter provisions respecting the management of agricultural activities contained in other existing or future national, regional or international instruments or programs.

ARTICLE IV

Guiding Principles

5. The Regional Plan measures are formulated in line with the following principles:
- a) Sustainable agriculture is linked to efficient, economically viable agricultural production systems that preserve and protect biodiversity, optimize the use of natural resources, and contributes to climate change adaptation and mitigation.
 - b) Preventing nutrient pollution caused or induced from agricultural sources is key to protect human health and living resources, as well as aquatic ecosystems.
 - c) Runoff is a critical factor that drives the transfer of excess of nutrients, pesticides, and waste and particularly plastic waste into the Mediterranean Sea.
 - d) The efficient use of irrigation water and the appropriate operation of irrigation systems adapted to the characteristics of soil, climatic conditions, and crops types, are essential to minimize surface runoff and regulate water percolation.
 - e) Overuse and other inappropriate uses of pesticides contribute to the contamination of soil, water, air, and adversely impacts biodiversity with detrimental effects on plant, animal, and human health.

ARTICLE V

Measures

- I. Regulatory Framework for Reduction of Inputs of Pollutants and other Wastes from Agricultural Activities
6. By 2028, the Contracting Parties shall establish a regulatory framework with the objective to reduce and further prevent pollution caused or induced by pollutants and other wastes discharged from agricultural activities. To this aim, the Contracting Parties shall consider the following four key aspects, as appropriate:
- a) Nutrients discharged from agricultural activities that contribute to the eutrophication of coastal waters by land-application of inorganic and organic fertilizers and manure. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex I.
 - b) Irrigation water runoff and percolation that contribute to the transfer of excess of nutrients, pesticides, waste and particularly plastic waste to the marine environment. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex II.
 - c) 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. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex III.
 - d) Good management practices that contribute to reducing plastic waste generation from agricultural activities in the context of sustainable consumption and production and circular economy. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex IV.

II. Implementation of Measures for Reduction of Inputs of Pollutants and other Wastes from Agricultural Activities

7. By 2030, the Contracting Parties shall to the extent possible, 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) for reducing inputs of pollutants and other wastes from agricultural activities.
8. By 2030, the Contracting Parties shall to the extent possible, 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).
9. By 2030, the Contracting Parties shall, to the extent possible, designate “vulnerable zones” as all known areas of agricultural land which drain into, and contribute to eutrophication of, coastal waters. To this aim, the Contracting Parties shall:
 - a) Notify the Secretariat to the Barcelona Convention of this initial designation within 6 months;
 - b) Monitor the trend and measure the concentrations of nutrients discharging into coastal waters further to the guiding elements to be considered for the procedure set in Annex V;
 - c) Agree on pollution reduction targets of excess of nutrients further to the outcomes of trend monitoring as per paragraph (9.b) and Annex V;
 - d) Implement appropriate response measures to reduce the sources of excessive discharges of nutrients as per reduction targets set for vulnerable zones in paragraph (9.c); and
 - e) Evaluate, revise or add new designations of vulnerable zones every five years.

III. Implementation of Measures Contributing to Sustainable Agriculture

10. By 2030, the Contracting Parties shall to the extent possible, 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. To this aim, the Contracting Parties shall establish the framework conditions to support farmers, as appropriate, to implement:
 - a) Integrated approaches for the supply of nutrients to crops taking into account the residual content of nutrients in the soil, nutrient content in irrigation water (fresh and treated wastewater), and available nutrients in fertilizers and manure.
 - b) Farming practices that reduce erosion by protecting the soil surface and allowing water to infiltrate instead of running off (conservation tillage, cover crops, etc.)
 - c) Climate-smart agricultural practices (e.g. solar pumping, precision agriculture, etc.) to reorient agricultural systems to first effectively support development and ensure food security in a changing climate; and second to optimize use of resources (land, water and external inputs).
 - d) Renewable energy technologies and increased efficiency processes through improvements in food production, processing and distribution.

ARTICLE VI

Technical Assistance, Transfer of Technology and Capacity Building

11. For the purpose of facilitating the effective implementation of Article V of this Regional Plan, the Contracting Parties collaborate to implement, exchange and share best agricultural practices for reduction of inputs of pollutants and other wastes from agricultural activities, directly or with the support of the Secretariat. To this aim, the Contracting Parties also collaborate in preparing and implementing common technical guidelines.

ARTICLE VII

Timetable for Implementation

12. The Contracting Parties shall implement the measures included in this Regional Plan as per the timelines associated with these measures.

ARTICLE VIII

Reporting

13. The Contracting Parties shall 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.

ARTICLE IX

Entry into Force

14. The present Regional Plan shall enter into force and become binding on the 180th day following the day of notification by the Secretariat in accordance with Article 15, paragraphs 3 and 4, of the LBS Protocol.

ANNEX I

Guiding Elements for Establishment of the Regulatory Framework for Reducing Nutrients Inputs from Fertilizers and Manure for implementing Article V on Measures

With the view to implementing Article V.6(a) on the reduction of pollution caused by inputs of nutrients in fertilizers and manure from agricultural activities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Needs of plants for nutrients.¹
- b) Soil characteristics.
- c) Land slope.
- d) Climate characteristics.
- e) Conditions for sowing and planting.
- f) Distance to water bodies, and the seashore.
- g) Capacity and storage of manure and means to avoid spills.
- h) Method of application of fertilizers and manure: efficient use of mechanical fertilizer and manure spreaders and fertigation including performance control.
- i) Stabilization treatment of manure before application: composting or others for the solid fraction; volume reduction of the liquid fraction and diluted slurries; and reduction of nitrogen content in the liquid (ammonia stripping and absorption, nitrification-denitrification) and/or phosphorus.
- j) Reducing nitrate (N) and phosphorus (P) leaching from manure: converting breeding farms into an isolated bubble where runoff from the surroundings and the uncontrolled outflow of liquids from the farm are avoided; applying anaerobic digestion and bio energy to produce N rich (bio-slurry) organic fertilizer and reduce GHG emissions; and producing liquid fertilizers from aerobic decomposition of organic waste as well as fertilizers from composting processes.

¹ The information will be obtained by reviewing the existing knowledge in the country or by cooperating with other countries and promoting field research when there is a gap in knowledge. The information should include the total nutrient uptake and the uptake according to crop development periods during the growing season (i.e. uptake curves).

ANNEX II

Guiding Elements for Establishment of the Regulatory Framework for Control of Surface Runoff from Agricultural Activities for implementing Article V on Measures

With the view to implementing Article V.6(b) on the control of irrigation water runoff and regulating water percolation to limit the transfer of excess of nutrients, pesticides, waste and particularly plastic waste generated from agricultural activities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) The needs of water to be applied to main annual and permanent crops, using existing information or conducting field experiments that should close the existing data gap.
- b) Use of control methods (based on soil and crop measurement) to support irrigation management decisions by the farmers.
- c) Calibrating water consumption to actual crop-related water demands.
- d) Adoption of pressure irrigation systems to improve water use efficiency.
- e) Establishment of artificial drainage systems.
- f) Application of soil salinity management and use of equilibrated leaching doses including establishment, if necessary, of artificial drainage systems.
- g) Conservation tillage methods according to the characteristics of soils, crops, and climatic conditions with the aim of regulating water percolation and minimizing surface runoff and resulting erosion.
- h) Use of cover plants to increase water penetration into the soil and reduce evaporation.
- i) Promotion of nature-based solutions to minimize unnecessary use and pollution of water resources.
- j) Consideration of crop cycles and crop varieties adapted to water availability.
- k) Promotion of water reuse and water harvesting techniques.

ANNEX III

Guiding Elements for Establishment of the Regulatory Framework for Promoting Integrated Pest Management in Agriculture for implementing Article V on Measures

With the view to implementing Article V.6(c) on the promotion of Integrated Pest Management practices for low-pesticide-input pest management in Agriculture, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Setting action thresholds, a point at which pest populations or environmental conditions indicate that pest control action must be taken based on results of monitoring. In case of need of intervention, preference to be given to non-chemical, physical and biological solutions or low-risk plant protection products.
- b) Application of cultural control practices that reduce pest establishment, reproduction, dispersal and survival, such as rotating between different crops, selecting pest-resistant varieties, and planting pest-free rootstock.
- c) Restricting practices that accelerate pesticides contamination such as use of aircrafts.
- d) Application of methods and tools for monitoring of harmful and beneficial organisms and use of forecast models.
- e) Application methods of pesticides: use of authorized formulas based on clear criteria of adaptation between the type of pest and the formula used, dose, indication of the correct moment of application, and appropriate use of spraying equipment.
- f) Preventing the spreading of harmful organisms by hygiene measures (e.g. by regular cleansing of machinery and equipment).
- g) Protection and enhancement of important beneficial organisms, e.g. by adequate plant protection measures or the utilization of ecological infrastructures inside and outside production sites.
- h) Control and limit the use of organic phosphorus pesticides.

ANNEX IV

Guiding Elements for Establishment of the Regulatory Framework for Reducing Generation of Agricultural Plastics for implementing Article V on Measures

With the view to implementing Article V.6(d) on the implementation of good management practices that contribute to reducing plastic waste generation from agricultural activities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Use of cover crops to reduce soil erosion instead of mulching films.
- b) Substitution of plastic products with more durable alternatives, such as glass or polycarbonate instead of greenhouse films.
- c) Replacement of short-term single-cycle products with reusable ones, such as stackable rigid harvesting crates instead of flexible bags.
- d) Promotion of recycling of agricultural plastics.
- e) Replacement, where appropriate, of non-biodegradable polymers with biodegradation properties adapted to their specific use.
- f) Introduction of labelling of plastic products to aid the process of identification and traceability.
- g) Implementation of Extended Producer Responsibility for plastic packaging (e.g. fertilizer products) and non-packaging products (e.g. greenhouse plastics).

ANNEX V

Guiding Elements for the Procedure for Monitoring and Measurement of Concentrations of Nutrients Discharging into Coastal Waters for implementing Article V on Measures

With the view to implementing Article V.9(b) related to the procedure for monitoring and measurement of concentrations of nutrients discharging into coastal waters, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable when setting the procedure to:

- a) Establish a monitoring programme to monitor and measure the concentrations of nutrients and their trends in major water bodies discharging into coastal waters. Monitoring data shall be reported on an annual basis further to a reporting format to be agreed with the Secretariat.
- b) Set the maximum permitted level of concentrations of nutrients measured in major water bodies discharging into coastal waters as per paragraph (Annex V.a) in coordination with the Secretariat with the aim of achieving Good Environmental Status (GES) of coastal waters further to a trend analysis of the concentrations of nutrients measured during a period of 5 years.
- c) Nutrients to be considered in the monitoring programme referred to in point (a) shall include the following parameters, as applicable, which are stipulated in Data Dictionaries and Data Standards for IMAP Common Indicator 13: Ammonium, Nitrate, Nitrite, Total Nitrogen, Orthophosphate, and Total Phosphorus.
- d) Adopt the sampling procedures and sample preparation methods included in UNEP/MAP's Monitoring Guidelines and Protocols for determination of key nutrients and chlorophyll *a* in seawater.

Appendix II

Workplan with timetable for implementation of Articles of the Regional Plan on Agriculture Management

[illegible]

Decision IG.26/7

Regional Plan on Aquaculture Management in the framework of Article 15 of the Land-Based Sources and Activities Protocol (LBS Protocol)

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

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

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility,”

Recalling also the United Nations Environment Assembly resolution of 15 March 2019, UNEP/EA.4/Res. 21, entitled “Towards a pollution-free planet,”

Recalling further the United Nations Environment Assembly resolutions of 6 December 2017, UNEP/EA.3/Res.10 “Addressing water pollution to protect and restore water-related ecosystems;” of 15 March 2019, UNEP/EA.4/L.12 “Protection of the marine environment from land-based activities;” and of 2 March 2022, UNEP/EA.5/Res.2 “Sustainable nitrogen management;” UNEP/EA.5/Res.7, “Sound management of chemicals and waste;” as well as UNEP/EA.5/Res.11 “Enhancing circular economy as a contribution to achieving sustainable consumption and production,”

Having regard to the Barcelona Convention and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities (LBS Protocol), specifically Article 5 thereof, providing for the elaboration of national and regional action plans and programmes, containing measures and timetables for their implementation; and Article 15 (paragraph 3) thereof, stipulating the legally binding nature of measures and timetables,

Recalling Decision IG.24/10 on the Main Elements of the Six Regional Plans to Reduce/Prevent Marine Pollution from Land-Based Sources adopted by the Contracting Parties at their 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019),

Noting with concern the excessive levels of nutrients and pollutants originating from aquaculture significantly impacting species composition in freshwater and coastal ecosystems, with cascading effects on biodiversity, quality of soil, water and air, and on ecosystem functioning,

Conscious of the urgent need to enhance action in synergy with relevant regional and global initiatives, such as the UNEP’s Global Partnership for Nutrient Management (GPNM), the European Green Deal (2019), and UfM Water Agenda,

Recalling Decision IG.19/5 on Mandates of the Components of MAP (COP 16) (Marrakesh, Morocco, 3-5 November 2009), and in particular the mandate of the Mediterranean Pollution Assessment and Control Programme (MED POL),

Having considered the report of the MED POL Focal Points Meeting (Athens, 24-26 May 2023), as well as the reports of the First and Second Meetings of the Working Groups of Designated Experts for Developing the Regional Plans on Agriculture, Aquaculture and Urban Stormwater Management in the Mediterranean (Athens, October 2022 and May 2023),

1. *Adopt* the Regional Plan on Aquaculture Management in the framework of Article 15 of the LBS Protocol, set out in Appendix I to this decision;
2. *Take note of* the workplan with timetable for implementation of articles of the Regional Plan on Aquaculture Management, set out in Appendix II to this decision;
3. *Call upon* the Contracting Parties to effectively implement the Regional Plan on Aquaculture Management and to report to the Secretariat, accordingly, as provided for in its Article 8;
4. *Request* the Secretariat (MED POL) to provide, upon request and subject to availability of funds, the necessary assistance to the Contracting Parties for the implementation of the measures provided for in the Regional Plan on Aquaculture Management;
5. *Urge* the Contracting Parties, intergovernmental organizations and donor agencies to contribute to the implementation of the Regional Plan on Aquaculture Management based on their specific mandates.

APPENDIX I

Regional Plan on Aquaculture Management

Regional Plan on Aquaculture Management

ARTICLE I Definition of Terms

For the purpose of this Regional Plan on Aquaculture Management; hereinafter referred to as the “Regional Plan”:

- a. "Alien Species" are (a) species or subspecies of aquatic organism occurring outside its known natural range and the area of its natural dispersal potential and (b) polyploid organisms, and fertile artificially hybridized species irrespective of their natural range or dispersal potential.
- b. "Allocated Zones for Aquaculture (AZA)" are specific areas dedicated to aquaculture activities, that have priority over other uses, where any future development thereof and their identification shall be based on the best social, economic and environmental information available in order to prevent conflicts among different users for increased competitiveness, sharing costs and services and to protect and assure investments done. AZA shall be established within the framework of ICZM and marine spatial planning following a participatory approach.
- c. "Allowable zone of effect (AZE) " is the area of seabed or volume of the receiving water body in which a competent authority allows the use of specific EQSs for aquaculture, while ensuring a healthy functioning of the ecosystem and the basic environmental services it provides, and respecting the ICZM decisions/ programmes already under implementation.
- d. "Aquaculture" is the farming of aquatic organisms including fish, mollusks, crustaceans, and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated.
- e. "Best Available Techniques (BAT)" as defined in Annex IV for the Land-Based Sources and Activities (LBS) Protocol.
- f. "Biofloc Technology" is a technique using a variety of micro-organisms to enhance water quality in aquaculture through balancing carbon and nitrogen in the system with the added value of producing proteinaceous feed in situ.
- g. "Ecosystem Approach to Aquaculture" strategy for the integration of the activity within the wider ecosystem such that it promotes sustainable development, equity, and resilience of interlinked social-ecological systems.
- h. "EQS" is a concentration of a particular pollutant or group of pollutants in water, in sediments and biota which should not be exceeded in order to protect human and animal health and the environment.
- i. "Escapes" are accidental events where cultured organisms or fertilized eggs are released from aquaculture facilities into the natural environment.
- j. "Extractive species" are aquatic organisms from the lower levels of the food web that do not need to be fed, including a large variety of species such as filter feeders, deposit feeders, dissolved nutrient absorbers.
- k. "Framework conditions" entail to creation of knowledge, market conditions, access to finance, regulations and support mechanisms.
- l. "Harmful species" are species causing or tending to cause harm to human activities/health or local ecosystems and biodiversity.

- m. "Integrated multi-trophic aquaculture" is a type of aquaculture that combines in a single farm area different aquatic species from various trophic levels, such as fish and extractive species.
- n. "Intensive aquaculture" where there is a full dependency for production on the use of external feed or fertilizers.
- o. "Invasive Alien Species" mean an alien species whose introduction or spread has been found to threaten or adversely impact upon biodiversity and related ecosystem services.
- p. "Land-Based Aquaculture" is a practice of farming aquatic organisms in terrestrial areas, both in open and closed water systems, with effects on coastal waters.
- q. "Marine Spatial Planning" is the process by which countries analyze and organize human activities in marine areas to achieve ecological, economic and social objectives.
- r. "Mixing zones" are defined as geographical areas or volume of water in the receiving environment of a discharge where initial dilution of the effluent occurs and where exceedance of water quality criteria may be permitted.
- s. "Pollutants" are substances present in concentration that may be harmful to the quality of aquatic or terrestrial ecosystems and human health.
- t. "Recirculating aquaculture systems" are land-based aquaculture facilities – either open air or indoors – that minimize water consumption achieving high rates of water re-use by mechanical, biological and chemical filtration, allowing the control of culture conditions and discharges.
- u. "Sea-Based Aquaculture" is a practice of farming aquatic organisms in transitional, coastal and marine waters.

ARTICLE II

Scope and Objective

1. The area to which the Regional Plan applies is the area defined in accordance with Article 3 of the LBS Protocol, consisting of the Mediterranean Sea Area as defined in Article 1 of the Convention; the hydrologic basin of the Mediterranean Sea Area; waters on the landward side of the baselines from which the breadth of the territorial sea is measured and extending, in the case of watercourses, up to the freshwater limit; brackish waters, coastal salt waters including marshes and coastal lagoons; and ground waters communicating with the Mediterranean Sea.
2. The Regional Plan shall apply to the aquaculture sector activities in the coastal regions or hydrologic basins discharging pollutants into the Mediterranean Sea.
3. The objective of the Regional Plan is to ensure that aquaculture sector activities are sustainable and are managed in a way such as to minimize pollution and potential negative ecological effects.

ARTICLE III

Preservation of Rights

4. The provisions of this Regional Plan shall be without prejudice to stricter provisions respecting the management of aquaculture activities contained in other existing or future national, regional or international instruments or programs.

ARTICLE IV

Guiding Principles

5. The Regional Plan measures are formulated in line with the following principles as stipulated in Article V:
 - a) Aquaculture development and management should take into account the full range of ecosystem functions and services; reduce the likelihood of local biodiversity loss and pollution of the environment; and should not threaten their sustained delivery to society.
 - b) Aquaculture should improve human well-being and equity for all relevant stakeholders and takers.
 - c) Aquaculture should be developed in the context of other sectors, policies and goals, with special attention to the protection of biodiversity, ecosystems and natural heritage in the Mediterranean region.

ARTICLE V

Measures

- I. Regulatory and Institutional Frameworks for Operating Aquaculture Facilities
 6. By 2027, the Contracting Parties shall establish a regulatory framework that sets the operational requirements to be met by aquaculture facilities as a precondition to operate. The requirements shall be updated, as appropriate, to reflect changes in local environmental conditions, as well as BAT in aquaculture operations.
 7. By 2028, the Contracting Parties shall establish institutional structures and take measures to:
 - a) Enforce, as appropriate, the adopted operational requirements addressing the pollution control aspects of paragraph 6.
 - b) Provide the framework conditions to encourage aquaculture facilities to adapt their operations further to BAT in aquaculture.
- II. Implementation of Measures in line with Good Environmental Management Practices of Aquaculture
 8. By 2030, the Contracting Parties shall take measures to verify that aquaculture facilities have established operational processes in order to:
 - a) Control and reduce the release of potentially detrimental substances to the marine environment further to the list of relevant substances under Annex I.C of the LBS Protocol, where applicable.
 - b) Implement measures to minimize pollution originating from aquaculture activities in the water column and sediments in accordance with the guiding elements provided in Annex I.A for land-based aquaculture and Annex I.B for sea-based aquaculture.
- III. Implementation of Measures Contributing to Sustainable Aquaculture
 9. By 2027, the Contracting Parties shall, as appropriate, adopt regulations for measures that promote the sustainability of aquaculture in terms of fostering responsible, economically viable, environmentally sustainable aquaculture which does not create significant pollution impact causing disruption to the ecosystem and loss of biodiversity at local scale, i.e. in the influence areas of operations. To this aim, the guiding elements included in Annex II.A for land-based aquaculture and Annex II.B for sea-based aquaculture shall be applied for inclusion in the aforesaid regulatory framework, as appropriate.

10. By 2030, the Contracting Parties shall implement measures promoting responsible, economically viable, environmentally sustainable aquaculture as per the regulated aspects of Paragraph 9.

IV. Implementation of Measures Contributing to Reduction of Plastics from Aquaculture

11. By 2028, the Contracting Parties shall 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. To this aim, guiding elements to be considered for Environmentally Sustainable Management of Plastic Waste from Aquaculture Activities are presented in Annex III.

ARTICLE VI

Technical Assistance, Transfer of Technology and Capacity Building

12. For the purpose of facilitating the effective implementation of Article V of this Regional Plan, the Contracting Parties collaborate to implement, exchange and share best practices on management of land-based and sea-based aquaculture, directly or with the support of the Secretariat. To this aim, the Contracting Parties also collaborate in preparing and implementing common technical guidelines.

ARTICLE VII

Timetable for Implementation

13. The Contracting Parties shall implement the measures included in this Regional Plan as per the timelines associated with these measures.

ARTICLE VIII

Reporting

14. The Contracting Parties shall 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.

ARTICLE IX

Entry into Force

15. The present Regional Plan shall enter into force and become binding on the 180th day following the day of notification by the Secretariat in accordance with Article 15, paragraphs 3 and 4, of the LBS Protocol.

ANNEX I.A

Guiding Elements for Control and Reduction of Pollution from Land-Based Aquaculture Facilities for implementing Article V on Measures

With the view to implementing Article V.8(b) on control and reduction of release of substances from intensive aquaculture facilities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Based on the findings of an environmental assessment and level of compliance in line with national standards, installation, as appropriate, of wastewater filtration and treatment systems based on mechanical filtration (e.g. settlement ponds, drum filters) and biofiltration technologies to control release pollutants (both of dissolved and solid matter origin) into the recipient waters by reducing the amount per cube meter discharged of pollutants and to improve abatement measures to reduce solid residues.
- b) Recycling/reuse of water from aquaculture activities, as appropriate, based on BAT that minimize water and energy consumption and support the integration of aquaculture and vegetable production.
- c) Establishing effluent water quality monitoring programme at appropriate temporal scale to determine water quality parameters, taking into account acceptable thresholds of pollutants.
- d) Optimizing effluent discharge systems which may include:
 - i. Installment of pipeline systems.
 - ii. Installment of diffusers and/or effective artificial aeration systems at the end of the pipelines.

ANNEX I.B

Guiding Elements for Control and Reduction of Pollution from Sea-Based Aquaculture Facilities for implementing Article V on Measures

With the view to implementing Article V.8(b) on the measures to minimize levels of pollutants in the water column and sediments from intensive aquaculture facilities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Adopt and implement the concepts of mixing zone and AZE where possible based on a dispersion model and established Environmental Quality Standards (EQSs), Water Quality Standards (WQS) and Sediment Quality Standards (SQS).
- b) Employ, where possible, monitoring devices and remote sensing (e.g. satellite imagery).
- c) Ensure regular fallowing of cages in aquaculture sites to avoid development of anoxic zones, if needed.
- d) Establish a no activity zone around cages, where possible, to protect the wildlife, and reduce pollution release in the area adjacent to the cages.
- e) Use new environmentally friendly antifouling agents (TBT-free, preferably also copper free).
- f) Adopt site-specific environmental monitoring programmes taking into consideration the carrying capacity of the site addressing, as applicable:
 - i. Sediments: total phosphorus, total nitrogen, total organic carbon, grain size structure, redox potential, and/or sulfides.
 - ii. Water column: temperature, salinity, pH, dissolved oxygen, total phosphorus, total nitrogen, ammonia, nitrites and nitrates, orthophosphates, turbidity, suspended solids particulate organic matter and chlorophyll-*a*.
 - iii. Biological: benthic and/or pelagic biodiversity composition and structure, (species richness, and other biological and ecological indices currently in use in the environmental monitoring of local conditions at sea), escape events, and lethal incidents of endangered species.

ANNEX II.A

Guiding Elements for Environmentally Sustainable Land-Based Aquaculture for implementing Article V on Measures

With the view to implementing Article V.9 on responsible, economically viable, environmentally sustainable, land-based aquaculture processes, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Promotion, where appropriate, of aquaculture systems and technologies with lower environmental impact, including farming of low trophic species, energy-efficient recirculating aquaculture systems, biofloc technologies, or integrated multi trophic aquaculture systems.
- b) Adoption of sustainable feed management practices that can improve feed efficiency and the overall environmental sustainability of the farming operations.
- c) Utilization of good quality and highly assimilable feed, in order to maximize growth, animal health and welfare, and reduce feed waste and related negative impacts on water quality.
- d) Enforcement of control rules on use of pharmaceuticals in order to minimize the risk of antimicrobial resistance and potential impacts on ecosystems and to curb the spread of pathogens to farmed organisms and wild fauna.
- e) Implementation of measures to avoid fish escapes (e.g. site survey, equipment, technical assessment, staff training, etc.)
- f) Promotion and adoption of animal welfare practices.
- g) Establishment of Environmental Monitoring Programmes (EMP).
- h) Reporting by aquaculture facilities/ primary producers/ operators to competent environmental authorities on the following issues, as applicable:
 - i. Lethal incidents of endangered species ¹ occurred related to the farming activity.
 - ii. Severe cases of fish escape events manifested by, or with a potential of, significant impacts on the ecosystem (e.g. disease transmission, genetic pollution, competition for resources, habitat modifications).
 - iii. Use of energy and green/renewable energy and the use of natural resources (water and space) in relation to the carbon footprint of the aquaculture facility.
 - iv. Use of antibiotic/antiparasitic treatments and fish losses related to the farming activity.

¹ Reference to IUCN list of endangered species

ANNEX II.B

Guiding Elements for Environmentally Sustainable Sea-Based Aquaculture for implementing Article V on Measures

With the view to implementing Article V.9 on responsible, economically viable, environmentally sustainable sea-based aquaculture processes, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Identification of Allocated Zones for Aquaculture (AZA) and selection of aquaculture sites on the basis of the Ecosystem Approach to Aquaculture (EAA), and identification of an Allowable Zone of Effect (AZE) in the close vicinity of each farm, as appropriate.
- b) Promoting farming of aquatic organisms belonging to lower trophic levels such as extractive species, plants/low protein consuming species and promoting the adoption of Integrated multi-trophic Aquaculture.
- c) Enforcement of control rules on use of pharmaceuticals in order to minimize the risk of antimicrobial resistance and potential impacts on ecosystems and to curb the spread of pathogens to farmed organisms and wild fauna.
- d) Implementation of measures to avoid fish escapes (e.g. site survey, equipment, technical assessment, staff training, etc.)
- e) Promotion and adoption of animal welfare practices.
- f) Reporting by aquaculture facilities/ primary producers/ operators to competent environmental authorities on the following issues, as applicable:
 - i. Lethal incidents of endangered species¹ occurred related to the farming activity.
 - ii. Severe cases of fish escape events manifested by significant impacts on the ecosystem (e.g. disease transmission, genetic pollution, competition for resources, habitat modifications).
 - iii. Use of energy and green/renewable energy and the use of natural resources (water and space) in relation to the carbon footprint of the aquaculture facility
 - iv. Use of antibiotic/antiparasitic treatments and fish losses related to the farming activity.

ANNEX III

Guiding Elements for Environmentally Sustainable Management of Plastic Waste from Aquaculture Activities for implementing Article V on Measures

With the view to implementing Article V.11 on the reduction of generated plastic waste from aquaculture activities, the following guiding elements to be considered by the Contracting Parties, as appropriate:

- a) To the extent possible, replace plastic infrastructure components with alternative durable and sustainable components.
- b) To the extent possible, promote circular design of aquaculture gear, as well as the use of biodegradable materials in aquaculture operations, including farming, processing and packaging.
- c) Reduce single-use plastic with the introduction of relevant alternatives and invest in developing recovery, cleaning and re-distribution schemes.
- d) Minimize the use of plastic types with low levels of recyclability.
- e) Reduce to the extent possible the use of equipment consisting of different types of plastic (i.e., different lifespan and different approach for collection and recycling).
- f) Use to the extent possible, packaging that is reusable or recyclable.
- g) Reduce to the extent possible packaging and over-packaging to minimize packaging waste.

Appendix II

Workplan with timetable for implementation of Articles of the Regional Plan on Aquaculture Management

[illegible]

Decision IG.26/8

Regional Plan on Urban Stormwater Management in the framework of Article 15 of the Land-Based Sources and Activities Protocol (LBS Protocol)

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

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

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility,”

Recalling also the United Nations Environment Assembly resolution of 15 March 2019, UNEP/EA.4/Res. 21, entitled “Towards a pollution-free planet,”

Recalling further the United Nations Environment Assembly resolutions of 6 December 2017, UNEP/EA.3/Res.10 “Addressing water pollution to protect and restore water-related ecosystems;” of 15 March 2019, UNEP/EA.4/L.12 “Protection of the marine environment from land-based activities;” and of 2 March 2022, UNEP/EA.5/Res.9 “Sustainable and resilient infrastructure,”

Having regard to the Barcelona Convention and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities (LBS Protocol), specifically Article 5 thereof, providing for the elaboration of national and regional action plans and programmes, containing measures and timetables for their implementation; and Article 15 (paragraph 3) thereof, stipulating the legally binding nature of measures and timetables,

Recalling Decision IG.24/10 on the Main Elements of the Six Regional Plans to Reduce/Prevent Marine Pollution from Land-Based Sources adopted by the Contracting Parties at their 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019),

Conscious of the urgent need to enhance action in synergy with relevant regional and global initiatives, such as the European Green Deal (2019) and UfM Water Agenda,

Recalling Decision IG.19/5 on Mandates of the Components of MAP (COP 16) (Marrakesh, Morocco, 3-5 November 2009), and in particular the mandate of the Mediterranean Pollution Assessment and Control Programme (MED POL),

Having considered the report of the MED POL Focal Points Meeting (Athens, 24-26 May 2023), as well as the reports of the First and Second Meetings of the Working Groups of Designated Experts for Developing the Regional Plans on Agriculture, Aquaculture and Urban Stormwater Management in the Mediterranean (Athens, October 2022 and May 2023),

1. *Adopt* the Regional Plan on Urban Stormwater Management in the framework of Article 15 of the LBS Protocol, set out in Appendix I to this Decision;
2. *Take note of* the workplan with timetable for implementation of articles of the Regional Plan on Urban Stormwater Management, set out in Appendix II to this decision;
3. *Call upon* the Contracting Parties to effectively implement the Regional Plan on Urban Stormwater Management and to report to the Secretariat, accordingly, as provided for in its Article 8;
4. *Request* the Secretariat (MED POL) to provide, upon request and subject to availability of funds, the necessary assistance to the Contracting Parties for the implementation of the measures provided for in the Regional Plan on Urban Stormwater Management;
5. *Urge* the Contracting Parties, intergovernmental organizations and donor agencies to contribute to the implementation of the Regional Plan on Urban Stormwater Management based on their specific mandates.

Appendix I

Regional Plan on Urban Stormwater Management

Regional Plan on Urban Stormwater Management

ARTICLE I

Definition of Terms

For the purpose of this Regional Plan on Urban Stormwater Management; hereinafter referred to as the “Regional Plan”:

- a. "Best Management Practices (BMP)" are physical, structural, and/or managerial practices that, when used singly or in combination, reduce the downstream quality and quantity impacts of stormwater. The term is synonymous with Stormwater Control Measures, Sustainable Drainage System, and Low Impact Development (LID).
- b. "Green Infrastructure (GI)" is the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.
- c. "Low Impact Development (LID)" refers to the development of a site while maintaining as much of its natural hydrology as possible, such as infiltration, frequency and volume of discharges, and groundwater recharge.
- d. "Nonstructural Stormwater Control Measures" are best management practices that rely on natural measures to reduce flow of stormwater and pollution levels; as such, they do not require extensive construction efforts and do promote pollutants reduction by eliminating the pollutants sources.
- e. "Stormwater" is the portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via rooftops, paved streets, highways, parking lots, overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility.
- f. "Stormwater Collection System" is a collection of structures, including retention basins, ditches, roadside inlets and underground pipes, designed to gather stormwater from built-up areas and discharge it, with or without treatment, into local water bodies, e.g. streams, rivers, coastal waters.
- g. "Structural Stormwater Control Measures" are best management practices that rely on the construction and operation of infrastructure and facilities to control the downstream quantity and quality of urban stormwater.
- h. "Urban runoff" means rainwater and snow melt from agglomerations typically collected by combined or separate sewers.

ARTICLE II

Scope and Objective

1. The area to which the Regional Plan applies is the area defined in accordance with Article 3 of the LBS Protocol, consisting of the Mediterranean Sea Area as defined in Article 1 of the Convention; the hydrologic basin of the Mediterranean Sea Area; waters on the landward side of the baselines from which the breadth of the territorial sea is measured and extending, in the case of watercourses, up to the freshwater limit; brackish waters, coastal salt waters including marshes and coastal lagoons; and ground waters communicating with the Mediterranean Sea.

2. The Regional Plan shall apply to the management of urban stormwater in urban agglomerations situated in coastal areas or hydrologic basins discharging to the Mediterranean Sea.
3. The objective of the Regional Plan is to control stormwater runoff and to prevent and significantly reduce inputs of pollutants and other waste into receiving waters.

ARTICLE III

Preservation of Rights

4. The provisions of this Regional Plan shall be without prejudice to stricter provisions respecting the management of urban stormwater contained in other existing or future national, regional or international instruments or programs.

ARTICLE IV

Guiding Principles

5. Regional Plan measures are formulated with the aim of addressing the following principles:
 - a) Integrated Stormwater Management incorporates urban stormwater planning into wider urban planning practices and city design schemes.
 - b) Increased urban stormwater runoff volumes play a major role in harming species' habitat, polluting sensitive potable water sources, degrading water streams, rivers, lakes, and other waterbodies in urban areas, as well as impacting recreational uses.
 - c) Control measures for stormwater runoff are best planned in the early phases of development of new urban areas to be implemented near the source of pollution of new or existing urban development areas.
 - d) Integrated stormwater management should be adopted in the context of adaptation measures to address climate change and to mitigate the impacts of extreme hydrological events.

ARTICLE V

Measures

- I. Regulatory Framework for Integrated Stormwater Management
6. By 2028, the Contracting Parties shall establish a regulatory framework to reduce stormwater runoff volume and peak flows as well as address related pollution aspects. To this aim, the Contracting Parties shall:
 - a) Develop stormwater management plans that include nonstructural and structural stormwater control measures covering as appropriate further to the items mentioned in the Annex.
 - b) 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.
 - c) 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 (e.g. Sustainable Drainage Systems; Low Impact Development, etc.)

- d) Identify the sources that contribute pollutants through stormwater and select the measures for pollution reduction.
- e) Establish monitoring programmes for recipient water (e.g. lakes, water streams, groundwater, etc.), as appropriate in order to undertake the proper mitigation measures.

II. Implementation of Urban Stormwater Control Measures

7. By 2030, the Contracting Parties shall implement the approved stormwater management plans further to the selection of applicable nonstructural and structural control measures stipulated under the guiding elements provided in the Annex. To this aim, the Contracting Parties shall consider the following elements for inclusion in stormwater management plans, as appropriate:
 - a) Implement 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 as indicated in the Annex.
 - b) Construct separate systems for municipal wastewaters (blackwater from toilets, greywater and industrial wastewater) and urban runoff in *newly developed residential, commercial and industrial areas*.
 - c) Reduce the adverse impacts of untreated stormwater overflows discharging from *existing combined collection systems* of rainwater or snow melt, domestic sewage, and industrial wastewater in the same pipe with a focus on below measures in the following hierarchal order, where applicable:
 - i. De-connecting impervious areas from combined sewer systems;
 - ii. Applying Green Infrastructure (GI) where possible to reduce and recover stormwater flows as indicated in the Annex; and
 - iii. Providing additional storage volume (decantation basins) in domestic, touristic and industrial areas to capture, collect and pre-treat the first storm flows (first flow) with heavy pollution loads in order to ensure the adequate capacity of the system for absorption of the peak flow during intense rain events.

III. Operation and Maintenance of Urban Stormwater Systems

8. By 2028, the Contracting Parties shall implement adequate seasonal maintenance of stormwater collection systems to ensure their efficient functioning and prevent any overflow flooding or pollution. To this aim, the Contracting Parties shall at least implement the following measures:
 - a) Maintain an updated inventory list on storm water infrastructure and sources of pollution such as the locations and functional conditions of overflow structures; as well as sewage storage capacity structures, in order to acquire a better understanding of the occurrence of stormwater overflows and their impacts on the quality of receiving water bodies, including potential future issues due to climate change.
 - b) Plan and implement regular road maintenance, street sweeping, storm-drain maintenance, stormwater hotline response, and landscape and park maintenance.
 - c) Perform regular monitoring of quantity and quality stormwater at key urban stormwater structures (e.g. continuous, flow-weighted sampling methods which require flow and water quality data) with the aim of setting thresholds on the quantity and quality of stormwater into recipient water taking into account national water standards and regulations.

ARTICLE VI

Technical Assistance, Transfer of Technology and Capacity Building

9. For the purpose of facilitating the effective implementation of Article V of this Regional Plan, the Contracting Parties collaborate to implement, exchange and share Best Management Practices for application of the stormwater control measures contained in the Annex of this Regional Plan, directly or with the support of the Secretariat. To this aim, the Contracting Parties also collaborate in developing common stormwater best practices guidelines.

ARTICLE VII

Timetable for Implementation

10. The Contracting Parties shall implement the measures included in this Regional Plan as per the timelines associated with these measures.

ARTICLE VIII

Reporting

11. The Contracting Parties shall 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.

ARTICLE IX

Entry into Force

12. The present Regional Plan shall enter into force and become binding on the 180th day following the day of notification by the Secretariat in accordance with Article 15, paragraphs 3 and 4, of the LBS Protocol.

ANNEX

Guiding Elements for Best Management Practices including Structural and Nonstructural Urban Stormwater Control Measures for Implementing Article V on Measures

With the view to implementing Article V on structural and nonstructural control measures to be considered for preventing, reducing and treating stormwater flows, as well as slowing and holding back stormwater that runs off from sites, the following guiding elements shall apply, as appropriate:

No.	Description of Control Measure	Type of Measure	Aim of Control Measure	Implementation Stage
1	Watershed and land use planning	Non-Structural	Minimize impervious areas	Planning
2	Conservation of natural areas	Non-Structural	Maintain the predevelopment hydrology of a site	Site Planning/ Preconstruction
3	Earthwork minimization	Non-Structural	Limit the degree of clearing to prevent soil compaction, prevent erosion from steep slopes	Grading stage/ Preconstruction
4	Erosion and sediment control	Structural & Non-Structural	Temporary practices to minimize soil erosion and prevent off-site delivery of sediment	Construction
5	Reforestation and soil conservation	Non-Structural	Improve the quality of native vegetation and soils present at the site	Site planning/ Preconstruction
6	Pollution prevention	Non-Structural	Prevent contact of stormwater runoff with pollutants natural and anthropogenic (e.g. from volcanic ashes, gas stations, outdoor storage of materials, informal dump sites, etc.)	Planning
7	Rainwater harvesting (GI) ⁺	Structural	Reduce runoff volume from rooftops in rain barrels, tanks or cisterns	Post Construction/ Retrofit
8	Bioswales, vegetated areas (GI)	Structural	Reduce runoff volume and improve quality through infiltration and evapotranspiration via vegetation	Post Construction/ Retrofit
9	Subsurface volume reduction (GI)	Structural	Reduce runoff through infiltration via pervious pavement, infiltration trenches, seepage pits, etc.	Post Construction/ Retrofit
10	Peak reduction and runoff treatment (GI)	Structural	Hold a volume of stormwater for an extended time in detention/retention basins, wetlands, lagoons, etc.	Post Construction

⁺ GI: Green Infrastructure

No.	Description of Control Measure	Type of Measure	Aim of Control Measure	Implementation Stage
11	Aquatic buffers and managed floodplains	Non-Structural	Reserve a vegetated zone adjacent to streams, shorelines, or wetlands	Planning/ Construction/ Post Construction
12	Water stream rehabilitation	Structural	Stabilize streambanks and/or prevent channel incision/enlargement to reduce downstream delivery of sediments and attached nutrients from urban agglomerations	Post construction/ Post development
13	Municipal housekeeping	Non-Structural	Provide source treatment of pollutants before they enter the storm-drain system like street sweeping and sediment cleanouts of sumps and storm-drain inlets	Post construction/ Post development
14	Snow management	Non-Structural	Removal, slipperiness control, transport, and dumping	Post construction/ Post development
15	Detection and elimination of illicit discharge	Non-Structural	Prevent pollutants from illegal cross-connections from introducing into the storm-drain system due to spills, leaks etc.	Post construction/ Post development
16	Stormwater Education	Non-Structural	Municipal efforts to make sure individuals understand how their actions and behaviors can influence water quality.	Post development
17	Residential Stewardship	Non-Structural	Municipal programs to enhance residential practices that can reduce the volume or improve the quality of runoff produced on their property (e.g. installing rain barrels or rain gardens, downspout disconnection, storm-drain marking, waste pickups, and yard waste composting).	Post construction/ Post development

Appendix II

Workplan with timetable for implementation of Articles of the Regional Plan on Urban Stormwater Management

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Decision IG.26/9

Guidelines for the Dumping of Inert Uncontaminated Inorganic Geological Materials

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

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

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility,”

Recalling also the United Nations Environment Assembly resolutions UNEP/EA.4/Res.7 of 15 March 2019 “Environmental sound management of waste,” UNEP/EA.4/Res. 21 of 15 March 2019 “Towards a pollution-free planet,” and UNEP/EA.9/Res.5 of 2 March 2022 “Sustainable and resilient infrastructure,”

Having regard to the 1995 Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea, and in particular Article 6 (2) thereof, requesting that criteria, guidelines and procedures for the wastes or other matter, the dumping of which is allowed under Article 4 (2) of the 1995 Protocol, be drawn up,

Recalling the 2005 Guidelines for the Dumping of Inert Uncontaminated Geological Materials, adopted by the Contracting Parties at their fourteenth meeting (COP 14) (Portoroz, Slovenia, 8-11 November 2005), and noting the progress made and key lessons learnt in their implementation,

Taking into account recent global and regional developments, particularly at level of the London Convention/London Protocol (LC/LP) International Maritime Organization (IMO) and other regional organization levels, respectively,

Committed to further streamlining the Mediterranean Action Plan Ecological Objectives, and associated Good Environmental Status targets, in the scope of application of the 1995 Dumping Protocol,

Having considered the report of the MED POL Focal Points Meeting (Athens, 24-26 May 2023),

1. *Adopt* the Updated Guidelines for the Dumping of Inert Uncontaminated Inorganic Geological Materials, set out in Annex I to the present Decision, which replace the 2005 Guidelines, herein after referred to as the “Guidelines”;

2. *Urge* the Contracting Parties who have not yet accepted the amendments to the 1976 Protocol for the “Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea” to do so;

3. *Take note* of Annex II to the present Decision summarizing different methodologies and techniques for monitoring purposes for Dumping of Inert Uncontaminated Inorganic Geological Materials;

4. *Call upon* the Contracting Parties to ensure the effective implementation, keeping in mind that the Guidelines shall be without prejudice to stricter provisions with respect to the dumping of inert uncontaminated inorganic geologic materials in the Mediterranean Sea Area contained in other existing national or international instruments and/or programmes;

5. *Request* the Secretariat to facilitate the work of the Contracting Parties for the implementation of the Guidelines, by further strengthening cooperation and synergies in this area, where appropriate, with the London Convention and its Protocol, the European Union Marine Strategy Framework Directive, and other relevant instruments; and by sharing information with global and regional agreements and programmes on the achievements and progress of the MAP Barcelona Convention system in this area.

ANNEX I

Guidelines for the Dumping of Inert Uncontaminated Inorganic Geological Materials

INTRODUCTION

These Guidelines; herein referred to as the “Updated Guidelines” are an update of the 2005 Guidelines, intended to assist the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) in the implementation of the Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (the Dumping Protocol); hereinafter referred to as “the Protocol”, with regard to the dumping of inert, uncontaminated, inorganic geologic materials into the Mediterranean Sea (articles 4.2 and 6.2).

The Protocol was adopted on 16 February 1976 by the Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region for the Protection of the Mediterranean Sea. The Protocol was amended and signed by 16 Contracting Parties on 10 June 1995.

The Updated Guidelines provide an update of a number of aspects including expanded definition of inert uncontaminated inorganic geologic materials; the criteria for their determination; identification of disposal sites; nature of potential impacts of dumping operations; as well as establishing monitoring requirements based on the Integrated Monitoring and Assessment Programme (IMAP) and its agreed sampling methodologies.

These guidelines are intended for use by national authorities in evaluating applications for the dumping of inert, uncontaminated, inorganic geological materials so as to prevent pollution in the Mediterranean Sea in a manner consistent with the provisions of the 1972 London Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 1972) and/or the 1996 Protocol thereto.

It is, however, implicitly recognized that the general considerations and detailed procedures described in these guidelines are not applicable in their entirety to all national or local situations.

PART A

Definitions

1. Article 4 of the Dumping Protocol lists the type of waste that may be considered for disposal at sea. Articles 4.2 and 6.2 address the dumping of inert, inorganic geological materials into the Mediterranean Sea.
2. For the purpose of these Updated Guidelines, materials may be considered as Inert, Uncontaminated, Inorganic Geological Materials, (herein referred to collectively as “materials”) if the following conditions are met:
 - a. The material is inert, and the relative hazards are confined to physical impacts.
 - b. The chemical nature of the material (including uptake of any elements or substances from the material by biota) is such that the only effects will be due to its physical properties.
 - c. The inert material will not interact with biological systems other than through physical processes.
 - d. The geological material is comprised of only the solid mineral portion of the Earth (such as rocks and minerals) and it has not been altered from its original state by physical or chemical processing in a way that would result in different or additional impacts to the marine environment, compared with those expected from unaltered material.
 - e. The geological material is inorganic if: (i) the materials are of inorganic mineral origin; and (ii) the materials contain no more than incidental and trivial amounts of compounds with carbon chemically bound to hydrogen.

In this regard, the waste that meets the “dredged material” criteria for disposal at sea, as mentioned under paragraph 18 of the “Updated Guidelines on Management of Dredged Material,” can be also considered as “Inert, Uncontaminated, Inorganic Geological Material” if it meets one of the exemption criteria under paragraph 26(a) of the “Updated Guidelines on Management of Dredged Material Guidelines” (COP Decision IG.23/12, Tirana (Albania), 17-20 December 2017).

Scope

3. For the scope of application of the current Guidelines, Figure 1 provides a waste management decision-making tree for selection of the applicable Guidelines to be used, taking into consideration the level of contamination of the waste and its origin. The decision should be made based on the analyses indicated in “Updated Guidelines on Management of Dredged Material.”
4. The schematic shown in Figure 2 provides a clear indication of the stages in the application of the Guidelines where important decisions should be made and is not designed as a conventional “decision tree”. In general, national authorities should use the schematic in an iterative manner ensuring that all steps receive consideration before a decision is made to issue a permit. The guidelines contain the following elements:
 - a. Waste Characterization – the assessment of the characteristics and composition of materials to be disposed at sea (Part B);
 - b. Waste Prevention Audit and Waste Management Options (Part B);
 - c. Action List (Part B);
 - d. Identify and Characterize Dump Sites (Part B);
 - e. Determine Potential Impacts and Prepare Impact Hypothesis(es) - Assessment of potential effects and expected consequences of the material dumping operation and preparation of a statement (Part B);
 - f. Prepare management and monitoring program based on the impact hypothesis for the application of the materials dumping permit (Part C)
 - g. Issue Permit – requirements and criteria for issuing a disposal permit (Part D).
 - h. If permit is issued, implement dumping and monitor the operation to establish whether the dumping permit conditions have been respected (Part C);
 - i. Field monitoring and assessment to demonstrate that the dumping operation do not cause damage to the environment and deteriorate GES (Part C).

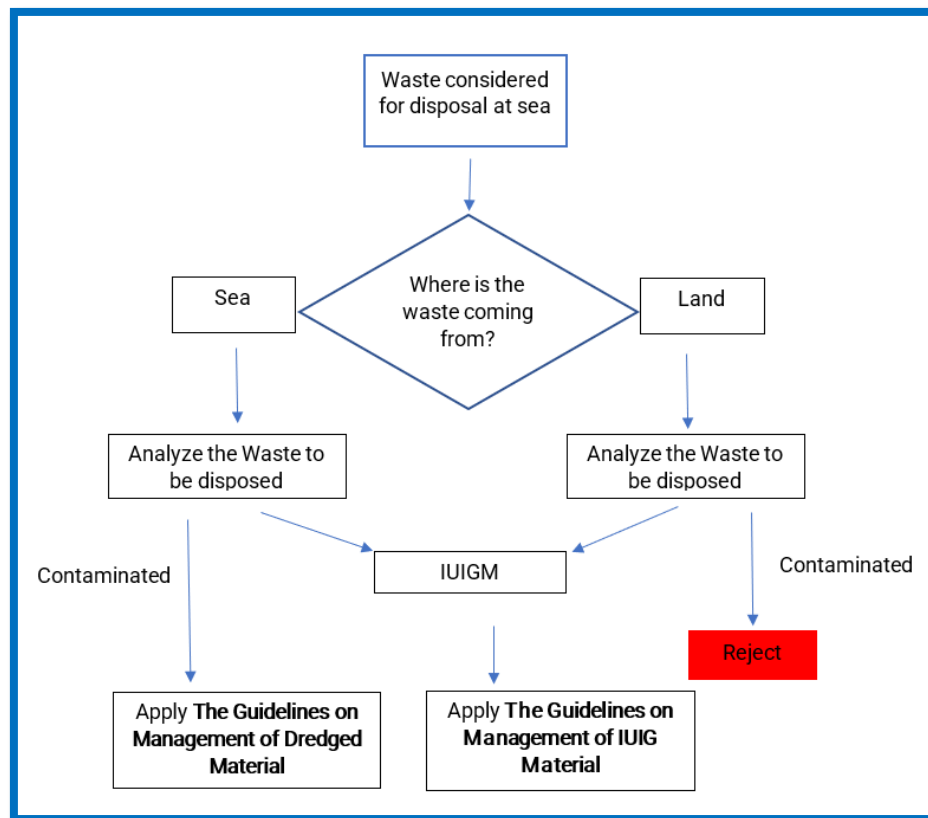


Figure 1: Waste Management decision tree for application of the Guidelines

5. In principle, the assessment process starts with “waste characterization” which examines the materials to be dumped. This first step is followed by an assessment of the presence of practicable opportunities to re-use, recycle or treat the waste in lieu of dumping. In case this is not possible, an action list is drawn for the materials to be disposed-off whereby an assessment is undertaken to ensure that these materials are acceptable for dumping. In the affirmative, the dumping site is identified and characterized; potential effects are determined; and an impact hypothesis is prepared along with a management and monitoring plans. At this stage, the issue of permitting is addressed. If permitting is legally possible, then dumping of the assessed material is implemented, and compliance to dumping requirements is monitored. This is followed by field monitoring and assessment of the impacts of dumped materials on site. At this stage, the process is repeated, looking again at potential effects resulting from the field dumping activities, and reconsidering potential effects. If necessary, the management and monitoring plans are updated as appropriate.

6. In general, national authorities should use the flow chart presented in Figure 2 in an iterative manner ensuring that all steps receive appropriate consideration, including consideration of Best Environmental Practices (BEP) before a decision is made to issue or decline a permit.

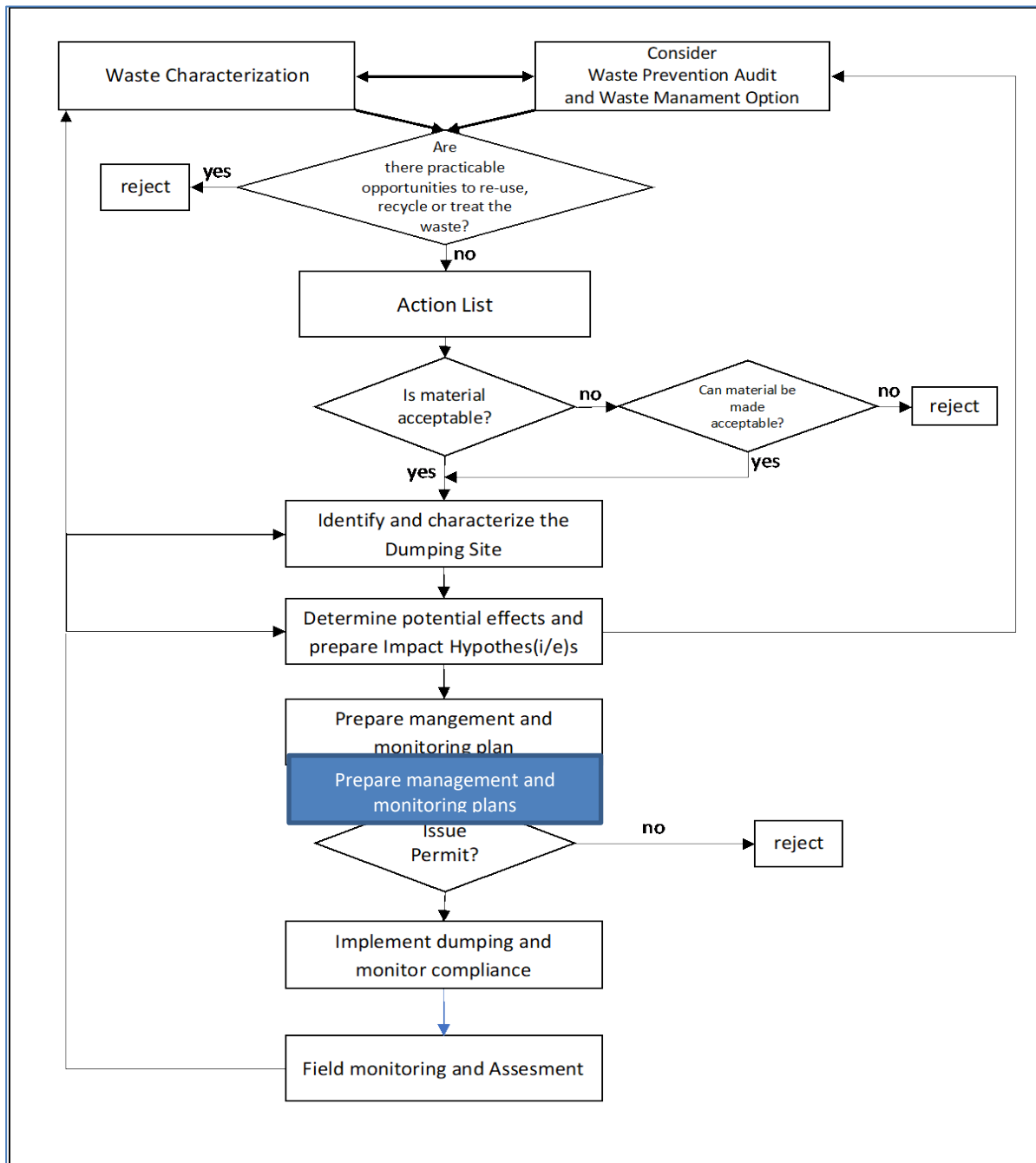


Figure 2: Flow chart of the step-by-step approach for the assessment framework to apply the updated guidelines for the dumping of inert uncontaminated inorganic geological materials

PART B

1. ASSESSMENT AND MANAGEMENT OF DUMPING OPERATIONS AT SEA

1.1 Requirements of the dumping protocol

7. In accordance with Article 4.1 of the Protocol, the dumping of inert, inorganic geological materials, is prohibited.

8. Nevertheless, under the terms of Article 4.2(d) (as Amended in 1995, Article 4.2(e)) of the Protocol, an exception may be made to this principle for the dumping of inert, inorganic geological materials. Under the terms of Article 5, the dumping of wastes or other matter listed in Article 4.2 requires a prior special permit from the competent national authorities.

9. Furthermore, in accordance with Article 6.1 of the Protocol, the permit referred to in Article 5 shall be issued only after careful consideration of the factors set forth in the Annex to the Protocol and taking into consideration article 20 of the Offshore Protocol.

10. Article 6.2 provides that the Contracting Parties shall draw up and adopt criteria, guidelines and procedures for the dumping of wastes or other matter listed in Article 4.2 so as to prevent, abate and eliminate pollution.

11. Article 7 of the Protocol states that incineration at sea is prohibited.

1.2 Waste prevention audit

12. The initial stages in assessing alternatives to dumping should, as appropriate, include an evaluation of:

- a. types, amounts and relative hazards of wastes generated. In case the material is inert, the relative hazards are confined to physical impacts;
- b. details of the production process and the sources of wastes within that process; and
- c. feasibility of the following waste reduction/prevention techniques:
 - i. clean production technologies;
 - ii. process modification;
 - iii. input substitution; and
 - iv. on-site, closed-loop recycling.

13. In general terms, if the required audit reveals that opportunities exist for waste prevention at source, an applicant is expected to formulate and implement a waste prevention strategy in collaboration with relevant local and national agencies which includes specific waste reduction targets and provision for further waste prevention audits to ensure that these targets are being met. Permit issuance or renewal decisions shall assure compliance with any resulting waste reduction and prevention requirements.

14. For this category of material, the most pertinent issue will be waste minimization.

1.3 Consideration of waste management options

15. Beneficial uses and land management should be primarily and ultimately considered before any decision on dumping at sea. Therefore, relevant authorities should determine that there are no practicable beneficial uses alternatives which have less adverse environmental impacts or potential risk than dumping.

16. Applications to dump wastes or other matter shall demonstrate that appropriate consideration should be given to the following hierarchy of waste management options, which implies an order of increasing environmental impact:

- a. re-use, such as refilling of mines;

- b. off-site recycling such as road construction and building materials; and
- c. disposal on land, and in water.

17. A permit to dump wastes or other matter shall be refused if the permitting authority determines that appropriate opportunities exist to re-use, recycle or treat the waste without undue risks to human health or the environment or disproportionate costs. The practical availability of other means of disposal should be considered in the light of a comparative risk assessment involving both dumping and the alternatives.

1.4 Assessment of the characteristics and composition of material to be disposed at sea

18. The character and form of the material and the basis on which it is characterized as geological and inert uncontaminated inorganic materials in the marine environment should be specified in accordance with Article 1 of the Dumping Protocol. Chemical analysis can be used to determine if a particular material contains elevated levels of contaminants (such as metals or organic constituents) relative to natural or ambient condition. Details of analyses and methods that shall be completed are provided in Appendix 1 of the “Updated Guidelines on Management of Dredged Materials”.

19. From this specification, it should be demonstrated that the chemical nature of the materials (including uptake of any elements or substances from the material by biota) is such that the only effects will be due to its physical properties. Thus, the assessment of the environmental impacts will be based solely upon origin mineralogy and the total amount and physical nature of the materials.

20. Characterization of the wastes and their constituents shall take into account:

- a. Origin;
- b. Size, quantities, or volume of waste material;
- c. Physical parameters: density, buoyancy, grain size, colour, form in which it is intended to be dumped;
- d. Geo-chemical characteristics: type, mineralogy and average composition;
- e. If needed, level of contaminants relative to natural or ambient conditions;
- f. Amount of material, anticipated or actual loading rate of material at the disposal site; and
- g. Anticipated or actual deposit and accumulation rate of material at the deposit site.

21. The purpose of waste characterization under this section is to establish a baseline information to determine whether the disposal at sea of the materials might cause adverse effects, especially the possibility of chronic or acute effects on marine organisms, habitats, biological communities or human health arising from the physical properties of the material. This must be reflected in the impact hypothesis and also in the monitoring program. Table 1 provides a list of potential physical impacts of the materials to be disposed and their potential environmental and biological effects.

22. A detailed description and characterization of the materials is an essential precondition for the consideration of alternatives and the basis for a decision as to whether a waste may be dumped. If a waste is so poorly characterized that proper assessment cannot be made of its potential impacts on human health and the environment, that waste shall not be dumped.

23. Information about the biological impact may be available from existing sources, for example from field observations on the impact of similar material at similar sites, or from previous test data on similar material tested not more than five years previously, and from knowledge of local discharges or other sources of pollution, supported by a selective analysis. In such cases, it may be unnecessary to measure again the potential effects of similar material in the vicinity.

Table 1: Potential Physical Impacts of materials disposal and their potential environmental and biological effect (adapted from PIANC, 2009 as described in IMO 2019).

Physical Change	Potential Environmental Effect	Biological Impact
Altered topography/bathymetry	Altered hydrodynamics and sedimentation regimes (erosion or accumulation of sediment)	• habitat destruction or alteration • changes to species distribution, e.g., wetland loss, movement of spawning grounds • erosion of habitats (such as seagrass beds) • Burial and smothering of benthos
Re-suspension of sediment matrix into water column	Transportation of suspended sediment plumes from the disposal sites	• plumes from the disposal sites spread to sensitive areas, such as seagrass beds, algal beds or coral reefs. • Reduction in water column primary production of phytoplankton
	Reduced light penetration	sub-lethal effects or death of light sensitive organisms and habitats
Sedimentation of the inert uncontaminated inorganic geological materials	Accumulation or dispersion of sediments	Alteration in habitats of the receiving environment: • Burial and smothering of benthos in the accumulated area (temporary or permanent) • Reduced function, growth, or survivorship of sessile benthic fauna through clogging of feeding mechanisms or smothering (especially filter-feeding organisms and sensitive habitats)
	disposal of sediment that is different from sediments at the disposal site	Habitat destruction or alteration
Rock blasting	Shock waves	Physiological response

24. If the potential impacts of the materials to be disposed cannot be adequately assessed based on the chemical and physical characterization and available information, biological testing may be conducted. Further detailed guidance on biological testing is provided in in Appendix 1 of the “Updated Guidelines on Management of Dredged Materials.”

1.5 Action list

25. The Action List provides a screening mechanism for determining whether a material is considered acceptable for dumping. However, as inert materials will not interact with biological systems other than through physical processes, the initial screening should be judged by considering answers to the following questions:

- Does the material meet the eligibility criteria for inert uncontaminated inorganic geological materials as defined in Part A of this Guideline?
- Have all possibilities of beneficial use of the material been explored and considered?
- What are the particle size and colour characteristics of the material?
- Does the material tend to disperse or deposit?
- Is there a basis for concern about risks to human health related to impact on seafood?
- Are the benthic assemblages allowing for the effects of any physical perturbation?

1.6 Selection of the dumping site

26. Prior to site selection, a primary obligation of the applicant is to assess whether there are alternatives to marine disposal. Opportunities should be explored for beneficial uses, when environmentally, technically and economically feasible to do so. In addition, the characteristics of the waste must be determined as indicated previously.

27. If marine disposal is found to be the appropriate management option, one or more potential disposal sites should be identified and characterized to understand the receiving environment and

better understand potential impacts. In order to limit potential impacts, priority should be given to the use of existing sites that have been selected to ensure that any impacts of disposal actions are spatially limited, and any monitoring efforts are focused and effective. In case where use of an existing site is not operationally feasible, criteria for selecting a new site for dumping operations should be determined so as to minimize interference with the environment and with other current and potential users of the sea.

28. Due to their inert nature, materials can be disposed into existing disposal sites permitted for dredged material.

1.6.1 Identification of candidate sites

a) Site location

29. The criteria for selecting a new site for dumping operations should be determined so as to minimise interference with the environment and with other current and potential users of the sea. Basic information on the site under consideration should include the coordinates (latitude and longitude) of the disposal site, as well as its location with regards to:

- a. the nearest coastline;
- b. recreational areas;
- c. spawning, recruitment and nursery areas of fish, crustaceans and molluscs;
- d. known migration routes of fish or marine mammals;
- e. commercial and sport fishing areas;
- f. mariculture areas;
- g. areas of natural beauty or significant cultural or historical importance;
- h. areas of special scientific, biological or ecological importance;
- i. navigation restrictions (including shipping lanes)
- j. military exclusion zones;
- k. Engineering uses of the seafloor (e.g. potential or ongoing seabed mining, undersea cables, desalination or energy production sites).

30. Location of disposal sites should take advantage of natural sediment transport processes, including potential benefits associated with dispersive sites that enable transport of sediments into sediment starved areas.

31. Consideration should be given to future plans for infrastructures.

32. Once the basic information of candidate sites is collected, a map should be drawn by the applicant. The map should include the identification of environmentally sensitive areas and potentially incompatible uses within the zone of siting feasibility. The accumulation of such maps will create a pool of candidate sites to be considered for future purposes.

b) Size consideration

33. Consideration also has to be given to the size and capacity of the dumping site for future use as a dumping ground for other inert, inorganic geological materials in the area. In such cases, the following aspects should be taken into consideration:

- a. The dumping site should be large enough to contain the bulk of the anticipated waste material within the site limits or within a predicted impact area after dumping;
- b. The capacity of the dumping site should be sufficient to accommodate the anticipated volumes of solid and/or liquid waste to be diluted to near background levels before or upon reaching the boundaries of the site;
- c. The dumping site should be deep enough such that mounding or height of the waste materials at the site does not cause interference with shipping and boating;

- d. The size and capacity of the dumping site should be sufficiently large to contain the anticipated volumes of waste for a pre-determined period of time;
- e. The dumping site should be sufficiently deep and large to allow the necessary monitoring to be carried out without undue expenditure of time and money.

34. The presence of other dumping sites in the vicinity of a proposed new site has to be taken also into account, since they could affect decisions relating to the amounts and types of wastes to be dumped at the site and the frequency of dumping operations. This condition also applies for existing dumping sites under consideration for new disposal operations.

1.6.2 Characterization of candidate sites

a) Characteristics of the water column and sediments

35. Site selection criteria should include the physical, chemical and biological characteristics of the seabed and water column in the surrounding area in which the site is to be located. This information can be obtained from the literature, but fieldwork should be undertaken to fill the gaps.

36. Overall, baseline studies are needed to provide a basis for selection of a site. In cases where the applicant will conduct the baseline studies, the sampling and analysis plans using appropriate techniques should be submitted to the national authority for review prior to conducting the baseline studies.

Physical characteristics

37. It must first be established whether the subject area is dispersive or depositional in nature. A dispersive site, generally one in a high-energy hydrodynamic environment is unlikely to contain fine-grained sediments. A depositional site, which generally reflects a low energy hydrodynamic environment, is likely to contain fine-grained sediments.

38. Non-dispersive, retentive (accumulative) sites are generally associated with non-significant transport of materials, and disposed wastes are expected to stay within a pre-determined disposal site footprint. Retentive sites typically have low current speeds and are situated in areas where sediments tend to accumulate naturally.

39. In each case, the indigenous biological assemblages will reflect the structure and texture of the sediment and associated hydrodynamic conditions. There are also locations that change from depositional to dispersive because of hydrodynamic variability.

40. Particular attention should be paid to constituents of the waste which float on the surface or which, in reaction with seawater, may produce floating substances and which, because they are confined to a two-dimensional rather than a three-dimensional medium, may disperse very slowly. The possibility of the reaccumulation of such substances as a result of the presence of surface convergences, which may interfere with amenities, as well as fisheries and shipping, must be investigated.

41. In general, the most important physical factors influencing the transport and mixing of waste consist of:

- a. the oceanic flow environment: several types of motion contribute significantly to turbulence and shear levels, resulting in the mixing of waste; these include surface waves, tidal and inertial oscillations, wind driven surface currents and the internal circulation of the ocean;
- b. turbulent diffusion: this process influences the spreading of waste through turbulent eddies;
- c. shear induced diffusion: this process results in the advection of waste due to variations in velocities with depth; and
- d. vertical mixing: this waste mixing process is caused by the intermittent hydrodynamic instability of water.

42. The physical impact may also extend to zones outside the dumping site as such, resulting from the forward movement of the dumped material due to wave and tidal action and residual current movements, especially in the case of fine fractions.

43. Analyses of these physical phenomena as well as waste characterization data (as described in Part B of this Guideline) is required to predict the behavior of waste once it has been disposed at sea, using, inter alia, modelling tools.

44. The following data should be collected and be used for understanding the hydrodynamic of the subject area and to determine the possible effects of dumping:

- a. Detailed bathymetry of the candidate sites and surrounding areas;
- b. Expected water temperature and salinity (including thermoclines and haloclines) at the time of disposal and any relevant temporal/seasonal fluctuations;
- c. Expected background turbidity and natural fluctuations at the time of disposal and any relevant temporal/seasonal fluctuations;
- d. Identification of the dispersive nature of the site, including assessment of the seasonal current flow, tidal cycles, wave climate, and up-welling at the candidate disposal sites;
- e. Currents at several locations in the water column: within one (1) meter of the bottom, mid-depth, and within 1 meter of the surface. In open water areas, one lunar cycle might be adequate to determine tidal constituents for modelling. However, in nearshore areas with complex topographic inputs or areas affected by seasonal conditions, such as storm surge or peak river discharge, measurements are required for the months likely to have highest bottom currents as well as months in which disposal will take place.
- f. Mean direction and velocity of the surface and bottom drifts.
- g. Re-suspension or sediment concentration measurements within 1 meter of the bottom are necessary where currents are strong enough to cause re-suspension.
- h. Other current and wave information may be required including:
 - i. Tidal period and orientation of the tidal ellipse
 - ii. Average number of storm days per year
 - iii. Velocities of storm-wave induced bottom currents
 - iv. General wind characteristics

45. Sediment stability is an important factor which needs to be taken into account in any assessment of materials disposal sites. Mass submarine movements can involve enormous volumes of sediment. These occur in the form of slumps, slides, debris flows and turbidity currents, which are activated by a number of factors, including tectonic events, sediment overloading, erosion and changes in sediment compaction.

46. Consideration also needs to be given to the potential of material left on the seabed to snag fishing gear, taking into account its location, condition and the existence of any fishery exclusion zones.

Chemical Characteristics

47. Sampling and analysis should be conducted for background natural baseline levels of expected chemicals of concern in the water column and the sediment (first survey as described in Section 1.7.3 of this Guideline):

- a. Mercury, cadmium, lead, copper, other heavy metals
- b. High molecular weight hydrocarbons (including oil and grease)
- c. PCBs (polychlorinated biphenyls) and PAHs (polycyclic aromatic hydrocarbons)
- d. Other contaminants of concern may need to be characterized based on site history (e.g., polybrominated diphenyl ethers (PBDEs), dioxins and furans, tributyltin (TBT), chlorinated pesticides, and nutrients).

Biological considerations

48. An evaluation of the biological sensitivity of potential dumping areas needs to be made, either through a study of existing data or, if necessary, by means of new surveys using analytical methodologies and techniques. The main considerations are summarized below:

- a. fishing grounds and aquaculture sites: dumping in active fishing areas can affect the living resources, interfere with fishing vessels and may damage or foul fishing gear;
- b. breeding and nursery grounds: certain grounds, although not in use for fishing, may be important for fish stocks through their role as spawning, nursery or feeding areas;
- c. migration routes: migrating species use their acute senses of detection to find their native region or to move from one area to another; noise resulting from the dumping operation and the dumped materials may disrupt the physiological detection processes used by the fish, resulting in migrating species becoming confused as to their migration routes;
- d. areas of high productivity or other special interest: some areas may be judged to require particular attention because of unusually high biological productivity; the dumping in such areas could impact production.
- e. areas with sensitive, endangered, or at-risk species and habitat: at the point of disposal, dumped material can be harmful and include covering of the seabed and a localized increase in the levels of suspended solids. This could impact the composition of known sensitive species, pelagic and benthic species, endangered or at-risk species, and habitat at or near the load site(s).

49. To avoid excessive use of and impacts on the seabed, the number of dumping sites should be limited in so far as possible. To the maximum extent possible, each site should be used without interfering with navigation.

1.7 Assessment of potential effects – impact hypothesis

1.7.1 General considerations and conditions

50. Any adverse environmental impact of the disposal at sea of the materials should be minimized through the implementation of the pollution prevention plan and best environmental practices. Such adverse effects should in any case be limited to the following:

- a. deep sea dump sites;
- b. the coastal and estuarine area of the Mediterranean Sea;
- c. recycling facilities; and,
- d. waste disposal facilities and sites.

51. Assessment of potential effects should lead to a concise statement of the expected consequences of the sea or land disposal options, i.e., the "Impact Hypothesis." It provides a basis for deciding whether to approve or reject the proposed disposal option and for defining environmental monitoring requirements. As far as possible, waste management options causing dispersion and dilution of contaminants in the environment should be avoided and preference given to techniques that prevent the input of the contaminants to the environment.

52. The aim of an impact hypothesis is to provide, on the basis of the available information, a concise scientific analysis of the potential effects of the proposed operation on human health, living resources, marine life, amenities and other legitimate uses of the sea. For this purpose, an impact hypothesis should incorporate information on the characteristics of the materials and on conditions at the proposed dumping site. It should encompass both temporal and spatial scales of potential effects.

53. An analysis of each disposal option should be considered in light of a comparative assessment of the following concerns: human health risks, environmental costs, hazards (including accidents), economics and exclusion of future uses.

- a. If this assessment reveals that adequate information is not available to determine the likely effects of the proposed disposal option, including potential long-term harmful consequences, then this option should not be considered further. In addition,
- b. If the interpretation of the comparative assessment shows the dumping option to be less preferable, a permit for dumping should not be given.

1.7.2 The nature of impact on the marine environment

54. Adverse effect resulting from the physical properties of the dumped materials at the disposal site may include changes in natural physical and chemical fluxes and perturbation of the seabed and water column and cause noise interference. The impact of increased exposures of organisms to these adverse effects may result in short and long-term effects on pelagic and benthic invertebrates, fish and fisheries and on users of the sea.

55. As indicated in the “Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities,” updated in 2023, Ecological Objective 11 on underwater noise and Common Indicators 26 and 27 are unlikely to be relevant for monitoring of disposal sites as underwater noise from general shipping is much more likely to be a significant source of underwater noise than disposal activities.

56. The following paragraphs present a conceptual model for the impact hypothesis as suggested in the “Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities”

- a. The potential effects of material disposal can be regarded as a set of bottom-up causes and primary effects, in which the physical system (both in the water column and on the bed) is altered and which in turn affect the health of the biological system. The eventual effects on the biological system and its anthropogenic uses can be regarded as a set of top-down responses, e.g., the effects on the higher levels of the ecological system (such as fishes, seabirds and marine mammals) as well as on fisheries and conservation objectives. The knowledge of these effects and the linkages between the different responses can be regarded as a conceptual model which, by the nature of the system and the potential changes to marine disposal, is naturally very complex.¹
- b. The disposal material will have the potential to affect the water column, the bed conditions and their biota. Reductions in water clarity through an increased turbidity may in turn affect the primary production by the phytoplankton. The deposited sediment will change the nature of the bed sediment if it is of a different particle size and it can have a smothering effect on the bed community. Both of these features will affect the structure of the bed community and in turn the demersal and benthic fishes feeding on that bed community.
- c. Contaminated particles should not be relevant for the materials that pass the eligibility criteria. However, the dumping operation could resuspend contaminated particles which may already be present in sediments within and in the vicinity of the dumping site. Contaminated sediments in and around the sediments of dumping site should be identified during pre-disposal surveys and considered in the impact assessment.
- d. During the preparation of an impact hypothesis, the Contracting Parties to the Barcelona Convention should take into consideration the two types of disposal sites, i.e., retentive (accumulative) and dispersive and these will require a different impact hypothesis.
- e. In the case of a retentive site, where the material deposited will remain within the vicinity of the site, the assessment should delineate the area that will be substantially altered by the presence of the deposited material and should examine the severity of these alterations. The assessment should specify the likelihood and scale of residual impacts outside the primary zone where the bulk of the deposited material remains.
- f. In the case of a dispersive site, the assessment should include a definition of the area likely to be altered in the shorter term by the proposed deposit operation (i.e., the near

¹ See Figures 2.1 and 2.2 in MEMG (2003)

field) and the severity of associated changes in that immediate receiving environment. It should also specify the likely extent of long-term transport of material from this area and what this flux represents in relation to existing transport fluxes in the area; thereby permitting a statement regarding the likely scale and severity of effects in the long-term and far-field.

1.7.3 *Construction of the impact hypothesis*

57. With a view to assessing the potential magnitude of impacts from dumping activities, a plume modeling should be established. For that purpose, baseline surveys data of the proposed dumping sites and surrounding zone as well as background data on the characterization of the waste material, as noted in Part B of these Guidelines, are essential.

58. Impact hypotheses can be of three different types as can be inferred from Table 2:

Table 2: Examples of different types of impact hypotheses

Type	Examples of Different Types of Hypotheses
Operational	Does the extent of dispersion from the disposal site exceed that predicted?
	Can the disposal site receive the required amount?
Environmental	Do suspended solids levels exceed critical levels for fish?
	Do the changes degrade the overall health/quality of the environment?
Effects on users/uses	Does the depth of accumulation of material at the disposal site cause concern for navigation?

59. In constructing an impact hypothesis, particular attention should be given to, but not limited to:

- Potential impacts on amenities (e.g., presence of floatables, turbidity, odor, discoloration and foaming)
- Possible effect on marine life, fish and shellfish culture, fish stocks and fisheries, seaweed harvesting and culture, as well as effect on local communities living near islands or near marine protected areas.
- Sensitive areas (e.g., spawning, nursery or feeding areas), habitat (e.g., biological, chemical and physical modification), migratory patterns and marketability of resources.
- Possible effect on other uses of the sea (e.g. impairment of water quality for industrial use, such as desalination plants, underwater corrosion of structures, interference with ship operations from floating materials, interference with fishing, mariculture, or navigation through deposit of waste or solid objects on the sea floor and protection of areas of special importance for scientific or conservation purposes).

60. Interference with the migration or spawning of fish or crustaceans, or with seasonal fishery activities, may be avoided by the imposition of timing restrictions on disposal operations.

61. When assessing the impact of disposal operations, it may be necessary to compare the physical and, where appropriate, the chemical or biological quality of the affected area with reference to sites located away from the disposal site. Experience of the selection of reference sites for biological and physical monitoring can be acquired from monitoring programmes carried out in the vicinity of dumping site. Such areas can be identified during the early stages of impact assessment.

62. Even the least complex and most innocuous wastes may have a variety of physical, chemical and biological effects. Impact hypotheses cannot attempt to reflect them all. It must be recognized that even the most comprehensive impact hypotheses may not address all possible scenarios such as unanticipated impacts. It is therefore imperative that the monitoring programme be linked directly to

the hypotheses and serve as a feedback mechanism to verify the predictions and review the adequacy of management measures applied to the dumping operation and at the dumpsite. It is important to identify the sources and consequences of uncertainty. The only effects requiring detailed consideration in this context are physical impacts on biota.

63. In the case of repeated or multiple dumping operations, or when other interferences occur in the vicinity of the disposal site, a cumulative effect approach should be used. The potential impact assessment of multiple stressors should include the combined risks to human health or the environment. It will also be important to consider the possible interactions with other waste dumping practices in the area, existing or planned.

64. The tiered approach to testing is adopted as best practice to address the impact hypotheses in a cost-effective and consistent manner. The tiered approach to testing consists of successive levels of investigation, each with increasing effort and complexity. At each tier it will be necessary to determine whether sufficient information exists to allow a management decision to be taken or whether further testing is required. This approach generates the information necessary to evaluate the proposed disposal material. It provides for optimal use of resources by focusing the least effort on operations where the potential (or lack thereof) for unacceptable adverse impact is clear and expending the most effort on operations requiring more extensive investigation to determine the potential (or lack thereof) for impact. This approach is described in the “Updated Guidelines on Management of Dredged Materials” in Annex A of those Guidelines where the sequence of tiers is as follows:

- a. assessment of physical properties.
- b. assessment of chemical properties.
- c. assessment of biological properties and effects.

65. Where monitoring is required, the effects and parameters described in the hypotheses should help to guide field and analytical work so that relevant information can be obtained in the most efficient and cost-effective manner.

66. Where the impact-hypothesis indicates any transboundary impacts, a consultation procedure should be initiated in accordance with Part D of these updated Guidelines.

67. Each assessment should conclude with a statement supporting a decision to issue or refuse a permit for dumping.

PART C

2. MANAGEMENT AND MONITORING FOR THE DISPOSAL AT SEA OF INERT, UNCONTAMINATED INORGANIC GEOLOGICAL MATERIALS

68. Site management and monitoring plans should set out the framework for management, mitigation, and monitoring of impacts during project implementation. They should detail the control strategies for the project, including environmental objectives, auditable performance criteria, and mitigating corrective actions.

2.1 Management of the disposal operations

69. This section deals with management techniques to minimise the physical effects of disposal of the material and is based on the approaches to management in the “Updated Guidelines on Management of Dredged Materials.”

70. Management techniques should be used to minimize the physical effects of the disposal operation once it has been predicted by the impact assessment.

71. The key to management lies in careful site selection and assessment of the conflict between marine resources, the marine environment and activities. In addition, appropriate methods of deposit should be chosen to minimize the environmental effects.

72. All measures should be taken to allow recolonization to take place once deposition stops.

73. Where appropriate, deposit vessels should be equipped with accurate positioning systems and the activities of the vessels should be reported to the permitting or supervising authority. Deposit vessels and operations should be inspected regularly to ensure that the conditions of the deposit permit are being complied with and that the crew are aware of their responsibilities under the permit. Ships' records and automatic monitoring and display devices (e.g. black boxes), where these have been fitted, should be inspected to ensure that deposit is taking place at the specified deposit site.

74. To avoid excessive degradation of the seabed as a whole, the number of sites should be limited as far as possible, and each site should be used to the maximum extent that will not interfere with navigation or any other legitimate use of the sea.

75. Effects can be reduced by ensuring that, as far as possible, the material and the sediments in the receiving area are similar. Locally, the biological impact may be further reduced if the sedimentation area is naturally subject to physical disturbance (horizontal and vertical currents). Where this is not possible, and the materials are clean and fine, a deliberately dispersive style of dumping should be utilised so as to limit blanketing to a small site.

76. Temporal restrictions on dumping activities may have to be imposed (for example tidal and seasonal restrictions). Interference with fish or crustacean migration or spawning or with seasonal fishing activities may be avoided by imposing a calendar for dumping operations.

77. The rate of deposition can be an important consideration since it will often have a strong influence on the impacts at the deposit site. It may therefore need to be controlled to ensure that the environmental management objectives for the site are not exceeded.

2.2 Monitoring operations for the material disposal at sea

2.2.1 Objectives and definition

78. For the purposes of assessing and regulating the environmental and human health impacts of disposal operations, monitoring is defined as the repeated measurement of an effect, whether direct or indirect, on the marine environment and/or of interferences with other legitimate uses of the sea.

79. Monitoring of dumping operations is generally undertaken for the following reasons:

- a. to establish whether the dumping permit conditions have been respected - *compliance monitoring* - and consequently have, as intended, prevented adverse effects on the receiving area as a consequence of dumping.
- b. to improve the basis on which permit applications are assessed by improving knowledge of the field effects of major discharges which cannot be directly estimated by a laboratory evaluation or from the literature;
- c. to provide the necessary evidence to demonstrate that within the framework of the Protocol the monitoring measures applied are sufficient to ensure that the dispersive and assimilative capacities of the marine environment are not exceeded, and so dumping operations do not cause damage to the environment and deteriorate GES.

80. It should be noted that baseline surveys need to be carried out prior to any disposal activities take place in order to define the existing environmental conditions so that subsequent monitoring is able to establish any changes resulting from the disposal activities.

81. As concluded in the document on the “Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities,” when undertaking monitoring of disposal operations, it is necessary to consider Ecological Objectives (EO9) on Contaminants and occasionally EO11 on Underwater Noise, as well as EO5 on Eutrophication in line with the Integrated Monitoring and Assessment Programme (IMAP) of the Mediterranean Sea and Coast.

2.2.2 Impact hypothesis verification: Defining the monitoring programme

82. The Impact Hypothesis forms the basis for defining the monitoring programme. It is derived from the predicted effects on the physical, chemical and biological characteristics of the areas in and around the disposal site (see Part B of these Guidelines).

83. While numerous potential effects can be envisaged, it is only those of potential significance (however defined) that require monitoring. It is then necessary to derive testable hypotheses for each of those potentially significant effects and to determine what measurements are required to test them. The primary consideration for impact hypotheses should be tailored to specific information such as site characteristics, site-specific species, local spatial and temporal scales of variable parameters and the permit terms and conditions.

84. In designing a monitoring programme, the following questions must be answered:

- a. What testable hypotheses can be derived from the impact hypothesis?
- b. What exactly should be measured?
- c. What is the purpose of monitoring a specific variable or physical, chemical or biological effect?
- d. In what compartment and at which locations can measurements be made most effectively?
- e. For how long should the measurements be carried out to meet the defined aim?
- f. With what frequency should measurements be carried out?
- g. What should be the temporal and spatial scale of the measurements made to test the impact hypothesis?
- h. How should the data from the monitoring programme be managed and interpreted?

85. The measurements required for monitoring can be divided into (i) those within the zone of predicted impact and (ii) those outside, and should determine:

- a. if the actual zone differs from that projected; and
- b. if the extent of change projected outside the zone of impact is within the scale predicted.

86. The former can be ascertained by designing a sequence of measurements in space and time with a view to ensuring that the projected spatial scale of change is not exceeded. The latter can be shown through measurements which provide information on the extent of the change occurring outside

the impact zone as a result of the dumping operation. These measurements are often based on a null hypothesis, i.e. that no significant change can be detected.

2.2.3 *Common methodologies and techniques for assessing adverse effects*

87. This section is based on the “Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities,” and its 2023 update which are linked to the IMAP Guidance/Monitoring Protocols.

88. Impacts on the seabed and associated biota in and around the disposal site are usually the most important impacts due to the bulk nature of the material. However, water column impacts may be relevant in some cases..

89. The main environmental components and features relevant to monitoring disposed material operations is given in Table 3.

Table 3: The main environmental components and features relevant to monitoring disposal operations (MEMG, 2003).

Component	Feature
Hydrography:	Tidal excursion
	Wind-driven circulation
	Bed currents
	Short-term circulation
	Long-term circulation
	Sediment movement
Water Column:	Light penetration
	Turbidity/Suspended solids
	Contaminants in water/suspended solids
	Particulate organic carbon
Seabed –Physical:	Bathymetry Bed forms
	Sediment physical characteristics
	Marine litter including macro-and micro-plastics
Seabed –Chemistry:	Sediment chemistry –contaminants
	Sediment chemistry –organic carbon
	Sediment properties –pH, redox
Seabed –Biology:	Biotope
	Epibenthos
	Benthic infauna
Top Predators:	Fish
	Seabirds
	Mammals

90. Where it is considered that effects will be largely physical, one component of monitoring may be based upon remote methods such as side-scan sonar to identify changes in the character of the seabed and bathymetric techniques and multibeam bathymetry to identify areas of disposed material accumulation. Both techniques may require some sediment sampling to establish "ground truth".

91. In order to assess the impact, it will be necessary to compare the physical, chemical and biological quality of the affected areas with reference sites located away from dispersal pathways. Such areas can be identified during the early stages of the impact assessment.

92. Note that baseline surveys need to be carried out prior to any disposal activities take place in order to define the existing environmental conditions so that subsequent monitoring is able to establish any changes resulting from the disposal activities, as specified in Part B of these Guidelines.

93. The spatial extent of sampling will need to take into account the size of the area designated for dumping, the mobility of deposited material and water movements which will determine the direction and extent of sediment transport.

94. The frequency of surveys will depend on a number of factors. Where a disposal operation has been going on for several years, it may be possible to establish the effect at a steady state of input and repeated surveys would only be necessary occasionally to check that effects are within those predicted or if changes are made to the operation such as the quantities or type of material, the method of deposit etc.

95. The range of common components and features that may be necessary (based on the impact hypothesis) to be monitored at and in the vicinity of a disposal site can be organised into the categories as shown in Table 3 above (MEMG, 2003). As explained in the “Compendium of Best Practices for Implementation of Dumping Protocol, it is recommended that the tiered approach to monitoring is adopted as best practice to address the impact hypotheses in a cost-effective and consistent fashion. An example of tiered monitoring is described in the “Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities” (para 46-47).

96. In order to assist those Contracting Parties that are at early stages of developing waste assessment and monitoring actions, the London Convention/London Protocol has developed guidance for low cost, low technology field monitoring for the assessment of the effects of disposal in marine waters of dredged material or inert, inorganic, geological material (IMO, 2016) that may be useful for some Parties. The objective of the guidance document is to provide practical information about using low technology and low-cost tools that are useful for monitoring of possible environmental impacts associated with marine disposal of either dredged material or inert, inorganic geological materials. However, this monitoring should be adequate to give convincing results, without jeopardising the aim of the monitoring. These Guidelines could be considered BEP for such countries, which are at the early stage of establishing monitoring programmes and are recommended for those interested Contracting Parties. Nevertheless, Contracting Parties should consider increasing the monitoring efficiency, over time, if the Contracting Parties have capacity.

97. Concise reports on monitoring activities should be prepared and made available to relevant stakeholders and other interested parties. Reports should detail the measurements made, the results obtained and the manner in which these data relate to the monitoring objectives and confirm the impact hypothesis. The frequency of reporting will depend on the scale of the dumping operation, the intensity of monitoring and the results obtained.

2.2.4 *Quality assurance*

98. Quality assurance may be defined as all planned and systematic activities implemented to provide adequate confirmation that monitoring activities are fulfilling requirements related to quality.

99. The results of monitoring activities should be reviewed at regular intervals in relation to their objectives in order to provide a basis for:

- a. modifying or terminating the field monitoring programme;
- b. amending or revoking the dumping permit;
- c. redefining or closing the dumping site; and
- d. modifying the basis for assessing dumping permits in the Mediterranean Sea.

100. The results of any reviews of monitoring activities should be communicated to all Contracting Parties concerned. The licensing authority is encouraged to take relevant research findings into consideration with a view to the modification of monitoring programmes.

PART D

3. REQUIREMENTS FOR THE ISSUANCE OF PERMIT DUMPING AT SEA

3.1 Requirements for a permit application

101. The Protocol establishes the permitting requirements for the sea disposal operations of a *single* dumping activity.

102. Any application for a permit must contain data and information specifying:

- a. Characterization of the wastes and their constituents;
- b. Types, amounts and sources of the materials to be dumped;
- c. Location and characteristics of the dumping site(s);
- d. History of previous dumping operations and/or past activities with negative environmental impacts;
- e. Method of dumping;
- f. Proposed site management; and
- g. Monitoring plan.

3.2 Main considerations during the issue of a permit

103. Article 6.1 of the Dumping Protocol states that a permit shall be issued only after careful consideration of the factors set forth in the Annex to the Protocol, guidelines and procedures adopted by the Contracting Parties.

104. Before considering the dumping of the materials at sea, every effort should be made to determine the practical availability of alternative land-based methods of treatment, disposal or elimination.

105. Only those materials which have been specified as inert uncontaminated inorganic geological materials according to the eligibility criteria described in Part A of these Guidelines, and found acceptable for sea deposit, based on the impact assessment, will be considered for dumping.

106. In special cases where it is decided to dump the materials at sea, this should be regarded as an exception. The practical availability of other means of disposal should be considered in the light of a comparative assessment of:

- a. their characteristics: chemical, biological and physical.
- b. their potential impact on the environment, including:
 - i. their effects on marine habitats and communities, and other legitimate uses of the sea;
 - ii. the effect of their onshore re-use, recycling, or disposal, including potential impacts on land, surface and groundwater and air pollution; and
 - iii. the impact of the use of the necessary energy and materials (including an overall assessment of the use of energy and materials and the savings achieved through re-use, recycling or disposal options), including transportation and the resultant environmental impact.
- c. their potential impact on human health, including:
 - i. the identification of routes of exposure and the analysis of potential impacts on sea and land re-use, as well as of recycling and disposal options, including the potential secondary impacts of energy use; and
 - ii. the quantification and evaluation of the safety risks associated with onshore re-use, recycling and disposal, compared with disposal at sea.
- d. their technical and practical feasibility, including:

- i. the identification of the practical limitations of disposal alternatives, taking into account the characteristics of the inert, inorganic geological materials and oceanographic considerations.
- e. economic considerations, including:
 - i. an analysis of the full cost of inert, inorganic geological materials re-use, recycling or disposal alternatives, including their secondary impacts; and
 - ii. a review of costs in relation to benefits in such areas as resource conservation and the economic benefits of steel recycling.

107. Opportunities should be provided for public review and participation in the permit evaluation process.

3.3 Conditions for issuing a permit

108. A decision to issue a permit should be based on the elements provided by a pre-disposal site survey. If the characterization of these conditions is insufficient for the formulation of an impact hypothesis, additional information will be required before any final decision is made with regard to issuing a permit.

109. A decision to issue a permit should only be made where all the impact assessments are complete, taking into account the defined criteria, and where the monitoring requirements have been determined. The conditions set out in the permit should be such as to ensure, in so far as practicable, that environmental disturbance and detriment are minimised, and that benefits are maximised.

110. Permit conditions should be drafted in plain and unambiguous language and will be designed to ensure that:

Where the comparative assessment reveals that adequate information is not available to determine the likely effects of the proposed disposal option, including the potential long-term harmful consequences, then this option should not be considered further. In addition, where analysis of the comparative assessment shows that the dumping option is less preferable than a land alternative, a permit should not be issued for the dumping.

111. Each assessment should conclude with a statement in support of a decision to either issue or refuse a permit for dumping.

112. In the event that the determined criteria cannot be met, a Contracting Party should not issue a permit unless a detailed assessment shows that disposal at sea is nonetheless the least detrimental option. Where such a conclusion is reached and a permit is issued, the Contracting Party should take all practical steps to mitigate the impact of the disposal operation on the marine environment.

113. Regulators should strive at all times to enforce procedures which ensure that environmental changes are as far below the limits of allowable environmental change as practicable, taking into account technological capacities and economic, social and political considerations.

114. Regulators should validate at all times that;

- a. the material is deposited at the selected deposit site;
- b. any necessary deposit management techniques identified during the impact analysis are carried out; and
- c. any monitoring requirements are fulfilled, and the results reported to the permitting or supervising authority.

115. The authority responsible for issuing the permit should take into consideration relevant research findings when specifying permit requirements.

3.4 Supplemental conditions for issuing a permit for an existing dumping site

116. The issuing of a permit for materials disposal at a site where past dumping activities were carried out should be based on a comprehensive review of results and objectives of existing monitoring programmes. The review process provides an important feedback and informed decision-making regarding the impacts of further disposal activities, and whether a permit may be issued for further dumping operations on site. Furthermore, such a review will indicate whether the field-monitoring programme needs to be continued, revised or terminated.

3.5 Consultation procedure

117. The consultation procedure should be undertaken further to the following steps:

1. A relevant Contracting Party which is considering whether to issue a permit under Part D of these Guidelines shall start this consultation procedure at least 32 weeks before any planned date of a decision on that question by sending to MAP a notification containing:
 - a. an assessment prepared in accordance with Part B of these Guidelines, including the summary in accordance with Part B of these Guidelines;
 - b. an explanation why the relevant Contracting Party considers that the requirements of Part B of these Guidelines may be satisfied;
 - c. any further information necessary to enable other Contracting Parties to consider the impacts and practical availability of options for re-use, recycling and disposal.
2. MAP shall immediately send copies of the notification to all Contracting Parties.
3. If a Contracting Party wishes to object to, or comment on, the issue of the permit, it shall inform the Contracting Party which is considering the issue of the permit not later than the end of 16 weeks from the date on which the MAP circulated the notification to the Contracting Parties and shall send a copy of the objection or comment to the MAP. Any objection shall explain why the Contracting Party which is objecting considers that the case put forward fails to satisfy the requirements of Part B of this Guideline. That explanation shall be supported by scientific and technical arguments. MAP shall circulate any objection or comment to the other Contracting Parties.
4. Contracting Parties shall seek to resolve by mutual consultations any objections made under the previous paragraph. As soon as possible after such consultations, and in any event not later than the end of 22 weeks from the date on which the MAP circulated the notification to the Contracting Parties, the Contracting Party proposing to issue the permit shall inform the MAP of the outcome of the consultations. The MAP shall forward the information immediately to all other Contracting Parties.
5. If such consultations do not resolve the objection, the Contracting Party which objected may, with the support of at least two other Contracting Parties, request the MAP to arrange a special consultative meeting to discuss the objections raised. Such a request shall be made not later than the end of 24 weeks from the date on which the MAP circulated the notification to the Contracting Parties.
6. MAP shall arrange for such a special consultative meeting to be held within 6 weeks of the request for it, unless the Contracting Party considering the issue of a permit agrees to an extension. The meeting shall be open to all Contracting Parties, the operator of the installation in question and all observers to MAP. The meeting shall focus on the information provided in accordance with Part B of these Guidelines. The chairman of the meeting shall be MAP Coordinator, or a person appointed by MAP Coordinator. Any question about the arrangements for the meeting shall be resolved by the chairman of the meeting.
7. The chairman of the meeting shall prepare a report of the views expressed at the meeting and any conclusions reached. That report shall be sent to all Contracting Parties within two weeks of the meeting.
8. The competent authority of the relevant Contracting Party may take a decision to issue a permit at any time after:

- a. the end of 16 weeks from the date of dispatch of the copies under sub paragraph 2 of the consultation procedure, if there are no objections at the end of that period;
 - b. the end of 22 weeks from the date of dispatch of the copies under sub paragraph 2 of the consultation procedure, if any objections have been settled by mutual consultation;
 - c. the end of 24 weeks from the date of dispatch of the copies under sub paragraph 2 of the consultation procedure, if there is no request for a special consultative meeting;
 - d. receiving the report of the special consultative meeting from the chairman of that meeting.
9. Before making a decision with regard to any permit under these Guidelines, the competent authority of the relevant Contracting Party shall consider both the views and any conclusions recorded in the report of the special consultative meeting, and any views expressed by Contracting Parties in the course of this procedure.
10. Copies of all the documents which are to be sent to all Contracting Parties in accordance with this procedure shall also be sent to those observers who have made a standing request for this to the MAP/MEDPOL.

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UNEP/MED WG.482/18. Monitoring Guidelines/Protocols for Sample Preparation and Analysis of Sea Food for IMAP Common Indicator 20: Heavy and Trace Elements and Organic Contaminants. Integrated Meetings of the Ecosystem Approach Correspondence Groups on IMAP Implementation (CORMONs). Videoconference, 1-3 December 2020.

UNEP/MED WG.509/41. Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities. Meeting of the MED POL Focal Points. Videoconference, 27-28 May and 6-7 October 2021.

https://wedocs.unep.org/bitstream/handle/20.500.11822/36209/21wg509_41_eng.pdf?sequence=1&isAllowed=y

UNEP/MED WG.509/42. Compendium of Best Practices for Implementation of Dumping Protocol. Meeting of the MED POL Focal Points. Teleconference, 27-28 May and 6-7 October 2021.

https://wedocs.unep.org/bitstream/handle/20.500.11822/36210/21wg509_42_eng.pdf?sequence=1&isAllowed=y (updated in UNEP/MED WG.554/4).

UNEP/MED WG.554/4. Compendium of Best Practices for Implementation of Dumping Protocol. Meeting of the MED POL Focal Points (2023). Meeting to Review the Updated Guidelines for the Dumping of Inert Uncontaminated Geological Materials and Sharing Best Practices to Support Implementation of the Dumping Protocol. Teleconference, 13-14 February 2023.

ANNEX II

Summary of methodologies and techniques for monitoring purposes for Dumping of Inert Uncontaminated Inorganic Geological Materials

Part I

This annex includes a summary of methodologies and techniques for monitoring purposes for Dumping of Inert Uncontaminated Inorganic Geological Materials with examples for monitoring the main environmental components and features relevant to material disposal operations for assessment of adverse impacts of dumping activities. The Contracting Parties are recommended to take into consideration these methodologies and techniques when establishing relevant monitoring programmes as referred in Part 'C' Chapter 2.2.3 in these Guidelines. This Annex is divided into three parts:

- Part I: Examples of the methodologies and techniques
- Part II: Sampling and Monitoring Protocols Developed under IMAP
- Part III: Innovative Solutions - Novel techniques for Monitoring

Component	Feature	Examples of the methodologies and techniques
Hydrography:	Tidal excursion	Subsurface drogues followed by boat with radar and DGPS position fixing and should be monitored per tide with spring and neap coverage. Also, navigational charts usually provide information about tidal speed and direction at a number of points (i.e., 'Tidal Diamonds' on Admiralty charts).
	Wind-driven circulation	Surface drogues followed by boat with DGPS position fixing under several wind conditions. Also, Ocean Current Surface Radar (OSCR) and Acoustic-Doppler Current Profile (ADCP) Imaging can be used.
	Bed currents	Bottom landers with recording current meters. Also, seabed drifters - deployment of plastic drifters, each tagged and with reward for recovery.
	Short-term circulation	Direct-reading current meters (DRCM) or recording current meter (RCM), deployed over tidal cycles and under differing spring-neap conditions. They can be deployed in conjunction with other water parameter measurement devices (e.g., depth, temperature, salinity/conductivity, oxygen, turbidity) to define water masses. In addition, ADCPs can be used.
	Long-term circulation	Recording current meter (RCM) deployed over a lunar cycle.
	Sediment movement	Bottom landers deploying a range of optical sensors and water sampling equipment. Also, a variety of sediment tracers are in use e.g., fluorescent tracers.
Water Column:	Light penetration	The simplest device is the Secchi disk that measures water transparency. UNEP/MAP has a relevant monitoring guidelines/protocols in UNEP/MED WG.482/6: Monitoring Guidelines/Protocols for Determination of Hydrographic Physical Parameters. Also, one can deploy underwater light meters to measure photosynthetically active radiation (PAR) penetration with depth.
	Turbidity/Suspended solids	Techniques for testing of turbidity may include (UNEP/MED WG.509/41): • Use of water displacement samplers at several depths, to give depth profile, then filtering water through filters to give weight of suspended solids; • Optical instruments can measure turbidity by monitoring optical backscatter (OBS) or transmission. OBS instruments are more sensitive to fine sediments (14-170 µm) in suspension than acoustic instruments. They need calibration to give values of suspended sediment concentration. Continuous monitoring equipment for this is available and can be deployed from vessels or installed on buoys or fixed structures to ensure appropriate coverage around the dumping operation. • Acoustic monitoring of turbidity may be achieved using instruments based upon acoustic backscatter. An increased concentration of suspended sediments leads to an increase in the backscattered acoustic energy. Acoustic instruments are more sensitive to coarse (75-250 µm) sediments in suspension. They also need calibration to give values of suspended sediment concentration. As for optical instruments, continuous monitoring equipment for this is available and can be deployed from vessels or installed on buoys or fixed structures to ensure appropriate coverage around the dumping operation.

Component	Feature	Examples of the methodologies and techniques
	Contaminants in water/suspended solids	Water samples are collected using standard oceanographic samplers and filters to give suspended load and dissolved phase for analysis of inorganic or organic contaminants. UNEP/MAP has two relevant monitoring guidelines/protocols: • UNEP/MED WG.482/15: Monitoring Guidelines/Protocols for Sampling and Sample Preservation of Seawater for IMAP Common Indicator 17: Heavy and Trace Elements and Organic Contaminants. • UNEP/MED WG.482/16: Monitoring Guidelines/Protocols for Sample Preparation and Analysis of Seawater for IMAP Common Indicator 17: Heavy and Trace Elements and Organic Contaminants.
	Particulate organic carbon	Water samples are filtered to collect particulate matter. Techniques that can be used include either percentage Loss-on-Ignition, CHN analyser or use wet oxidation technique followed by spectrophotometry or titration.
Seabed – Physical:	Bathymetry	Echo sounder and multibeam bathymetry to provide accurate recording of depth variations across disposal sites
	Bed forms (<i>i.e., the shape of the seabed including sand waves, mega ripples, rock outcrops etc.</i>)	• Photography to give presence of different ripple types, rock surfaces, crevices, sediment pockets in hard substratum. • Side-scan sonar for sweep of area giving 2-dimensional interpretation. • Bed-profiling, e.g., Sub-bottom profilers and RoxAnn (http://www.sonavision.co.uk/products.asp?cat_id=1), giving bed features (substratum types, bed forms, major changes of bed).
	Sediment physical characteristics (<i>i.e., sediment particle size, density, water content, permeability etc.</i>)	• A subjective assessment following grab or core sampling - skilled visual assessment into mud, muddy-sand, mud, etc. • Detailed particle size analysis of samples taken by grab or core; granulometric analysis using sieving for the coarse fraction and laser granulometry (e.g., Malvern, Frisch), Coulter Counter, or pipette analysis for the finer fraction if <5% by weight. • Geotechnical analyses for e.g., bulk density, liquid/plastic limits, consolidation, permeability and shear strength (Fitzpatrick and Long, 2007). • Sediment Profile Imaging – This allows rapid data acquisition during field sampling and a wide variety of physical and biological parameters can be measured from each image, including: - Grain-size major mode and range (gravel, sand, silt, clay). - Depth of the apparent Redox Potential Discontinuity (RPD). - Calculation of the Organism-Sediment Index, allowing rapid identification and mapping of disturbance gradients in surveyed areas. - Infaunal Successional Stage. - Evidence of excess organic loading and high sediment oxygen demand. - More details can be seen at: https://www.inspireenvironmental.com/2015/12/04/sediment-profile-imaging%20-%20~:text=Sediment%20Profile%20Imaging%20allows%20rapid%20data%20acquisition%20during,%28gravel,%20sand,%20silt,%20clay%29.%20Small-scale%20surface%20boundary%20roughness

Component	Feature	Examples of the methodologies and techniques
	Marine litter including macro- and micro-plastics	• OSPAR Guidelines for Monitoring Marine Litter on the Beaches in the OSPAR Maritime Area (https://www.ospar.org/documents?v=7260). • UNEP/MAP has Ecological Objective 10 related to marine litter and Common Indicator 23 'Trends in the amount of litter in the water column including microplastics and on the seafloor. Associated with that Common Indicator is a checklist for collecting data on seafloor marine litter (IMAP CI23). • Recently, Madricardo et al., (2020) have given an overview of the current state-of-the-art methods to address the issue of seafloor macro-litter pollution. The overview includes the following topics: the monitoring of macro-litter on the seafloor, the identification of possible litter accumulation hot spots on the seafloor through numerical models, and seafloor litter management approaches (from removal protocols to recycling processes). • Regarding microplastics, the best guidance currently available is that proposed in GESAMP (2019) that has proposed guidelines including: ○ Designing monitoring and assessment programmes ○ Monitoring methods for shorelines ○ Monitoring methods for the sea surface and water column ○ Monitoring methods for seafloor ○ Monitoring methods for marine biota ○ Sampling processing for microplastics ○ Methods for physical, chemical and biological characterisation of plastic litter
Seabed – Chemistry:	Sediment chemistry – contaminants	Sampling by grab or core (non-contaminating material) then analysis by digestion and Atomic Absorption or Plasma-emission spectroscopy for metals; GCMS or HPLC for organic contaminants; petroleum hydrocarbons by extraction and gravimetry or GCMS. UNEP/MAP has two relevant monitoring guidelines/protocols: • WG. 482/11: Monitoring Guidelines/Protocols for Sampling and Sample Preservation of Sediment for IMAP Common Indicator 17: Heavy and Trace Elements and Organic Contaminant. • WG 482/12: Monitoring Guidelines/Protocols for Sample Preparation and Analysis of Sediment for IMAP Common Indicator 17: Heavy and Trace Elements and Organic Contaminants. • Sediment Profile Imaging can be used with Diffusive Gradient in Thin films (DGT) gels to give information on the profiles on contaminants in the top 20 cm of sediment (Birchenough et al., 2010). Also, there is the possibility of using passive sampler to assess the bioavailability of chemical contaminants in sediment e.g., (Gillmore et al., 2021) and paper LC/SG 41/INF.7 'Laboratory, field, and analytical procedures for using passive sampling in the evaluation of contaminated sediments: user's manual' available through IMO Web Accounts
	Sediment chemistry – organic carbon	Sampling by core or grab to give undisturbed surface sediment then assess Loss-on-ignition (using muffle-furnace), direct measurement of carbon and nitrogen by CHN analyser or wet oxidation technique for carbon. Also, micro-Kjeldahl technique for nitrogen.
	Sediment properties –pH, redox	Platinum electrode measurements at depth in sediment in a grab or on a core sample to give Eh profile and depth of redox profile discontinuity level.

Component	Feature	Examples of the methodologies and techniques
Seabed – Biology:	Biotope	A biotope is an area of uniform environmental conditions providing a living place for a specific assemblage of plants and animals. Techniques for this can include: • Still and video photography using epibenthic sledge towed behind vessel or drop camera; calibrate area observed; record megabenthic organisms and any surface features (pockmarks, burrow entrances). • Use of remote operated vehicle (ROV) from vessel to obtain precise nature of biological features; if necessary, ground-truth using core and grab sampling. • Biotope mapping using combinations of multibeam bathymetry, side scan sonar, sub-bottom profiling and RoxAnn with ground truthing by core and grab analysis.
	Epibenthos	• Still and video photography (as for biotope). • Use of remote operated vehicle (ROV) (as for biotope). • Towed epibenthic sledge, naturalists dredge or scallop dredge from vessel, with onboard analysis. • Seabed towed gear, e.g., Agassiz or beam trawl with onboard analysis of large and common forms but laboratory analysis for more precise identification
	Benthic infauna	UNEP/MAP has a relevant monitoring guidelines/protocol for this issue in UNEP/MED WG.461/21: Update of Monitoring Protocols on Benthic Habitats: Guidelines for monitoring marine benthic habitats in Mediterranean. Techniques for this can include: • Use of grab or core samplers to provide fully quantitative samples; sieving on board and laboratory sorting and identification to give abundance, biomass and species richness per sample. • Sediment profile imaging (SPI) to give photographs, and possible image analysis) of sediment type in relation to presence of organisms – see above
Top Predators:	Fish	UNEP/MED WG.458/4: ‘Guidance on monitoring concerning the biodiversity and non-indigenous species’ covers cetaceans. Monk seals, sea birds and turtles.
	Seabirds	Aerial and shore photography, visual recording.
	Mammals and Reptiles	Photography, visual recording.

Part II: Sampling and Monitoring Protocols Developed under IMAP

Contaminants in biota

Contracting Parties shall take into consideration the following monitoring and sampling protocols in their monitoring programmes for monitoring and assessment of contaminants in biota as indicated in Part C of these Guidelines. They Protocols are described in detail in the following reports:

- a. UNEP/MED WG.482/13. Monitoring Guidelines/Protocols for Sampling and Sample Preservation of Marine Biota for IMAP Common Indicator 17: Heavy and Trace Elements and Organic Contaminants.
- b. UNEP/MED WG.482/14. Monitoring Guidelines/Protocols for Sample Preparation and Analysis of Marine Biota for IMAP Common Indicator 17: Heavy and Trace Elements and Organic Contaminants.
- c. UNEP/MED WG.482/17. Monitoring Guidelines/Protocols for Sampling and Sample Preservation of Sea Food for IMAP Common Indicator 20: Heavy and Trace Elements and Organic Contaminants.
- d. UNEP/MED WG.482/18. Monitoring Guidelines/Protocols for Sample Preparation and Analysis of Sea Food for IMAP Common Indicator 20: Heavy and Trace Elements and Organic Contaminants.

Part III: Innovative Solutions

Novel techniques for Monitoring

A number of novel techniques for marine monitoring have and are becoming available due to new technologies being developed. In particular, the use of autonomous vehicles (drones) either underwater, on the sea surface or in the air are bringing new possibilities for marine monitoring. Powered Autonomous Underwater Vehicles (AUVs) have been in use for some time now that can carry out e.g., surveys of side scan sonar, multibeam bathymetry and sub-bottom profiling. In addition, the use of underwater gliders and autonomous surface vehicles is becoming more common. Canada submitted a useful review of novel drones for marine monitoring to the LC/LP Scientific Groups Meeting in 2019.² Also, see Chapters 11-16 on in (NOC, 2020) for details of a variety of such devices.

² LC/SG 42/INF.11 available from IMO Wen Accounts

Decision IG.26/10¹

Conceptual Framework for Implementing Marine Spatial Planning in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their 23rd meeting,

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

Recalling also the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

Recalling further the Union for the Mediterranean Ministerial Declaration on Sustainable Blue Economy of 2 February 2021 and the Declaration of the meeting of the ministers of the countries participating in the initiative for the sustainable development of the blue economy in the Western Mediterranean of 23 June 2023,

Having regard to the Protocol on Integrated Coastal Zone Management in the Mediterranean, hereafter referred to as the ICZM Protocol, and in particular Article 3 on Geographical Coverage for its application,

Recalling Decision IG.23/7 of the 20th Meeting of the Contracting Parties (COP 20) (Tirana, Albania, 17-20 December 2017), by which the Meeting took note of the Conceptual Framework for Marine Spatial Planning as a guiding document to facilitate the introduction of this management tool into the Integrated Coastal Zone Management framework,

Recalling also Decision IG.24/5 of the 21st Meeting of the Contracting Parties (COP 21) (Naples, Italy, 2-5 December 2019), by which the Meeting adopted the Common Regional Framework for Integrated Coastal Zone Management,

Having considered the encouraging results of several pilot projects implemented by the Contracting Parties following the COP 21 Decision on the Conceptual Framework for Marine Spatial Planning,

Committed to strengthen cooperation for achieving Sustainable Development Goals (SDGs) by ensuring that activities on the marine and land parts of coastal zone are planned and managed in a coordinated way, respecting the ecosystem health and integrity and contributing to Good Environmental Status (GES) of the Mediterranean Sea and Coasts,

Acknowledging Marine Spatial Planning as a necessary tool for sustainable Blue Economy,

Bearing in mind the mandate of PAP/RAC within the MAP-Barcelona Convention system and its relevance to the implementation of this Decision,

Having considered the Report of the 20th Meeting of the Mediterranean Commission on Sustainable Development (Marseille, France, 14-16 June 2023) highlighting the need for including a comprehensive integrated Marine Spatial Planning in the next MSSD and the establishment of a dedicated UNEP/MAP working group on Marine Spatial Planning, and the Report of the Meeting of the PAP/RAC National Focal Points (Split, Croatia, 23-24 May 2023),

1. *Adopt* the Conceptual Framework for Implementing Marine Spatial Planning in the Mediterranean (hereinafter referred to as MSP Conceptual Framework) set out in Annex to the present Decision, as a

¹ Reservation by Egypt and Libya on the entire decision and its annex

guiding document for coordinated implementation of Marine Spatial Planning within the geographical scope of application of the Barcelona Convention,

2. *Invite* the Contracting Parties to implement the MSP Conceptual Framework and strengthen regional cooperation in line with the provisions of the ICZM Protocol and by using the online Marine Spatial Planning Workspace (<https://msp.iczmplatform.org/>),
3. *Request* the Secretariat (PAP/RAC) to establish a dedicated working group composed of experts of the Contracting Parties and all UNEP/MAP Components to lead the work on Marine Spatial Planning implementation in the Mediterranean and contribute towards streamlining Marine Spatial Planning in the revised Mediterranean Strategy for Sustainable Development,
4. *Encourage* the Contracting Parties to participate, contribute and benefit from other existing mechanisms and tools developed for the implementation of Marine Spatial Planning, including the initiatives for creating an open Community of Practice for exchange on Marine Spatial Planning, in order to align the approaches and promote UNEP/MAP's principles and objectives,
5. *Request* the Secretariat (PAP/RAC) to continue supporting the Contracting Parties in their effort to implement the ecosystem-based Marine Spatial Planning by providing capacity building and training, regularly updating the Marine Spatial Planning Workspace, and helping create national and local Communities of Practices for Marine Spatial Planning.

Annex

Conceptual Framework for Implementing Marine Spatial Planning in the Mediterranean

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Conceptual Framework for Implementing Marine Spatial Planning in the Mediterranean

I. INTRODUCTION

Marine Spatial Planning (MSP), as an emerging requirement for the entire Mediterranean Region, has been called upon by the Contracting Parties (CPs) of the Barcelona Convention to contribute to good environmental status (GES) of marine and coastal environment, explore the connections between land and sea areas in more detail, and propose coherent and sustainable land and sea use planning frameworks related to key economic sectors and activities that may affect the coastal and marine resources.

Spatial planning of the coastal zone is considered an essential instrument for implementing the [Protocol on Integrated Coastal Zone Management in the Mediterranean \(ICZM Protocol\)](#). According to Art. 3, the coastal zone to which the ICZM Protocol applies is the area between:

- the seaward limit of the coastal zone, which shall be the external limit of the territorial sea of the Parties; and
- the landward limit of the coastal zone, which shall be the limit of the competent coastal units as defined by the Parties.

It follows that planning should be equally applied to both components of the coastal zones. Even if MSP is not specifically mentioned, planning of the marine space, along with the terrestrial one, is a concept already taken on board by the ICZM Protocol, in particular within Art. 2, 3, 5, 6 and 18. The operational application of MSP focuses on the marine area within the territorial sea of a country, with a requirement to take land-sea interactions into account, as specified in Art. 2 and 6.

MSP is considered instrumental for the implementing the ecosystem approach as the backbone of the entire Barcelona Convention framework. As a strategic approach for the integrated management of natural resources, it promotes conservation and sustainable use. Through the ecosystem approach, MSP benefits from a series of sustainability assessments in preparation of integrated plans that contribute to the achievement of Good Environmental Status (GES). Thus, it ensures that the capacity of marine ecosystems to respond to human-induced changes is not compromised.

Accommodating the demand for the blue economy is central to MSP. This is clearly addressed by the ICZM Protocol in highlighting the role of sustainable economy, which should be *“adapted to the fragile nature of coastal zones and that the resources of the sea are protected from pollution”* (Art. 9). Likewise, conducting maritime activities should ensure *“preservation of coastal ecosystems in conformity with the rules, standards and procedures of the relevant international conventions”* (Art. 9).

Given the definition of the coastal zones in the ICZM Protocol, almost all other Protocols of the Barcelona Convention are, in one way or the other, related to it. ICZM can and should support the implementation of these Protocols and *vice versa* - their relevant objectives and provisions should be considered in all ICZM projects, plans and strategies. Given these links, the application of MSP within the framework and the geographic scope of the ICZM Protocol can contribute to the goals defined by other Protocols – such as in the case of identification, planning and management of protected areas according to the SPA/BD Protocol, or protecting the sea against pollution resulting from exploration and exploitation of the continental shelf according to the Offshore Protocol.

In this perspective, and in line with the [Common Regional Framework for ICZM in the Mediterranean](#)², MSP can be considered as the main tool/process for the implementation of ICZM in the marine part of the coastal zone, specifically for its emphasis on sustainable planning and management.

² Adopted by the COP21, in Naples (Italy), 2-5 December 2019. Decision IG.24/5

Any activity and/or project conducted as a state practice under MSP shall not constitute a change in the legal positions of state parties in respect of issues related to sovereignty and/or sovereign rights.

To this end, according to the ICZM Protocol provisions and with the support of UNEP/MAP and its Components, the CPs are encouraged to accomplish the following, as appropriate:

- i. Effectively address planning and management issues in the marine part of the coastal zone;
- ii. Support implementation of ICZM in the marine part of the coastal zone by applying MSP with a strong focus on land-sea interactions (LSI) and in line with the general framework of the Barcelona Convention and its Protocols, in particular notably by:
 - reducing marine-based source of pressure affecting the marine environment through spatial efficiency and control of temporal distribution of human activities;
 - reducing conflicts between maritime uses and protection of areas with high natural and ecological relevance;
 - identifying areas that need to be protected in order to preserve processes and functions that are essential in achieving the GES;
 - identifying environmental hotspot areas at sea where specific measures are necessary;
 - identifying elements ensuring connectivity among relevant habitats.

In line with the above, this document provides a general framework, facilitating CPs to verify that the main needed elements of the MSP process are considered with reference to their coastal and marine activities.

II. MSP GOVERNANCE IN THE MEDITERRANEAN

The key governance challenge for MSPs in the Mediterranean will be to articulate an agreed and clear vision for sustainable development in the context of:

- **The relevant national considerations** for the marine and wider coastal zone.
- **International and transboundary drivers.** MSP is primarily and above all a national issue, but plans may have an impact on, and be impacted by, what happens in areas beyond the country's boundaries. Regional cooperation is, therefore, an essential component of the MSP governance process.

Articulating and delivering the agreed and clear vision will imply:

- Inclusive stakeholder involvement
- Integrating and harmonizing multiple interests
- Approval at the highest political level, including high-level inter-ministerial co-ordination, and where necessary, transboundary collaboration
- The harmonisation and alignment with other relevant plans and policies, including, but not limited to, climate change adaptation and mitigation, transport, water quality and biodiversity
- An effective regulatory framework
- The integration of both land and sea through their interactions (Art. 3 of the ICZM Protocol)
- Transboundary and international co-operation (Art. 14.1 and 28 of the ICZM Protocol)
- Regular reviewing and updating following evolving conditions (Art. 18.4 of the ICZM Protocol).

Furthermore, it should be noted that a successful MSP process can only be achieved when the following preconditions are created:

- i. A core group of well-informed and supportive stakeholders and social actors actively supporting the process
- ii. Institutions responsible for the plan have ensured sufficient capacity to prepare *and* implement its policies
- iii. Government commitment to the plan has been reflected in both legislation and the delegation of the necessary authority, along with the allocation of necessary financial resources
- iv. Unambiguous high-level and operational objectives that address both societal and environmental conditions have been adopted against which the efforts of the plan can be measured
- v. Where relevant, transboundary commitment, capacity and effective cooperation mechanisms are put in place.

In short, MSP is not a one-off, short-term project. It is governance at the highest level involving ministries across government, multiple economic sectors, citizens and stakeholders, the scientific community and, in some cases, international partners.

III. COMMON PRINCIPLES

Available methodologies and scientific literature propose a wide range of MSP definitions. Ehler and Douvere (2009)³ provided one of the most quoted ones, according to which MSP can be defined as “*a practical way to create and establish a more rational organisation of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way*”. Another commonly used definition is the one given by Art. 3 of Directive 2014/89/EU establishing a framework for MSP as “*a process by which the relevant Member State’s authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives*”.

The expected benefits of MSP are the following:

- Increased horizontal and vertical coordination between administrations and among different sectors using a single process to balance the development of a range of maritime activities;
- Reduction of conflicts and exploitation of synergies among different uses of the marine space;
- Contribution to equitable access to marine resources;
- Increased stakeholder involvement, public participation and information sharing;
- Encouragement of investment by instilling predictability, transparency and clearer rules;
- Improved protection of the environment, through early identification and reduction of impacts as well as promotion of opportunities for multiple uses of the same marine space;
- Identification of (spatial) measures that can support the achievement of Good Environmental Status (see section 4.1);
- Improve protection of cultural heritage and preservation of intangible values of the sea.

Independently on the considered definition and the specific objectives and expected benefits, several common principles and general contents for the implementation of MSP are identified below (some of them completely or partially overlap with ICZM principles). When dealing with MSP implementation, this list should be reviewed and tailored according to the specific scope and goals of the MSP process and the characteristics of its application area.

III.1 Adaptive approach

The adaptive approach is an interactive and systematic process for continually improving policies, plans and management practices by learning from the outcome of previous steps and cycles. Through this approach, policies, plans and programmes are identified based on the best available knowledge and are then implemented, monitored, periodically evaluated and improved based on evaluation results. This approach is particularly useful in dealing with complex, dynamic and uncertain issues, including planning of current and future uses of the sea. Indeed, MSP does not lead to a one-time plan; it is a continuing iterative process that adapts over time. To shape MSP according to an adaptive approach, the following guidelines can be suggested:

- Design the MSP process, including monitoring, evaluation and revision steps from the beginning;
- Possibly, promote *active* adaptive management, which includes the evaluation and comparison of an alternative hypothesis (e.g. scenarios) about the future evolution of the considered marine area;

³ Ehler C., and F. Douvere, 2009. Marine Spatial Planning: a step-by-step approach towards ecosystem-based management. IOC Manual and Guide n. 53, ICAM Dossier n. 6, Paris, UNESCO.

- Develop MSP indicators linked to clear objectives and targets, including governance or process, socio-economic, spatial and ecological-environmental indicators;
- Adopt a medium/long-term perspective to deal with the strategic and anticipatory nature of MSP properly and allow planning, implementation, adaptation and planning continuous action over a period long enough to get concrete results.

III.2 Multi-scale approach

The operational application of MSP within the frame of the Barcelona Convention shall focus on the marine area within the territorial sea of a country, according to the geographic scope of the ICZM Protocol (Art. 3). This operational application can be embedded into a multi-scale approach, combining top-down and bottom-up perspectives. The multi-scale approach includes the following different scales:

- Mediterranean scale addressing the whole sea basin through cooperation among CPs in the frame of the Barcelona Convention to approach the strategic level of MSP, such as for example: (i) definition of elements for a common vision and related objectives, (ii) identification of priority areas and issues to be approached at a transboundary level, (iii) identification of initiatives (e.g., projects) to address transboundary areas and issues;
- Sub-regional scale – where relevant and possible – approaching transboundary MSP issues (elements for a common vision, objectives, priorities and initiatives) in sub-Mediterranean regions, also linking them to sub-regional strategies and plans (e.g., EUSAIR and the West Med maritime initiative) for coordinated implementation;
- National scale, fully implementing the MSP process – according to common principles and coherently with the Mediterranean and sub-regional approaches – in marine areas falling within national jurisdiction, with particular reference to the territorial sea according to the geographic scope of the ICZM Protocol;
- Sub-national and local scales, fostering MSP applications aiming to provide evidence of concrete and visible environmental, social and economic benefits of MSP. Pilot activities at the sub-national and/or local scale could focus on priority areas, such as highly vulnerable areas, areas with major use conflicts, areas with high potential for synergies between uses and multi-use opportunities. Pilot activities could also be useful in developing and testing new overarching or item-specific methodologies, including through the next generation of CAMP projects better integrating marine areas through MSP.

III.3 Integration

Integration is an essential feature of MSP as it can assume different meanings:

- MSP is not only dealing with the blue economy. In addition, economic, environmental, social, and governance aspects all have to be taken into consideration to pursue sustainability goals;
- Integration among sectors is needed to go beyond sector policies, plans and regulations;
- Vertical and horizontal cooperation among administrations and technical agencies is required to proceed towards coordination and integration of sector policies and plans;
- Integration between land-based and marine planning is essential to harmonise and ensure coherence among parts of the same coastal system, interacting with each other in different ways.

III.4 Four dimensions of MSP

MSP operates in three spatial dimensions, taking into account maritime uses and related conflicts on the ocean surface, water column and seabed. Time can be considered as a fourth dimension. In terms of MSP implementation, this may imply:

- Identification of the most relevant spatial dimensions for each maritime use and assessment of the compatibility with other uses that mainly occur in other dimensions (e.g. shipping and sand extraction from the sea-bed);
- Synergies and compatibilities between different uses can also be fostered through temporal zoning and regulation, such as allowing access to military restricted areas for shipping or recreational activities if there are no military operations and safety is ensured;
- Proper assessment of the four dynamic needs of each maritime use to evaluate whether compatibilities are really possible and conflicts minimised.

III.5 Knowledge-based process

MSP must rely on high-quality data, focusing on key relevant information. In this regard, the following guidelines are suggested:

- Use the best available knowledge to promote the definition of the most appropriate geographic scale and scope for MSP strategies and/or plans, also taking the holistic UNEP/MAP's Integrated Monitoring and Assessment Programme (IMAP) into consideration (i.e., ecosystem limits) and considering LSI an essential element of MSP;
- Focus on the collection of data and information which are really essential for MSP;
- Identify the specific gaps that might hamper MSP and that require specific actions;
- Take into consideration any form of “good quality” knowledge. This comes primarily from scientific sources and institutionalised monitoring activities and datasets, but should also capitalize on private sources of information, including knowledge generated by people living and working at the sea (the so-called “citizen science”);
- Improve transparent access to accurate and complete information;
- Go from data and knowledge to information useful for the planning and decision-making process required by MSP. Spatial-based tools are particularly useful in this regard.

III.6 Suitability and spatial efficiency

The suitability of maritime activities and spatial efficiency in distributing these activities are key guiding concepts for MSP - aiming at improving the sustainability of the use of marine resources (including the marine space), minimising conflicts between uses (including nature protection) and exploiting possible synergies. In this regard, the following guidelines are suggested:

- Use the sea space for those uses which indeed depend on marine resources or that can be more efficiently and sustainably operated at sea ;
- When dealing with the planning, start identifying immovable and non-renounceable uses and functions that normally have priority in space allocation;
- Encourage co-use or multi-use of the same marine area as much as possible, provided that this implies higher benefits, lower impacts and reduced conflicts;
- Spatial efficiency should also imply a fair distribution of MSP-related socio-economic benefits in the total planned marine area.

III.7 Connectivity

MSP does not only focus on proper and efficient spatial allocation of maritime uses, but also has to do with connectivity. Improved connections aim to generate social, economic, environmental and governance benefits; the following guidelines are suggested:

- In the MSP plan, consider connections between linear elements as shipping lanes to develop an integrated maritime transport system, energy grid to improve energy distribution efficiency or blue corridors to connect natural habitats;
- In the MSP plan, consider connections of patches, areas with similar or interrelated uses or functions as in the case of networking of marine protected areas or the preservation of connected habitats which are vital for marine species;
- Beyond planning maritime uses, remember to create connections between MSP operators in terms of knowledge sharing, cooperation and coordination.

Assessment and planning of connectivity elements are particularly relevant for LSI aspects.

III.8 Cross-border cooperation

Although MSP can be seen primarily as a country-based process, cross-border cooperation is essential to ensure the MSP plans are coherent and coordinated across the coastal zones and the marine regions. This implies cooperation at the methodological (common methods, data and information sharing, tools sharing, MSP practice exchange, capacity building), strategic (common vision, shared principles and possible common objectives) and implementation (e.g., planning of marine bordering areas, etc.) levels.

Moreover, it is well-known that a number of problems and challenges (e.g., maritime transport operation and safety, fish stock conservation and sustainable management, biodiversity protection and ecosystem preservation, future development of offshore renewable energy production and distribution, etc.) have a transboundary dimension and might require the adoption of a common regional or sub-regional approach.

IV. FUNDAMENTAL CONCEPTS

IV.1 Ecosystem approach

Ecosystem-based management is an approach that goes beyond examining single species, habitats, ecosystems or related functions in isolation. Instead, it can be intended as an interdisciplinary and integrated approach to planning and management that recognises the richness and complexity of ecological systems and the continuous interactions of their components. Ecosystem-based management founds decision-making on ecological limits and spatial boundaries of ecosystems. It integrates social, ecological and governance principles to preserve healthy and productive ecosystems and related services and ensure the sustainable use of natural resources. The terms **ecosystem-based management** and **ecosystem approach** are often used interchangeably and generally overlap in their fundamental meaning.

In the Mediterranean, the [ecosystem approach](#) is the guiding principle to all policy development and implementation under the auspices of the UNEP/MAP Barcelona Convention system, with the ultimate objective of achieving Good Environmental Status (GES) of the Mediterranean Sea and Coast. It is operationalised through the [Integrated Monitoring and Assessment Programme](#) of the Mediterranean Sea and Coast (IMAP), which shares many common elements with the [EU Marine Strategy Framework Directive](#). According to the ICZM Protocol, the ecosystem approach applies to all related planning processes of land and sea-based marine activities, therefore underpinning the overall MSP implementation. Even if it does not cover all Mediterranean countries, the [EU MSP Directive](#) also reflects on the relevance of the ecosystem approach to “contribute to promoting sustainable development and growth of the maritime and coastal economies and the sustainable use of marine and coastal resources”. Therefore, MSP is expected to contribute to the goals of IMAP and the [EU Marine Strategy Framework Directive](#).

The relationship between the ecosystem approach and MSP is a two-way process. The latter can contribute to the overall objective of achieving the GES, also by identifying related spatial measures. Proper planning of maritime activity can:

- Reduce marine-based sources of pressure affecting the marine environment through spatial efficiency and control of the temporal distribution of human activities;
- Reduce conflicts between maritime uses and protection of areas with high naturalistic and ecological relevance;
- Identify areas to be protected in order to preserve processes and functions that are essential in achieving GES;
- Identify environmental hotspot areas at sea where more intense measures are necessary;
- Avoid unsustainable uses in protected areas and identify synergies that can provide win-win solutions for socio-economic development and environmental protection;
- Identify connecting elements among relevant habitats through blue corridors.

The ecosystem approach is well conceptualised, and its application to the marine space is gaining increasing attention. However, its actual implementation still poses a significant challenge within the MSP process, calling for clearer guidance, sharing of good practices, studies and tools.

Specific tools, practices and guidance checklist for considering ecosystem approach within MSP have been made available on the Mediterranean MSP workspace website.

<https://msp.iczmplatform.org/>

IV.2 Climate action

The operative integration of climate action into MSP is a novel approach. It represents a major challenge for several countries due to the uncertainty inherent to climate change projections and the ecological and socio-economic responses to their impacts. However, addressing climate action challenges is necessary to make the MSP plans viable and useful in the long term and to promote actions contributing to mitigation goals and carbon neutrality.

Taking climate action into account is particularly relevant for the sustainable planning and management in the Mediterranean, which is the region recognised as one of the world's climate change hotspots. Impacts of climate change on the Mediterranean coastal and marine ecosystems further add on top of pressures generated by several human activities, in particular tourism, shipping, oil and gas exploitation, fisheries and aquaculture.

Among its objectives, the ICZM Protocol (and its Common Regional Framework for ICZM) stresses the importance of preventing and reducing the effects of natural hazards and climate change, and consequently, taking mitigation and adaptation measures. At the EU level, the MSP Directive (2014/89/EC) recommends Member States to prepare maritime spatial plans, which aim for a balanced and sustainable use of the marine space. This implies the resolution of conflicts among different economic sectors, stronger synergy and, most importantly, the “preservation, protection and improvement of the environment, including resilience to climate change impacts”.

From a process perspective, an MSP plan shall be designed flexibly, allowing its progressive adaptation along with changing conditions (i.e., new knowledge on the marine environment, the latest climate change projections and assessment of related impacts, evolution of the policy and socio-economic context, etc.). This implies the design and implementation of a robust monitoring, evaluation and revision mechanism of the MSP plan. Active adaptive management can also include the evaluation and comparison of alternative planning scenarios of the considered marine area.

The concept of dynamic ocean management is progressively permeating MSP. This can be defined as management that rapidly changes in space and time in response to changes in the ocean and its users, through the integration of near real-time biological, oceanographic, social and/or economic data. This approach can help address the challenges posed by the ongoing change of the climate system and, consequently, of the oceanographic conditions.

MSP can address operational aspects of climate change adaptation and mitigation in various ways.

- Solving new conflicts that can arise between marine sectors and between the sectors and the marine environment, due to challenges posed by climate change.
- Minimising economic losses deriving from choices that do not take into account risks associated with extreme weather and slow-onset events.
- Envisaging spatial and temporal measures aimed at increasing the adaptation capacity of major maritime sectors and marine protection aspects.
- Envisaging spatial measures directly targeted to promote the reduction of greenhouse gas emissions in several maritime sectors, in line with the [Sustainable Development Goals \(SDGs\) of the UN 2030 Agenda](#), the [Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas](#), and the [European Green Deal](#).

Tools, practices and guidance checklist for considering climate change within MSP have been made available on the Mediterranean MSP workspace website.

<https://msp.iczmplatform.org/>

IV.3 Land-sea interactions

The term “Land-Sea Interactions” (LSI) is usually used in the context of planning and management of marine and coastal areas. Despite its high relevance, a unique definition and conceptualisation of LSI has not yet been established or formalised.

LSI is generally interpreted as a set of processes linking terrestrial and marine areas. Such processes may include, for example, agricultural nutrients and contaminants runoff to rivers and their consequent load in coastal waters, as well as the laying of a submarine pipe in the intertidal area to connect an offshore oil and gas platform to the terrestrial pipeline network. Almost all maritime uses need support installations on land (such as the ports for shipping, marinas for yachting or grid connections for offshore wind farms). On the other hand, there are uses mostly exerted on land (for example, beach tourism, water-front, ports) that also extend their domain to the sea.

Some common categorizations are generally adopted related to LSI and applied within the analysis of LSI:

- i. LSI have a two-way direction - from land to sea and from sea to land;
- ii. LSI can have natural or anthropogenic components.

LSI analysis should also consider the interactions of planning processes and plans for land and sea domains. It is important to ensure that legal, administrative, consultation and technical processes are coordinated (and hopefully connected) to avoid unnecessary duplications, incoherence, conflicts, waste of resources and/or excessive demand of stakeholders' efforts.

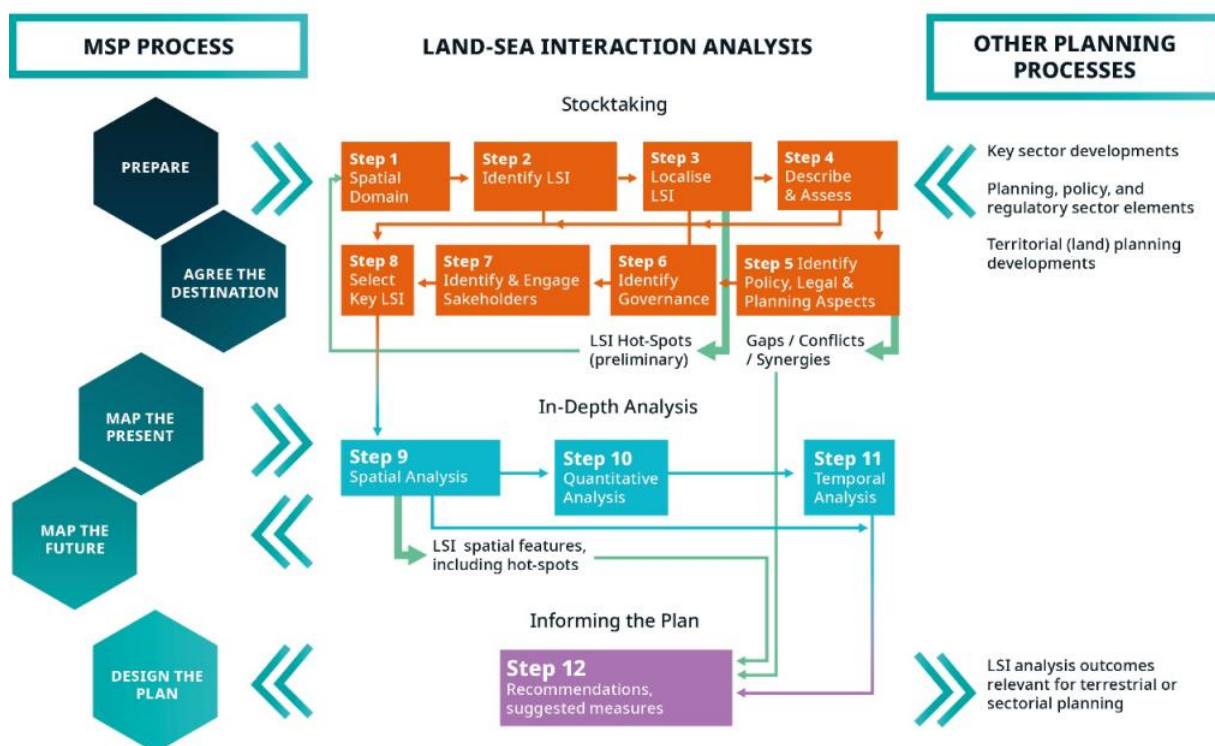
LSI analysis should be understood as an important component in the preparation of a marine spatial plan. When carrying out MSP, it is important to consider the continuity between land and sea, and to ensure that spatial planning is carried out in an integrated manner across maritime and terrestrial areas. This is of interest both to the environmental protection and the effective development of maritime and coastal economies.

The influence of terrestrial spatial planning on marine spatial planning involves transferring experience, methods, and tools to adapt to the marine context. Insights gained from land-based planning can inform data collection, environmental impact assessments, and stakeholder collaboration at sea. However, it's crucial to consider the distinctiveness of marine ecosystems and tailor approaches accordingly, while utilizing technology, raising awareness, and contributing to legal and governance frameworks for sustainable marine development.

The specific objectives of LSI analysis are:

- Identify and localise the most relevant LSI, at present and in the future
- Understand the spatial scope of LSIs and eventually localise hot-spot areas
- Identify measures to be included within the MSP plan, aimed at managing impacts/synergies on marine activities and ecosystems determined by land-sea interactions.

LSI analysis, within MSP, developed by the UNEP/MAP is composed of 3 main components: stocktaking, in-depth analysis of key LSI, and informing the plan/recommendations for addressing LSI (see the diagram below).



This diagram has been developed by PAPRAC UNEP/MAP to support marine spatial planning activities in the Mediterranean. For more planning tools and guidance visit msp.iczmplatform.org



The tool for LSI analysis, along with some examples of its practical application, has been made available on the Mediterranean MSP workspace website.

<https://msp.iczmplatform.org/>

IV.4 Blue economy

The blue economy refers to the use of the marine environment and its resources for economic development. This concept covers a wide range of economic sectors such as fisheries, aquaculture, transportation, coastal tourism, renewable and non-renewable energy, mineral extraction, and nature conservation, as well as related environmental issues such as pollution, ocean acidification, over-harvesting, and habitat loss. As a concept, the blue economy aims to promote economic growth, social inclusion, and the preservation or enhancement of livelihoods while simultaneously ensuring the environmental sustainability of the oceans and coastal areas⁴.

However, the challenge of the blue economy remains in strengthening the economic significance of various maritime uses, while sustainably managing the marine environment in the long term. Therefore, it is necessary to adopt an integrated approach that considers the interconnectedness of economic, social, and environmental factors. This involves promoting sustainable practices that balance economic development with environmental protection and social equity, while also recognising the importance of scientific research, technological innovation, and stakeholder engagement.

⁴ GEF LME:LEARN. 2018. Environmental Economics for Marine Ecosystem Management Toolkit. Paris, France.

MSP, with ICZM, has a key role in providing such a holistic framework by advancing the rational utilisation of marine resources to overcome the obstacles to the blue economy's development. MSP can facilitate the development of a sustainable blue economy in a variety of ways:

- by adopting an ecosystem-based approach, it can ensure the preservation of both living organisms and the non-living marine environment;
- it may play a critical role in addressing knowledge gaps in key sectors and the marine environment;
- it can promote multi-uses and identify sites for new and emerging uses;
- it can serve as a tool that helps improve investor confidence by promoting transparency and predictability, thereby creating an environment conducive to investment in the development of innovative blue technologies;
- it can facilitate mitigating the effects of a changing climate, by prioritising marine uses and activities with zero or minimum emissions as well as allocating areas for renewable energy and blue carbon capture;
- transboundary MSP can foster collaboration across borders for regional development⁵.

Therefore, MSP can be a tool to confirm the sustainable use of marine resources, and to achieve the benefits of a blue economy.

⁵ UNESCO-IOC. 2021. MSPglobal Policy Brief: Marine Spatial Planning and the Sustainable Blue Economy. Paris, UNESCO. (IOC Policy Brief no 2)

V. MSP PROCESS

MSP should be shaped and based on the specificities of individual marine areas that in question. However, there are common steps that are considered in most MSP initiatives and guiding documents, such as data collection and analysis, stakeholder consultation and the participatory development of a plan, the subsequent phases of implementation, enforcement, evaluation and revision. In line with the customised methodologies and MSP practices across the Mediterranean, there are seven interrelated stages of the MSP process. These correspond to a great extent with the ICZM process for coastal strategies and plans.

In no case should these stages should be considered obligatory, as each MSP process needs to be tailored according to specific characteristics of its geographic scope, objectives and expected results. Instead, they could be considered as a checklist to select those elements which are considered relevant for the specific MSP process.

V.1 Starting the process and getting organised

A solid foundation for the planning process is vital. It should include:

- *Building relationships with partners, stakeholders and individuals who can support the plan-making process;*
- *Addressing technical and human challenges;*
- *Building communication skills necessary for enabling partners and stakeholders to clearly visualise problems, potential futures, solutions, and to facilitate their inclusion.*

This can be accomplished by using the following scheme of potential tasks and initiatives:

- Agreeing on the mandate, constitution, goals and terms of reference of the MSP steering body
- Engagement of key partner ministries and authorities and ensure their support of the MSP process
- Agreeing on the boundaries of the MSP area
- Consideration of the wider spatial scale of analysis, extending beyond administrative boundaries and taking into account interactions with **land-based** human activities
- Setting up an interdisciplinary group of experts that include marine scientists, in order to support science-based decisions across the entire planning process thus ensuring the application of the **ecosystem approach**
- Identification of major stakeholders, their interests and influence
- Identification of social actors, upholding diversity and gender equity
- Mapping the relevant MSP sectors (and their representatives) that will be the most affected by **climate change**
- Identification, design and use of methods and awareness tools to ensure social actors' engagement throughout the process
- Agreeing on the MSP programme of work and the institutional framework by which it will be drafted
- If required, initiating the Strategic Environmental Assessment (SEA) process with iterative links to the following stages of the MSP process

- Securing institutional capacity and funding for MSP preparation, including mapping and other information system tools
- Ensuring that the procedures and structures for international consultations and/or collaboration are in place
- Establishing an effective shared planning regime, if preparing transboundary MSP.

V.2 Assessing the context and defining a vision

A wide discussion across the society to refine the themes of the plan will focus on and clearly articulate the strategic vision for the future of the marine area.

The Plan shall be made by taking into consideration the plethora of global and Mediterranean-wide agreements and conventions, national policies and programmes and the existing sub-regional and local plans and policies.

The key output of this stage is the **Scoping Document** - setting out a roadmap and tools required to achieve an agreed strategic vision and high-level objectives for the plan area.

This can be achieved by using the following scheme of potential tasks and initiatives:

- Mapping and analysis of all relevant policies and conventions at international, national and sub-national level
- Engaging stakeholders and social actors in high-level objective/vision setting process
- Identifying the broad list of themes and topics the MSP could encompass. Give particular attention to the high-level MSP objectives that can be affected by **climate change**, as well as conservation goals towards achieving or maintaining **good environmental status** (GES).
- Defining the strategic vision (high-level objectives) for the future of the plan area
- Identifying spatial and temporal measures, regulations and standards already available for achieving the high-level objectives of the plan
- Summarising the key findings in a scoping report; agree and publish.

V.3 Analysing the existing conditions

Gathering and analysing information, including interactions between land and sea, identifying conflicts, coexistences, and compatibilities.

This is the **data and information gathering** stage. However, it is important to focus information gathering only to what is “**fit for the purpose**”, i.e., appropriate and of a necessary standard to inform the plan development and its policies.

It is crucial to value **indigenous knowledge** appropriately. Such knowledge includes the understandings, skills, and even philosophies developed by local communities and users with long histories and experiences of interaction with their marine surroundings.

This can be accomplished by using the following scheme of potential tasks and initiatives:

- Identification of relevant spatial information through a focused, fit-for-purpose approach
- Analysis and mapping of current and relevant oceanographic and environmental characteristics

- Analysis and mapping of current maritime activities and their interactions. It is particularly important to assess, and preferably spatially determine, impacts of **climate change** affecting different sectors
- Analysis of the most important **LSIs** in the planning area
- Analysis of conflicts and compatibilities, coexistence, multi-use opportunities and hot spots
- Involvement of stakeholders and social actors to reflect on the analysis of existing conditions

V.4 Analysis of future conditions

Describing potential future trends and projections, key hot-spots, and future scenarios for maritime uses.

At this stage, the scope of planning begins to narrow down to those main elements, themes and issues which shape the future of the plan area. **Future trends** are identified where possible. The use of **future scenarios** is strongly advocated - bringing together stakeholders and key social actors to help elaborate plausible future scenarios for individual maritime uses, potential areas of conflict, coexistence and compatibility with other uses, along with the cumulative impacts on the environment. Hence, this qualitative stage relies heavily on the expertise and knowledge of everyone that has a stake in the future of the marine special plan area.

This can be achieved by using the following scheme of potential tasks and initiatives:

- Identification of the main elements of the vision shaping the future evolution of the planning area
- Analysis of trends and available projections and development options of maritime economic activities. Possible impacts of newly planned activities that extend beyond the MSP planning area (including the land part) must be properly evaluated
- Involvement of stakeholders and social actors in the elaboration of future scenarios - informal, qualitative descriptions of plausible futures of individual maritime uses
- Identification of highly impacted or vulnerable areas with many conflicting activities through assessment and spatial identification of pressures and (cumulative) impacts of human activities on the marine resources, along with the expected impacts of **climate change** affecting different sectors and the marine environment.

V.5 Identification of key issues

Agreeing on the key issues on which the plan will focus in the design phase.

The scope of the plan and its final form take shape at this stage by selecting the main issues discussed in the plan.

This can be achieved by using the following scheme of potential tasks and initiatives:

- Identification of the key issues which should be addressed in the design phase based on the outcome of the analytical phase
- Involvement of stakeholders and social actors in the elaboration of key issues.

V.6 Design phase: Elaborating the MSP

Defining and elaborating the planning measures, their location in space and time, verification and publishing.

The specific **measures** of the marine spatial plan will be articulated at this stage. Besides spatial measures such as zoning, they potentially include measures to manage activities in time, defining limitations and the nature of specific activities. Other measures may include economic incentives and disincentives, along with regulation and enforcement, and in particular, public education and awareness. The plan should specifically include the adaptation and mitigation objectives and related measures for the different sectors that could be implemented within the MSP framework. According to the ecosystem approach, the objectives and corresponding measures of economic development must not prevail over the objectives of biodiversity conservation. They should, to the greatest possible extent, address achieving or maintaining GES.

Future institutional arrangements for the delivery and monitoring of the plan must also be set out at this stage, ensuring that the plan becomes a living document and that the key actors continue to operate in an integrated manner to deliver it.

The plan should also lay the foundations of its **monitoring and evaluation** in the future by establishing monitoring protocols and indicators.

This can be achieved by using the following scheme of potential tasks and initiatives:

- Identification of planning units, taking into considerations the natural boundaries (for example, the extension of seagrass meadows)
- Identification of detailed planning objectives linked to the strategic vision and preferred scenario
- Design and elaboration of planning measures
- Design and agreement on future institutional arrangements to ensure an integrated approach to the implementation of the MSP
- Establishment of ecological and environmental monitoring and evaluation protocols for the MSP area, including indicators. Synergies with monitoring programmes that are, already in place to assess the environmental status of coastal marine waters (indicator systems set within IMAP at Mediterranean level and the MSFD and the WFD at European level) should be maximised.
- Establishment of socio-economic monitoring and evaluation protocols for the MSP area, including indicators
- Full involvement of stakeholders and social actors in the elaboration of the MSP and its measures is necessary
- Design and publishing the draft MSP for consultation in an attractive and accessible form
- Finalisation and high-level approval.

V.7 Implementing, monitoring and evaluating the MSP

Obtaining formal approval, and plan dissemination, implementation, monitoring, evaluation.

Legitimacy through the political approval of the plan according to national legal requirements can take time and resources. The engagement and support of stakeholders and the community established through the preparation process will contribute to successful capitalisation at this stage.

A **broad dissemination** of the plan and its vision long after it has been designed is essential to ensure that it plays a central role in the future sustainable development of the plan area.

The plan needs to be regularly assessed and revised, and include any changes in line with policies or strategies setting more ambitious international sustainability objectives. When monitoring the plan implementation, specific trade-offs and co-benefits (in terms of biodiversity conservation, social equity, preservation of underwater cultural sites etc) should also be evaluated.

This can be achieved by using the following scheme of potential tasks and initiatives:

- Achieving statutory approval at a government level for the MSP
- Designing an implementation and dissemination plan for the MSP
- Monitoring and evaluation of the MSP process.

Decision IG.26/11

Regional Harmonised Procedures for the Uniform Implementation of the Ballast Water Management Convention in the Mediterranean Sea

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their 23rd Meeting,

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

Recalling also the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

Recalling further the United Nations Environment Assembly resolution UNEP/EA.4/Res. 21 of 15 March 2019, entitled “Towards a pollution-free planet”,

Having regard to Article 6 of the Barcelona Convention as well as Article 4 paragraph 2 and Article 18 of the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea,

Having also regard to Article 13 paragraph 1 of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, addressing measures regulating the intentional or accidental introduction of non-indigenous or genetically modified species,

Having further regard to Article 13 paragraph 3 of the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004 (the “Ballast Water Management Convention”) and the associated guidelines developed by the International Maritime Organization (IMO),

Recalling Decision IG.25/16 on the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031) as well as Decision IG.25/17 on the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027), hereinafter referred to respectively as “the Mediterranean Strategy (2022-2031)” and “the Mediterranean BWM Strategy (2022-2027)”, adopted by the Contracting Parties at their 22nd Meeting (COP 22) (Antalya, Türkiye, 7-10 December 2021),

Committed to continue addressing the risk arising from the introduction of invasive alien species through ships’ ballast water in the Mediterranean region, which has been recognised as one of the four greatest threats to the world’s oceans and which can cause extremely severe and irreversible environmental, economic and public health impacts,

Noting that the overall objective of the Mediterranean BWM Strategy (2022-2027) is, amongst others, to establish a framework for a regional harmonised approach in the Mediterranean on ships’ ballast water control and management that is consistent with the requirements and standards of the Ballast Water Management Convention, as outlined in Article 13(3) thereof,

Reaffirming the need for harmonisation of BWM measures in the region, especially given the international nature of shipping, the fact that an estimated 58% of the commercial maritime traffic in the Mediterranean Sea is internal, and the semi-enclosed nature of the Mediterranean Sea,

Recalling the mandates of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) and the Specially Protected Areas Regional Activity Centre (SPA/RAC) as laid down in Decision IG. 19/5 on the Mandates of the Components of MAP, adopted by the Contracting Parties at their 16th Meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009) and their relevance to the implementation of this Decision,

Having considered the reports of the 15th Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) (Kappara, Malta, 13-15 June 2023) and of the 16th Meeting of the Specially Protected Areas and Biological Diversity (SPA/BD) Focal Points (Malta, 22-24 May 2023),

1. *Adopt* the regional harmonised procedures for the uniform implementation of the Ballast Water Management Convention in the Mediterranean Sea, hereinafter referred to as “the regional BWM harmonised procedures”, set out in the Annex to this Decision;
2. *Reaffirms* the importance of harmonising BWM procedures to ensure the uniform implementation of the Ballast Water Management Convention in the Mediterranean region;
3. *Call upon* the Contracting Parties to take effective measures to implement the regional BWM harmonised procedures, thus enhancing the implementation of the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea as well as of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and contributing to the implementation of the Mediterranean BWM Strategy (2022-2027) as well as the Mediterranean Strategy (2022-2031);
4. *Urge* the Contracting Parties, which have not yet done so, to ratify the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea, as well as the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, in order to achieve universally the objectives of the Protocols in the Mediterranean region;
5. *Encourage* the Contracting Parties, which have not yet done so, to ratify and effectively implement the Ballast Water Management Convention, as soon as possible;
6. *Request* the Secretariat (REMPEC and SPA/RAC) to provide targeted technical support for the ratification and implementation of the Ballast Water Management Convention, as well as the implementation of the regional BWM harmonised procedures, in synergy with the International Maritime Organization (IMO), through technical cooperation and capacity building activities, including resource mobilisation (internal and external); and
7. *Request also* the Secretariat (REMPEC) to communicate the regional BWM harmonised procedures to the International Maritime Organization (IMO) so that they may subsequently be circulated to IMO Member States for their information and action as appropriate.

ANNEX

Regional harmonised procedures for the uniform implementation of the Ballast Water Management Convention in the Mediterranean Sea

**Regional harmonised procedures for the uniform implementation of the Ballast Water
Management Convention in the Mediterranean Sea**

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations (UN), the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), the Specially Protected Areas Regional Activity Centre (SPA/RAC), the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) or the International Maritime Organization (IMO), concerning the legal status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Definitions

Barcelona Convention means the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.

Black Sea area means the Black Sea proper with the boundary between the Mediterranean and the Black Sea constituted by the parallel 41°.

BWM Convention means the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004.

Helsinki Convention means the Convention on the Protection of the Marine Environment of the Baltic Sea.

Mediterranean Sea area means the Mediterranean Sea proper including the Gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41° N parallel and bounded to the west by the Straits of Gibraltar at the meridian of 005°36' W.

OSPAR Convention means the Convention for the Protection of the Marine Environment of the North-East Atlantic.

Precautionary principle means the principle as taken from the Convention on Biological Diversity, which reads: "*where there is a threat to significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat*".

Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12°28'.5 N, 043°19'.6 E) and Husn Murad (12°40'.4 N, 043°30'.2 E).

Acronyms

BWE:	Ballast water exchange
BWM:	Ballast water management
BWM Convention:	International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004
IBWMC:	International Ballast Water Management Certificate
BWMP:	Ballast Water Management Plan
BWMS:	Ballast water management system
BWRB:	Ballast Water Record Book
EASIN:	European Alien Species Information Network
GISIS:	Global Integrated Shipping Information System
HAOP:	Harmful aquatic organisms and pathogens
HELCOM:	Baltic Marine Environment Protection Commission or Helsinki Commission
IAS:	Invasive aquatic species
IMO:	International Maritime Organization
MEPC:	Marine Environment Protection Committee
PSU:	Practical salinity units
REMPEC:	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
ROPME:	Regional Organization for the Protection of the Marine Environment
SRA:	Same risk area
SPA/RAC:	Specially Protected Areas Regional Activity Centre

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Preamble

Nothing in these regional harmonised procedures for the uniform implementation of the Ballast Water Management Convention in the Mediterranean Sea, hereinafter referred to as the regional BWM harmonised procedures, shall prejudice the principles of Sovereignty of the States, principles of Freedom, rights of Navigation, and principles of Innocent Passage in the Territorial Sea.

1 Introduction

The Mediterranean Sea comprises less than 1% of global oceans but, because of its strategic location, has a significant volume of shipping traffic. Passenger and merchant ships making port calls, together with ships transiting the area, represent just over 24% of global shipping. In 2019, this included 27% of the global fleet of oil and chemical tankers and 17.3% of worldwide cruises, with 453,000 port calls made by 14,403 ships. The majority of commercial maritime traffic is intra-Mediterranean¹.

Harmful aquatic organisms and pathogens (HAOP) are recognised as one of the main threats to the marine and coastal biodiversity of the Mediterranean. To date, nearly 1,000 marine species have been recognised as non-indigenous to the Mediterranean Sea. The take up in one location, and release in another location, of unmanaged ballast water by ships is a known vector of HAOP worldwide.

Recognising concern over the introduction of harmful aquatic organisms and pathogens (HAOP) via ballast water, the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) was adopted by the International Maritime Organization (IMO) in 2004.

The BWM Convention entered into force on 8 September 2017. As of 23 March 2023, the BWM Convention has 95 Contracting Parties, the combined merchant fleets of which constitute approximately 92.41% of the gross tonnage of the world's merchant fleet, including 13 of the Mediterranean coastal States that are Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention)².

The BWM Convention requires ships to manage their ballast water so that aquatic organisms and pathogens are removed or rendered harmless before ballast water is released into a new location, with the purpose of preventing the spread of HAOP.

The BWM Convention applies to all ships registered under Parties to the BWM Convention, which take up and use ballast water during international voyages. Ships registered to a flag that has not ratified the BWM Convention may not be issued relevant certificates under the Convention, however port States that are a Party to the Convention do expect ships to comply with the requirements of the Convention, to ensure no more favourable treatment is given.

Article 13(3) of the BWM Convention includes that Parties with common interests to protect the environment, human health, property, and resources in a given geographical area, in particular, those Parties bordering enclosed and semi-enclosed seas, shall endeavour, taking into account characteristic regional features, to enhance regional co-operation.

Reflecting on the threat of introduction of HAOP through ballast water in the Mediterranean Sea area, the Contracting Parties to the Barcelona Convention adopted the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027) (hereinafter referred to as the Mediterranean BWM Strategy (2022-2027)) at their 22nd meeting. This built on previous actions by the Contracting Parties to the

¹ UNEP/MED, 2022.

² The Contracting Parties to the Barcelona Convention are Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syrian Arab Republic, Tunisia, Türkiye, and the European Union.

Barcelona Convention, including the adoption of the 2012 Ballast Water Management Strategy for the Mediterranean Sea.

The overall objectives of the Mediterranean BWM Strategy (2022-2027) are to:

- Establish a framework for a regional harmonised approach in the Mediterranean on ships' ballast water control and management that is consistent with the requirements and standards of the BWM Convention, as outlined in Article 13(3);
- Initiate some preliminary activities related to the management of ships' biofouling in the Mediterranean region; and
- Contribute to the achievement of Good Environmental Status with respect to "non-indigenous species" as defined in the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria.

The Mediterranean BWM Strategy (2022-2027) comprises six (6) Strategic Priorities, each of which is supported by a number of actions and activities that are described in more detail in the Action Plan (Section 4 thereof). Appendix 1 thereto sets out a work plan and implementation timetable while Appendix 2 thereto outlines supplementary information for regional harmonisation of BWM measures.

Strategic Priority 1 (Support ratification and implementation of the BWM Convention) of the Mediterranean BWM Strategy (2022-2027) stipulates that *"The Contracting Parties to the Barcelona Convention support the work for the minimisation of the introduction of invasive aquatic species carried out by the relevant organisations and fora, particularly the work of the IMO, and are committed to take all appropriate actions towards the ratification and implementation of the BWM Convention in the Mediterranean"*.

The Actions associated with Strategic Priority 1 include:

- Action 1: Ratification of the BWM Convention;
- Action 2: Harmonisation of BWM measures in the Mediterranean region;
- Action 3: Development, adoption, and implementation of a regional protocol for port baseline surveys and biological monitoring in Mediterranean ports;
- Action 4: Promotion of the use of risk assessment as a tool to assist in ballast water (and, more generally, invasive aquatic species) management and decision-making; and
- Action 5: Alignment of BWM measures with neighbouring regions.

The regional BWM harmonised procedures address aspects of the uniform implementation of the BWM Convention for which regional harmonisation in the Mediterranean region is essential, and contribute to Actions 2, 3, 4 and 5.

The regional BWM harmonised procedures consist of six (6) parts, as follows:

- **Harmonised Procedure: Ballast Water Exchange Areas** (Section 2);
- **Harmonised Procedure: Regulation A-4 Exemptions** (Section 3);
- **Harmonised Procedure: Sediment Reception Facilities** (Section 4);
- **Harmonised Procedure: Contingency Measures** (Section 5);
- **Harmonised Procedure: Additional Measures** (Section 6); and
- **Harmonised Procedure: Warnings** (Section 7).

2 Harmonised Procedure: Ballast Water Exchange Areas

2.1 Mediterranean Sea Context

The Contracting Parties to the Barcelona Convention communicated a harmonised, voluntary, interim ballast water exchange regime to the IMO in 2011 by means of BWM.2/Circ.35³ (Harmonized voluntary arrangements for ballast water management in the Mediterranean Region). The regime was intended for implementation prior to the entry into force of the BWM Convention.

This regime was also set out in Annex 2 of the 2012 Mediterranean BWM Strategy “*Harmonised voluntary arrangements for ballast water management in the Mediterranean region*”.

The regime identified the areas in the Mediterranean Sea that meet the 50/200 BWM Convention requirement, noting there are no areas in the Mediterranean Sea that meet the 200/200 requirement.

The Mediterranean BWM Strategy (2022-2027) includes proposed arrangements for regulation of ballast water exchange in the Mediterranean. The proposed arrangements are in line with those communicated in BWM.2/Circ.35 and the 2012 Mediterranean BWM Strategy.

The Mediterranean BWM Strategy (2022-2027) includes a map (Figure 1) of areas that meet the 50/200 BWM Convention requirement for ballast water exchange in the Mediterranean, and notes that at least one of these areas is actually unfit for ballast water exchange due to its size.

Shipping traffic routes recorded in the Mediterranean Sea (Figure 2) indicate that many ships traverse waters that do not meet the 50/200 BWM Convention requirement for BWE.

This harmonised approach to designate ballast water exchange areas in the Mediterranean Sea beyond the 200/200 and 50/200 BWM Convention requirements aims to provide a consistent approach to identification and designation of BWE areas, which may be used both as an interim solution until the regulation D-2 standard must be met, and to address longer term contingency measure needs, if considered necessary.

³ IMO, 2011.

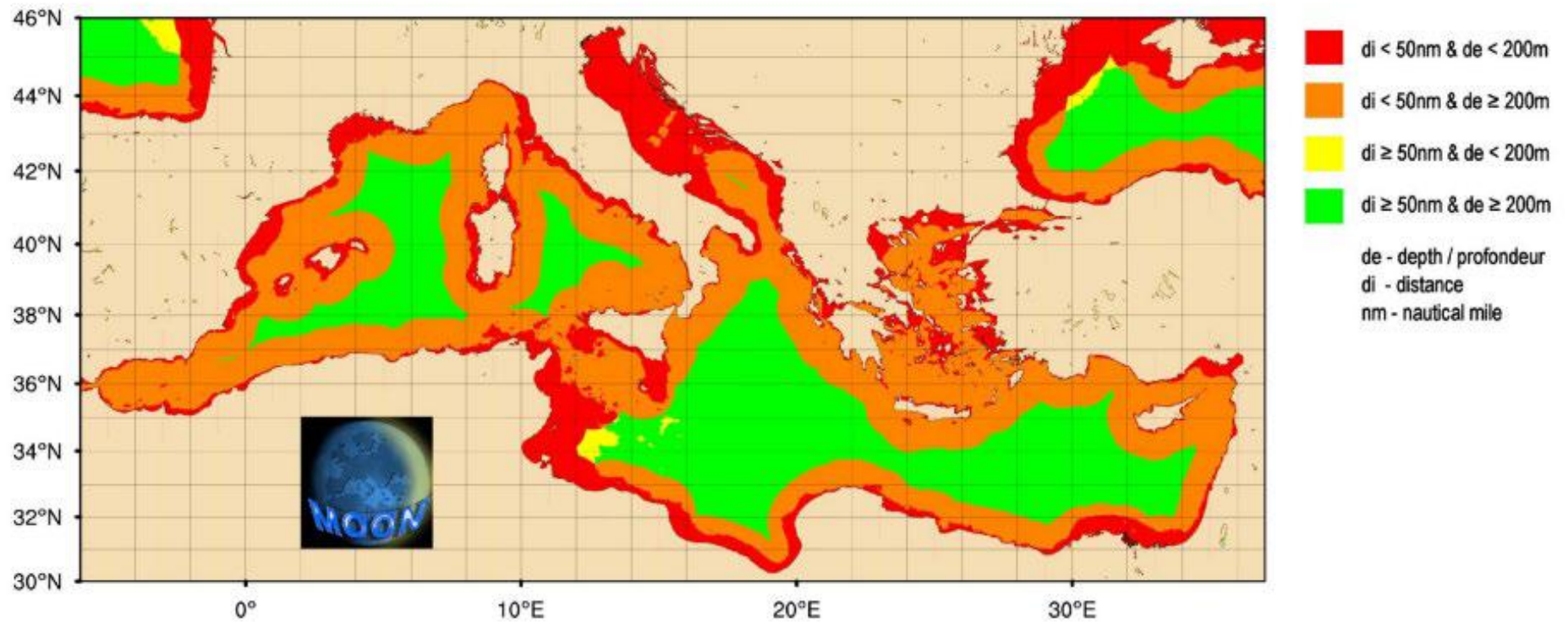


Figure 1: The Mediterranean Sea showing depth and distance from nearest land combinations, from the Mediterranean BWM Strategy (2022-2027).

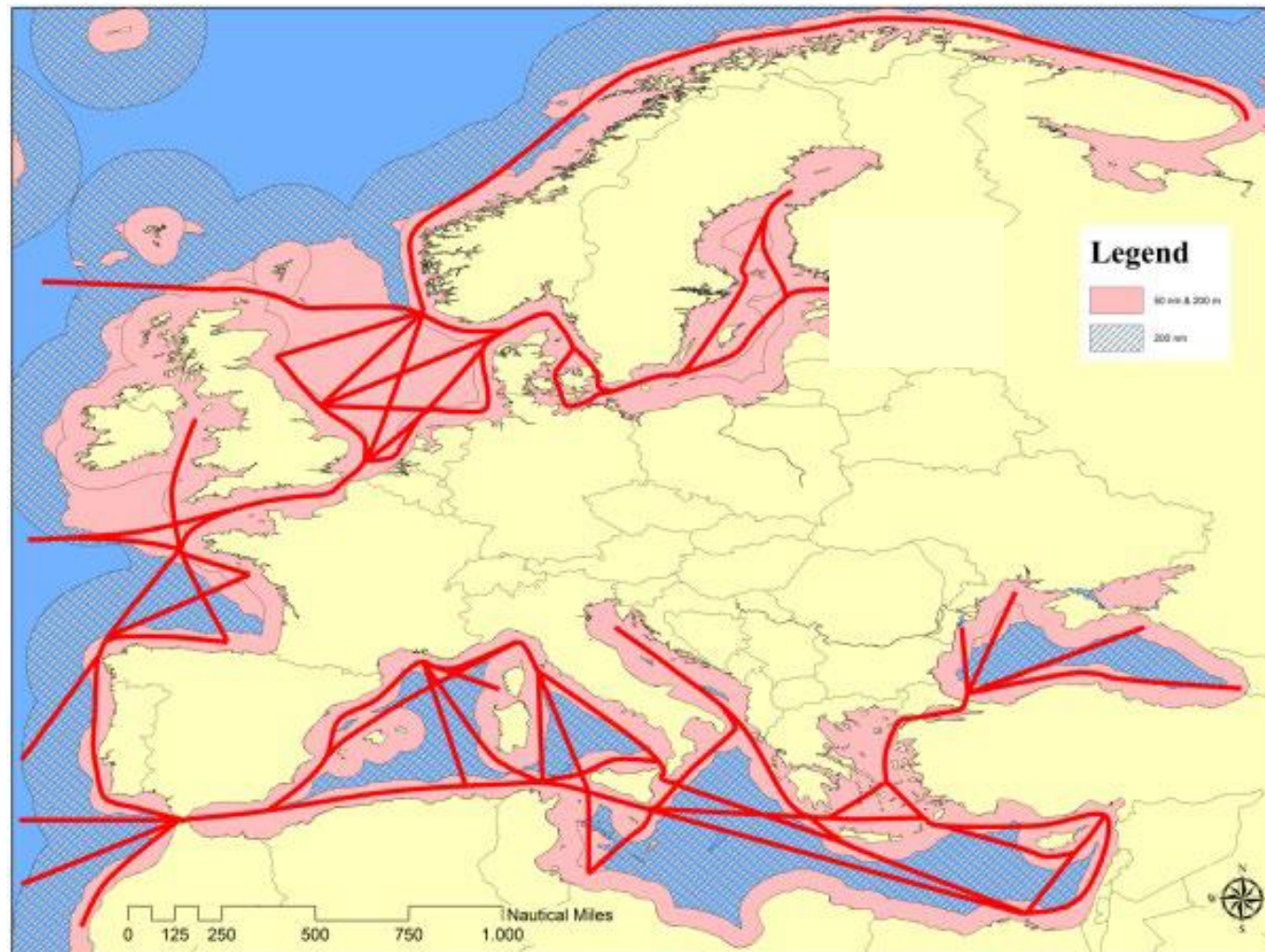


Figure 2: The seas surrounding Europe with red lines showing the main shipping routes, from David, M. and Gollasch, S. 2016. The pink areas are less than 50 nautical miles from nearest land and/or in waters less than 200m deep, and the pink shaded areas are more than 200 nautical miles from the nearest land.

2.2 Ballast water exchange areas in the Mediterranean Sea

As detailed in the Mediterranean BWM Strategy (2022-2027), and consistent with regulation B-4 of the BWM Convention, the requirements for ballast water exchange in the Mediterranean Sea area include:

Ships entering the waters of the Mediterranean Sea area from the Atlantic Ocean (Straits of Gibraltar), or from the Indian Ocean through the Red Sea (Suez Canal) or leaving the waters of the Mediterranean Sea area to the Atlantic Ocean (Strait of Gibraltar) or to the Indian Ocean through the Red Sea (Suez Canal), should:

- (a) Undertake ballast water exchange before entering the Mediterranean Sea area, or after leaving the Mediterranean Sea area, as applicable, according to the standard set out in regulation D-1 of the BWM Convention, and at least 200 nautical miles from the nearest land and in waters at least 200 meters in depth; and
- (b) In situations where this is not possible, either due to deviating the ship from its intended voyage or delaying the ship, or for safety reasons, such exchange should be undertaken before entering the Mediterranean Sea area, or after leaving the Mediterranean Sea area, as applicable, in accordance with the standard set out in regulation D-1 of the BWM Convention, as far from the nearest land as possible, and in all cases in waters at least 50 nautical miles from the nearest land and in waters of at least 200 meters depth.

Ships should, when engaged in traffic between:

- I. ports located within the Mediterranean Sea area; or
 - II. a port located in the Black Sea area and a port located in the Red Sea area; or
 - III. a port located in the Black Sea and a port located in the Mediterranean Sea area; or
 - IV. a port located in the Red Sea area and a port located in the Mediterranean Sea area.
- a) Undertake ballast water exchange as far from the nearest land as possible, and in all cases in waters at least 50 nautical miles from the nearest land and in waters of at least 200 meters depth. The areas where such requirements are met in the Mediterranean Sea area, appear in Figure 1;
 - b) In situations where this is not possible either due to deviating the ship from its intended voyage or delaying the ship, or for safety reasons, exchange of ballast water should be undertaken in areas designated by the port State for that purpose, and, if a port State decides to designate a ballast water exchange area; and
 - c) Such areas shall be assessed in accordance with the Guidelines on designation of areas for ballast water exchange (G14) and in consultation with adjacent States and all interested States.

As per regulation B-4 of the Ballast Water Management Convention, if the safety or stability of the ship is threatened by a BWE operation, this operation should not be undertaken. The reasons should be entered in the Ballast Water Record Book and a report should be submitted to the maritime authorities of the port of destination.

Each ship calling at a port within the Mediterranean Sea area is required to have on board a Ballast Water Management Plan complying with requirements of the Guidelines for ballast water management and development of Ballast Water Management Plans (G4)⁴ and to keep a record of all ballast water operations carried out.

⁴ MEPC.127(53) amended by MEPC.306(73); IMO, 2005 and 2019.

For ships travelling between the Mediterranean area and the North Sea, in line with the General guidance on the voluntary interim application of the D-1 ballast water exchange standard by vessels operating between the Mediterranean Sea and the North-East Atlantic and/or the Baltic Sea (BWM.2/Circ.39⁵), the ballast water exchange requirements include that:

- Ships leaving the Mediterranean Sea and proceeding to destinations in the North-East Atlantic or the Baltic Sea should exchange all their ballast tanks to the regulation D-1 standard at least 200nm from nearest land and in water at least 200m deep as soon as they enter the North-East Atlantic. It should be noted that the best place to do this is in waters that meet these criteria to the west of Portugal, Spain and France, as most of the waters of the English Channel and its approaches, the North Sea and the Baltic Sea are less than 200m deep;
- Ships entering the Mediterranean Sea from the North-East Atlantic or the Baltic Sea and proceeding to destinations in the Mediterranean Sea, the Black Sea or elsewhere should exchange all their ballast tanks to the regulation D-1 standard at least 200nm from nearest land and in water at least 200m deep before they leave the North-East Atlantic; and
- If it is not possible to meet the BWM Convention's 200/200 requirement for ballast water exchange, exchange should be undertaken as far from land as possible outside the Mediterranean Sea and in all cases in waters at least 50nm from nearest land and in waters 200m deep.

2.3 Designating ballast water exchange areas

To designate ballast water exchange areas beyond those identified by BWM Convention regulation B-4 (the 200/200 and 50/200 requirements), the Guidelines (G14) requires three steps to be undertaken – identification, assessment, and designation.

Several countries, such as Australia and Norway, and regions, for example the North Sea and Baltic Sea, have assessed and/or designated areas for BWE in line with the Guidelines (G14).

2.3.1 Harmonised procedure to designate ballast water exchange areas in the Mediterranean Sea

To designate BWE areas in the Mediterranean Sea, the three steps – *identification*, *assessment*, and *designation*, as outlined in the Guidelines (G14), should be followed. To ensure the process is streamlined and efficient, three additional steps are included in this procedure to set up governance arrangements for the designation process and ensure an appropriate level of consultation occurs.

⁵ IMO, 2012.

The six steps recommended for designating BWE areas in the Mediterranean Sea are set out in Figure 3 below and include:

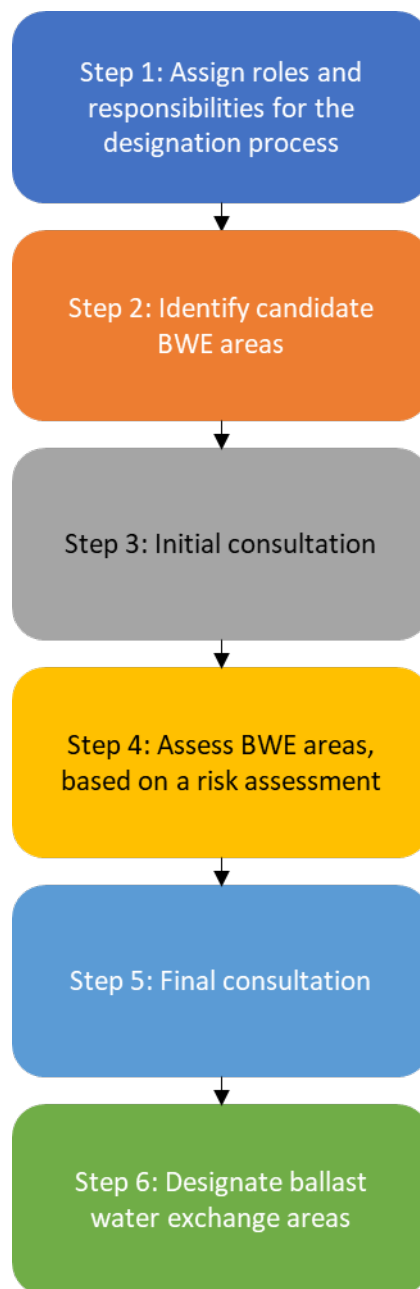


Figure 3: Steps for designating BWE areas in the Mediterranean Sea.

2.3.1.1 Step 1: Assign roles and responsibilities for designation process

Successfully navigating the designation process will require ensuring there are clear roles and responsibilities allocated at the outset. The government policy agency in the port State that has the lead responsibility to ensure that ballast water is managed correctly should nominate an officer for the role of managing the designation process. It may be necessary to outsource phases of the process, such as the risk assessment, however a government officer should have responsibility for overall management.

If more than one port State is involved in the BWE area designation process, equivalent government agencies in the relevant port States should be engaged at the earliest possible time, and similar roles and responsibilities assigned in each relevant port State Authority. If more than one port State is involved in the designation process, an expert consultative group should be established, incorporating experts from all relevant port States, to review and assess all information gathered and assessed, and provide recommendations to the decision maker(s).

The designation manager should report to an overall decision maker - a senior manager appointed by the government agency in each port State Authority - to be accountable for the designation process and to approve and progress the designation for government and/or bilateral or regional endorsement.

2.3.1.2 Step 2: Identify appropriate ballast water exchange areas

There are three considerations essential to identifying appropriate BWE areas, in accordance with the Guidelines (G14). These include legal aspects, important resources (e.g. fisheries, tourism, aquaculture) and protected areas, and navigational constraints.

Legal Aspects

The jurisdiction of the designating body (or port State) is an important consideration. If a designated BWE area is being considered because there is insufficient sea area on ships' routes that meets the BWM Convention 200/200 or 50/200 requirements, then the port State(s) or regional body proposing to designate the BWE area must have jurisdiction over the proposed BWE area. That may mean that the area of the proposed BWE area is in the Exclusive Economic Zone of a port State, or several port States.

If a port State has also incorporated the provisions of the BWM Convention into its national law, the port State must also have included the ability to designate ballast water exchange areas in their national law. In addition, the port State must ensure that the requirements regarding BWE are tiered in accordance with regulation B-4. This means that ships must still undertake BWE:

- as far from land as possible, and at least 200 nautical miles from nearest land and in water 200 metres in depth (the 200/200 requirement);
- if this is not possible, at least 50 nautical miles from nearest land and in water 200 metres in depth (the 50/200 requirement); and
- if this is not possible, in the designated BWE area.

If a port State has not incorporated the provisions of the BWM Convention into its national law, it should assign, in its national law, the authority to designate ballast water exchange areas.

Important Resources and Protected Areas

The location of proposed BWE areas should be carefully considered. Adverse impacts in aquatic areas protected under national or international law and other important aquatic resources, including those of economic and ecological importance, should be avoided.

The implementation of the BWM Convention in the Mediterranean region should take into account the potential impact of ballast water discharge on important resources, such as fisheries, marine biodiversity, and protected areas. It is important to ensure that the implementation of the convention is done in a manner that is consistent with the region's sustainability goals and objectives.

The establishment and management of marine and coastal protected areas in the Mediterranean represent a critical measure to address the pressures and protect the Mediterranean Sea and Coast, in alignment with the Barcelona Convention and its Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol). The Convention recognizes the importance of

marine protected areas (MPAs) and Specially Protected Areas of Mediterranean Importance (SPAMIs) as effective tools for conserving marine biodiversity and ecosystem services.

In 2020, 8.3 % of the Mediterranean Sea is benefiting of a protection status (including MPAs with a national statute, SPAMIs, marine Natura 2000 sites, and the Pelagos Sanctuary), covering a total surface area of 209,303 km²

The post-2020 targets taken at regional and global levels, through the Post-2020 Regional Strategy for Marine and Coastal Protected Areas (MCPAs) and Other Effective Area-based Conservation Measures (OECMs) in the Mediterranean, and the Kunming-Montreal Global Biodiversity Framework, respectively, ambition 30% of protection of the Mediterranean Sea by 2030.

The List of Specially Protected Areas of Mediterranean Importance (SPAMI List) was established by virtue of Article 8 of the SPA/BD Protocol and aims at promoting cooperation in the management and conservation of natural areas, as well as in the protection of threatened species and their habitats. The sites included in the SPAMI List are intended to have a value of example and model for the protection of the natural heritage of the region.

To date, the SPAMI List counts 39 SPAMIs (38 national SPAMIs and the Pelagos Sanctuary declared following an agreement between France, Italy and Monaco). SPAMIs cover a total surface area of 138,464 km² representing 5.5 % of the Mediterranean Sea area ([Figure 4](#)).

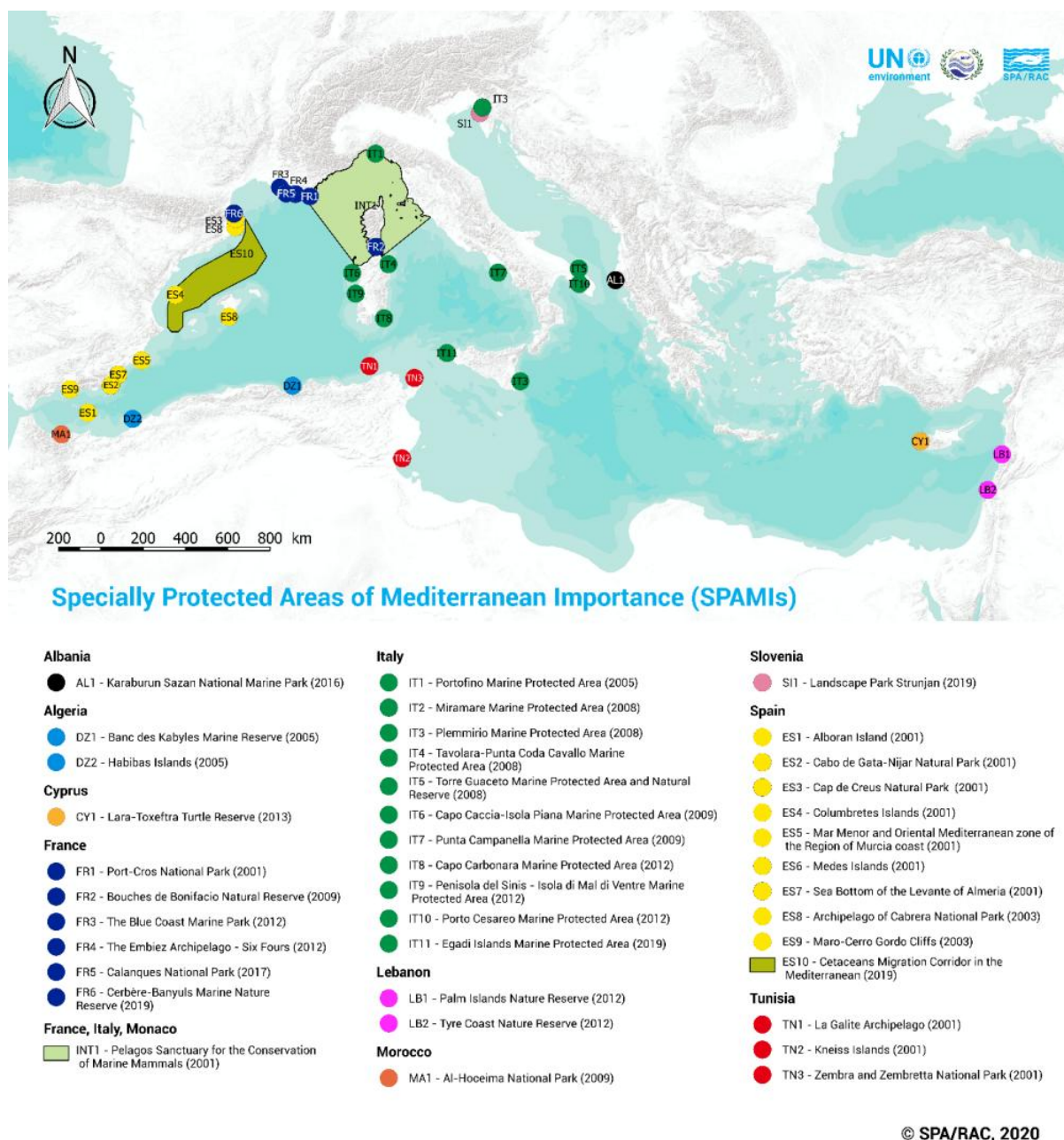


Figure 4: Specially Protected Areas of Mediterranean Importance (SPAMIs) – Names, location and year of inclusion on the List

These protected areas are critical for the conservation of biodiversity and the protection of natural resources, including native habitats and species that may be vulnerable to the introduction of alien invasive species. The implementation of the BWM Convention should ensure that ballast water discharge does not harm these protected areas or their ecological values. Ballast water discharge from ships can introduce invasive species into the marine environment, which can have a negative impact on biodiversity and ecosystem functioning. Consequently, adequate measures should be put in place in order to prevent the introduction of invasive species through the regulation of ballast water discharge.

The implementation of the BWM Convention should take into account the potential impact of ballast water discharge on MPAs and SPAMIs and the species and habitats they protect. Ships entering MPAs

or SPAMIs may need to undergo additional ballast water management measures to ensure that invasive aquatic species are not introduced into these protected areas. In this way, the designation of MPAs and SPAMIs and the implementation of the BWM Convention can work synergically to protect the marine environment of the Mediterranean Sea and promote sustainable development.

Navigational Constraints

The purpose of designating a BWE area is to provide a practical option for BWM management that effectively manages the risk of ballast water, either prior to a ship being required to meet the D-2 standard or as a contingency measure. Therefore, an important consideration when identifying a potential BWE area is navigation aspects such as existing shipping routes and navigational safety, in accordance with the Guidelines (G14). The impact on shipping should be minimised.

2.3.1.3 Step 3: Initial consultation

The purpose of the initial consultation is to seek feedback from potentially affected stakeholders on BWE area(s) to identify:

- if areas will be suitable for ships to undertake BWE, and
- any reasons why a full assessment should not be undertaken,

prior to undertaking an extensive and potentially expensive risk assessment.

After potential BWE area(s) have been identified, and before a risk assessment is undertaken, relevant stakeholders should be consulted. If the proposed BWE areas extend into other port State jurisdiction(s), consultation should begin at the earliest stage possible in the designation process.

The first stage consultation should include as many relevant stakeholder groups as possible. These may include: shipping industry, ports, local governments, neighbouring port States, regional bodies and authorities, scientific experts, and affected industries such as fisheries, tourism, and aquaculture. The Contracting Parties to the Barcelona Convention should also be consulted.

The information provided to stakeholders should include the details of the potential areas, making it clear that these are not the final areas, and that an extensive risk assessment should still be undertaken prior to designating any ballast water exchange area.

2.3.1.4 Step 4: Assess ballast water exchange areas

The assessment of a proposed BWE area should be based on a risk assessment in accordance with the Guidelines (G14).

The risk assessment criteria include: oceanographic, physico-chemical, biological, environmental, important resources and ballast water operations.

Data for the risk assessment can be gathered from various sources. Questions that need to be addressed in the assessment, and examples of data sources, include (but are not limited to):

Is the area big enough for ships to undertake a full BWE? ⁶

- Industry data on ballast water exchange rates and quantities;
- Shipping route data;
- Industry data on the location of ballast water uptake (donor port) and quantity of ballast water taken up;
- Industry data on current exchange locations, quantities, and ship speed; and
- Industry data on the location of ballast water discharge (recipient port) and quantity of ballast water discharged.

Are there any sea areas that should be avoided?

- Locations of special protected areas or areas of high environmental significance; and
- Locations of other industries and activities for example aquaculture, fishing, boating, and tourism.

Where would the exchanged ballast water go?

- Oceanographic data to understand currents, upwellings and other oceanographic features of the proposed ballast water exchange area to determine where ballast water exchanged in the proposed BWE area may flow to.

What harmful aquatic organisms and pathogens might be in the ballast water?

- Data on the presence of known harmful aquatic organisms and pathogens (HAOP) in the region, particularly in donor ports related to the potential ballast water exchange area. This information can be obtained either through port surveys (using traditional taxonomic approaches or modern e-DNA surveys, as agreed by the port States) or expert knowledge.
- Biological data on each of the known HAOP to understanding the length and tolerances (depth, water quality) of each lifecycle stage. Species that can be transported via ballast water should be focused on.

Will the potential HAOP survive in the areas where the ballast water is exchanged or flows to?

- Hydrological data to understand the water depths in and surrounding the proposed ballast water exchange area.

The designated ballast water exchange area should provide the least risk to the aquatic environment, human health, property, or resources. The results of the risk assessment should be used to define the spatial limits of the BWE area, which should also be aligned with national and international law.

2.3.1.5 Step 5: Final Consultation

Once the risk assessment is complete, a final consultation should be undertaken with the same stakeholders as the initial consultation. The final consultation should provide the outcomes of the risk assessment, and whether the potential BWE area has been found suitable for designation by the decision maker(s). If the results of the risk assessment suggest that use of the BWE area would result in unacceptable risk (noting that zero risk is not possible) then this should be explained to stakeholders in the final consultation.

⁶ Regulation D-1 of the BWM Convention requires at least 95% volumetric exchange of ballast water. For ships exchanging ballast water by the flow-through or dilution methods, pumping through three times the volume of each ballast water tank is required to meet the standard in regulation D-1.

Input from stakeholders should be sought on the final details of the proposed BWE area, and any comments addressed, prior to finalising the area.

Prior to designating the area, endorsement for the BWE area should be sought from the relevant port State Authority(ies) and the Contracting Parties to the Barcelona Convention.

2.3.1.6 Step 6: Designation

To designate the BWE area, three actions should occur:

- The area should be included or referred to in the national circulars or notices to mariners;
- Stakeholders should be notified; and
- The IMO should be notified.

Ballast water exchange areas designated by a port State Authority must be communicated to the IMO prior to implementation.

Effectively communicating the dimensions and use of the BWE area to industry stakeholders is essential. Communications should:

- Include guidance if a full exchange in the designated BWE area is not possible, in line with the Guidelines (G6) (i.e. that no exchange should be undertaken if a full exchange is not possible); and
- Reaffirm the tiered requirements for BWE in line with regulation B-4 (i.e. BWE should be undertaken to meet the 200/200 requirement first, if that cannot be met, the 50/200 requirement, and only if that cannot be met, the designated BWE area should be used).

The length of time that the BWE area will be designated for use should also be clearly communicated.

In most cases, this should be that the BWE area should be regarded as temporary and for use by ships only until they are required to meet regulation D-2. After that time, the BWE area should only be used in the event that BWE is utilised as a contingency measure, in accordance with the ship's BWMP, if the port State Authority considers it appropriate and there are not alternative options for ballast water management (e.g. a ballast water reception facility). This should be considered in line with the Guidance on contingency measures under the BWM Convention (BWM.2/Circ.62)⁷.

⁷ IMO, 2017g.

3 Harmonised Procedure: Regulation A-4 Exemptions

3.1 Mediterranean Sea context

In the Mediterranean BWM Strategy (2022-2027)⁸, the Contracting Parties to the Barcelona Convention agreed to develop, adopt, and implement a comprehensive Regional Procedure for the Granting of Exemptions under the BWM Convention.

The 2012 Mediterranean BWM Strategy (BWM.2/Circ.35⁹) included that exemptions can be granted to a ship on a voyage between specified ports or locations within the Mediterranean Sea or to a ship operating exclusively between specified ports or locations within the Mediterranean Sea area, in accordance with regulation A-4 and the Guidelines (G7).

According to the IMO's Global Integrated Shipping Information System, Spain has issued three A-4 exemptions. Two of these exemptions were granted to the same ship for short periods (three months) to allow travel between two ports for the purpose of dry dock repairs. A third exemption was issued to a ship, also for a three-month period, to operate only in Algeciras Bay.

The Mediterranean Sea is a biodiversity hotspot that is heavily impacted by the introductions of HAOP. To date, nearly 1,000 marine species have been recognised as non-indigenous to the Mediterranean Sea. The Suez Canal was expanded in 2015, enabling larger ships to pass through and serving as a channel for species to spread. In this case, unmanaged ballast water enables secondary transfer of species. Recent research found that the highest species spread risk to the Mediterranean is from inside the Mediterranean itself, identifying a number of ports in the Mediterranean Sea that are high-risk for HAOP, including Gibraltar, Suez, Istanbul and Algeciras¹⁰.

According to the Mediterranean BWM Strategy (2022-2027) the most up to date data available through the Marine Mediterranean Invasive Alien Species Database (MAMIAS¹¹) suggests that, for the Mediterranean as a whole, introductions of species linked to shipping make up 70% of recorded non-indigenous species.

The Marine Ecoregions of the World project identified seven bioregions in the Mediterranean Sea¹²:

- Adriatic Sea;
- Aegean Sea;
- Levantine Sea;
- Tunisian Plateau/Gulf of Sidra;
- Ionian Sea;
- Western Mediterranean; and
- Alboran Sea.

⁸ UNEP/MED, 2022.

⁹ IMO, 2011.

¹⁰ Wang *et al.* 2022.

¹¹ Available at: <http://dev.mamias.org/services/dash/med>

¹² Spalding *et al.*, 2007.

There has been variability in the monitoring and reporting of HAOP in the Mediterranean Sea, with information scattered in various databases, institutional repositories and literature and surveys undertaken with differing approaches, such as traditional taxonomy and eDNA analysis. The European Alien Species Information Network (EASIN) increased accessibility to HAOP spatial information and has been used to identify that the composition of HAOP in the Mediterranean differs among Mediterranean bioregions¹³.

Average Mediterranean surface temperature and salinity also show variability across bioregions. The Mediterranean Sea is generally significantly warmer in the east, and there is about a 10°C range between winter and summer highs and lows. Variation in salinity can reflect a few very large freshwater inputs, like those from the Atlantic Ocean flowing through the Strait of Gibraltar into the Mediterranean Sea, as shown in Figure 5, and from the Rhone River, which can create relatively fresh/brackish water layers in some regions.

Risk assessments to contribute to decision making on applications for regulation A-4 exemptions in the Mediterranean Sea should take into account this variability.

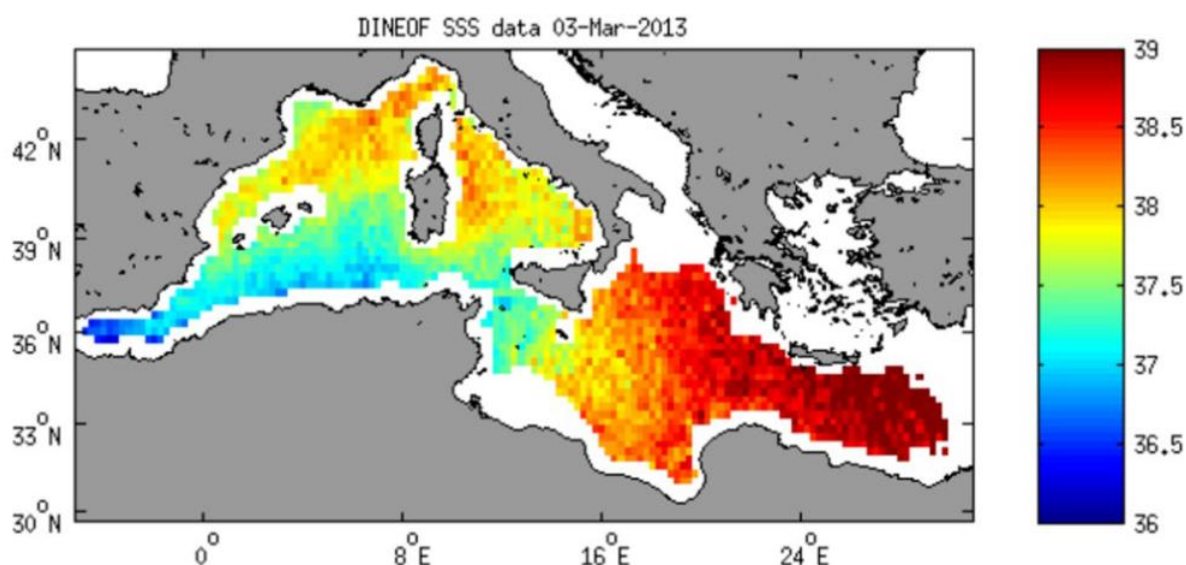


Figure 5: Salinity in the Mediterranean Sea on 3 March 2013, using information from the European Space Agency's (ESA) SMOS mission, from ESA – Mediterranean Sea salinity

3.2 Harmonised procedure for granting regulation A-4 exemptions in the Mediterranean Sea

This harmonised procedure aims to ensure that exemptions are assessed and granted in a consistent manner in the Mediterranean Sea, and that any exemption issued does not impair or damage the environment, human health, property, or resources.

¹³ Katsanevakis, S. and others. 2014.

3.2.1 Establishing roles and responsibilities

Roles and responsibilities must be clear from the outset. The roles and responsibilities for this harmonised exemption procedure are included in [Table 1](#).

The port State Authority(ies) directly relevant to the exemption application should nominate officers for the role of managing the exemption process. The exemption manager should report to an overall decision maker – a senior manager appointed by the port State Authority to be accountable for the exemption process and progress the exemption for the port State Authority and/or bilateral or regional approval.

More than one port State Authority will be involved in the exemption process, so equivalent government agencies in the relevant port States should be engaged at the earliest possible time, and similar roles and responsibilities assigned in each relevant port State Authorities. An expert consultative group should be established, incorporating experts from all relevant port States and international experts as needed, to review and assess all information gathered and assessed, and provide recommendations to the decision maker(s).

Table 1. A-4 exemptions: responsibilities of port State Authorities and applicants.

APPLICANT	PORT STATE AUTHORITY(IES)
Consult with relevant port State Authorities as soon as possible	Inform applicant about the procedure and any associated conditions for exemptions
Collect data in accordance with this harmonised procedure, taking into account any guidance or directions from the port State Authorities	Target species selection
Pay for data collection as necessary	Consult with other port State Authorities as necessary.
Submit raw data to the port State Authorities	Guide and advise applicant(s) on the procedure requirements
Undertake risk assessment in line with this procedure, taking into account any guidance or directions from the port State Authorities	Share raw data for inclusion in regional databases
Submit application, including all information and data required along with the risk assessment report	Review applications, submitted data and the risk assessment report
	Make a decision on whether or not to issue an exemption
	Issue exemption (if relevant)
	Clearly communicate exemption decision to applicants and the IMO (if relevant)
Undertake intermediate review and provide report to port State Authorities	Notify applicant when intermediate review of exemption is required (if relevant)
	Review intermediate review and make a decision on whether or not to withdraw, or continue, the exemption (if relevant)
	Clearly communicate intermediate review decision to applicant and IMO (if relevant)

3.2.2 Application process

A flow chart of the application process is shown in Figure 7.

It is the responsibility of a ship owner/operator to apply to the port State Authorities for a regulation A-4 exemption. The ship's flag State should also be advised of the application.

A-4 Exemptions are granted jointly by the involved port State Authorities, in other words where the ship is operating. It is important that the flag State is included in the consultations, but it should be noted that the flag State does not take the ultimate decision. The ultimate decision is to be taken by the port State Authorities, who have the right to protect their environment from ships operating in their territories.

Expressions of interest should be made as early as possible, noting that the application process, including collection of data, may take several months (or years) to conclude. An expression of interest should include the proposed route that an exemption will be applied for and why an exemption is sought.

Exemptions may be viewed by the shipping industry as a means to avoid the requirement to meet the regulation D-2 standard in accordance with BWM Convention implementation schedule (Figure 6). As a result, approval of an exemption could result in a ship owner/operator choosing to delay installation of a suitable ballast water management system on the ship.

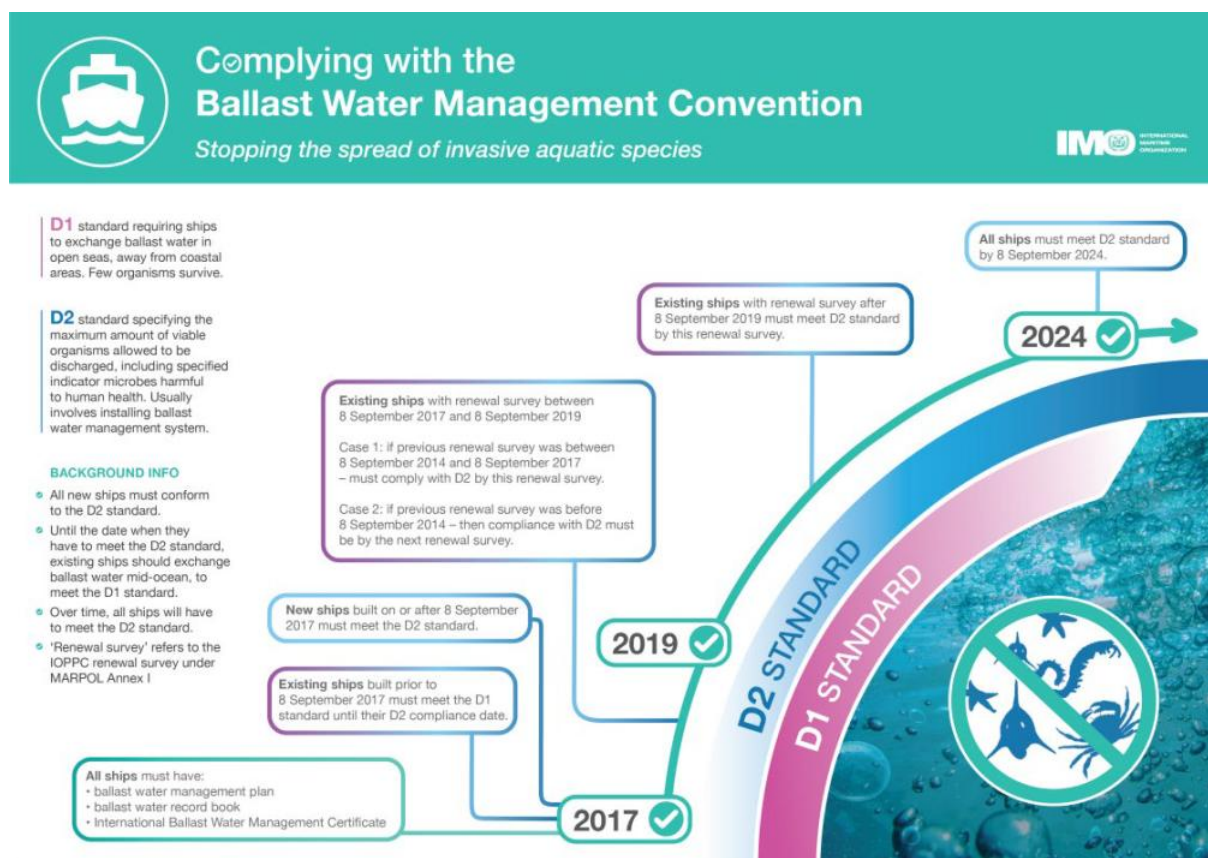


Figure 6: Infographic “Complying with the Ballast Water Management Convention”, from the IMO Website.

If this is the intent of the applicant, this should be communicated to the port State Authorities. It is also the responsibility of the port State Authorities to advise the applicant that the exemption, if approved, may only be effective for up to 5 years, and is subject to immediate review should information become available that would indicate the risk had increased (for example, if any of the factors taken into account in the risk assessment change).

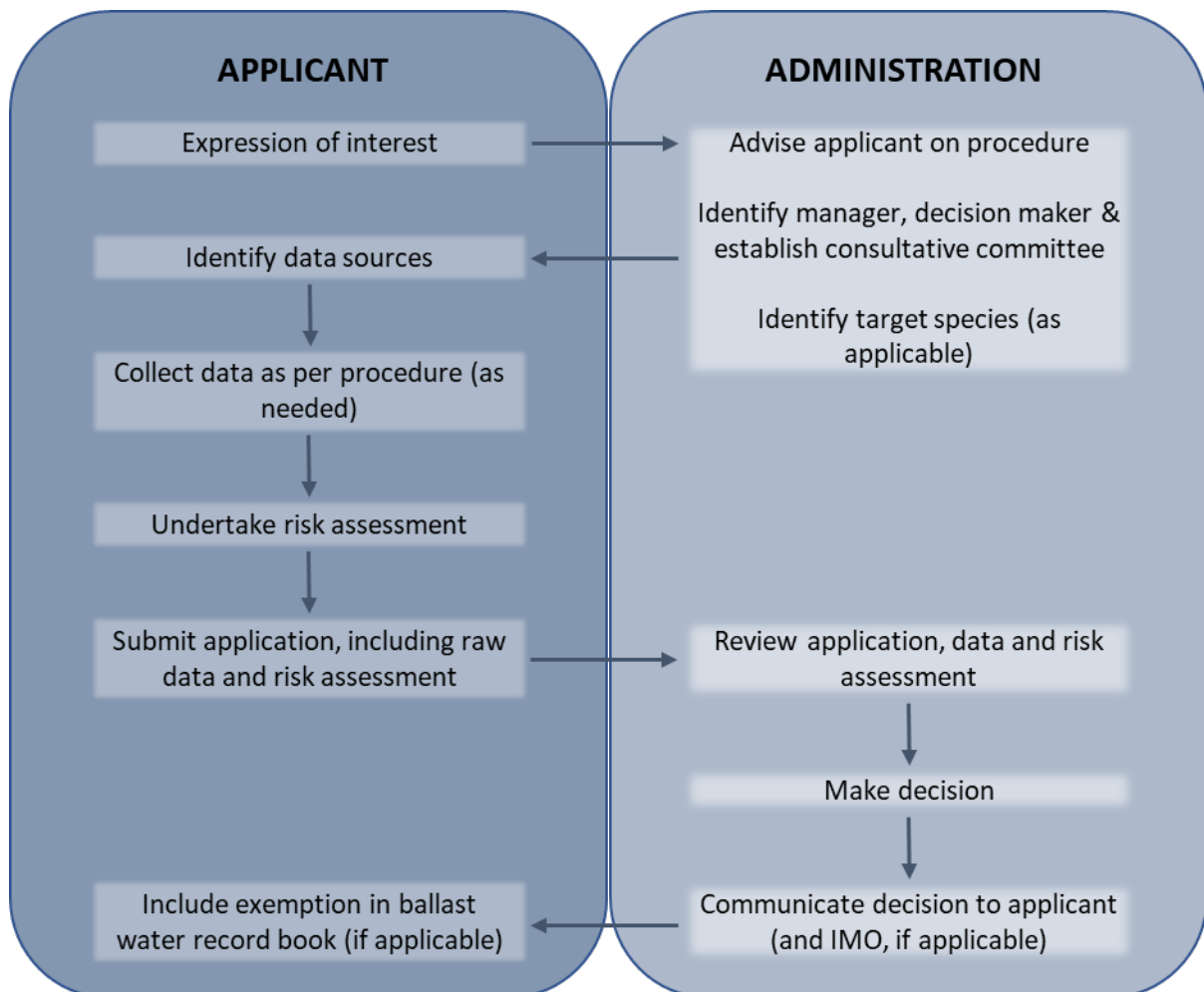


Figure 7: Assessment process in accordance with this procedure.

Upon receipt of an expression of interest, the port State authority should advise the applicant of the requirements in accordance with this procedure, and any costs that will be charged to the applicant, for example for time taken by the port State authority to review the application.

The port State Authority should also review the expression of interest to determine the target species relevant to the application and provide this list to the applicant. Guidance on target species identification can be found in [Appendix A – Protocol for Identifying Target Species](#). To provide a list of target species to applicants in a timely manner, it is recommended that a regional target species list be prepared that can be applied to all regulation A-4 exemption applications.

The risk assessment process should be undertaken by the applicant. The risk assessment process is described in more detail in [Section 3.2.3](#).

Detailed applications should be prepared once the full risk assessment process is complete. Applications should include:

- *General information:*
 - Period for which an application is sought (mm:yy to mm:yy); and
 - Why an exemption under regulation A-4 is sought.
- *Ship's information:*
 - Ship name;
 - IMO number;
 - Port of registry;
 - Gross tonnage;
 - Owner;
 - Call sign;
 - Ballast water management option usually undertaken by ship, including ballast water treatment technology, if installed
 - A copy of the Ship's Ballast Water Management Plan should be submitted; and
 - The port State Authority may also require ballast water and sediment management history for a determined period.
- *Route information:*
 - Route of application, given as donor port(s) and recipient port(s) for ballast water discharge or as defined area of operation;
 - If single voyage: Date and time of departure and arrival;
 - If multiple voyages: Voyage frequency, regularity and estimated amount of ballast water discharged during the exemption period. Estimated time and dates for departures and arrivals;
 - Any voyages the ship plans to take to ports other than the specified ports during the duration of the exemption; and
 - If multiple voyages, the estimated total number of voyages and the amount of ballast water discharged under the duration of the exemption.
- Environmental information: all data on temperature and salinity (and other environmental factors, if relevant) collected for use in the risk assessment must be provided to the port State Authorities. This information should be in line with the requirements outlined in Section 3.2.3.
- Biological information: all data on species in the relevant ports or areas collected for use in the risk assessment must be provided to the port State authority(ies). This information should be in line with the requirements outlined in Section 3.2.3 and be provided in the format specified by the Marine Mediterranean non-indigenous and Invasive Species Database (MAMIAS¹⁴).
- Full risk assessment report, in accordance with Section 3.2.3 of this procedure.

Applications should be sent to the relevant contact point in each port State Authority.

¹⁴ Available at: <https://dev.mamias.org/page/contribution>.

3.2.3 ***Risk assessment and data needs***

The eight key principles of risk assessment in the Guidelines (G7) are:

- **Effectiveness** - that risk assessments accurately measures the risks to the extent necessary to achieve an appropriate level of protection;
- **Transparency** - that the reasoning and evidence supporting the action recommended by risk assessments, and areas of uncertainty (and their possible consequences to those recommendations), are clearly documented and made available to decision-makers;
- **Consistency** - that risk assessments achieve a uniform high level of performance, using a common process and methodology;
- **Comprehensiveness** - that the full range of values, including economic, environmental, social and cultural, are considered when assessing risks and making recommendations;
- **Risk management** - that low-risk scenarios may exist, but zero risk is not obtainable, and as such risk should be managed by determining the acceptable level of risk in each instance;
- **Precautionary** - that risk assessments incorporate a level of precaution when making assumptions, and making recommendations, to account for uncertainty, unreliability, and inadequacy of information. The absence of, or uncertainty in, any information should therefore be considered an indicator of potential risk;
- **Science based** - that risk assessments are based on the best available information that has been collected and analysed using scientific methods; and
- **Continuous improvement** - any risk model should be periodically reviewed and updated to account for improved understanding.

The risk assessment must be undertaken in accordance with these principles and the Guidelines (G7).

A two-step risk assessment, with the first step based on salinity and target species to give an early indication of the risk assessment outcome, should be undertaken.

The two-step risk assessment provides for a combination of environmental matching and species-specific risk assessment, supported by information on shipping activities.

Step One: Risk Assessment Algorithm

Two key risk criteria to distinguish between unacceptable (high) risk and acceptable (low) risk are:

- a) Difference in water salinity between the donor and recipient ports; and
- b) Presence of target species in donor and recipient ports.

In step one, the most recent existing data should be used if available.

For water salinity, data might include port collected salinity records, or data from remote sensing. If existing water salinity data is not comprehensive, port surveys can be conducted at both the donor and recipient ports (see port survey protocol in [Appendix B – Port Survey Protocol](#)).

For target species presence/absence, existing databases and literature should be used to determine presence or absence in the relevant ports, if available. Data sources may include port or national monitoring (using traditional taxonomy or new methods such as eDNA analysis), the Marine Mediterranean Invasive Alien Species Database (MAMIAS) or the European Alien Species Information Network (EASIN). Where existing data is used, it should be verified and validated, and have been collected no longer than three years prior to the date of the risk assessment.

If existing data on target species is not comprehensive, and information on some target species is not available, either a precautionary approach can be taken, whereby the target species is assumed to be present in the donor port but absent from the recipient port, or port surveys can be conducted at both the donor and recipient ports (see port survey protocol in [Appendix B – Port Survey Protocol](#)).

The step one risk assessment algorithm (Figure 8) has only two possible outcomes – low or high risk - as there are only two possible next steps, which are to proceed to step two, or consider withdrawing the application. The outcome of step one provides an indication of the final decision and may assist the applicant to decide whether to proceed with step two (the detailed and more expensive element) of the risk assessment.

A low-risk outcome in step one suggests that the risk of transfer of HAOP in ballast water on the proposed route may be acceptable, subject to further detailed analysis in step two of the risk assessment.

A high-risk outcome in step one indicates that the risk of transfer of HAOP in ballast water on the proposed route may be unacceptable (that is, that there is a high risk of survival of HAOP transferred via ballast water), in which case an exemption cannot be granted. It is still possible that step two of the risk assessment may provide contradictory advice, for example that the target species already exist in both donor and recipient ports, however applicants should consider whether to proceed to step two if step one indicates high risk.

Step One Risk Assessment Model A-4 Exemptions in the Mediterranean Sea

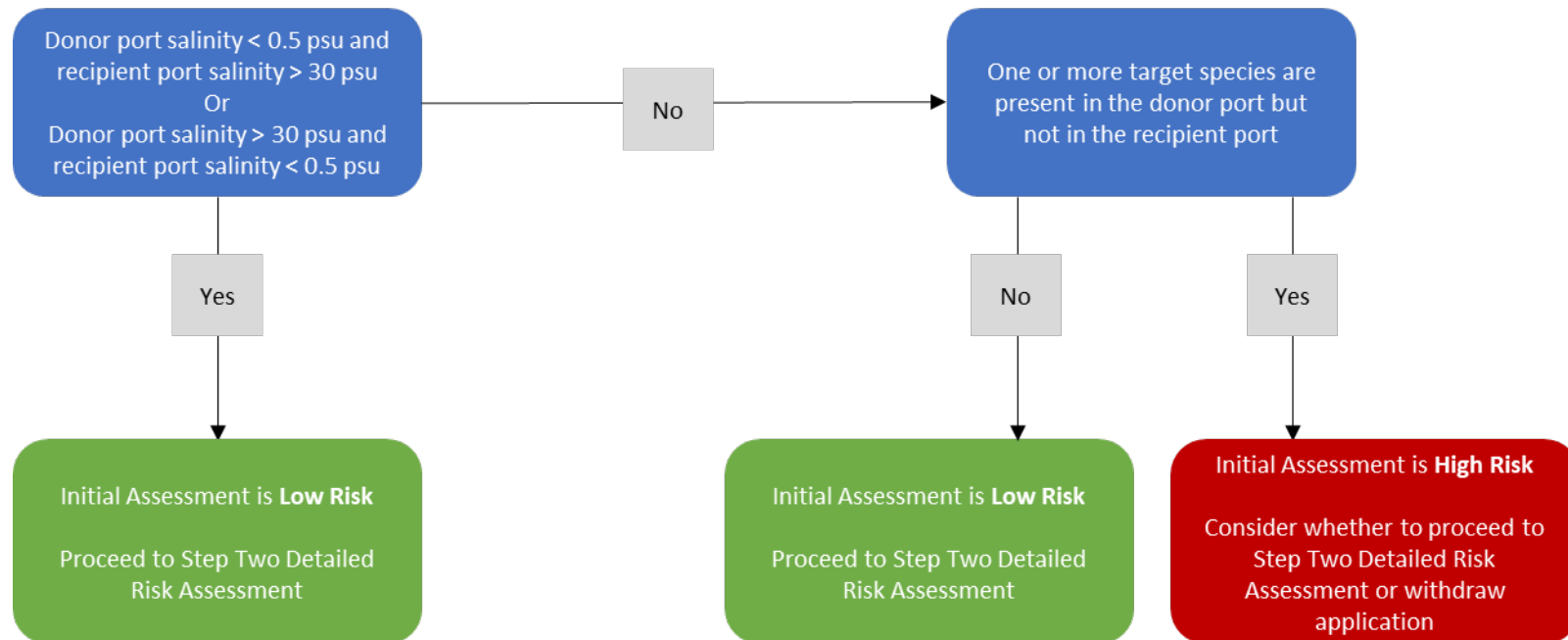


Figure 8: Risk assessment model for exemptions (step one).

Step Two: Detailed Risk Assessment

The detailed risk assessment in step two should take into account additional information on target species, species-specifics (e.g., dispersal capacity), natural dispersal, and mitigation measures (e.g., volume of ballast water, location of discharge and uptake). The step two risk assessment should be based only on verified data. Applicants should present the analysis of all data in a risk assessment report as part of the application for an exemption.

Additional aspects to consider in the step two detailed risk assessment include (but are not limited to):

- **Port information**

Port environmental information (depth, salinity, temperature, turbidity) at the point of uptake and discharge of ballast water should be considered. This may require a port survey, which should follow the protocol in [Appendix B – Port Survey Protocol](#) and/or obtaining data from existing sources, such as port monitoring or remote sensing.

- **Additional species data**

Additional species data should be assessed including presence and abundance of target species in the donor and recipient ports and surrounding areas. This may require a port survey, which should follow the protocol in [Appendix B – Port Survey Protocol](#), and/or obtaining data from existing sources, such as port or national monitoring, the Marine Mediterranean Invasive Alien Species Database (MAMIAS), developed by the Specially Protected Areas Regional Activity Centre (SPA/RAC). The biological information needed for A-4 Exemptions should take this database into account, possibly as a baseline. Another existing source is EASIN.

All data should be verified and validated. It should be noted that, if target species are present in both the donor and recipient ports, and control measures are being implemented in the recipient port for that target species, the species presence in both ports should not be used as a basis considering the ballast water as low risk. In this case additional introductions will negatively impact on the effectiveness of the control measures. In line with regulation C-2 of the BWM Convention, port State Authorities should notify ships of areas under their jurisdiction where ships should not take up ballast water due to known conditions.

- **Natural dispersal**

Natural dispersal can be assessed for target species that were identified as high risk in step one. The extent and directionality of natural dispersal of target species should be modelled in line with the Guidelines (G7). Recent research using natural dispersal modelling for assessing same risk areas¹⁵ should be considered. If this assessment in step two shows a high probability for natural dispersal, this may be used to counter a high-risk rating from step one based on presence/absence.

- **Human pathogens**

Information on pathogens in the donor port and the risk to human health should be considered as far as possible, including notifications under regulation C-2 regarding HAOP and sewage outfalls.

- **Mitigation and control measures**

If high risk scenarios are identified, there may be actions that the applicant can take to mitigate the risk. Mitigation measures might include, for example, restrictions in relation to the volume, location or timing of uptake and discharge of ballast water, undertaking regular port monitoring, reducing the duration of the exemption, or adding specific terms for intermediate review of the exemption, or terms for the withdrawal of the exemption.

¹⁵ Hansen, F. T., & Christensen, A. 2018; Stuer-Lauridsen, F. *et al.*, 2018; HELCOM-OSPAR, 2020b.

Risk Assessment Report

The risk assessment report, to be submitted to the port State Authorities together with the A-4 exemption application, should clearly set out the considerations, any weighting applied to aspects of the assessment, and the reasoning behind the risk assessment outcome.

The report should include detailed descriptions of both the step one risk assessment algorithm and the step two detailed risk assessment.

At a minimum, the report should include:

- Non-technical summary with a high-level explanation of the purpose, methodology and risk assessment outcome;
- Table of contents;
- Description of methodology, including collection of data and risk assessment;
- All data used in the risk assessment (as an appendix);
- Description of the outcomes of the risk assessment; and
- References for all information sources used.

The risk assessment report should be assessed by the relevant port State authorities and the expert consultative group. Review of the report should ensure data used has been validated and verified.

It should be noted that the outcome of the risk assessment as analysed by the applicant does not necessarily guarantee the outcome of the exemption decision making process.

3.2.4 Decision making

The expert consultative group should review and assess the exemption application, including the step one risk assessment algorithm and step two risk assessment report, and provide recommendations to the decision maker(s).

Careful consideration should be given to the validity of the data used in the risk assessment, and any weightings applied by the applicant.

In accordance with the Guidelines (G7), any lack of full scientific certainty should be carefully considered in the decision-making process, as any decision to grant an exemption will allow for the discharge of ballast water that does not meet the regulation D-1 or D-2 standards.

If a 5-year exemption is being considered, an intermediate review, after 2.5 years, should be included as a condition of the exemption. The review should include an update of the data used in the risk assessment, including any port surveys to ensure the port survey data is up to date, and a re-do of the risk assessment. The conditions of the exemption should allow for withdrawal of the exemption if the intermediate review identifies that the risk is now unacceptable.

3.2.5 Records and communication

All data collected in the course of the exemption application process should be provided by the applicant to the port State Authorities in raw format. This data should be stored centrally and be publicly available, for example through the Marine Mediterranean Invasive Alien Species Database (MAMIAS).

The exemption decision should be clearly communicated to the applicant. If the decision is to grant the exemption, the decision should also be communicated to the IMO through the Global Integrated Shipping Information System (GISIS), and included in the ships' Ballast Water Management Plan and Record Book.

- The information included in the Ballast Water Record Book should include: details of the exemption route and ports, identifying the donor and recipient ports, or SRA,
 - If for a single voyage – date and time of departure and arrival; and
 - If same risk area – the detailed coordinates of the boundary of the SRA
- Details of conditions associated with the exemption, including for example:
 - Requirement to undertake an intermediate review of the exemption, what the intermediate review should include and the due date for the intermediate review report;
 - Ability to withdraw the exemption based on the outcomes of the intermediate review;
 - Any mitigating measures the ship will take to minimise risks; and
 - The ship should not mix ballast water or sediments other than between the ports or locations specified in the exemption, which should be documented in the Ballast Water Management Plan and Record Book.
- Duration of the exemption (no more than five years); and
- Information and conditions for withdrawal of the exemption.

3.2.6 Implementing this harmonised procedure

In accordance with the 'continuous improvement' principle of the Guidelines (G7), this procedure should be kept under continuous review by the relevant port State Authorities.

4 Harmonised Procedure: Sediment Reception Facilities

4.1 Mediterranean Sea context

BWM.2/Circ.35¹⁶ and the Mediterranean BWM Strategy (2022 – 2027)¹⁷ include that sediments collected during the cleaning or repairing operations of ballast tanks should be delivered to sediment reception facilities in ports and terminals, in accordance with Article 5 of the BWM Convention, or, if the ship is not yet required to meet the regulation D-2 standard in accordance with the BWM Convention implementation schedule (regulation B-3), be discharged beyond 200 nautical miles from the nearest land of the coastline when the ship is sailing in the Mediterranean Sea area.

Further, BWM.2/Circ.39¹⁸ includes that the release of sediments during the cleaning of ballast tanks should not take place within the Baltic Sea, or, if the ship is not yet required to meet the regulation D-2 standard according the BWM Convention implementation schedule (regulation B-3), within 200nm of the coastline of the North-East Atlantic or the Mediterranean Sea.

The voluntary regime set out in both BWM.2/Circ.35 and BWM.2/Circ.39 no longer applies when a ship meets the regulation D-2 performance standard in accordance with the BWM Convention implementation schedule.

4.2 Harmonised procedure for sediment reception facilities in the Mediterranean Sea

In accordance with Article 5 of the BWM Convention, in designated ports and terminals where cleaning or repair of ballast tanks occurs, adequate facilities should be provided for the reception of sediments.

Consideration should be given of the availability of sediment reception facilities in the Mediterranean Sea. When considering the establishment of a sediment reception facility in the Mediterranean Sea, the relevant port State Authorities should consider:

- Whether the cleaning or repair of ballast tanks occurs in ports or terminals within their jurisdiction;
- Whether sediment reception facilities are available at those ports or terminals;
- Whether sediment reception facilities are available within the local region, so that disposal of sediments can be undertaken by ships without undue delay; and
- Whether sediment reception facilities are registered on GISIS.

Coordination between port State Authorities may be required to ensure adequate access to facilities in the Mediterranean Sea.

The best management practices identified in the Guidelines (G1), and expanded on in GloBallast Monograph 23, should be followed when developing sediment reception facilities.

¹⁶ IMO, 2011.

¹⁷ UNEP/MED, 2022.

¹⁸ IMO, 2012.

5 Harmonised Procedure: Contingency Measures

5.1 Harmonised procedure for contingency measures in the Mediterranean Sea

In the case of potentially non-compliant ballast water in ships trading with Contracting Parties to the Barcelona Convention, and in line with the Guidance on contingency measures under the BWM Convention (BWM.2/Circ.62), communication between the ship and the port State Authority should occur. This should include:

- The ship's responsible officer should report the potentially non-compliant ballast water, and the cause for this to the company;
- The company should report the cause of the potentially non-compliant ballast water to the flag State and, if relevant due to issues with the ship's BWMS, the classification society;
- Based on feedback from the flag State (and classification society where relevant), the company should agree on a plan to resolve the cause of the potentially non-compliant ballast water including, if needed, a BWMS repair plan. The repair plan should include all relevant supporting information, including historical failure and a schedule with a specific timeline for the repair to be completed;
- The company should submit a request to utilise a contingency measure to the port State Authority where the ballast water is intended to be discharged, in the form of a 'Ballast Water Contingency Measure Request Form' (Section 5.1.1). This should include a copy of the report on the cause of the potentially non-compliant ballast water and the plan to resolve the cause of the potentially non-compliant ballast water; and
- The company should confirm to the ship which contingency measure is to be undertaken and provide any additional guidance or instructions necessary to fulfil the requirements of the port State, flag State or classification society, as necessary.

One of the approaches to manage non-compliant waters listed in the BWM.2/Circ.62 is the use of a ballast water exchange as a way to manage the water instead of treatment approved for the ship and as stated in its International Ballast Water Management Certificate (IBWMC). Such exchange may be acceptable by the port State authority if the risk for the environment is considered low. Such ballast water exchanges shall be carried out in areas designated for such activities and according to the Harmonised Procedure: Ballast Water Exchange Areas (Section 2). It should also be noted that the suggested Ballast Water Contingency Measure Request Form (Section 5.1.1) may be updated at a later stage following agreement on its use by the port State Authority(ies) as may be agreed by the Contracting Parties to the Barcelona Convention. Ballast water reporting forms in such case would be used not only for potentially targeting ship for PSC inspection but also could be used to carry out biological risk assessment prior to granting a right to discharge; in line with the Action 4 of the Mediterranean BWM Strategy (2022-2027).

It is expected that:

- The **company** should coordinate the necessary response between the port State, flag State, and classification society;
- The **port State** should communicate its consent for the contingency measure to be used OR discuss alternatives together with clear guidance on how the measure is to be undertaken and any additional reporting requirements;
- The **flag State** should acknowledge receipt of the ballast water non-compliance notice and, in the case of BWMS failure, accept this as notification of the failure; and
- The **classification society** should undertake additional surveys, as necessary.

Resolution MEPC.290(71)¹⁹ on the experience-building phase associated with the BWM Convention should be taken into account, noting that during the ballast water experience-building phase a ship should not be penalised solely due to an exceedance of the ballast water performance standard described in regulation D-2 of the Convention following use of a ballast water management system (BWMS), provided that:

1. The BWMS is approved in accordance with regulation D-3.1;
2. The BWMS has been installed correctly;
3. The BWMS has been maintained in accordance with the manufacturer's instructions;
4. The Ballast Water Management Plan, approved in accordance with regulation B-1 of the BWM Convention, has been followed, including the operational instructions and the manufacturer's specifications for the BWMS; and
5. Either the self-monitoring system of the BWMS indicates that the treatment process is working properly, or the port State has been advised that the BWMS is defective prior to the discharge of any ballast water.

5.1.1 Example Ballast Water Contingency Measure Request Form

(Adapted from INTERTANKO's Ballast Water Contingency Measures for Tankers – IMO, 2019)

Request to undertake contingency measure.

1 COMPANY REQUESTING TO UNDERTAKE CONTINGENCY MEASURE

- 1.1 Company name: _____
- 1.2 Designated officer: _____
- 1.3 Email: _____ 1.4 Tel. _____

2 SHIP'S PARTICULARS

- 2.1 Name of ship: _____
- 2.2 IMO number: _____
- 2.3 Master: _____

3 BALLAST WATER MANAGEMENT SYSTEM INSTALLED ON SHIP

- 3.1 BWMS manufacturer: _____
- 3.2 BWMS model: _____

¹⁹ IMO, 2017d.

4 PORT/LOCATION OF SOURCE OF NON-COMPLIANCE BALLAST WATER

- 4.1 Country: _____
- 4.2 Name of port or area: _____
- 4.3 Longitude/Latitude: _____
- 4.4 Time and date of occurrence: _____ hrs __ / __ / ____ (dd/mm/yyyy)

5 INTENDED BALLAST WATER DISCHARGE

- 5.1 Country: _____
- 5.2 Name of port or area: _____
- 5.3 Quantity of ballast water to be discharged (m³): _____

6 INFORMATION ON THE CAUSE OF POTENTIALLY NON-COMPLIANT BALLAST WATER

6.1 Brief description of cause of the non-compliant ballast water. Full details are provided in the report on the cause of the potentially non-compliant ballast water and the plan to resolve the cause of the potentially non-compliant ballast water, including any BWMS issues, enclosed:

7 ADDITIONAL REMARKS AND INFORMATION

8 PROPOSED CONTINGENCY MEASURE

Insert description of the proposed contingency measure including all relevant details on how the measure will be conducted, as per the details provided in the ship's BWMP. Only contingency measures included in the ship's BWMP should be proposed.

Insert additional details relating to the time and location the measure will be conducted, as per the Ballast Water Reporting Form.

9 ADDITIONAL INFORMATION

The following documents are appended to this Form (as applicable):

1. A completed Ballast Water Report Form as per the recommended format provided in the 2017 Guidelines for ballast water exchange (G6) – resolution MEPC.288 (71).
2. A report on the cause of the potentially non-compliant ballast water as submitted by the designated officer in charge on the ship.
3. A plan to resolve the BWMS issues.
4. International Ballast Water Management Certificate.
5. Copy of the BWMS Type Approval Certificate.
6. Copies of the Ballast Water Record Book covering at least the previous three ballast water management operations.

We invite you to review the information provided together with the proposed contingency measure and advise the undersigned as soon as possible of your consent to undertake the procedure described above.

In the event an alternative measure is proposed or more details are required, please contact the undersigned.

Company representative: _____ Date: __/__/____(dd/mm/yyyy)

6 Harmonised Procedure: Additional Measures

6.1 Mediterranean Sea context

The Mediterranean BWM Strategy (2022-2027) recommends that there should be regional harmonisation of activities which are necessarily implemented at national level, including additional measures.

6.2 Harmonised procedure for developing additional measures in the Mediterranean Sea

In line with the Guidelines (G13), the development of additional measures in the Mediterranean Sea should follow this process:

- Step 1: Assessment ([Section 6.2.1](#));
- Step 2: Identification ([Section 6.2.2](#));
- Step 3: Effects and consequences ([Section 6.2.3](#));
- Step 4: Consultation ([Section 6.2.4](#));
- Step 5: Submission for approval or notification ([Section 6.2.5](#)); and
- Step 6: Communication of information ([Section 6.2.6](#)).

6.2.1 Step 1: Assessment

The need for and nature of additional measures should be assessed, including:

- Identification of the concern;
- Description of the cause of the identified concern;
- Identification of potential additional measures to be introduced; and
- Identification of potential effects and consequences, beneficial and detrimental, resulting from introduction of the proposed additional measure(s).

The character of the concern should also be assessed, taking into consideration:

- What are the probabilities or consequences of future introductions of HAOP on the environment, human health, property, or resources?
- If HAOP have already been introduced, what effects are they already having on the environment, human health, property, or resources, and how might this be affected by future introductions?
- Whether ballast water from ships is a vector for the introduction of HAOP?

6.2.2 Step 2: Identification

The additional measure(s) to be introduced should be in accordance with Article 7(2) and regulation C-1.3 of the BWM Convention and be clearly identified in respect of:

- The area(s) where the additional measure(s) is/are applicable defined by precise coordinates;
- The operational and/or technical requirement(s) which applies to ships in the area(s), and the requirement(s) to provide documentation for compliance if needed;
- The arrangements which may be provided to facilitate ships' compliance with the additional measure(s);
- The effective date and duration of the measure(s); and
- Any other requirements and services in relation to the additional measure(s).

The Party or Parties assessing the additional measure(s) should ensure that any additional measure(s) do(es) not compromise the safety and security of the ship and in any circumstances not conflict with any other conventions or customary international law with which the ship is required to comply.

The legal determination upon which the additional measure(s) is submitted should be identified.

6.2.3 Step 3: Effects and Consequences

The economic consequences resulting from the introduction of the additional measure(s) should be taken into account, for example:

- The economic benefits and possible costs, including costs to the industry, associated with the additional measure(s); and
- Any other effects and consequences.

6.2.4 Step 4: Consultation

Adjacent states, and any other state that may be affected by the additional measure(s) should be consulted. Such consultation should meaningfully inform decision making on the additional measure(s). The assessment (Step 1: Assessment) should be provided to affected port States and the port State(s) should be invited to comment on the draft assessment. The following information should be communicated:

- The precise co-ordinates where and applicable date when additional measure(s) is/are applicable;
- The need and reasoning for the application of the additional measure(s), including, whenever possible, benefits;
- A description of the additional measure(s); and
- Any arrangements that may be provided to facilitate ships' compliance with the additional measures.

6.2.5 Step 5: Submission for approval or notification

Two procedures for introducing additional measures are possible under regulation C-1: one procedure which requires IMO approval (the approval procedure), and another which only requires IMO notification (the notifying procedure).

Notifying procedure: Where a Party or Parties may seek to introduce additional measures through the notifying procedure, the IMO should be notified at least 6 months prior to the projected date of implementation, except in emergency circumstances in accordance with regulation C-1.3.2 of the BWM Convention.

Communication to the IMO should include:

- The precise co-ordinates where additional measure(s) is/are applicable;
- The need and reasoning for the application of the additional measure(s), including, whenever possible, benefits;
- A description of the additional measure(s); and
- Any arrangements that may be provided to facilitate ships' compliance with the additional measure(s).

Approval procedure: If the additional measure(s) require(s) approval by the IMO under international law, as reflected in UNCLOS, an application to introduce additional measure(s) should be submitted to the Marine Environment Protection Committee (MEPC) for its approval. If the MEPC approves the application, the additional measure(s) may be implemented. If the application is not approved, the additional measure(s) cannot be implemented.

6.2.6 Step 6: Communication of information

Adjacent port States and other port States that may be affected, the shipping industry and ships entering the areas concerned should be informed about the additional measure(s) as soon as possible (or as soon as approved by the IMO if applicable).

The information to be communicated should include:

- The precise co-ordinates where additional measure(s) is/are applicable;
- The operational and/or technical requirement(s) which applies or apply to ships in the area(s), and the requirement(s) to provide documentation for compliance if needed;
- The arrangements which may be provided to facilitate ships' compliance with the additional measure(s);
- The effective date and duration of the measure(s); and
- Any other requirements and services in relation to the additional measure(s).

Communications should be submitted to the IMO.

7 Harmonised Procedure: Warnings

7.1 Harmonised procedure for issuing warnings in the Mediterranean Sea

Port State Authorities should notify mariners, the IMO and relevant coastal States of any areas under their jurisdiction where ships should not uptake ballast water due to known conditions. The notification should include the following information:

- Precise coordinates of the area(s) and, where possible, the location of any alternative area(s) for the uptake of ballast water;
- Advice to ships needing to uptake ballast water in the area, describing arrangements for alternative supplies; and
- The time period the warning is likely to be in effect.

Port State Authorities should also provide notice to mariners, the IMO and relevant coastal States when the warning is no longer applicable.

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Appendix A – Protocol for Identifying Target Species

Background and context

The Guidelines (G7) include methods to determine target species for species-specific assessments. Target species should be selected based on criteria that identify species that can be transported via ballast water and have the ability to invade and become harmful.

The HELCOM-OSPAR JHP includes target species selection criteria, for use in risk assessments that follow the JHP's two-step process (noting that this does not necessarily include assessments for SRAs). The selection criteria include a practical method for determining a target species list, using verified data and expert groups to review species against selection criteria.

Protocol for identifying target species

This protocol has been adapted from the Guidelines (G7), the HELCOM-OSPAR JHP and recent research on same risk areas²⁰.

An initial target species list should be developed based on existing scientific data if available. Regular port surveillance, either using traditional surveillance methods, eDNA analysis or remote operated vehicles (or a combination of all three), is the best way to develop a dataset from which to draw the initial list from.

If verified and validated data is not available, expert judgement may be used. The following questions should be considered for the initial list:

- Is there potential for the species to be primarily introduced, or secondarily spread, via ballast water or sediments?
- Is the species present only in part(s) of the region but not the entire region?

If the answer to both or one of these questions is no, then the species should not be considered a target species.

If the answer to these first two questions is yes, then the following questions should be considered to refine the target species list:

- Has it been demonstrated that the species has a negative impact on human health?
- Has it been demonstrated that the species has a negative impact on the environment (e.g., native communities, habitats and/or ecosystem functioning, strength, and type of ecological interactions)?
- Has it been demonstrated that the species has a negative impact on the economy?

If the answer to any of these questions is yes, or uncertain, the species should be included on the refined target species list.

Target species to be considered in an SRA risk assessment should also be analysed based on the following life history traits specific to natural dispersal:

- Mortality;
- Temperature tolerance;
- Salinity tolerance;
- Vertical position or movement behaviour in the water column;
- Horizontal swimming behaviour;
- Habitat preference;

²⁰ Stuer-Lauridsen, F. *et al.*, 2018.

- Duration and timing of free-swimming stages;
- Seasonal life events e.g., spawning;
- Time to maturation; and
- Lifetime expectancy.

Target species lists should be regarded as living documents that are regularly updated as additional data becomes available.

It is recommended that a regional target species list be prepared that can be applied to all exemption applications under regulation A-4.

Appendix B – Port Survey Protocol

This protocol takes into account the comprehensive port survey protocol included in the HELCOM-OSPAR JHP, in addition to the GloBallast guidance on port biological baseline surveys²¹, and research to validate molecular techniques for the purposes of HAOP surveillance. This protocol is specific to exemption applications in the Mediterranean Sea and is not a protocol for a comprehensive port survey aimed at identifying all native and non-indigenous species in a port or location.

Port surveys for the purposes of exemption applications in the Mediterranean Sea should focus on:

- Port information;
- Environmental information; and
- Target species.

This protocol provides guidance for the identification of appropriate sites for sampling, establishment of a sampling design and ensuring data is collected in a consistent manner for storage in a central location, such as the Marine Mediterranean Invasive Alien Species Database (MAMIAS).

Sampling design

Sampling timing and frequency

Sampling timing should reflect the lifecycle and movement patterns of the target species so that sampling is undertaken during seasons when it is predicted that a target species, if present, is most likely to be found. It is recommended that at least two seasons should be sampled in a one-year period. If the target species list includes species with planktonic larval stages, plankton sampling will need to occur during seasons when target species planktonic larval stages are in their greatest numbers.

Settlement plates should be deployed at the time of the first seasonal sampling and retrieved during the second seasonal sampling.

Site selection

All types of benthic habitats that occur in the port should be sampled, with sufficient replication to ensure scientific rigor. Highly frequented berths and ballast release locations should be prioritised. Sampling should not disrupt port operations, so consideration of sampling methods is particularly important (noting that newer methods, such as species specific eDNA analysis and use of remote operated vehicles are likely to have less impact on port operations than traditional surveillance methods).

The GPS location of each field site should be recorded.

²¹ Awad, A., Haag, F., Anil, A.C., and Abdulla, A. 2014.

Port information

Port information, such as benthic habitats, port traffic, and ballast uptake and discharge areas should be recorded using the port characteristics field data sheet.

Environmental information

Environmental information, in particular salinity, is necessary for step one of the exemption risk assessment. Temperature, depth, oxygen, and turbidity should also be recorded for the step two detailed risk assessment.

This environmental data can be collected through a variety of techniques. Submersible data loggers can be used to collect a data on a range of parameters from multiple depths at a single point in time. Similarly, secchi discs (if used correctly – at noon - to avoid reflection from the sun) or electronic turbidity sensors can record turbidity at a single point in time.

Field environmental data should be recorded on using the site and environmental field data sheet.

Remote sensing data can provide longer term environmental data for surface waters, which can be useful to detect seasonal variations and compare locations at the same point in time. Use of satellite data can also reduce cost and time delays associated with field intensive techniques, which is particularly important in port environments.

Species information

The survey should aim to determine the presence or absence of each target species, in each relevant port or location. If a target species is determined to be present in a location, the survey should also provide sufficient information to estimate its abundance.

A list of target species should be provided by the port State Authorities for the donor port and the recipient port, based on the Appendix A – Protocol for Identifying Target Species. It is recommended that a regional target species list be prepared that can be applied to all exemption applications under regulation A-4.

If a regional list is not available, and port or country specific lists are used, the lists of donor and recipient ports should be reconciled. If the lists of species differ, the lists should be combined to provide a complete target species list to be assessed in both ports.

The sampling design will be dependent on the target species. This protocol includes details of traditional methods for sampling to collect species information. Port State Authorities may accept the use of alternative techniques, such as remotely operated underwater vehicles (ROVs) and the analysis of eDNA in addition to, or replacement of, the traditional techniques described in this protocol.

Alternative techniques can reduce cost and time delays associated with field intensive techniques. If these tools are to be used, they should undergo a process of validation to assess their overall performance and fitness for purpose. For example, guidelines for the development and validation of eDNA assays for marine pests have been developed in Australia²² and Finland²³.

²² Australian Government, 2018.

²³ Finish Environment Institute (2022). Roadmap for implementing environmental DNA (eDNA) and other molecular monitoring methods in Finland Vision and action plan for 2022–2025.
https://helda.helsinki.fi/bitstream/handle/10138/342992/SYKEra_20-2022_Roadmap%20for%20implementing%20environmental%20DNA.pdf?sequence=4&isAllowed=y

Traditional techniques that can be employed to determine target species presence/absence target different types of species. Detailed sampling and processing instructions for the following are provided:

- [Table 2](#) - Phytoplankton: plankton tows;
- [Table 3](#) - Zooplankton: plankton tows;
- [Table 4](#) - Mobile epifauna: crab traps, minnow traps, artificial habitat collectors;
- [Table 5](#) - Fouling organisms: settlement plates, scraping underwater structures; and
- [Table 6](#) - Benthic infauna: benthic grabs.

Table 2. Detailed species information field sampling collection techniques for phytoplankton.

Technique and minimum number of samples per site	Sampling instructions
10 µm net x 1	A concentrated vertical sample using a small hand-held 10 µm net should be taken. The dimensions of the net and description of sampling procedure should be recorded. Three tows, pooled into one sample, 10 to 15m apart should be conducted. Haul and tow rates should not exceed 0.25 – 0.3 metres/second. A flow metre can be mounted to the web for quantification of the water volume sampled. Samples should be preserved in acid Lugol's solution (0.25 – 0.5 cm ³ /100 cm ³ sample) and placed in a cooler for transport ²⁴ .
Water sample x1	Obtain a 250ml water sample pooled from three locations at least 15m apart at each site. Samples (500ml to 1000ml) should be taken at each location at the surface and 5m depth (or 1m from the seabed if shallower). Samples should be preserved in acid Lugol's solution (0.25 – 0.5 cm ³ /100 cm ³ sample) and placed in a cooler for transport.
Sample processing	
Sample processing and species identification should be conducted by a quality assured laboratory according to their best practices. All non-indigenous species should be identified. Phytoplankton species composition should be recorded.	

²⁴ Preservation guidance may be given by the analyzing laboratory in accordance with their potential accreditation.

Table 3. Detailed species information field sampling collection techniques for zooplankton.

Technique and minimum number of samples per site	Sampling instructions
100 µm net x1	A vertical sample should be collected using a 100 µm mesh free-fall drop-net (or similar). The dimensions of the net and description of sampling procedure should be recorded. Three tows, pooled into one sample, 10 to 15m apart should be conducted. Haul and tow rates should be approximately 1 metre/second. A flow metre can be mounted to the web for quantification of the water volume sampled. Gelatinous species should be identified and/or photographed immediately after collection without preservation. Samples should be preserved in 4% formaldehyde solution for transport. If target species include larger zooplankton, a vertical sample should also be collected using a 500 µm mesh free-fall drop-net (or similar).
500 µm net x1	
Sample processing	
Sample processing and species identification should be conducted by a quality assured laboratory according to their best practices. All non-indigenous species should be identified. Zooplankton species composition should be recorded.	

Table 4. Detailed species information field sampling collection techniques for mobile epifauna.

Technique and minimum number of samples per site	Sampling instructions
Crab trap x3	Crab traps catch larger invertebrates and some larger fish (e.g., the Fukui designed crab trap (63cm x 42cm x 20cm with 1.3cm mesh netting). Minnow traps are more effective for catching small fish and small crabs and shrimp (e.g., the Gee-minnow trap (42cm x 23cm with 6.4mm netting and 2.5cm mouth). Artificial habitat collectors catch smaller mobile fauna which require shelter, such as amphipods, isopods, mysids and decapods. An example collector is a plastic crate (30 x 30 x 30cm) filled with dead, autoclaved oyster shells or alternative content to provide shelter. Crab and minnow traps should be baited using locally available fish and weighted (1-2kg weight on the frame for crab traps and artificial habitats; 1kg inside for minnow traps). Traps should be tethered securely to wharves and/or other structures. Three traps should be deployed at each site for at least 48 hrs. On collection, material from artificial habitats should be carefully washed in a bucket with water and filtered through a 0.5mm sieve. Collected organisms should be preserved in 4% formaldehyde or 98% ethanol. Record the dimensions of the trap, bait species, depth and location that trap was set at, deployment duration, substrate type, and catch species and abundance. Identification of species should be verified. If specimens need to be preserved for identification, fish and larger invertebrates can be frozen, smaller invertebrates preserved in 4% formaldehyde solution.
Minnow trap x3	
Artificial habitat collector (optional) x3	
Sample processing	
Quality assured laboratories or local authorities should confirm species identification from the preserved samples and/or photographs. Catch per time interval per trap should be reported.	

Table 5. Detailed species information field sampling collection techniques for fouling organisms.

Technique and minimum number of samples per site	Sampling instructions
Settlement plates x3 units (of 3 plates each)	Each fouling plate unit should be constructed of polypropylene rope (0.5cm diameter) of sufficient length, three grey 15cm x 15cm, or 14cm x 14cm, PVC plates and a brick. Each plate should be sanded for a few seconds (sanding paper 80) prior to the deployment. A hole (0.5cm) should be drilled at the centre of each plate for the rope, and a tube should be placed between the rope and the plate to prevent the rope from breaking. Plates should be secured on the rope at set distances using knots secured with zip ties on both sides of the plate. The plates should be secured in the rope in such a way that they will be deployed at around 1m, 3m and 7m depths. A brick should be tied at the end of the rope for weight when deploying the unit in the port. Three replicate fouling units should be deployed per site in locations where they will not be disturbed by for example port traffic. Units should be tied securely to the dock structures so that the first plate is submerged at approximately 1 m depth. The unit should always remain in a vertical position and the rope should be tight. Units should be deployed for 6 weeks. On retrieval, plates should be separated, photographed, placed in labelled plastic bags and sealed. The brick and rope should be stored in a separate bag and checked for mobile epifauna. identified on site, or preserved in 4% formaldehyde or 98% ethanol, or frozen for identification in the laboratory.
Fouling scrape x 3 to 6	Sampling of fouling organisms by scraping should be conducted during the warmest season (spring or summer). At least three pilings or similar structures should be sampled at each site. The pilings should be located at equal distance (10-15m) from each other. Breakwaters, groynes, rock walls and natural rocky reefs, as well as hulks (wrecks) should also be sampled if possible. Scrapings should be taken in the sublittoral zone. An area of 0.1m² should be scraped using a hand-held scraping tool, operated either in the water (diver) or from the dock (with a collection net attached to the scraper). Samples should be collected in pre-labelled zipper bags. Ropes can also be scraped and/or photographed at depths of 1m, 3m and 7m. Sampling area should be estimated, and samples should be identified on site, or preserved in 4% formaldehyde or 98% ethanol, or frozen for identification in the laboratory.
Sample processing	
Scrape and settlement plate samples should be quantitatively analysed by experts with good knowledge and experience of species identification from the Mediterranean Sea, or by a quality assured laboratory. Identifying organisms from plates is easiest when they are fresh. Observed species should be reported. The rope and brick should be rinsed thoroughly above a 0.5mm sieve and all organisms identified and reported.	

Table 6. Detailed species information field sampling collection techniques for benthic infauna.

Technique and minimum number of samples per site	Sampling instructions
Benthic grab x3	At least 3 grab samples should be taken at each site in at least 15m distance from each other using a benthic grab, preferably operable from the dock. It may be necessary to operate the grab from a boat to reach sites further from shore where the substrate is suitable for benthic grab samples (soft sediment). Samples should be at least 10cm deep into the sediment. Samples should be sieved with a 0.5mm sieve, transferred to sample jars and identified on site, preserved in 4% formaldehyde or 98% ethanol, or frozen for identification in the laboratory.
Sample processing	
Samples should be analysed and processed by a quality assured laboratory. All non-indigenous species should be identified and reported.	

A detailed list of field equipment is provided on the next page.

Species data should be recorded using the species information field data sheet.

Data collected using the species information field data sheet includes the minimum data for contributions to the Marine Mediterranean Invasive Alien Species Database (MAMIAS)²⁵:

- Scientific name of the species;
- X,Y coordinates of where the species has been observed (using World Geodetic System WGS84, as reference coordinate system);
- Depth, number of individuals; and
- Date when the species was observed.

Species data should be provided to MAMIAS.

²⁵ <https://dev.mamias.org/page/contribution>

Field sampling equipment

Suggested equipment for field sampling:

- Water sampler
- Plankton nets
 - Small hand hauled 10 µm net for phytoplankton
 - 100 µm free fall drop net for zooplankton
 - 500 µm drop-net for larger zooplankton
- 500 ml glass bottles for zooplankton samples
- 250 ml clear glass bottles for phytoplankton samples
 - Lugol solution
- Clean funnel and a bail (for water samples)
- Scrapers for fouling communities (handheld, mesh bag attached or hand-held scrapers)
 - 1 – 2 l zip-lock bags for the obtained samples
- Traps
 - 9 x Collapsible Chinese crab trap
 - 9 x 2 kg lead weights
 - Cable ties (for attaching the lead weights to the traps)
 - 9 x Shrimp trap (Box or cylinder, 2 mm plastic mesh, 150-200 mm high, 400-500 mm long)
 - Rocks (approx. 1 kg) inside the traps for weight
 - 9 x artificial habitat collectors
 - 9 x 2 kg weight
 - Cable ties (for attaching the lead weights to the traps)
 - Approximately 400 m of rope for tethering the traps
 - 1 l zip-lock bags for the catch
 - Bait fish
- Petersen, Ponar or similar hand-operated benthic grab
 - 0.5 mm sieve
- Jars (1 l) for benthic samples
- Alcohol and/or 4% formaldehyde solution (at minimum 2 l per 3 sites)
- Buckets (rope attached to one for obtaining rinsing water)
- 3 large coolers with cold blocks
- Submersible data loggers (e.g. YSI or CTD)
- Secchi disc or turbidity meter
- Digital camera and a GPS device
- Permanent markers
- Labelling tape for the sample containers
- Mesh bags (0.5 mm)
- 50 m transect line, labelled at 1 m intervals
- 0.10 m² quadrat frame(s)
- Camera in an UW housing

Port characteristics field data sheet

Port name and ID		Date (day, month, yr)	
Established (year)		Location (Lat, Long in WGS84)	
Assessor(s) (name, surname)			

General description (general info about the port: size, area, type of transport cargo or people)			
Recent construction (Description of any recent construction activities)			
Main shipping routes			
Habitat description			
Existing monitoring			
Adjacent waters			
Salinity max (psu)		Sea surface temp max (°C)	
Salinity min (psu)		Sea floor temp min (°C)	
Sea surface temp min (°C)		Sea floor temp max (°C)	
Tidal range (m)			
Comments			

Provide map of the area as an attachment

Sampling site and environmental field data sheet

Port name and ID		Date (day, month, yr)	
Site ID		Time (hh:mm)	
Location (Lat, Long in WGS84)		Field surveyor (name, surname)	

Environmental Data

Air temp (°C)		Dissolved oxygen at bottom (mg/l)	
Cloud cover (%)		Water transparency (m)	
Wind direction (grad)		Wind speed (m/s)	
Water temp at surface (°C)		Salinity at surface (psu)	
Water temp at 1m (°C)		Salinity at 1m (psu)	
Water temp at 3m (°C)		Salinity at 3m (psu)	
Water temp at 5m (°C)		Salinity at 5m (psu)	
Water temp at 7m (°C)		Salinity at 7m (psu)	
Water temp at bottom (°C)		Salinity at bottom (psu)	
Sea state (m)		Comments	

Sediment Data – Method of collection: _____

Sediment organic content (g)		Sediment <0.5-0.25mm (% dry weight)	
Sediment median (µm)		Sediment <0.25-0.125mm (% dry weight)	
Sediment >1mm (% dry weight)		Sediment <0.125-0.063mm (% dry weight)	
Sediment <1 – 0.5mm (% dry weight)		Sediment <0.063mm (% dry weight)	

Port name and ID		Date (day, month, yr)		Location (Lat, Long in WGS84)	
Site ID		Time (hh:mm)		Field surveyor (name, surname)	
Water depth					

	Phytoplankton		Zooplankton	
	Water sample	100 µm net	100 µm net	500 µm net
Sampling start (dd.mm.yy or hh.mm)				
Sampling finish (dd.mm.yy or hh.mm)				
Total water volume filtered (m³)				
Total number of samples				
Sampling method (including dimensions of sampling device)				
Storage method				

[illegible]

Species information field data sheet page 2 of 3: Details of sample collection**Details of sample collection – Fouling organisms**

	Settlement plates			Fouling scraping		
	Unit 1	Unit 2	Unit 3	Scraping 1	Scraping 2	Scraping 3
Sampling start (dd.mm.yy or hh.mm)						
Sampling finish (dd.mm.yy or hh.mm)						
Total number of samples						
Sampling method (including dimensions of sampling device)						
Storage method						

Details of sample collection – Benthic epifauna

	Benthic grab		
	Grab sample 1	Grab sample 2	Grab sample 3
Sampling start (dd.mm.yy or hh.mm)			
Sampling finish (dd.mm.yy or hh.mm)			
Total water volume filtered (m ³)			
Total number of samples			
Sampling method (including dimensions of sampling device)			
Storage method			

Species information field data sheet page 3 of 3: Details of species

Sample	Species observed (scientific names)	Abundance of species of observed
Phytoplankton water		
Phytoplankton 100 µm net		
Zooplankton 100 µm net		
Zooplankton 500 µm net		
Crab trap 1		
Crab trap 2		
Crab trap 3		
Minnow trap 1		
Minnow trap 2		
Minnow trap 3		
Artificial habitat trap 1		
Artificial habitat trap 2		
Artificial habitat trap 3		
Settlement plate 1		
Settlement plate 2		
Settlement plate 3		
Fouling scraping sample 1		
Fouling scraping sample 2		
Fouling scraping sample 3		
Grab 1		
Grab 2		
Grab 3		

Decision IG.26/12

Establishment of Regional Activity Center on Climate Change

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

Deeply concerned by the unfolding climate crises and their impact on the Mediterranean region and its marine and coastal environment and by the adverse effects of climate change, with serious economic and social implications;

Conscious that recent extreme events such as deadly floods, draught, and unprecedented wildfires across Mediterranean countries, are symptomatic of the rapidly worsening condition of the climate of the region;

Recognizing the gaps between the gravity of the effects of climate change and the urgency of responding to them, and the ongoing efforts to reduce and prevent such effects by building on and strengthening current regulatory and implementation systems;

Recalling the conclusions of numerous scientific reports and assessments that point to the vulnerability of the Mediterranean basin, as a hotspot for climate change, such as recent Intergovernmental Panel on Climate Change (IPCC) reports, the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the 2020 State of the Environment and Development in the Mediterranean Report (SoED), and the First Mediterranean Assessment Report (MAR1);

Recalling the Kunming Declaration adopted by the CBD COP 15 part 1 (Kunming, China, 11- 15 October 2021) towards the development, adoption and implementation of an effective post-2020 global biodiversity framework; the Glasgow Climate Pact adopted by the UNFCCC COP 26 (Glasgow, UK, 31 October-13 November 2021) towards the implementation of the Paris Agreement objectives as crucial milestones for addressing the threats of biodiversity loss and climate change universally; and the Sharm el-Sheikh Implementation Plan adopted by the UNFCCC COP27 (Sharm el-Sheikh, Egypt, 6-20 November 2022);

Recalling also the relevant United Nations Environment Assembly (UNEA) Resolutions, as well as Multilateral Environmental Agreements and other international instruments, including the UN Framework Convention on Climate Change (UNFCCC), the UN Convention on Biological Diversity (CBD), and instruments regulated under the International Maritime Organization (IMO), Basel, Rotterdam and Stockholm Conventions (BRS) among others to strengthen the regional dimension of the implementation of climate change activities;

Noting with appreciation the Decisions taken by the Contracting Parties of UNFCCC in COP20 and COP25, expressing the intentions of Parties to cooperate and engage through multilateral, bilateral and regional complementary initiatives that aim to raise awareness and enhance education on climate change and its impacts, opportunities, and co-benefits;

Recalling the Decisions IG.17/5 “Governance” taken at the 15th Meeting of the Contracting Parties, Decision 20/13 taken by the 17th Meeting of the Contracting Parties, Decision IG.25/3 “Governance” taken by the 22nd of the Contracting Parties that aim to ensure an effective MAP governance based on stronger cooperation and integration among MAP Components;

Reiterating the commitments expressed by the Conference of the Parties in the context of its previous Meetings through political declarations and decisions, and in the context of global and regional inter- governmental processes towards strengthened efforts to build resilience to climate change, to curb greenhouse gas emissions and to provide the necessary finance for both;

1. *Decide* to establish the MAP Regional Activity Centre on Climate Change (CC/RAC) as one of the Components of the MAP system, in accordance with the common operational principles for MAP Components (Decision IG.25/3 Annex 6);
2. *Admit* the “*Mediterranean Climate Change Research Center/Akdeniz İklim Değişikliği Araştırma Merkezi (AIDAM)*” Institution at Caferağa, Gürbüz Türk Street. No:38, 34710 Kadıköy/İstanbul, a structure of the Ankara University National Center for the Sea and Maritime Law (DEHUKAM), to be the UNEP/MAP Regional Activity Centre on Climate Change;
3. *Emphasize* that the establishment of the newly established CC/RAC will not bear any cost for the Mediterranean Trust Fund, and *Accepts with gratitude* the generous offer of Türkiye to cover all the establishment costs of the CC/RAC as its Host Country;
4. *Request* the Secretariat to develop an independent mapping exercise including a fully-fledged assessment of the UNEP/MAP system and its different components with a view to define the mandate and integrate the newly established CC/RAC within the UNEP/MAP system, the results of which shall be submitted in a timely manner to all Contracting Parties for consideration of the MAP Focal Points Meeting of the biennium 2024-2025, then for decision at COP24 in order to operationalize the CC/RAC. Such assessment should be developed in a transparent and inclusive way, taking into account all governance, legal, financial, and administrative aspects and should ensure full complementarity and synergies, for the benefit of the Mediterranean region and the implementation of global and regional commitments;
5. *Also request* the Secretariat to present to the Bureau for its consideration during 2024 the terms of reference for the above mentioned independent mapping exercise and its conclusions. On the basis of the outcome of the above mentioned exercise a draft proposal for a mandate for the CC/RAC shall be developed for decision by COP 24.

Decision IG.26/13**Assessment Studies: Summary for Policymakers (SPM) of the MedECC Special Report on Climate and Environmental Coastal Risks**

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, and its Protocols, at their 23rd meeting,

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

Recalling also the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility”,

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

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

Recognizing that there are gaps in the knowledge of the state of the environment and risks related to climate and environmental change in Mediterranean coastal zones and that there is an urgent need to continue to strengthen efforts to bridge those gaps through building and reinforcing existing mechanisms,

Expressing appreciation for the work undertaken by the network of Mediterranean Experts on Climate and environmental Change (MedECC), including the publication of MAR1 in 2020 and the ongoing preparation of three Special Reports, but also MedECC’s involvement in other MAP processes and products such as the MED2050 foresight exercise, the Mediterranean observatory on environment and development and the Mediterranean Commission on Sustainable Development,

Having considered the conclusions of the meeting of the Plan Bleu Focal Points (Marseille, France, 12-13 June 2023), and the 20th meeting of the Mediterranean Commission on Sustainable Development (Marseille, France, 14-16 June 2023),

1. *Endorse* the Summary for Policymakers (SPM) of the MedECC Special Report on climate and environmental coastal risks, as set out in the Annex to the present Decision;
2. *Urge* the Contracting Parties and the Secretariat to make all possible efforts to overcome the knowledge gaps that are identified in the MedECC Special Report on climate and environmental coastal risks;
3. *Encourage* the Contracting Parties and partners to support the streamlining of the report findings at all levels of policy- and decision-making; and organise on a voluntary basis national or sub-regional presentation and meetings;
4. *Invite* the Contracting Parties to provide adequate and sustained support, to MedECC, and its science-policy-society interface within the UNEP/MAP – Barcelona Convention system, and encourage larger participation from all the Mediterranean and women scientists;
5. *Request* the Secretariat (Plan Bleu) to continue its institutional support to MedECC, hosting its secretariat and make efforts in collaboration with MAP Partner Institutions and Organizations and Contracting Parties to provide the necessary financial support to MedECC work and operation;

6. *Request* the Secretariat to further mainstream the results of the MedECC Special Report on climate and environmental coastal risks and other results stemming from MedECC into relevant UNEP/MAP work;

7. *Request* the Secretariat and *invite* the Contracting Parties to properly disseminate the results of the MedECC Special Report on climate and environmental coastal risks and its SPM through an extensive dissemination and communication campaign in all relevant national and international fora beyond Barcelona Convention;

8. *Request* the Secretariat to *invite* the Contracting Parties to participate in the consultation process of the two upcoming MedECC Special Reports on climate-water-energy-food-ecosystems nexus and on environmental change, conflict, and human migration;

9. *Request* the Secretariat and *invite* the Contracting Parties to make the efforts in cooperation with the other supporting institutions to ensure the adequate and sustained support to the preparation of the Second Mediterranean Assessment Report (MAR2) planned for 2024-2027.

Annex

**Summary for Policymakers of the MedECC Special report on Climate and Environmental
Coastal Risks in the Mediterranean**



**Mediterranean Experts on Climate
and environmental Change**

MedECC Special Report

Climate and Environmental Coastal Risks in the Mediterranean

Summary for Policymakers

Draft revised during the Plenary Consultation on 6 November 2023

Current date of draft: 7 November 2023

Report Coordinators: Salpie Djoundourian (Lebanon), Piero Lionello (Italy), María Carmen Llasat (Spain)

Report Coordinating Lead Authors: Mohamed Abdrabo (Egypt), Murat Belivermiş (Türkiye), Z. Selmin Burak (Türkiye), Dario Camuffo (Italy), Salpie Djoundourian (Lebanon), José A. Jiménez (Spain), Nathalie Hilmi (Monaco), Suzan Kholeif (Egypt), Stefano Moncada (Malta), Anna Pirani (Italy), Agustín Sánchez-Arcilla (Spain), Athanasios Vafeidis (Germany)

MedECC Coordinators: Wolfgang Cramer (France), Fatima Driouech (Morocco), Joël Guiot (France)

MedECC Secretariat: Julie Gattacceca (France), Katarzyna Marini (France/Poland)



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Union pour la Méditerranée
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Mediterranean
Action Plan
Barcelona
Convention



with financial support from

MedECC

The Mediterranean Experts on Climate and environmental Change (MedECC)¹ is an open and independent network of scientists founded in 2015, that specifically focuses on climate and environmental changes within the Mediterranean region. The ultimate objective of MedECC is to provide decision-makers, stakeholders, and citizens with scientific assessments of scientific knowledge on climate and environmental changes including associated risks and social aspects.

To date (October 2023), MedECC counts more than 800 registered scientific members (including more than 300 authors), all contributing in an individual capacity and without financial compensation. MedECC scientists are located in 35 countries, including 19 countries registered as Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and 23 countries that are members of the Union for the Mediterranean.

Since 2018, Plan Bleu has hosted the Secretariat of MedECC as part of a partnership with the Union for the Mediterranean (UfM) and helps ensure its functioning through various funding sources. The UfM supports MedECC through technical assistance contracts for the MedECC via the AIR Climat association (2018-2020, 2021-2023) through funding from the Swedish International Development Cooperation Agency (SIDA). The Mediterranean Action Plan of the United Nations Environment Program (UNEP/MAP) has also contributed to support MedECC since 2022.

The MedECC published the First Mediterranean Assessment Report (MAR1) in November 2020, which includes a Summary for Policymakers (SPM) that has been approved line by line during a plenary session attended by government representatives from Mediterranean countries in September 2020. The SPM has been endorsed by the Contracting Parties to the Barcelona Convention during COP22 and acknowledged during the 2nd UfM Ministerial Conference. MedECC was awarded the prestigious North-South Prize 2020 of the Council of Europe for their efforts for peace and democracy. The MAR1 report has significantly laid the groundwork for the first ever chapter on the Mediterranean Basin in an IPCC report, published as a cross-chapter paper in the IPCC 6th Assessment Report in 2022.

MedECC reports are produced for use by policymakers and a broader audience. They are developed on the basis of scientific criteria only. Their validity is therefore the responsibility of MedECC Report Authors alone. The available knowledge concerning the risks studied by MedECC has significant gaps, often due to limited monitoring systems or scientific research capacity – these gaps have been communicated as clearly as possible. Despite best efforts, errors and omissions are nevertheless not unlikely.

This Special Report

The **Special Report on environment and climate change risks in the Mediterranean** responds to the MedECC Steering Committee's decision to produce three Special Reports as part of the 2021-2023 MedECC work program. These reports will focus on specific issues identified after the publication of the First Mediterranean Assessment Report (MAR1) in November 2020, while considering suggestions from government representatives and stakeholders.

¹ www.medecc.org

This Special Report identifies and assesses environmental and climate change hazards in the coastal zone of the Mediterranean Basin, related risks, adaptation options and solutions along five chapters: Chapter 1 provides the context, background and key dimensions of this assessment, Chapter 2 assesses the drivers of coastal risks in the Mediterranean and their changes, Chapter 3 assesses the coastal impacts of climate and environmental drivers, and the risks posed on human and natural systems, Chapter 4 assesses the existing and prospective responses and management approaches to address climate change and environmental risks, the final Chapter 5 synthesises the available knowledge about climate resilient sustainable development pathways, building on the outcomes of Chapters 2 to 4.

The Special Report has been prepared by a team of leading experts and scientists in the various fields of research, who have volunteered to contribute without any economic compensation. The outline was developed during a Scoping Meeting where experts and scientists were consulted alongside governmental representatives and stakeholders. The framework and outline were finally reviewed and approved by the MedECC Steering Committee. The authors were selected and approved by the MedECC Steering Committee based on their expertise, country and gender balance (55 authors from 17 countries).

The initial draft underwent internal review in 2022. The first revised order draft, incorporating the review comments, underwent external peer-review between May and July 2023. **The Special Report includes the Summary for Policymakers (SPM) composed of headline statements and a high-level summary and narrative of the key messages from the longer report.** The draft Summary for Policymakers underwent broad consultation with governments, decision-makers and stakeholders in June-July 2023. As a result, 801 and 320 comments for the longer report and SPM had been received respectively. The authors revised the draft SPM between August and October 2023, addressing all comments. The final stakeholder review of the SPM was concluded through the online plenary consultation on November 6, 2023. The particular aim of the consultation was to ascertain that the findings of the Special Report on climate and environmental coastal risks, as presented in the SPM, are fully comprehensible and unambiguous, that the remarks from the online consultation have been well integrate and, overall, that the Plenary consultation did not identify any factual inaccuracy or error in the SPM. The revised SPM will be the object of the Decision on its endorsement at the 23rd Meeting of the Contracting Parties to the Barcelona Convention (COP23, 4-8 December 2023, Portoroz, Slovenia). The publication of the Special Report is planned for January 2024.

The MedECC coordinators are very grateful for the expertise, rigour and dedication shown by the volunteer Coordinating Lead Authors and Lead Authors, working across scientific disciplines in each chapter of the report, with essential help by the many Contributing Authors. MedECC Authors and Coordinators want to thank all reviewers for their time and effort.

Notes

- In the SPM, **references for material contained in the full Special Report** are given in **curly brackets {}** at the end of each paragraph.
- In the SPM, **Shared Socioeconomic Pathways (SSP)** defined in the IPCC AR6 based on future greenhouse gases (GHG) emissions are cited: SSP1-1.9 - very low GHG emissions (CO₂ emissions cut to net zero around 2050), SSP1-2.6 - low GHG emissions (CO₂ emissions cut to net zero around 2075), SSP2-4.5 - intermediate GHG emissions (CO₂ emissions around current levels until 2050, then falling but not reaching net zero by 2100), SSP3-7.0: high GHG emissions: (CO₂ emissions double by 2100), SSP5-8.5- very high GHG emissions: CO₂ emissions triple by 2075.
- In the SPM, **Representative Concentration Pathways (RCP)** defined in IPCC AR5 are cited. RCPs are greenhouse gas concentration (not emissions) trajectories labelled after a possible range of radiative forcing values in the year 2100 (2.6, 4.5, 6, and 8.5 W m⁻², respectively and corresponding to one stringent mitigation scenario (RCP2.6), two intermediate scenarios (RCP4.5 and RCP6.0) and one scenario with very high GHG emissions (RCP8.5).

Acronyms

This Summary for Policymakers contains complete words and terms to avoid using acronyms. A list of acronyms is included to help correspondence with technical and scientific reports that frequently refer to these terms using acronyms, including the MedECC underlying report on which the SPM is based.

DRR - Disaster Risk Reduction

EU - European Union

ECA - Emission Control Area

GDP - Gross Domestic Product

GHG - Greenhouse gases

Hg - Mercury

ICZM - Integrated Coastal Zone Management

IPCC - Intergovernmental Panel on Climate Change

MAP - Mediterranean Action Plan

MAR1 - First Mediterranean Assessment Report

MeHg - Methylated Mercury

MedECC - Mediterranean Experts on Climate and environmental Change

Med SOx ECA - Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter

MME - Mass Mortality Events

NbS - Nature-based Solutions

NDC - Nationally Determined Contributions

NGO - Non-governmental Organisation

NMC - Northern Mediterranean countries

OCP - Ocean & Climate Platform

OECD - Organisation for Economic Co-operation and Development

PAH Polycyclic Aromatic Hydrocarbons

PAP/RAC - Priority Actions Programme / Regional Activity Centre

PCB - Polychlorinated Biphenyls

POP - Persistent Organic Pollutant

RCP - Representative Concentration Pathways

RSLR - Relative Sea Level Rise

SBE - Sustainable Blue Economy

SDG - Sustainable Development Goals

SEMC - Southern and Eastern Mediterranean Countries

SLR - Sea Level Rise

SSE - Shore-Side Electricity

SSP - Shared Socioeconomic Pathways

SOx - Sulphur Oxides

UfM - Union for the Mediterranean

UNDP - United Nations Development Programme

UNEP - United Nations Environment Programme

UNFCCC - United Nations Framework Convention on Climate Change

WFE - Water - Food - Energy

Executive Summary: climate and environmental coastal risks in the Mediterranean Basin

The coastal zone of the Mediterranean Sea is affected by multiple drivers of change: climate, pollution, biologic and socio-economic processes. This report describes their evolution, their impacts on ecosystems and people, the risks that are posed and solutions to reduce them together with pathways for sustainable development.

The Mediterranean coastal region is characterised by rapid, spatially diverse and geographically unbalanced socioeconomic development, mainly related to demographic trends, human settlement patterns and on-going wars and armed conflicts in different countries. Total coastal population of the Mediterranean is expected to grow faster than the inland population, thus leading to increased exposure of population and assets to coastal hazards. The northern Mediterranean may experience coastal population decline under some scenarios, while the highest increases in coastal population are expected in the Mediterranean Middle East and Maghreb countries.

Climate change is affecting the Mediterranean coastal zone, both its terrestrial and marine components. Projections show increase of near surface air temperature, frequency and intensity of hot extremes, sea level, evapotranspiration and a reduction of precipitation, depending on the level of future greenhouse gas emissions. Climate change is expected to pose serious risks on ecosystems and important economic sectors such as summer beach tourism, agriculture, aquaculture and fisheries.

The Mediterranean coastlines have experienced an accelerating relative sea level rise, which is expected to continue during the coming decades and centuries. The increase of sea level will exacerbate the risks of coastal floods, permanent inundation of some areas, and coastal erosion, with consequences on ecosystems and efficiency of present defences. Coastal structures, such as airports, transport networks, ports, and cultural heritage sites will be at risks. Both protection against coastal flooding and management of coastal erosion generally do not adequately consider future sea level rise, with risks of limited future efficiency. Climate change and growing urbanisation will further increase the risk posed by flash floods in some coastal areas.

Risks of water scarcity in the coastal areas of the Mediterranean are caused by the overall drying trend affecting the region, salinisation of coastal aquifers, increasing demand associated with population growth, irrigation, touristic use, industry and the energy sector. Risks of water scarcity are expected to increase in the future. Adaptation to reduced water availability is taking place in the Mediterranean coastal areas, with needs that vary significantly across sub-regions, depending on the population dynamics, the hydrogeological context and water management practices. These adaptation options consist of increasing water supply, improving water quality, supporting measures and governance, and to a lesser extent reducing water demand.

In the Mediterranean Sea observed mass mortalities in coastal waters have been partially attributed to marine heat waves and are expected to increase in the future. Mediterranean coastal wetlands have significantly declined since the beginning of the 20th century and further reduction is expected in the future. The efficiency of conservation measures of coastal ecosystems strongly depends on the success of climate change mitigation and an increasing number of hard limits will be reached for every increment of global warming. Further, the

Mediterranean is becoming increasingly apt to be colonised by non-indigenous tropical species and alteration of species distribution and population have been observed. However, solutions have been rarely attempted.

The Mediterranean coastal areas are polluted by micro- and macro-plastics, metals, persistent organic pollutants and emerging pollutants, with nutrients inputs from land producing eutrophication in several coastal areas with negative impacts on ecological systems, human health and economic sectors (aquaculture, fishing, and coastal tourism). Pollution is originated from numerous human activities, mainly land-based, such as industry, agriculture, urbanisation, and tourism. Future pollution levels along the Mediterranean coasts are expected to exhibit varying trends across regions and pollutants, depending on regulations, dependency, production, treatments, and socioeconomic changes. Actions controlling pollution at its sources are generally more efficient than those treating it at endpoints. Actions to tackle pollution at basin scale are not implemented, yet, and challenges both technical and in the decisional process remain to be solved.

The engagement of scientists with policymakers, stakeholders, and citizens is a key factor to removing barriers (including lack of understanding and trust) and can be particularly fruitful during the planning process. Turning stakeholders into partners strongly increases the possibility of successful implementation of solutions and adaptation measures.

In the Mediterranean coastal zone, the present actions towards solutions to environmental problems, adaptation to climate change and its mitigation are insufficient to attain the UN Sustainable Development Goals (SDGs) ensuring the wellbeing of people and the sustainability of resources. Without transformative actions across all sectors, systems, and scales climate change risks will be exacerbated and the sustainable development goals will not be met. Social-economic and gender-based inequalities, lack of access to basic service will act as further barriers to the implementation of sustainable development pathways.

Adopting actions consistent with sustainable development pathways requires the proper identification of vulnerabilities related to human activities and climate change impacts and assessment of options to reduce risks to the affected communities and ecosystems. A mix of legal, policy and economic instruments, and behavioural nudges, are available at local, national, and regional level to promote effective and resilient development pathways in the Mediterranean coastal zone.

0. Framing: scope and basic concepts

- 0.1 This Special Report identifies and assesses environmental and climate change hazards in the coastal zone of the Mediterranean Basin, the related risks, adaptation options and solutions. It further assesses and provides information on actions to meet the United Nations Sustainable Development Goals (SDGs), such as combating climate change, increasing food security, ensuring water resources, accessing affordable and sustainable energy resources, managing natural resources, creating opportunities for social inclusion, and economic prosperity. Adaptation plans are presented placing the social and cultural values in context of the region and its local traditions, considering the need to protect communities and biodiversity, minimise impacts on the natural environment and addressing ethical considerations important for socially oriented adaptation policies.**
- 0.1.1** Policies to manage coastal risks and adaptation strategies in the coastal Mediterranean zone are important to the whole region as a third of the Mediterranean population lives close to the sea and depends on infrastructure and economic activities in its immediate vicinity.
- 0.1.2** The coastal zone can be defined using objective and subjective criteria, many times with a high level of uncertainty or fuzziness. Depending on the technical, economic or legal implications, the definition and extent of the coastal zone may vary significantly in the literature. This report does not aim to propose a general definition, instead it adopts a loose criterion that the coastal zone consists of areas geographically connected to the coastline, including land areas directly impacted by marine processes and sea areas directly impacted by terrestrial processes.
- 0.1.3** The Mediterranean coastal zone is often narrow and over-pressured and requires a specific risk assessment tailored to its characteristics to inform adaptation pathways and support decisions towards risk reduction and sustainability in coastal governance, policies and social perception.
- 0.2 This Special Report, as with other MedECC assessments, international and national assessment processes, is based on the available, relevant and traceable evidence in the published scientific literature, including different lines of evidence (observational products, model-based findings and other types of data and analyses).**
- 0.2.1** This report applies the calibrated terms that were adopted transversally by the Intergovernmental Panel on Climate Change (IPCC) since the 5th Assessment Report in order to communicate either qualitatively or quantitatively the robustness and certainty of assessment findings. The calibrated terms quantify confidence and likelihood². The terms are attributed to the assessment outcome by the author team following an evaluation of the available evidence. The designation of confidence and likelihood are

² Each finding is grounded in an evaluation of underlying evidence and agreement. A level of confidence is expressed using five qualifiers: very low, low, medium, high and very high, and typeset in italics, for example, *medium confidence*. The following terms have been used to indicate the assessed likelihood of an outcome or result: virtually certain 99–100% probability; very likely 90–100%; likely 66–100%; about as likely as not 33–66%; unlikely 0–33%; very unlikely 0–10%; and exceptionally unlikely 0–1%. Additional terms (extremely likely 95–100%; more likely than not >50–100%; and extremely unlikely 0–5%) are also used when appropriate. Assessed likelihood is typeset in italics, for example, *very likely*.

agreed upon through a consensus-building discussion of the evidence, reflecting all expert views that are expressed.

- 0.2.2** A common set of key dimensions is used in this report on the basis of information that is available in the scientific literature, including well-defined time frames, baselines for past changes and conditions, a subset of representative scenarios of future changes, and well-known frameworks, such as the Sustainable Development Goals (SDGs).

A. Present status of the climatic and environmental drivers for the coastal area

A.1 Climate change is affecting the whole Mediterranean environment, including its coastal zone, both its terrestrial and marine components. {2.2}

- A.1.1** Overall, the near surface air temperature of the Mediterranean region in 2020 is 1.5°C warmer than the pre-industrial times³ (1850–1900), with an increasing trend of the order of 0.01– 0.05°C yr⁻¹ since the 1980s (*high confidence*). {2.2.1}

- A.1.2** The evolution of the Mediterranean Sea surface temperature has been characterised by multidecadal variations superimposed by a long-term positive trend since the preindustrial period with an increase of about 0.86°C (*high confidence*). Satellite data show since the 1980s spatially different warming rates of the sea surface between +0.29°C and +0.44°C per decade, stronger in the eastern basin. Over the last two decades the frequency and duration of marine heat waves increased by 40% and 15%, respectively (*high confidence*). {2.2.1, 2.2.5}

- A.1.3** The magnitude and pattern of the observed precipitation trends over the Mediterranean exhibit pronounced spatial variability and depend on the time period and season considered (*high confidence*). {2.2.2}

- A.1.4** The estimated decrease of the pH of the Mediterranean Sea surface waters is between 0.055 and 0.156 pH units since the preindustrial period (*high confidence*). {2.2.5}

A.2 The Mediterranean coastlines have experienced relative sea level rise, the sum of mean sea level rise and vertical land motion, with an accelerated rate during the last three decades (1993–2018). {2.2.7, 2.2.8}

- A.2.1** Mean sea level in the Mediterranean shows an approximate trend of ~1.4 mm yr⁻¹ during the 20th century (*high confidence*), and has accelerated to 2.8 ± 0.1 mm yr⁻¹ in the last three decades (1993–2018) (*high confidence*). The interannual and decadal variability that is superimposed to this trend can temporarily mask it. {2.2.7}

- A.2.2** Vertical land motion along the Mediterranean coasts generally ranges from 0 to –10 mm yr⁻¹, with isolated positive values. This widespread subsidence is mainly determined by geological factors such as tectonic subsidence and natural sediment compaction but is increased by human activities such as the withdrawal of underground fluids (water, oil and gas, drainage of organic soils) that contribute significantly to relative sea level rise in some areas⁴ (*high confidence*). {2.2.8}

³ The period 1850–1900 is used as an approximation for pre-industrial conditions. consistently with IPCC AR6-WGI SPM and former AR5 and SR1.5.

⁴ In the coastal region of the eastern Nile Delta in Egypt, Thessaloniki in Greece, the city of Venice, the Po Delta, the Arno river and the coastal plain of Catania in Italy, the Ebro delta in Spain, or the Medjerda delta in Tunisia

A.2.3 Coastal flooding in the Mediterranean due to storm surges and wind waves threatens the flood-prone areas in the waterfronts (river mouths and deltas) and low-lying coastal plains in many Mediterranean countries. Relative sea level rise has already increased the frequency of floods of the Venice city centre, Italy (*high confidence*). {2.2.4}

A.3 The Mediterranean coastal areas are polluted by micro- and macro-plastics, metals, persistent organic pollutants and emerging pollutants emanating from various sources, with nutrients inputs from land producing eutrophication in several coastal areas. {2.4}

A.3.1 Coastal water pollution originates mainly from land-based sources, followed by air and ship-originated sources. Pollution sources include domestic effluents, agricultural runoff, road transport, maritime transport, mine tailings, manufacturing and extractive industries. {2.4}

A.3.2 The Mediterranean Sea is one of the most heavily plastic polluted areas across the globe and floating plastics accumulate along its coasts as a result of human activities and marine circulation (*high confidence*). Plastics account for up to 82% of observed litter, 95–100% of total floating marine litter and more than 50% of seabed marine litter in the Mediterranean Sea. About two thirds of all the plastic debris from land-based sources (rivers, urban and industrial areas, and intensive agricultural areas) is retained in the coasts, where its level has remained steady for the past two decades, with several hotspots of plastic fluxes⁵ (*medium confidence*). {2.4.4}

A.3.3. Human activities have led to increased concentrations of potentially toxic metals with hotspots of lead, mercury and cadmium located on the northern, central and southeastern shores of the Mediterranean Basin (*high confidence*). Manufacturing of refined petroleum products (South Mediterranean, Balkans and Türkiye), tanning and dressing of leather, and manufacturing of cement (Balkans and Türkiye) and energy production (Mediterranean EU countries) contribute to the release of heavy metals in coastal waters impacting marine ecosystems. Mercury concentrations exceed European Union regulatory thresholds in many Mediterranean top-predatory fish. Methylated mercury concentrations are twice as high in the waters of the West compared to the East Mediterranean (*high confidence*) and are biomagnified in marine food webs (*medium confidence*). In general, the release of toxic metals is decreasing for the European Union countries, but opposite trends are reported in some areas (*high confidence*). {2.4.2}

A.3.4 Pollution sources such as domestic effluents, runoff from agricultural practices and urban runoff introduce emerging pollutants and persistent organic pollutants in the coastal zone, with higher concentrations in the northern than the southern shores. Pollution from polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) has been detected along some tracks of the Mediterranean coastlines with the highest levels observed around river mouths, harbour and industrial areas (*medium confidence*). Shipping is one of the main sources of oil pollution in Mediterranean coasts, with about 90% of tanker spills occurring near the coastlines and affecting particularly the eastern coasts (*medium confidence*). {2.4.3}

⁵ The coastlines of Algiers in Algeria, Israel, Marche and the Po Delta in Italy, Barcelona in Spain, Bizerte in Tunisia, Mersin in Türkiye, and Syria

A.3.5 Nutrient flows of nitrogen and phosphate have decreased in most of the northern Mediterranean over the last two decades, following the implementation of best agricultural management practices and technological advances in wastewater treatment plants. However, nutrient pollution has increased in the southern and eastern Mediterranean in parallel with agricultural intensification and urban and industrial development (*high confidence*). {2.4.1}

A.4 Biological drivers in the Mediterranean and along its coast include the presence of over a thousand of non-indigenous species, making it a major invasion hotspot, and jellyfish blooms. {2.3.2, 2.3.4}

A.4.1 Non-indigenous species are accidentally introduced in Mediterranean coastal waters, estuaries or coastal lagoons, by aquaculture facilities, aquarium species trade, boat ballast waters and the biofouling on vessels. Most non-indigenous subtropical coastal fish species enter the Mediterranean from the Red Sea. Warming of the Mediterranean waters is creating increasingly suitable conditions for non-indigenous thermophilic species, which are expanding their distribution ranges (*high confidence*). {2.3.2, 2.3.3}

A.4.2 The frequency of jellyfish blooms has increased in the Mediterranean Sea with some evidence that they benefit from eutrophication, warming of sea water and other human induced stressors (*medium confidence*). {2.3.4}

A.5 The Mediterranean coastal region is characterised by rapid, spatially diverse and geographically unbalanced socioeconomic development, mainly related to demographic trends, human settlement patterns and on-going wars and armed conflicts in different countries.

A.5.1 The total population of Mediterranean countries in 2020 was about 540 million people, around one-third of them living in the coastal zone, with a high concentration of urban settlements near the coast. {2.5.1}

A.5.2 The development gap between the northern, southern and eastern countries in terms of economic growth, income, population growth and education continues to persist and is further exacerbated by war and social unrest in several eastern and southern Mediterranean countries (*high confidence*), potentially reducing the adaptive capacity to coastal hazards (*medium confidence*). {2.5.2}

A.5.3 The Mediterranean is the world's leading tourism destination, both internationally (it attracts about one third of the world's tourism) and domestically, with over half of the EU's tourist accommodation establishments located in coastal areas. While the northern countries represent mature/traditional tourism destinations, some southern countries, such as Egypt and Türkiye, have recently experienced a significant growth in coastal tourism. {2.5.2, 5.3.1}

A.5.4 The Mediterranean drainage basin incorporates more than 160 rivers, mainly small ones, most of them distributed on the European side of the Mediterranean coast. About 46% of the total length of the Mediterranean coastline has been formed by sediment deposition whose supplied have been significantly reduced by damming of Mediterranean rivers (*medium confidence*) {2.5.2}

A.5.6 The majority of fish stocks are overexploited (*high confidence*) which poses also serious economic problems. The most overexploited priority species in the Mediterranean is the

European hake, which - due to its presence in most trawl fisheries - shows an average overexploitation rate 5.8 times higher than the sustainability target. {2.5.2}

A.5.7 The Mediterranean has experienced an upward trend in aquaculture production driven primarily by increased production in Egypt and Türkiye, followed by Greece, Italy, Spain, France and Tunisia. More than 100 species (finfish, shellfish, crustaceans and algae) are currently cultivated within a wide range of environments and farming systems. {2.5.2}

B. Future evolution of climatic and environmental drivers for the coastal area

B.1 Near surface air temperature in the Mediterranean region is projected to *very likely* continue to increase more than the global average, together with an increase in frequency and intensity of hot extremes, increase of evapotranspiration (*high confidence*), reduction of precipitation (*high confidence* for 4°C global warming level) depending on the level of future mitigation of greenhouse gas emissions.

B.1.1 Mean near surface air temperature in the Mediterranean region, relative to 1850–1900, is projected to increase by 2.1 [1.6 to 2.7] °C⁶ over the period 2041–2060 and 2.2 [1.6 to 3] °C over the period 2081–2100 under the low greenhouse gas emissions scenario (SSP1-2.6), and by 2.2 [2.3 to 3.6] °C over 2041–2060, and 5.5 [4.2 to 6.8] °C over 2081–2100 under the very high emissions scenario (SSP5-8.5) (*high confidence*). Heat waves will increase both over land and over sea (*high confidence*). {2.2.1}

B.1.2 Precipitation will decrease over most of the Mediterranean and heavy rainfalls will increase in some areas of the northern Mediterranean (*low confidence* for 1.5°C global warming level, *high confidence* for 4°C global warming level). Global warming will further increase the existing difference in intensity of precipitation and hydrological extremes between the northern and southern Mediterranean areas (*high confidence*). The projected increase of dry spell length is larger in the South than in the North Mediterranean (*medium confidence*). {2.2.2}

B.1.3 Future reduced precipitation, associated with increased evapotranspiration will lead to droughts, with drier soils and a decline of runoff and of coastal freshwater supply, to become more severe under moderate emission scenarios and strongly enhanced under severe emission scenarios (*high confidence*). {2.2.6}

B.1.4 Compared to the end of the 20th century (1976–2005), the mean sea surface temperature of the Mediterranean Sea is expected to increase by mid-21st (2021–2050) century in the range from 0.6°C to 1.3°C and by the end of the 21st century (2071–2100) in the range 2.7°C to 3.8°C under the very high greenhouse gas emissions scenario (*high confidence*). The warming at the end of the century will be smaller (from 1.1°C to 2.1°C) under an intermediate scenario. Warming is expected to be stronger in summer than in winter (*medium confidence*) and associated with longer and more intense marine heat waves (*high confidence*). {2.2.5}

B.1.5 Seawater acidification is projected to continue both off-shore and at the coast (*virtually certain*). It is projected that the pH will decrease between –0.25 and –0.46 units in Mediterranean surface waters by the end of the century compared to pre-industrial era in very high emission scenarios (*medium confidence*). {2.2.5}

⁶ In this Report, unless stated otherwise, square brackets [x to y] are used to provide the assessed *very likely* range, or 90% interval.

- B.1.6** The future evolution of sea surface salinity of the Mediterranean Sea remains largely uncertain with *very low confidence* on its sign of change. Any change will likely be spatially and temporally inhomogeneous due to the primary role of the river and near-Atlantic freshwater inputs (*medium confidence*). {2.2.5}
- B.2 Mediterranean relative mean sea level is expected to continue to rise during the coming decades and centuries at a rate depending on the future emissions of greenhouse gases (*virtually certain*). The increase of relative sea level will cause more frequent coastal floods covering larger coastal areas (*virtually certain*). {2.2.4, 2.2.7}**
- B.2.1** Mediterranean mean sea level is projected to rise during the coming decades and centuries, *likely* reaching 0.15–0.33 m by mid-21st century, and 0.32–0.62 m under the very low greenhouse gas emissions scenario and 0.63–1.01 m under the very high greenhouse gas emissions scenario by the end of 21st century, relative to 1995–2014 (*medium confidence*). The process is irreversible at the scale of centuries to millennia (*high confidence*). {2.2.7}. The long-term knowledge of the vertical land movements is restricted to a limited number of sites where geological or geodetic surveys have been carried out. {2.2.7}
- B.2.2** The frequency of an extreme sea level event that occurs one in a 100 year is likely to increase by 10-30% and 22-65% by the mid and end of the 21st century under an intermediate and very high emissions scenario respectively (*high confidence*). {2.2.4}
- B.3 Future pollution levels along the Mediterranean coasts are expected to exhibit varying trends across regions and pollutants,** depending on regulations, decreasing dependency, diminishing production and socioeconomic changes. The leakage of plastics into the sea will depend on the rate of plastic production, regulations and waste management (*high confidence*). {2.4}
- B.3.1** Nutrient fluxes to the coastal zone are expected to decrease in the north due to the implementation of European environmental regulations and to increase in the south if urban development and agricultural intensification continue at the present pace (*high confidence*). The current nutrient imbalance in coastal ecosystems, with increasing availability of nitrogen relative to phosphates and leading to exacerbated eutrophication problems, is expected to increase (*high confidence*). {2.4.1}
- B.3.2** Concentrations of certain persistent organic pollutants (POPs), such as polychlorinated biphenyl (PCBs) and dichlorodiphenyltrichloroethane (DDT), will continue to decline in the Mediterranean coasts due to regulations (*medium confidence*). Emerging pollutants such as pharmaceuticals and personal care products, are expected to increase due to socioeconomic changes and emerging industries to supply the demand (*medium confidence*). {2.4.3, 2.4.5}
- B.3.3** The leakage of plastics into the sea depends on the rate of plastic production. By 2040 it is *likely* to double if annual plastic production continues to grow at a rate of 4% and waste management is not radically improved. Decreasing the production growth, implementing regulations limiting single-use plastic and improving waste management can reduce the leakage (*high confidence*) {2.4.4}
- B.4 The Mediterranean is becoming increasingly apt to be colonised by non-indigenous species of tropical origin that are expanding their distribution ranges (*high confidence*). {2.3.2}**

B.5 Total coastal population of the Mediterranean is expected to grow faster than the inland population under most shared socioeconomic pathways, thus leading to increased exposure of population and assets to coastal hazards (*high confidence*). This increase strongly depends on the pathway and varies considerably between the geographic subregions. The northern Mediterranean may experience coastal population decline under some scenarios, while the highest increases in coastal population are expected in the Mediterranean Middle East and Maghreb countries (*medium confidence*). {2.5.1}

C. Observed impacts and future risks

C.1 In general, the Mediterranean coastline is presently retreating, with a large spatial variability (*high confidence*) and it will increase under the effect of climate change (*high confidence*) with consequences on ecosystems and protection efficiency of present structures (*high confidence*). {3.2.2}

C.1.1 The most dramatic erosion is observed in river mouth areas, coastal stretches around harbours and other coastal infrastructures as a result of decreased sediment supply and alteration of sediment fluxes caused by coastal structures (*very high confidence*). {3.2.2}

C.1.2 In the absence of adequate adaptation and protection measures, beaches will continuously erode during the next decades increasing risks of storm induced damages and reducing the extension of areas for sun-and-beach tourism (*high confidence*). {3.2.2}

C.1.3 Coastal erosion will increase under the effect of climate change, as mean sea level rise will enhance erosion in combination with energetic storms, aggravating a generalised shoreline retreat. In the future the projected median value of shoreline retreat for the Mediterranean with respect to 2010 is 17.5 [8.8 to 27.7] m and 23 [11.1 to 36.3] m by 2050 under the intermediate and very high greenhouse gas emissions scenarios, respectively, increasing to 40 [20.1 to 65.1] m and 65 [31.3 to 115.0] m respectively by 2100 (*medium confidence*). {3.2.2}

C.1.4 Coastal erosion will increase flooding and reduce the degree of protection provided by existing infrastructures along the coast, consequently increasing risk of storm induced damages (*high confidence*). {3.2.2}

C.1.5 Coastal erosion will also lead to a loss of ecosystem services as coastal zone habitats will be affected, degraded and, eventually, disappear due to coastal squeeze (*medium confidence*). {3.2.2}

C.2 Regional sea level rise will increase the risk of storm-related floods and also result in the permanent inundation of certain areas along the Mediterranean coasts. Climate change and growing urbanisation will further increase the risk of flash floods in some coastal areas (*medium confidence*). Risks caused by meteorological and seismic tsunamis will continue to be present (*high confidence*). {3.2.3, 3.2.4}

C.2.1 In the Mediterranean, waterfronts, seaward parts of coastal settlements and low-lying areas are exposed to flood risk caused by waves during energetic storms, which, in the absence of efficient adaptation/protection measures, will generally increase in the future because of mean sea level rise (*high confidence*). Future mean sea level rise will lead to an increased frequency and intensity of coastal floods (*high confidence*). {3.2.3}

- C.2.2** Mean sea level rise will cause gradual and permanent inundation of low-lying unprotected areas in deltas and coastal plains, being locally often aggravated by subsidence, putting at risk natural, cultural values and important agricultural activities (*high confidence*). {3.2.3}
- C.2.3** Risks posed by flash floods are high in several coastal stretches of the Mediterranean because of exposed and vulnerable urban settlements, densely populated areas, local meteorological regimes, and topographic conditions. In the future, in the absence of efficient adaptation, flash flood risks are expected to increase in relation to the increase in the frequency of heavy rainfall events and population density in flood prone coastal areas (including Türkiye, Greece, Italy, France and Spain) (*medium confidence*). {3.2.3}
- C.2.4** The Mediterranean coast is among the areas with the highest probability of compound flooding in comparison with European coasts due to co-occurrence of heavy rainfall and high-water levels. The expected evolution of these events under climate change will be affected by the increase of both hazards, although with a large spatial variability in their occurrence and no clear trend regarding their intensity and frequency (*medium confidence*). {3.2.3}
- C.2.5** The occurrence of meteotsunamis is relatively frequent along some stretches of the Mediterranean coast (eastern Adriatic, Balearic Islands, strait of Sicily, Maltese Islands) with specific hotspots in some bays and inlets where resonance is favoured. They continue posing significant risks for Mediterranean coastal zones, despite being rare events. Due to the small tides, coastal infrastructures along the Mediterranean are generally not adapted to accommodate meteotsunami damages and flooding are potentially worse in the Mediterranean in comparison to other macro-tidal coasts of the world. {3.2.4}
- C.2.6** Tsunamis produced by seismic events have caused severe damages and loss of lives in the past. Due to the high seismicity of the Mediterranean basin, the short travel times of tsunami waves to the coast from source areas and the concentration of population and assets along the coastal zone, tsunamis are a significant threat for the Mediterranean coastal zones despite their low frequency, with the eastern basin being the most affected one. {3.2.4}
- C.2.7** In the absence of effective adaptation policies in the Mediterranean region, up to 20 million people could be affected by permanent displacement due to sea-level rise by 2100. This exposure is about three times higher in the southern and eastern countries than in the northern countries (*low confidence*). {3.4.2}
- C.3 Risks of water scarcity in the coastal areas of the Mediterranean are caused by the overall drying trend affecting the region, salinisation of coastal aquifers, increasing demand associated with population growth, irrigation, touristic use, industry and the energy sector. Risks of water scarcity are expected to increase in the future (*high confidence*)** {3.2.5}
- C.3.1** Seawater intrusion in coastal aquifers affects a great part of the Mediterranean coast. In the future, salinisation of aquifers could further increase in the coastal areas affected by relative sea level rise (*high confidence*). {3.2.5}
- C.3.2** Tourism and irrigated agriculture produce water demand peaks during summer. Increase of irrigation demand (driven by climate change and agricultural practices), the

increment of population, particularly in the coastal areas of eastern and southern Mediterranean countries, and summer tourism are expected to lead to growing water demand in the future (*high confidence*). In the future, reduced precipitation and increased evapotranspiration will lead to a decline of runoff in the Mediterranean region and consequently affect the supply of fresh water to the coastal areas (*high confidence*). {3.2.5}

C.3.3 Future degradation and reduction of the availability of conventional freshwater resources for the different uses is expected, especially in the southern and eastern Mediterranean (*high confidence*). {3.2.5}

C.4 Mediterranean coastal wetlands have significantly declined since the beginning of the 20th century. Coastal ecosystems and their services are at risk of further reduction in the future. Risks can be further increased by changes of sediment supply, industrial and urban development (*high confidence*). {3.5}

C.4.1 Mediterranean coastal wetlands have experienced a substantial decline, losing approximately 50 % of their area during the 20th century, due to a combination of erosion, extreme events, salt-water intrusion, and mainly human-induced pressures (such as expansion of irrigated agriculture), and urban, industrial and infrastructure development. They will be significantly affected by future changes in precipitation (*high confidence*), although with a high spatial variability. Sea level rise and coastal erosion will lead to further losses of coastal wetlands (*high confidence*), especially in areas where existing rigid inland boundaries limit the potential horizontal migration of wetlands. {3.5}

C.4.2 Degradation, regression and biodiversity loss, and, eventually, disappearance of ecosystem habitats will lead to an overall decline in ecosystem services relative to current conditions (*high confidence*). For the northern Mediterranean coast, the services decline can reach around 6% of the present value by 2100 under the very high greenhouse gas emissions scenario, but with a high spatial variability and the largest decline occurring in the north-eastern Mediterranean areas (*medium confidence*). Lack of studies prevents assessing for the rest of the Mediterranean coastline. {3.5.2}

C.4.3 The decrease in sediment supply, coupled with further industrial, urban and tourism development, can enhance the vulnerability of coastal sandy beaches, wetlands, and saltmarshes to sea level rise. {3.5.2}

C.5 In the Mediterranean Sea mass mortalities in coastal waters have been recently observed, they have been partially attributed to marine heat waves and are expected to increase in the future (*high confidence*). {3.2.7}

C.5.1 Mass mortality events in the Mediterranean Sea have been observed during the last decades, affecting corals, sponges, molluscs, bryozoans and echinoderms, and they have been attributed to marine heat waves and pathogen infections. Many Mediterranean coastal species are reaching their tolerance limits due to ocean warming and repeated marine heat waves. (*high confidence*). {3.2.7}

C.5.2 The frequency and intensity of mass mortality events will likely increase in the future in parallel with rising marine heat waves (*high confidence*). {3.2.7}

C.5.3 Mortality risks are increased by synergistic effects of warming and pollution (*medium confidence*). {3.2.6}

C.6 Alteration of species distribution and population have been observed, such as the presence of non-indigenous species and jellyfish blooms. {3.2.7}

C.6.1 Non-indigenous species affect indigenous species through predation, competition for resources and ecological niches, food web shifts and as vectors of pathogens or parasites. Non-indigenous species are producing a variety of ecological and socio-economic impacts on the Mediterranean, with examples of negative impacts on native biodiversity and coastal ecosystem services, mainly food provision (*high confidence*). {3.2.7}

C.6.2 Recent studies suggest an increase in the frequency of jellyfish blooms in the Mediterranean Sea, which has been linked to eutrophication and other human induced stressors, including anthropogenic warming (*medium confidence*) {2.3.3}

C.7 In the Mediterranean coastal region, climate change is expected to pose serious risks on important economic sectors such as summer beach tourism, agriculture, aquaculture and fisheries (high confidence). {3.3}

C.7.1 Hot temperatures and heat waves are expected to reduce the traditional attractiveness of the Mediterranean beaches in the summer, while increasing suitability of spring and autumn seasons for beach tourism (*medium confidence*). The narrowing and eventual disappearance of beaches poses high risks for the sun-and-beach tourism sector, especially in urbanised areas where the coastal zone is limited by physical barriers, such as numerous coastal stretches in Cyprus, France, Greece, Italy, Malta and Spain, among other countries (*high confidence*). {3.3.1}

C.7.2 In the coastal areas of the Mediterranean, risks for agricultural productivity are posed by the overall loss of the quality and availability of water resources and the loss of agricultural land, caused by erosion and permanent submersion. In absence of adequate adaptation, agricultural lands located in low-lying coastal areas, such as the plains of the Nile, Ebro and Po deltas, will be affected by the impacts of relative sea level rise (*high confidence*). {3.3.2}

C.7.3 Climate change is affecting the range and quantity of species available for commercial exploitation (*medium confidence*) and favouring the emergence of non-indigenous species (*medium confidence*). Mediterranean fisheries are overexploited and the majority of the stocks are declining (*high confidence*). {3.3.3}

C.8 Sea level rise is expected to place at risk Mediterranean coastal structures, such as airports, transport networks, and ports, and cultural heritage sites (high confidence). {3.3.5, 3.4.1}

C.8.1 Three out of the world's 20 airports most at risk of coastal flooding due to sea level rise are located in the Mediterranean⁷. In several Mediterranean countries, roads and railways are located close to the shoreline and exposed to the risk of flooding and erosion. Multihazard conditions affecting Mediterranean ports are projected to significantly worsen due to climate change under a very high emission scenario. The

⁷ Ioannis Kapodistrias Intl in Greece, Pisa and Venice in Italy

absence of adequate adaptation will increase risks for operating Mediterranean ports, particularly in the southern Mediterranean. The extent of this increase will vary depending on local conditions, port configuration being a crucial factor (*medium confidence*). {3.3.5}

C.8.2. Sea level rise is expected to reduce the effectiveness of protection provided to the coast by parallel breakwaters, due to increased overtopping. The extent of this impact will largely depend on the height of the structures (*high confidence*). Large values of sea level rise will make the design and planned operativity of the current Venice defence systems inadequate (*medium confidence*). {3.3.5}

C.8.3 The large majority of Mediterranean UNESCO cultural World Heritage Sites in low elevation coastal zones are currently at risk of erosion and coastal flooding (*high confidence*). The coast-built heritage is *likely* to be also affected by slow cumulative deterioration processes, with an increase in the risk of decohesion and due to salt crystallisation and mechanical stress (*very high confidence*). {3.4.1}

C.9 Diverse pollutants affect the coastal waters of the Mediterranean Sea with negative impacts on ecological systems, human health and economic sectors (aquaculture, fishing, and coastal tourism). The risks associated with coastal pollution are expected to increase as anthropogenic pressures in coastal zones continue to grow, exacerbated by the compounding effects of climate change, leading to cumulative and synergistic impacts (*medium confidence*). {3.2.6, 3.2.7}

C.9.1 High nutrient fluxes from land sources cause eutrophication with adverse consequences, such as hypoxia or anoxia, episodes of massive mucilage formation and harmful algal blooms. Mucilage has been reported particularly in highly productive and shallow water coastal areas of the Mediterranean. It reinforces hypoxic and anoxic conditions, negatively affecting benthic organisms and damaging tourism and fisheries. {3.2.6, 3.2.7}

C.9.2 Metals accumulate in estuaries, wetlands, deltas, prodeltas and, more generally, in coastal and seafloor sediments, with some of them having negative impacts on organisms (such as immunosuppression, impaired reproduction and development) even at minute concentration and accumulating in marine organisms throughout food webs (the bioaccumulation of mercury is a representative example). {3.2.6}

C.9.3 Pharmaceutical residuals and other emerging pollutants reach coastal waters through rivers and domestic effluents, where conventional processes are unable to treat them. These emerging pollutants present a risk of acute or chronic toxicity to aquatic organisms (*medium confidence*). {3.2.6}

C.9.4 High concentration of plastics represents an important risk for marine biodiversity. Coastal areas are in general hotspots for plastic ingestion and coastal species are at higher risk than open-sea species (*medium confidence*). Risks for human health are due to the ingestion and accumulation by commercially exploited seafood, and spread through the trophic chain (*medium confidence*). {3.2.6}

C.9.5 Complex interactions between climate change impacts and pollutants in the coastal environment will become more frequent due to multiple stressors from both natural and anthropogenic sources (*medium confidence*). {3.2.6}

C.9.6 The occurrence of natural disasters and environmental degradation linked to pollution has multiple direct and indirect impacts on the health and well-being of coastal populations along the Mediterranean Basin. In the absence of effective adaptation, risks are expected to increase in the near future as climate change hazards and coastal populations are expected to increase (*high confidence*). {3.4.2}

D. Adaptation measures and solutions

D.1 Reduction of risks posed by climate hazards has primarily included protection against coastal flooding, prevention of coastal erosion and conservation measures for coastal ecosystems. Both protection against coastal flooding and management of coastal erosion generally lack considering the values of future sea level rise, with risks of limited future efficiency (*high confidence*). The efficiency of conservation measures of coastal ecosystems strongly depends on the success of climate change mitigation and an increasing number of hard limits will be reached for every increment of global warming (*high confidence*).

D.1.1 Protection against coastal flooding, except for few examples of relocation and nature-based solutions, typically relies on relatively high-cost engineering solutions, with negative effects on coastal landscape, biodiversity and ecosystems (*high confidence*). Lack of consideration of sea level rise in coastal flood-risk management is widespread and implies the risk that during the 21st century the defence systems will reach soft limits, lock-ins and maladaptation (*high confidence*). {4.2.1}

D.1.2 Prevention of coastal erosion by engineering protection and artificial nourishment of beaches is becoming less efficient due to sediment scarcity (*medium confidence*). Nature-based solutions are increasingly discussed, they have economic and environmental advantages, but trade-offs with the use of beaches and coastal resources limit the scale of their implementation (*high confidence*). Landward relocation with appropriate planning could represent a sustainable solution in some areas, especially when other adaptation measures are not viable. Along the European Mediterranean coastline relocation is limited by the lack of space in low-lying coastal areas and by low social and present economic feasibility, but it might become economically viable in the long term (*medium confidence*). {4.2.2}

D.1.3 Current management of coastal erosion generally overlooks the risks posed by sea level rise (*high confidence*). Transparent communication and governance are essential for avoiding short term interventions and maladaptation in the future (*medium confidence*). {4.2.2}

D.1.4 Autonomous adaptation of coastal ecosystems requires adequate conservation measures, such as habitat protection, limitation of human pressures, reduction of pollution, ensuring sufficient accommodation space and area-based conservation measures, which in the Mediterranean are too limited in scale and ambition to curb coastal ecosystem losses (*high confidence*). Active restoration remains too limited to support the recovery of habitats at relevant ecological scales, while coastal protection measures reduce and fragment habitats (*high confidence*). {4.2.3}

D.1.5 The efficiency of conservation measures strongly depends on the success of climate change mitigation, that is limiting warming climate change below 1.5°C with no or small overshoot (*medium confidence*). Adaptation limits of coastal terrestrial, freshwater and

brackish water ecosystems will be reached above 3°C of global warming in the northeastern Mediterranean and possibly earlier in the eastern and southern Mediterranean (*high confidence*). {4.2.3, 4.2.4}

D.1.6 Reducing the risk of possible conflicts and side-effects of some adaptation actions on related other sectors can be achieved through cross-sectoral adaptation strategies. Such strategies, if included in a regional “Mediterranean” framework, would enable cooperation and more effective cross-border measures to be undertaken. {4.2.3}

D.2 Mediterranean coastal waters are heavily influenced by pollution originating from numerous human activities, mainly land-based, such as industry, agriculture, urbanisation, and tourism. Actions controlling pollution at its sources are generally more efficient than those treating it at endpoints (*medium confidence*). Actions to tackle pollution at basin scale are not implemented, yet, and challenges both technical and in the decisional process remain to be solved. {4.3}

D.2.1 Management of pollution both at the sources and at the endpoints requires continued long-term monitoring, using an appropriate set of indicators and adaptive recovery management plans (*high confidence*). Actions aimed at the sources are more efficient, particularly in case of point sources, as they are usually simpler to be implemented, long-lasting, easier to monitor, and cheaper, while they are more problematic in the case of dispersed sources and at endpoints (*medium confidence*). {4.3}

D.2.2 Strategies to reduce coastal pollution include use of municipal solid waste for the waste-to-energy industry, recycling and re-use of wastewater, sustainable farming practices and more efficient treatment of polluted water from farming activities and eco-remediation. {4.3.1, 4.3.2}

D.2.3 There is currently no consistent strategy approach to reduce plastic litter pollution, as the gap between politics, science and society still complicates the joint design and implementation of effective mitigation measures. The effectiveness of solutions is further still limited by knowledge gaps, technical difficulties and economic costs (*medium confidence*). {4.3.4}

D.2.4 The implementation of pollution management strategies differs among Mediterranean countries. In order to ensure effective decision making, coordination among parties, improved spatial consistency of information on litter distribution, and awareness-raising measures are fundamental. {4.3.5}

D.2.5 Waste prevention through of law-enforcement, appropriate waste management and monitoring the effectiveness of implemented actions (such as those included in the European Marine Strategy Framework Directive) are important components to reach a Good Environmental status {4.3.4}.

D.3 Although the presence of non-indigenous species is observed throughout the Mediterranean region, solutions have been rarely attempted, with few successful examples. Management of non-indigenous species are based on actions at regional levels: eradication initiatives; efforts for their commercial exploitation; protection of indigenous species by providing suitable habitat, protected areas, and ecological connectivity. {4.4}

D.4 Adaptation needs to water shortages vary significantly across sub-regions, depending on the hydrogeological and coastal water management context. Adaptation to reduced water availability is taking place in the Mediterranean coastal areas (*high confidence*). These adaptation options consist of increasing water supply, improving water quality, supporting measures and governance, and to a lesser extent reducing water demand {4.2.4}.

D.4.1 Observed adaptation to reduced water availability is often based on increasing water supply based on diversified strategies (water diversion and transfers, diversification of resources, surface reservoirs, desalination), which, though being efficient, pose social, environmental, and economic challenges, and can reach hard limits (*high confidence*). {4.2.4}

D.4.2 Water demand management measures, although they are an important component to limit future risks of water scarcity, are limitedly used (*high confidence*). Sustainable water demand can be achieved by improving irrigation practices, changing agricultural practices, improving urban water management, through economic and financial incentives, regulating distribution (*high confidence*). {4.2.4}

D.4.3 Nature-based solutions, such as favouring saltmarsh accretion to reduce surface saltwater inflow into aquifers and estuaries, have limitations in terms of feasibility and efficiency for high rates of sea level rise (*high confidence*). {4.2.4}

D.4.4 A transformation of the water-food-energy nexus, while taking into account the ecosystem, can bring substantial co-benefits to the reduction of water shortage risks, such as increased human health, aquaculture easing and healthier terrestrial and freshwater ecosystems (*high confidence*). {4.3}

D.5 The engagement of scientists with policymakers, stakeholders, and citizens is a key factor to removing barriers (including lack of understanding and trust) and can be particularly fruitful during the planning process. Turning stakeholders into partners strongly increases the possibility of successful implementation of solutions and adaptation measures (*high confidence*). {4.7}

D.5.1 Coastal adaptation management and planning processes provide unique opportunities for the establishment of permanent frameworks for science-policy-community interaction. Such frameworks require sufficient resources, are based upon transparency and are the key for building partnerships and trust. Plans that are co-created by science-policy-community groups strongly increase their chances for successful implementation (*high confidence*). {4.7.3}

E. Recent developments and sustainable development pathways

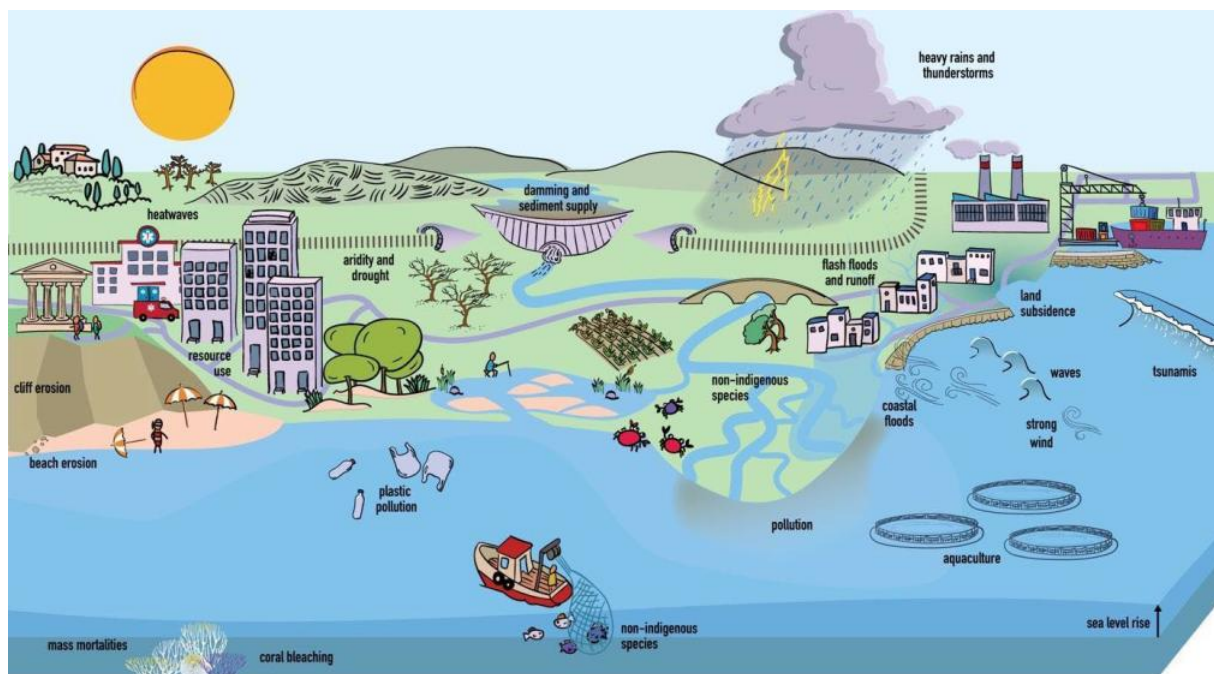
E.1 The present actions towards solutions to environmental problems, adaptation to climate change and its mitigation are insufficient to attain the Sustainable Development Goals (SDGs) ensuring the wellbeing of people and the sustainability of resources in the Mediterranean coastal zone (*medium confidence*). {5.2, 5.3}

E.1.1 Climate change, in combination with other drivers such as urbanisation, rural exodus, and population growth, represent a threat to the vital services provided by Mediterranean marine and coastal ecosystems (*high confidence*). {5.4.5}

- E.1.2** Further research is needed to establish the risks posed by the implementation of renewable energy projects (wind, solar and wave energies, hybrid systems) to the unique biodiversity of the Mediterranean coastal ecosystems (*medium confidence*). {5.3}
- E.1.3** The most vulnerable actors in society - such as the elderly, migrants, refugees, internally displaced individuals, women, children and low-income earners - who are exposed to climate hazards, such as heat waves and flooding, among others, are in many cases not adequately engaged in the policy-making processes nor adequately considered in policy measures, to ensure efficient and just transition to changing environment and climate (*medium confidence*). {5.4}
- E.1.4** Crucial socioeconomic sectors, such as tourism, ports and maritime transport, construction and real estate, contribute to economic development and employment, but are largely based on extractive models of development, insufficiently embracing circularity and sustainable development practices (*medium confidence*). {5.3}
- E.1.5** The current share of carbon emissions of the Mediterranean countries amounts to no more than 6 percent of global emissions, with northern Mediterranean countries contributing the larger proportions. While greenhouse gas emissions in northern Mediterranean Countries have been systematically decreasing since 2005, they have been continuously increasing in southern and eastern Mediterranean Countries since the 1960s, mainly driven by economic and population growth and do not show a promising path in their reduction given the expected increase in energy demand in the next few decades (*high confidence*). {5.2.1}
- E.1.6** Among renewable energy sources in the Mediterranean coastal zone, offshore wind energy represents a feasible viable option while wave and thermal gradient energies are still in the early stages (*medium confidence*). Despite some progress in promoting transition from fossil fuels towards renewable and clean energy sources and efforts to support conservation and restoration of blue carbon pools (such as coastal ecosystems), sustainable development pathways are not progressing sufficiently to achieve net zero targets by the mid-21st century (*high confidence*). {5.3}
- E.1.7** Low carbon energy pathways in coastal economies are essential for sustainable local and regional economic growth and stability (*medium confidence*). In the quest for decarbonisation, alternative fuels and energy sources such as biofuels, synthetic fuels, hydrogen, and batteries are emerging in the Mediterranean. Transition to economically, socially and environmentally more sustainable maritime transport would result in relatively lower carbon emissions per tonne transported compared to terrestrial and aerial transport (*low confidence*) {5.3.1}
- E.2** **Without transformative actions across all sectors, systems, and scales climate change risks will be exacerbated and the UN Sustainable Development Goals will not be met (*high confidence*). A mix of legal, policy and economic instruments, and behavioural nudges, are available for local, national, and regional authorities to promote effective climate resilient sustainable development pathways in the Mediterranean coastal zone. Properly identifying vulnerabilities related to human activities and climate change impacts, assessing opportunities to reduce risks to the affected communities and ecosystems, and adopting actions consistent with the Sustainable Development Goals (SDGs) are fundamental for pursuing these goals (*high confidence*). {5.3, 5.4}**

- E.2.1** Carbon neutrality by 2050 can only be reached by ensuring more political and economic stability, and implementing circular and sustainable development models, especially in southern and eastern Mediterranean countries, in order to decouple energy consumption from economic growth (*high confidence*). {5.2.2}
- E.2.2** There is a consistent potential for climate change mitigation and adaptation through effective conservation and restoration of blue carbon ecosystems including seagrass meadows, coastal wetlands, salt marshes and coastal terrestrial ecosystems (including coastal dunes). The carbon sequestration capacity of coastal wetlands is about 10 times that of terrestrial ecosystems, but they are not sufficiently protected (*high confidence*). {5.2.2}
- E.2.3** An effective implementation of the sustainable blue economy represents a powerful mean to protect and transform Mediterranean marine and coastal areas, fostering resources for local, inclusive, sustainable and resilient development (*high confidence*). Ensuring continuous monitoring and assessment of coastal ecosystems and their valuable services can support the adoption of dynamic adaptive strategies (*medium confidence*). {5.2.2}
- E.2.4** Coastal tourism is a strong economic driver and as such has a key role in fostering sustainable development pathways, especially by shifting from generally wasteful and overconsumption practices to more circular and sustainable ones (*medium confidence*). Sustainable tourism, which promotes local communities and conserves natural resources, is endorsed by international organisations and programs. Ecotourism models can use alternative policy tools including green taxes and eco-labelling schemes (*high confidence*). Additionally, the negative impacts of touristic cruises on air quality can be reduced by electrification of ports and controlling emission of pollutants (*medium confidence*). {5.3.1, 5.3.2}
- E.2.5** Actions towards reducing the overexploitation of fish stocks and the consequent negative impacts particularly on small-scale fishers include their meaningful participation in the co-management of the sector, the implementation of best practices to maximise the value of the catch and the establishment of vertically-integrated distribution channels especially at local level (*high confidence*). {5.3.1}
- E.3 Social inequalities, access to basic service, gender-based inequalities are issues of concern in the Mediterranean region and in its high urbanised coastal zone as they act as a barrier to the implementation of sustainable development pathways** (*high confidence*) {5.4}
- E.3.1** Existing social inequalities across the Mediterranean Basin act as a further barrier to climate change adaptation and sustainable development pathways. A careful analysis of distributional effects of policies, adaptation actions and development programmes is fundamental to avoid the risk of negatively impacting low-income earners (*high confidence*). {5.4.1}
- E.3.2** Social infrastructures have a positive impact on social cohesion, by ensuring equal access to basic services (such as health care and education) across cities and regions. However existing inequalities within and among Mediterranean countries can undermine social cohesion (*high confidence*). {5.4.2}

E.3.3 In the Mediterranean countries where gender-based inequality is high, developing transformative coastal adaptation pathways by empowering women participation in decision-making and support programmes, contributes to the achievement of SDG5-Gender equality (*high confidence*). {5.4.4}



Marine warming and heat waves: since the 1980s sea surface warmed in the range from +0.29°C and +0.44°C per decade. Over the last two decades the frequency of marine heat waves increased by 40%. The mean sea surface temperature of the Mediterranean Sea is expected to increase by the end of the 21st century in the range 2.7°C to 3.8°C under the very high greenhouse gas emissions scenario.

Flash floods: Risks posed by flash floods are high in several Mediterranean coastal stretches. Without efficient adaptation, flash flood risks are expected to increase in relation to the increase in the frequency of heavy rainfalls and population density in flood prone coastal areas.

Population: The total population of Mediterranean countries in 2020 was about 540 million people, around one-third of them living in the coastal zone. Up to 20 million people could be affected by permanent displacement due to sea-level rise by 2100.

Coastal Floods: The frequency of an extreme sea level event that occurs one in a 100 year is likely to increase 65% by the end of the 21st century under the very high greenhouse gas emission scenario.

Aquaculture: More than 100 species (finfish, shellfish, crustaceans and algae) are currently cultivated in the Mediterranean.

Sea level rise: Mean sea level in the Mediterranean has risen at about 1.4 mm yr⁻¹ during the 20th century and has accelerated to about 2.8 mm yr⁻¹ in the last three decades. At the end of the 21st century, the Mediterranean mean sea level is projected to likely increase 0.6-1.0m relative to present under the very high greenhouse gas emission scenario.

Sea water acidification: Seawater acidification is projected to continue and will decrease between -0.25 and -0.46pH units in Mediterranean surface waters by the end of the century compared to pre-industrial era in very high emission scenarios.

Non-indigenous species: Over a thousand of non-indigenous species have been identified in the Mediterranean and along its coasts. Warming of the Mediterranean waters is creating increasingly suitable conditions for non-indigenous thermophilic species.

Coastal erosion: In the future the projected median value of shoreline retreat for the Mediterranean with respect to present is 65 m by 2100 under a very high emission scenario.

Wetland: Mediterranean coastal wetlands have experienced a substantial decline, losing approximately 50% of their area during the 20th century.

Plastic pollution: Plastics account for up to 82% of observed litter, 95-100% of total floating marine litter and more than 50% of seabed marine litter in the Mediterranean Sea. By 2040 plastic pollution is likely to double if annual plastic production continues to grow at a rate of 4% and plastic waste management is not radically improved.

Pollution is originated from numerous human activities, mainly land-based, such as industry, agriculture, urbanisation, and tourism. Future pollution levels along the Mediterranean coasts are expected to exhibit varying trends across regions and pollutants, depending on regulations, decreasing dependency, diminishing production and socioeconomic changes.

Aridity and droughts: Future reduced precipitation, associated with increased evapotranspiration will lead to droughts, drier soils, decline of runoff and of coastal freshwater supply.

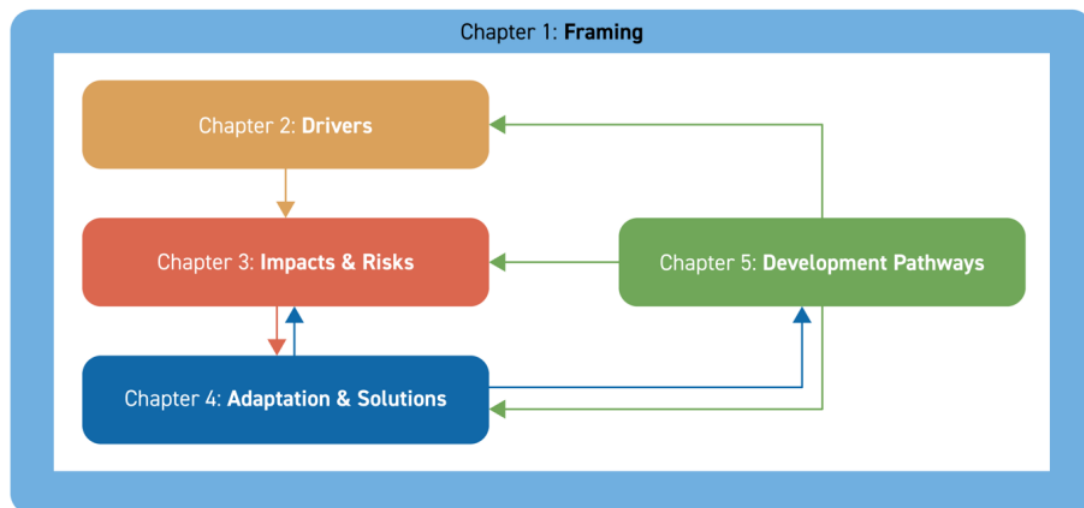
Mass mortalities: observed mass mortalities in Mediterranean coastal waters have been partially attributed to marine heat waves and are expected to increase in the future.

Figure SPM1 | The coastal zone and drivers of environmental and climate change

List of corrigenda agreed during the Plenary Consultation (6 November 2023) to be implemented in the final revision and copy-editing:

- *Modify text "Sea water acidification: Seawater acidification is projected to continue and pH will change between -0.25 and -0.46pH units in Mediterranean surface waters by the end of the century compared to pre-industrial era in very high emission scenarios"*
- *Add text: "Salinisation of aquifers: Seawater intrusion in coastal aquifers affects a great part of the Mediterranean coast. In the future, salinisation of aquifers could further increase in the coastal areas affected by relative sea level rise"*
- *Add figure: graphic visuals representing: a) seagrass meadows, b) marine heatwaves, c) ship induced pollution (ports)*

Climate and environmental change, and impacts in the Mediterranean region



SUBJECT	FRAMING	DRIVERS	IMPACTS & RISKS	ADAPTATION & SOLUTIONS	DEVELOPMENT PATHWAYS
Climate & Geology	1.2	2.2	3.2; 3.3; 3.4; 3.5	4.2; 4.5	5.2; 5.3
Air temperature	1.2.1	2.2.1			
Precipitation		2.2.2	3.2.3; 3.3.5; 3.4.1	4.2.1	
Atmospheric circulation		2.2.3	3.2.4		
Cyclones		2.2.4	3.2.3		
Sea water temperature, salinity & acidification		2.2.5	3.2.5; 3.2.6; 3.3; 3.4; 3.5	4.2.5	
Surface water budget		2.2.6	3.2.5	4.2.4	
Sea level rise & (permanent) coastal submersion		2.2.7	3.2.2; 3.2.3; 3.4.1; 3.5.1; 3.5.2	4.2.2	
Natural & anthropic land subsidence		2.2.8	3.2.2; 3.2.3	4.2.3	
Geohazards		2.2.9	3.2.4	4.5.1	
Biology		2.3	3.2.7; 3.4.2	4.4	5.3
Non-indigenous species		2.3.1	3.2.7	4.4	
Species distribution		2.3.2	3.2.7; 3.3.3; 3.5.2		
Jellyfish blooms		2.3.3	3.2.7		
Pollution	1.2.2	2.4	3.2.6	4.3	5.3
Nutrients		2.4.1	3.2.6	4.3.1; 4.3.2; 4.3.3	
Trace metals		2.4.2	3.2.6	4.3.3	
Persistent organic pollutants (POP)		2.4.3	3.2.6	4.3.1; 4.3.2; 4.3.3; 4.3.4	
Plastics		2.4.4	3.2.6	4.3.4	
Emerging pollutants		2.4.5	3.2.6	4.3.2; 4.3.3	
Municipal waste				4.3.1	
Air pollution		2.4.6	3.2.6		
Economy & Society	1.2.3; 1.3	2.5	3.3; 3.4; 3.5	4.3	5.3; 5.4
Population growth	1.1.3	2.5.1	3.4.2		
Development trends	1.1.3	2.5.2	3.4.1		
Tourism & cruising		2.5.2.1	3.3.1		5.3.1.2
Maritime transport		2.5.2.1	3.3.1		
Oil & gas exploration and extraction		2.5.2.2	3.3.4		5.3.1.1
Sea water desalinization		2.5.2.3	3.3.4		
Food security			3.3.2		
Fisheries & aquaculture		2.5.2.4	3.3.3		5.3.1.3
Science-policy interface	1.1.2			4.7	
Transformative pathways for development	1.3.2				5.3.3
Social equity and climate justice	1.4.4				5.4

Figure

SPM2 | Visual guideline to the content of the report

List of corrigenda agreed during the Plenary Consultation (6 November 2023) to be implemented in the final revision and copy-editing:

- Change title: "Structure and logics of the report showing references to the sections of the full report in which the listed issues are addressed."
- Visual aspect: Improve the presentation of information to enhance readability. It has been agreed that the authors will consider extending the box content by adding short descriptions of chapter content. However, the final decision to implement this change will be reserved for them.

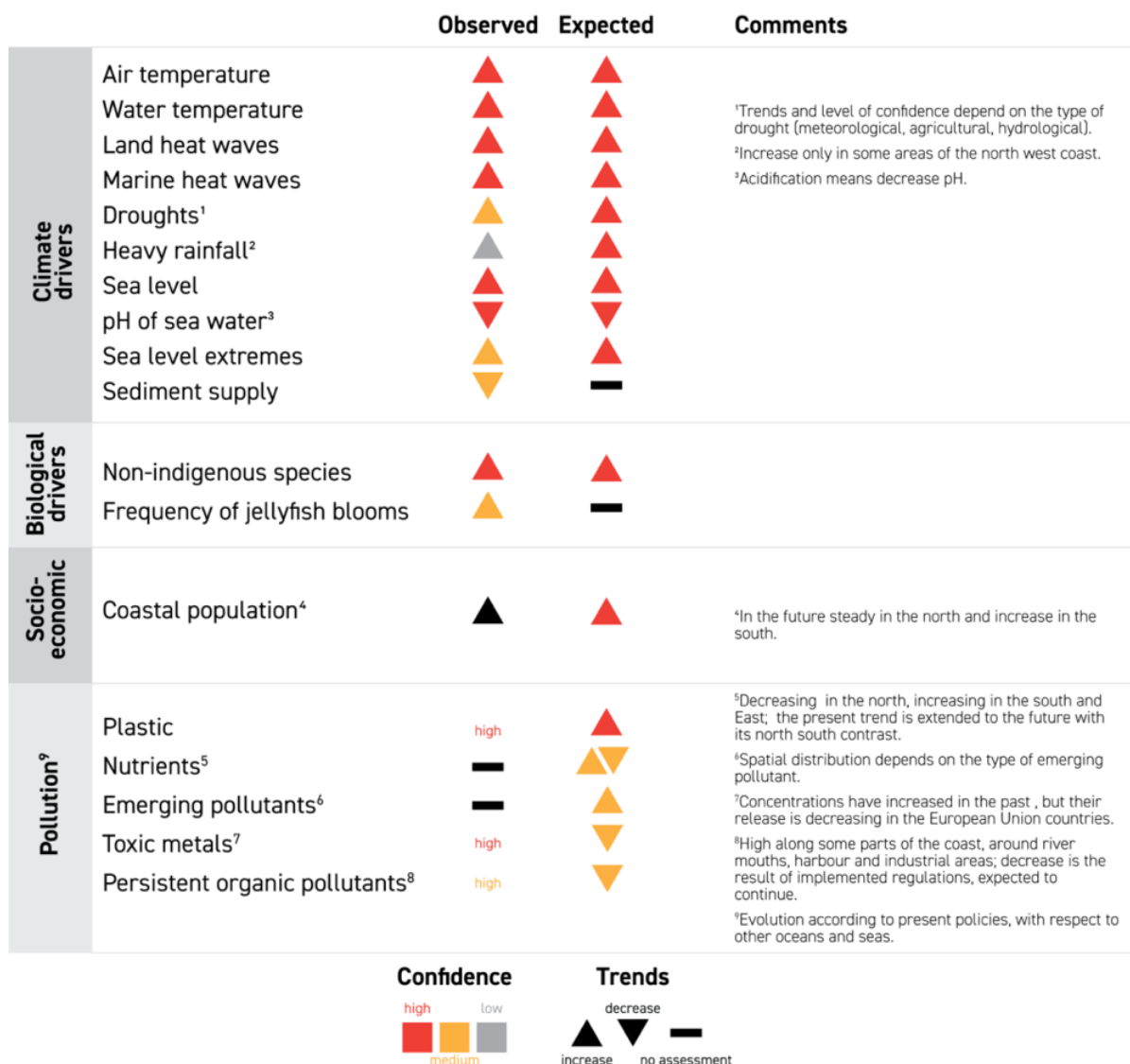


Figure SPM3 | Drivers of change and their expected evolution in the Mediterranean coastal zone. [Note: the visual is in progress]

List of corrigenda agreed during the Plenary Consultation (6 November 2023) to be implemented in the final revision and copy-editing:

- Add “drivers” after “socio-economic” and after “pollution”
- Add the following elements to “Socio-economic drivers” (in relation to sections A.5.3 and A.5.6 of the SPM):

Tourism: Observed: increase / Expected: not-assessed (10) observed increase has occurred in the south Mediterranean countries

Overexploitation of fish-stock: Observed: increase / Expected: not-assessed

CLIMATE AND ENVIRONMENTAL COASTAL RISKS IN THE MEDITERRANEAN & SDGs

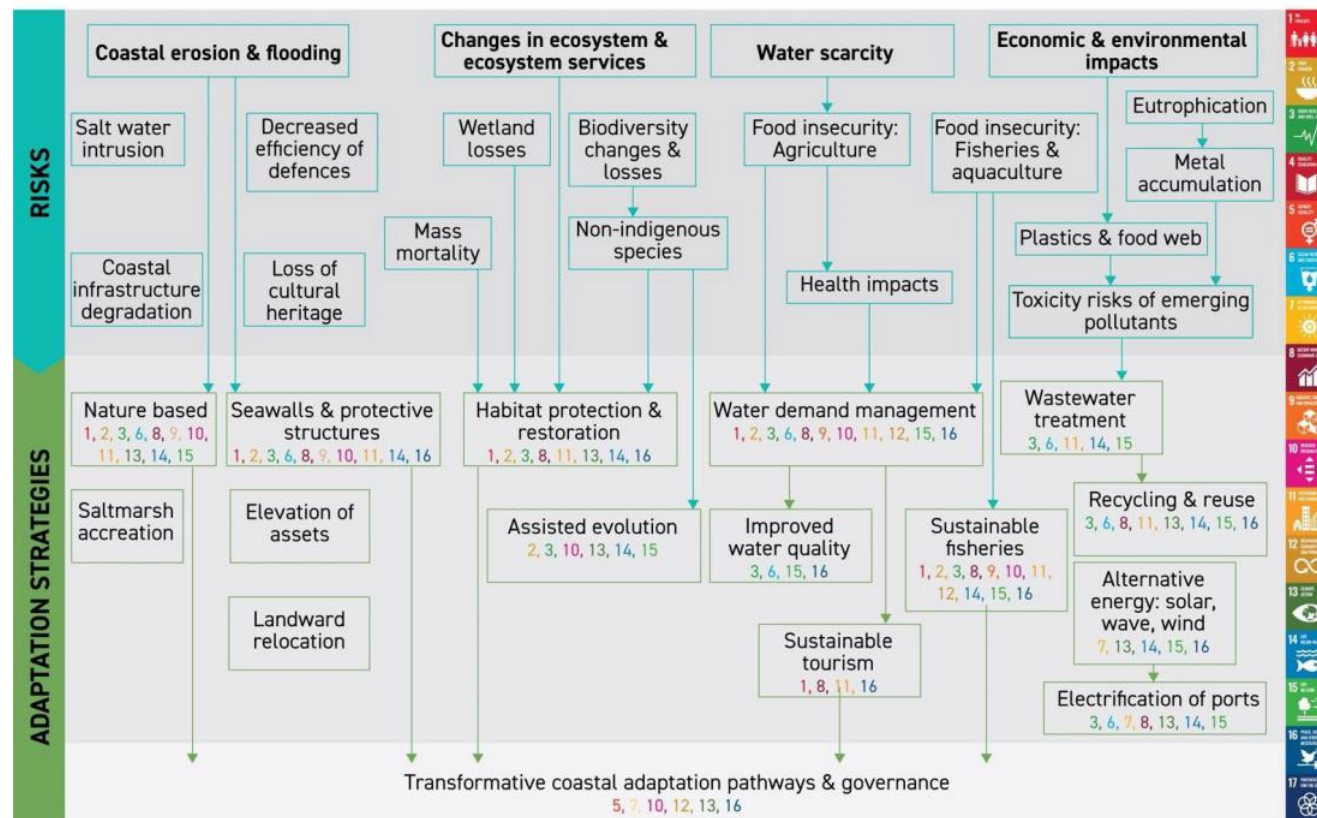


Figure SPM4 | Risks, adaptation and solution in the Mediterranean coastal zone and their links to the Sustainable Development Goals (SDGs).

List of corrigenda agreed during the Plenary Consultation (6 November 2023) that will be implemented in the final revision and copy-editing:

- Replace “Changes in ecosystem & ecosystem services” with “Losses in ecosystem & ecosystem services”
- Replace “Economic and environmental impacts” with “Negative economic and environmental impacts”;
- Add the following numbers below: a) saltmarsh accretion: 6, 11, 13, 14, 15; b) landward relocation: 8, 9, 10, 11, 14, 15, 16; c) elevation of assets: 8, 9, 10, 11, 15, 16

Table SPM1. Geographical context: The Northern Mediterranean Countries (NMC) gather twelve countries or entities: AL, BA, CY, ES, FR, GR, HR, IT, MC, ME, MT and SI. The Southern and Eastern Mediterranean Countries (SEMC) gather ten countries or entities: DZ, EG, IL, LB, LY, MA, PS, SY, TN and TR. The Mediterranean biogeographical region comprises the Union territories of Greece, Cyprus, and Malta, parts of the Union territories of Spain, France, Italy, Portugal and Croatia.

ISO2 Code	Country of entity	Regions
AL	Albania	NMC
BA	Bosnia and Herzegovina	NMC
CY	Cyprus	NMC
DZ	Algeria	SEMC
EG	Egypt	SEMC
ES	Spain	NMC
FR	France	NMC
GR	Greece	NMC
HR	Croatia	NMC
IL	Israël	SEMC
IT	Italy	NMC
LB	Lebanon	SEMC
LY	Libya	SEMC
MA	Morocco	SEMC
MC	Monaco	NMC
ME	Montenegro	NMC
MT	Malta	NMC
PS	State of Palestine	SEMC
SI	Slovenia	NMC
SY	Arab Republic of Syria	SEMC
TN	Tunisia	SEMC
TR	Türkiye	SEMC

Section 4

UNEP/MAP Programme of Work and Budget

Decision IG.26/14

Programme of Work and Budget for 2024-2025

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their 23rd Meeting,

Recalling Articles 18 and 24(2) of the Barcelona Convention and Decision IG.21/15 of COP 18 (Istanbul, Türkiye, 3-6 December 2013) on the Financial Rules and Procedures for the funds of the Barcelona Convention;

Recalling Decision IG.25/1 of COP 22 (UNEP/MAP Medium-Term Strategy 2022-2027) adopting the Medium-Term Strategy 2022-2027 (MTS) as the framework for the development and implementation of the Programme of Work of UNEP/MAP;

Welcoming the Progress Report on the activities carried out during the 2022-2023 biennium and the related expenditure report;

Emphasizing the need for stable, adequate and predictable financial resources for MAP and the Mediterranean Trust Fund (MTF);

Welcoming the rate of collection of assessed contributions including parts of the arrears, and noting the need for their timely collection;

Appreciating the guidance provided to the Secretariat by the Bureau of the Contracting Parties to the Barcelona Convention during the 2022-2023 biennium;

Expressing deep appreciation to the Contracting Parties and partners that have provided additional financial and other resources for the implementation of the activities of the 2022-2023 biennium, including through the Bilateral Agreements with the Italian Ministry of Environment and Energy Security, and the Ministry for Europe and Foreign Affairs of France, the EU-funded IMAP MPA, EcAp MED III and Marine Litter MED II projects, the GEF-funded MedProgramme, and Fish EBM project, etc. and *welcoming* the financial resources mobilized by the Secretariat including Regional Activity Centers (RACs) for the same purpose;

Welcoming the simplified structure of the Programme of Work and Budget applied to 2024-2025 Programme of Work and Budget presentation to ensure that Contracting Parties have a clear understanding of the priorities and the relationship with the MTS, bearing in mind the Decision IG. 17/5 “Governance Paper” adopted by COP 15 (Almeria, Spain, 15-18 January 2008);

Noting with appreciation the progress made on the refurbishment of the premises of the Coordinating Unit with the strong support of Government of the Hellenic Republic and welcoming the actions to be undertaken to conclude this process in 2024;

1. *Request* the Executive Director of UNEP and the Coordinator of MAP to execute the Budget taking into consideration Decision IG.21/15 on the Financial Regulations and Rules and Procedures for the Contracting Parties, in particular the provisions under Annex II, Procedure 2, paragraph 4, which entrusts the responsibility to certify and authorize expenditures to UNEP in conformity with the Programme of Work and Budget Decisions adopted by the Conference of the Parties;

2. *Approve* the 2024-2025 Programme of Work and Budget set out in the Annex to this Decision including the Deliverables of the Programme of Work and Budget 2024 – 2025 set out in Appendix 1 to this Decision;

3. *Approve* the budget appropriations, as set out in Table 1. “Overview of income and commitments” of the Annex to this Decision; the income in the amount of EUR

13,296,144 , composed of the Mediterranean Trust Fund in the amount of EUR 11,413,576, the European Union discretionary contribution in the amount of EUR 1,192,968 and the host country contribution of EUR 689,600 (USD 800,000); the use of the unutilized MTF positive balance up to the amount of EUR 3,289,504;

4. *Approve* the use of the budget appropriations as set out in Table 3 Summary of Activities and Administrative Costs by MAP Component;

5. *Approve* the 2024-2025 assessed ordinary contributions from Parties shown in Table 2 “Expected Ordinary Income” of the Annex to this Decision, which is based on the 2022-2024 scale of assessment adopted by the United Nations General Assembly (UNGA) at its 76th Session on 24 December 2021 in Resolution A/RES/76/238;

6. *Request* the Executive Director of UNEP, subject to the approval of the United Nations Environment Assembly, to extend the Mediterranean Trust Fund through 31 December 2025;

7. *Approve* the staffing of the Coordinating Unit including MED POL for 2024-2025 as indicated in Table 4a. “Details of Salaries and Operational and other Activities Costs of the Secretariat” in the Annex to this Decision provided that the increased staff costs are financed from the unutilized positive balance of the MTF on exceptional basis for this biennium;

8. *Take note of* the staffing of REMPEC for 2024–2025 as indicated in Table 4b, “Details of Salaries and Administrative Costs of REMPEC” in the Annex to this Decision;

9. *Take note of* the external funding secured by the Secretariat and MAP Components in the amount of EUR 16,386,037 and external non-secured funding in the amount of EUR 10,295,644 for the implementation of the Programme of Work 2024-2025;

10. *Authorize* the Coordinator in line with Decision IG.21/15 on the Financial Rules and Procedures for the Funds of the Barcelona Convention, Procedure 2, paragraph 6, to approve transfers within the same Programme and Component up to 20 per cent within the criteria: a. funds to be transferred are savings achieved upon committing funds for full delivery of activities planned in the approved Programme of Work, b. the transferred funds are strictly used for achieving the outcomes of the Programme of Work of concerned biennia in line with the outcomes of the 2022-2027 Mid-term Strategy; and c. such transfers are reported for information at the first meeting of the Bureau of the Contracting Parties following occurrence of such transfers;

11. *Urge* the Contracting Parties to strictly adhere to Procedure 4.2 of the Financial Rules and Procedures and pay their contributions to the MTF in the first quarter of each year to allow for the full and effective implementation of the Programme of Work;

12. *Request* the Secretariat to keep up to date information on the status of Contracting Parties’ contributions to the Mediterranean Trust Fund and to continue to post it in a publicly available place on the UNEP/MAP website and report, for information, to the Bureau of the Contracting Parties in their periodical meetings on the status of unutilized resources;

13. *Urge* the Contracting Parties to adhere to nomination deadlines of their representatives in meetings of the MAP system and to avoid modifications and cancellation of their travel in order to minimize losses arising from the increase of airfare and cancellation fees and inefficiencies;

14. *Urge* the Contracting Parties to consider increasing their voluntary contributions in cash and/or in kind in support of the implementation of the 2024-2025 Programme of Work and to support the resource mobilisation activities of the Secretariat;

15. *Invite* other partners including industry to contribute adequate human and financial resources to meet the external funding requirements for priorities still unfunded under the 2024-2025 Programme of Work and Budget;

16. *Request* the Secretariat to undertake with no budgetary implications, an internal evaluation in order to assess the coherence of the MAP system to the provisions of the “Common Operational Principles for MAP Components”, as adopted by COP 22 Decision IG. 25/3, Annex VI; the evaluation should consider the adequacy of all MAP Components with respect to the necessary functional and financial autonomy to fully and timely fulfill their regional mandate, as set by COP 16 Decision IG. 19/5 “Mandates of the Components of MAP”, in particular including possible proposals in relation to the structure of the MAP Components and their effects on the budget, including the use of the MTF to support the operational costs of all MAP Components, for consideration at COP 24;

17. *Also request* the Secretariat, in consultation with the Bureau, to prepare for careful consideration by the MAP Focal Points and, after further refinement, approval by COP 24 a result-based Programme of Work and Budget for 2026-2027, explaining the key principles and assumptions on which it is based and taking into account the progress achieved during the implementation of the 2022-2023 and 2024-2025 Programmes of Work, providing information on the consultation process followed for its preparation, and in full alignment with the MTS taking into consideration the outcomes of the above evaluation as provided for in paragraph 16;

18. *Request* the Secretariat to develop a proposal for absorbing the whole remaining unutilized positive balance of the MTF, excluding the Working Capital Reserve, in the two following biennia (2026-2027 and 2028-2029) and maintain, as permanent principle of efficiency, the objective of avoiding unutilized positive balance of the MTF and to present this proposal for consideration at COP 24.

Rationale for the Programme of Work 2024-2025

1. Decision IG.25/19 “Programme of Work and Budget for 2022-2023”, adopted by the 22nd Meeting of the Contracting Parties (COP 22) in December 2021, in Antalya, Türkiye, mandated the Secretariat to prepare, in consultation with the Bureau, for careful consideration by the MAP Focal Points and, after further refinement, approval by COP 23 a result-based Programme of Work and Budget for 2024 - 2025, explaining the key principles and assumptions on which it is based and taking into account the progress achieved during the implementation of the 2022-2023 Programme of Work, providing information on the consultation process followed for its preparation, and in full alignment with the MAP Medium-Term Strategy (MTS) 2022-2027.
2. It further requested the Secretariat, in consultation with UNEP Headquarters, to explore possible ways of simplifying the structure of the Programme of Work and Budget to ensure that Contracting Parties have a clear understanding of the priorities and the relationship with the MTS when adopting the budget.
3. In line with this Decision, the 2024-2025 Programme of Work (PoW), being in the middle of the new MTS cycle, was designed to ensure its continued effective implementation and achievement.
4. Its preparation takes into consideration the following elements:
 - a. Full alignment with the MTS 2022-2027;
 - b. Status of implementation of the MTS 2022-2027 and current PoW 2022-2023;
 - c. Reliable resource mobilization (including also not yet secured external funding);
 - d. Relevant regional and global commitments;
 - e. Regional progress and achievements on environmental and sustainable development agenda in the Mediterranean;
 - f. Comparative advantages;
 - g. Balanced distribution, to the extent possible, of activities around MTS Programmes and Outcomes.
5. The 2024-2025 PoW is built around 27 Outcomes to be delivered through the implementation of 104 main activities, distributed over the MTS Programmes as shown below:

MTS Programmes	Number of Outcomes (MTS)	Number of Activities
Programme 1. Towards a Pollution and Litter Free Mediterranean Sea and Coast Embracing Circular Economy	4	22
Programme 2. Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity	4	8
Programme 3. Towards a Climate Resilient Mediterranean	4	5
Programme 4. Towards the Sustainable Use of Coastal and Marine Resources Including Circular and Blue Economy	4	15
Programme 5. Governance	5	22
Programme 6. Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making	3	20
Programme 7. For Informed and Consistent Advocacy, Awareness, Education and Communication	3	12
TOTAL	27	104

6. In response to the request of COP 22, on the potential simplification of the PoW structure, the Secretariat aims at maintaining the list of deliverables in the PoW Tables until their review and approval by the MAP Components/Thematic Focal Points meetings, while the working document to be submitted to the MAP Focal Points and COP 23 for review and approval will go up to the level of main activities and present the list of deliverables only as information document. To address the request of COP 22 to strengthen RBM, the activities have been further aggregated and their number reduced from 116 in PoW 2022-2023 to 104 in the PoW 2024-2025.

Thematic Programme 1: Towards a Pollution and Litter Free Mediterranean Sea and Coast Embracing Circular Economy

7. The main objective of the 2024-2025 PoW for this Programme is to support integrated responses for prevention and reduction of plastic pollution and marine litter, including emerging sources of pollution, in the framework of the Regional Plans and NAPs under the LBS Protocol, the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031); the Mediterranean Offshore Action Plan; and the Regional Action Plan on SCP, while ensuring links and synergies with other relevant regional and global instruments and processes, including those under the IMO, the BRSC, UNEA Resolutions, as well as the anticipated global Treaty to address plastic pollution. The activities further aim at promoting a transformational change embracing circular economy and contributing to the implementation of the One Health Approach, linking human and ecosystems health with pollution reduction and prevention, taking into account lessons learnt from the COVID-19 pandemic.
8. More specifically, the 2024-2025 PoW envisages:
 - a) Supporting the implementation of 2021 Regional Plans under the LBS Protocol, through local, national, subregional and regional actions;
 - b) Analyzing the state of play of marine renewable energies including offshore windfarms, including socio-economic aspects, and supporting the sustainable development of the sector;
 - c) Undertaking pilot actions to prevent, eliminate and dispose in an environmentally sound manner obsolete chemicals under the MedProgramme;
 - d) Strengthening the capacity of individual coastal states to respond efficiently to marine pollution incidents; improving pollution event follow-up and enhancing the level of enforcement and the prosecution of discharge offenders;
 - e) Further supporting the ratification and effective implementation of MARPOL Annex VI, facilitating the entry into effect of the Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter (Med SOx ECA);
 - f) Delivering studies for a possible designation of the Mediterranean Sea Emission Control Area for Nitrogen Oxides (Med NOx ECA) pursuant to MARPOL Annex VI;
 - g) Supporting public and private actors in preventing marine litter, plastic pollution and toxic chemicals, addressing the circular economy approach;
 - h) Implementing the One Health approach in the Mediterranean in relation to links between pollution and human health, with an initial focus on health impacts of polluted seafood consumption, and analysis of potential health-related indicators in line with Regional Plans and NAPs;
 - i) Supporting the creation and development of circular economy businesses in key sectors of activity which are main sources of pollution.

Thematic Programme 2: Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity

9. The main objective of the 2024-2025 PoW for this Programme is to contribute to the effective implementation of the Post 2020 SAP BIO and to support the Contracting Parties in their efforts in establishing, expanding and efficiently managing a comprehensive, coherent and effective Mediterranean network of Marine and Coastal Protected Areas (MCPAs) and other effective area-based conservation measures (OECMs). This Programme also places a particular focus on the enhancement of ecosystem resilience through restoration, in line with the UN Decade for Ecosystem Restoration, as well as on the improvement of the status of conservation of Mediterranean endangered and threatened species and key habitats.
10. More specifically, the 2024-2025 PoW envisages:
 - a) Undertaking a state of play on existing practices and measures for biodiversity/ecosystems restoration including their scientific evaluation; identifying innovative actions and supporting replication and sharing of successful practices, including pilots and demonstration actions, taking into consideration synergies with the UN Decade on Ecosystem Restoration;
 - b) Updating and implementing Regional Action Plans/Strategy on Species and Habitats and supporting elaboration of sub-regional and national ones;
 - c) Implementing targeted priority measures to minimize non-indigenous species introductions and control their introduction pathways in line with the Regional Action Plan concerning species introduction and invasive species, and the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027);
 - d) Supporting elaboration and/or updating of national strategies and action plans for MPAs and OECM networks, based on the orientations and priorities of the Post-2020 SAPBIO, Post-2020 Regional Strategy for MCPAs and OECMs, the Kunming-Montreal Global Biodiversity Framework, and other relevant global frameworks and targets;
 - e) Expanding the MPA/SPAMIs and OECM networks, designating protected areas with enhanced protection levels, and enforcing efficient management measures for their long-term conservation;
 - f) Strengthening effective SPAMI management through continuing and fostering SPAMI Twinning Programmes;
 - g) Guiding enforcement activities through technical tools, standards, criteria, guidelines, tailored at regional or sub-regional level, as needed and relevant;
 - h) Ensuring continuous knowledge enhancement, and conservation status assessments of marine and coastal species and habitats covered by Regional Action Plans or by the Annex II and III of the SPA/BD Protocol;
 - i) Using the functionalities of the Mediterranean Observatory for transversal analysis between human induced pressures and conservation status, and contributing to the definition of criteria for identification of sites with highest ecological relevance and/or regeneration potential;
 - j) Organising capacity building programmes (scientific symposia, workshops and thematic regional, sub-regional and national training sessions) and improving the science-policy interface;
 - k) Improving and adapting measures to mitigate the impact and interaction with coastal and marine human activities and/or climate change and enhancing their adoption by the Contracting Parties.

Thematic Programme 3: Towards a Climate Resilient Mediterranean

11. The main objective of the 2024-2025 PoW for this Programme is to support Contracting Parties in their efforts to prevent or reduce the impact of climate change on coastal and marine ecosystems and increase resilience to climatic change and variability. It also aims at ensuring that Contracting Parties are

provided with up-to-date scientific knowledge on related climate change. One major outcome foreseen under this Programme is the delivery of an updated Regional Framework for Climate Change Adaptation.

12. More specifically, the 2024-2025 PoW envisages:

- a) Building a region-wide common understanding of and promoting nature-based solutions for climate change adaptation in the Mediterranean; Assessing and disseminating nature-based technical solutions and best practices applicable to Mediterranean specific context;
- b) Developing and promoting guidance on nature-based solutions applicable to different coastal typologies to be considered in the preparation of coastal plans;
- c) Observing and analyzing emerging issues (mainly in relation to offshore activities and climate change) and identifying appropriate measures to address their impacts on marine biodiversity and ecosystems;
- d) Supporting elaboration of national ICZM plans and strategies aiming at increasing resilience to climatic variability and change;
- e) Mainstreaming climate change adaptation into local ICZM plans;
- f) Mobilizing and implementing innovative solutions to reduce GHG emissions from ships in selected ports, including through energy efficiency and decarbonisation;
- g) Supporting the operation and activities of the scientific network MedECC and developing science-based assessments and policy recommendations on thematic impacts of climate and environmental change in support of informed decision-making;
- h) Contributing to climate change mitigation efforts through circular economy approaches, increased resource efficiency and carbon neutrality business strategies.

Thematic Programme 4: Towards the Sustainable Use of Coastal and Marine Resources Including Circular and Blue Economy

13. The main objective of the 2024-2025 PoW for this Programme is to assist Contracting Parties in achieving the sustainability of coastal and marine resources through the synergetic implementation of planning and management approaches and integrating circular economy measures and solutions in key Blue Economy sectors. It also aims at supporting Contracting Parties' efforts to implement the Offshore Protocol and the Mediterranean Offshore Action Plan.

14. More specifically, the 2024-2025 PoW envisages:

- a) Promoting integration of circular economy into key Blue Economy sectors, including through recommendations, pilot actions and sustainable entrepreneurship support;
- b) Implementing the ICZM Protocol and its Common Regional Framework, focusing on the preparation or updating National ICZM Strategies and coastal plans and vulnerability analyses for selected areas, supported by participatory foresight activities;
- c) Supporting on-the-ground activities in selected coastal areas through Coastal Area Management Projects (CAMP), including transboundary CAMP;
- d) Undertaking methodological work for ICZM focusing on the update of matrices from the Common Regional Framework for ICZM;
- e) Strengthening of the Marine Spatial Planning (MSP) implementation through training, capacity building and strengthening of a community of practice for MSP in the Mediterranean;

- f) Implementing key targeted measures of the Mediterranean Offshore Action Plan and maintaining its governance, cooperation and partnership framework sustainable and operational;
- g) Promoting sustainable tourism and sustainable marine renewable energies in the Mediterranean, in conformity with the UNEP/MAP Barcelona Convention framework and developing relevant guidelines;
- h) Supporting the development of national policies and pilot actions on SCP and circular businesses, as well as the implementation of SCP, circular economy and innovative sustainable economies at regional and national levels;
- i) Supporting effective and systemic use of economic instruments such as subsidy policies, conservative easements and other tools for nature conservation and sustainable development.

Foundational Programme 5: Governance

15. The main objective of the 2024-2025 PoW for this Programme is to ensure the effective implementation and enforcement by the Contracting Parties of the Barcelona Convention, its Protocols, MAP Strategies and regional policies and measures and relevant COP Decisions, while supporting policy coherence and complementarity among relevant work at global, regional and national levels and enhanced efficiency with the use of new digital approaches. It also aims at strengthening public institutions and enhancing partnerships and multi-stakeholder engagement, including with civil society organisations, the private sector, and science policy interface. Major outcomes foreseen under this Programme are the development of a revised Roadmap for ecosystem approach implementation in the Mediterranean and a revised Mediterranean Strategy for Sustainable Development.
16. More specifically, the 2024-2025 PoW envisages:
 - a) Ensuring effective decision-making and review of implementation of the legal and policy instruments by the MAP relevant bodies; Deliver a successful COP 24, in Egypt, in 2025;
 - b) Supporting national efforts for further progressing on the ratification of the Protocols to the Barcelona Convention, to enable their entry into force for as many CPs as possible;
 - c) Reinforcing Contracting Parties' capacities on reporting on legally binding provisions of the MAP Barcelona Convention framework; developing legal indicators;
 - d) Implementing the MAP Data Policy at regional and as appropriate at national levels, and strengthening national capacities to implement it with closer support and dedicated workshops;
 - e) Strengthening SPI networks in the scope of MAP work;
 - f) Strengthening capacities for mobilizing external resources to implement PoW and MTS and executing efficiently externally funded projects in their context, including finalisation of funding proposals within the Post-2020 SAP BIO Resource Mobilisation Strategy;
 - g) Strengthening partnerships with major regional and global actors and scientific and academic networks/institutions; Enhancing participation and engagement of the civil society, as well as of the private sector;
 - h) Promoting gender mainstreaming into UNEP/MAP operations and activities.

Enabling Programme 6: Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making

17. The main objective of the 2024-2025 PoW for this Programme is to recapitalize on the work undertaken for the implementation of IMAP, with a view to entering into a new phase and delivering an updated IMAP for GES assessment, based on the outcomes of the 2023 Mediterranean Quality Status Report

(2023 Med QSR). This Programme also aims at strengthening the Environment and Development Observatory in support of CPs decision-making. Another key objective of 2024-2025 PoW for this Programme is to strengthen the information system for IMAP including with the integration of assessment tools, as well as the delivery of a Knowledge Management Platform for the MAP system.

18. More specifically, the 2024-2025 PoW envisages:

- a) Implementing IMAP at national and as appropriate sub-regional level taking in consideration the MED QSR 2023 recommendations and preparing thematic analyses and assessments as requested by the Contracting Parties;
- b) Maintaining and updating all InfoMAP components such as: Barcelona Convention Reporting System (BCRS), National Baseline Budget (NBB) reporting system, full IMAP Info System for all IMAP Common Indicators and InfoMAP Spatial Data Infrastructure for the geographical data and maps (InfoMAPNode); as well as enhancing and updating InfoMAP tools as INFO/RAC Cloud tools;
- c) Strengthening national capacities to organize, upload, validate and release IMAP data, and to establish a strong science-policy interface for the implementation of the ecosystem approach;
- d) Maintaining MAP Components' databases and products and ensuring full operability of the new MAP Knowledge Platform allowing the migration, integration, harmonization, management and update of InfoMAP System and MAP Components databases in a unique hub;
- e) Disseminating widely the main elements of the Med2050 foresight study, making full use of them for further strategic approaches through spin-off (thematic or geographical) activities and linking them with future MSSD preparatory activities;
- f) Strengthening work of global, regional, national and sub-national observatories on environment and development through data-sharing and capacity-building and updating the MSSD dashboard and the SCP indicators database, and their integration into the World Environment Situation Room.

Enabling Programme 7: For Informed and Consistent Advocacy, Awareness, Education and Communication

19. The main objective of the 2024-2025 PoW for this Programme is to inform stakeholders and policy makers about the state of the Mediterranean Sea and coast and to make them aware of the environmental priority issues, and to disseminate knowledge and raise awareness and outreach of general public in particular youth, including through citizen science and digital campaigns. It also aims at contributing to a digital transformation using new technologies to improve networking and MAP visibility. A key milestone in our advocacy campaign is the celebration with pride and inclusiveness of the 50 years Anniversary of MAP (1975) and 20 years Anniversary of MAP II and of the current Barcelona Convention (1995), all adopted in Barcelona, Spain.

20. More specifically, the 2024-2025 PoW envisages:

- a) Implementing the MAP Operational Communication Strategy 2024-2025 in the framework of the 2024-2029 Communication Strategy, and updating it for the biennium 2026-2027;
- b) Publishing and disseminating the results from the 2023 MED QSR, the Med2050 Foresight, and other environmental assessment products;
- c) Delivering the MAP Knowledge Management Strategy and ensuring functioning and maintenance of MAP Knowledge Management Platform integrating information and knowledge from the entire MAP system;

- d) Celebrating dedicated recognized Days of importance to the Mediterranean (i.e., Mediterranean Coast Day, SPAMI Day etc.) and UNEP/MAP system anniversaries, i.e., UNEP/MAP 50th anniversary, SPA/RAC 40th anniversary and INFO/RAC 20th anniversary;
- e) Delivering environmental and sustainability awards and certificates (e.g., WeMed Sustainability Award, Istanbul Environment Friendly City Award, SPAMI Certificates) to enhance public awareness and outreach;
- f) Preparing and implementing education and awareness programmes on key issues, including through e-learning tools with a special attention to youth;
- g) Developing and implementing a concrete communication and visibility plan towards COP 24.

Annex

Programme of Work and Budget for 2024-2025

Table 1. Overview of Income and Commitments
All amounts in €

<u>Part A (Core Funding)</u>	Approved Budget 2022-2023			Proposed Budget 2024-2025 ⁽¹⁾		
		exchange rate	0.862		exchange rate	0.862
	€	€	€	€	€	€
<i>A. Income</i>	2022	2023	Total 2022-2023	2024	2025	Total 2024-2025
<i>Expected Ordinary Income</i>						
MTF Ordinary Contributions	5,706,788	5,706,788	11,413,576	5,706,788	5,706,788	11,413,576
EU Discretionary Contribution	596,484	596,484	1,192,968	596,484	596,484	1,192,968
Greek Host Government Contribution ⁽²⁾	344,800	344,800	689,600	344,800	344,800	689,600
<i>TOTAL of Expected Ordinary Income</i>	6,648,072	6,648,072	13,296,144	6,648,072	6,648,072	13,296,144
<i>B. Unutilized MTF Balance</i>	1,106,475	1,512,794	2,619,269	1,432,807	1,856,697	3,289,504
<i>Total Available Funds</i>	7,754,547	8,160,866	15,915,413	8,080,879	8,504,769	16,585,648
<i>C. Commitments</i>	2022	2023	Total 2022-2023	2024	2025	Total 2024-2025
Activities	2,098,000	2,171,000	4,269,000	2,027,214	2,437,499	4,464,713
Posts and Other Administrative Costs ⁽³⁾	4,847,034	5,133,609	9,980,643	5,206,610	5,267,429	10,474,039
Programme Support Costs	809,513	856,257	1,665,770	847,055	799,841	1,646,896
<i>TOTAL Regular Commitments</i>	7,754,547	8,160,866	15,915,413	8,080,879	8,504,769	16,585,648
<i>Provision for Working Capital Reserve (incl. PSC)⁽⁴⁾</i>			0			0
<i>Grand Total</i>	7,754,547	8,160,866	15,915,413	8,080,879	8,504,769	16,585,648

Part B (External Funding)

	Total 2022-2023	Total 2024-2025
UNEP/MAP Project Funding	7,605,204	10,033,896
Resources mobilized by Components	11,831,052	6,352,141
Resources to be mobilized	7,617,000	10,295,644
TOTAL	27,053,256	26,681,681

Part C (RAC's Hosting Countries' Contributions)⁽⁶⁾

<i>Country (Center)</i>	2022	2023	Total 2022-2023	2024	2025	Total 2024-2025 ⁽⁶⁾
Croatia (PAP/RAC)	159,666	159,666	319,332	266,546	266,546	533,092
France (BP/RAC)	377,785	377,785	755,570			0
Italy (INFO/RAC)	155,000	155,000	310,000			0
Malta (REMPEC)	256,000	256,000	512,000	260,000	260,000	520,000
Spain (SCP/RAC)	655,520	655,520	1,311,039	684,658	488,037	1,172,695
Tunisia (SPA/RAC)	90,000	90,000	180,000			0
<i>TOTAL of Host Country Contributions (in cash/kind)</i>	1,693,971	1,693,971	3,387,941	1,211,204	1,014,583	2,225,787

(1): Budget based on Contributions and utilization of MTF Balance with a 0% increase to the Assessed Ordinary Contributions

(2): The equivalent of USD 400,000 in EUR using the budget rate of 0.862 for 2022-2023 and 0.945 for 2024-2025 based on the average rate calculated for the respective periods. For reconciliation purposes the rate of 0.862 is applied for both biennia in this version. The budget will be established at the relevant UN Operational Rate of Exchange in 2024-2025.

(3): Proposed figure includes the Greek Host Country Contribution, while Table 3 excludes the same. Computer programmes/systems costs including Umoja costs have been charged to CAL fund.

(4): No additional resources required for the WCR for 2024-2025. The 15% of the difference between the Assessed Ordinary Contributions (MEL) allocation in 2022-2023 and 2024-2025 is to be returned back to the MEL Trust Fund balance.

(5): The national contributions towards MAP's Regional Activities Centers (RACs) from the respective Host Country.

(6): The figures will be updated following additional information to be received by the respective RAC's Host Countries.

Table 2. Expected Ordinary Income

Assessed Ordinary Contributions apportioned to the Parties of the Barcelona Convention for the 2024–2025 biennium (EUR) ¹						
Contracting Parties	0% Increase in A.O.C.*			0% Increase in A.O.C.*		
	Approved Assessed Ordinary Contributions for 2022 (in €)	Approved Assessed Ordinary Contributions for 2023 (in €)	Approved Assessed Ordinary Contributions for 2022-2023 (in €)	Proposed Assessed Ordinary Contributions for 2024 (in €)	Proposed Assessed Ordinary Contributions for 2025 (in €)	Proposed Assessed Ordinary Contributions for 2024-2025 (in €)
Albania	3,704	3,704	7,408	3,704	3,704	7,408
Algeria	50,469	50,469	100,938	50,469	50,469	100,938
Bosnia and Herzegovina	5,556	5,556	11,112	5,556	5,556	11,112
Croatia	42,135	42,135	84,270	42,135	42,135	84,270
Cyprus	16,669	16,669	33,338	16,669	16,669	33,338
EU	64,360	64,360	128,720	64,360	64,360	128,720
Egypt	142,670	142,670	285,340	142,670	142,670	285,340
France	1,999,323	1,999,323	3,998,646	1,999,323	1,999,323	3,998,646
Greece	150,482	150,482	300,964	150,482	150,482	300,964
Israel	259,755	259,755	519,510	259,755	259,755	519,510
Italy	1,476,573	1,476,573	2,953,146	1,476,573	1,476,573	2,953,146
Lebanon	16,669	16,669	33,338	16,669	16,669	33,338
Libya (State of Libya)	8,334	8,334	16,668	8,334	8,334	16,668
Malta	8,797	8,797	17,594	8,797	8,797	17,594
Monaco	5,093	5,093	10,186	5,093	5,093	10,186
Montenegro	1,852	1,852	3,704	1,852	1,852	3,704
Morocco	25,466	25,466	50,932	25,466	25,466	50,932
Slovenia	36,579	36,579	73,158	36,579	36,579	73,158
Spain	988,086	988,086	1,976,172	988,086	988,086	1,976,172
Syrian Arab Republic	4,167	4,167	8,334	4,167	4,167	8,334
Tunisia	8,797	8,797	17,594	8,797	8,797	17,594
Türkiye	391,252	391,252	782,504	391,252	391,252	782,504
TOTAL Assessed Ordinary Contributions (MTF)	5,706,788	5,706,788	11,413,576	5,706,788	5,706,788	11,413,576

ADDITIONAL CONTRIBUTIONS						
	0% Increase in A.O.C.*			0% Increase in A.O.C.*		
	Expected Contribution for 2022 (in €)	Expected Contribution for 2023 (in €)	Expected Contribution for 2022-2023 (in €)	Expected Contribution for 2024 (in €)	Expected Contribution for 2025 (in €)	Expected Contribution for 2024-2025 (in €)
EC Discretionary Contribution	596,484	596,484	1,192,968	596,484	596,484	1,192,968
Host Country Contribution (Greece) ⁽²⁾	344,800	344,800	689,600	344,800	344,800	689,600

(1): The proposed Assessed Ordinary Contributions for 2024-2025 are aligned with the current UN assessed rates (2022-2024).

(2): The equivalent of USD 400,000 in EUR applying the budget rate (0.862 for 2022-2023 and 0.862 for 2024-2025). For reconciliation purposes the rate of 0.862 is applied for both biennia in this version.

*A.O.C.=Assessed Ordinary Contribution(s)

Table 3. Summary of Activities and Administrative Costs by Component (MTF/EC Discretionary Contribution)

	Budget 2022-2023 (in €): Budget based on Contributions and utilization of MTF Balance with no increase to the Assessed Ordinary Contributions						
(in €)	Approved Budget 2022-2023 (in €)				Proposed Budget 2024-2025 (in €)		
	2022	2023	Total	2022-2023	2024	2025	Total 2024-2025
CU							
TOTAL ACTIVITIES	338,000	719,000		1,057,000	246,000	769,691	1,015,691
POSTS AND OPERATIONAL COSTS	1,553,591	1,588,844		3,142,435	1,637,901	1,669,135	3,307,036
TOTAL	1,891,591	2,307,844		4,199,435	1,883,901	2,438,826	4,322,727
MEDPOL							
TOTAL ACTIVITIES	380,000	275,000		655,000	320,000	290,000	610,000
POSTS AND OPERATIONAL COSTS	661,027	901,444		1,562,471	892,001	906,215	1,798,216
TOTAL	1,041,027	1,176,444		2,217,471	1,212,001	1,196,215	2,408,216
REMPEC							
TOTAL ACTIVITIES	335,000	212,000		547,000	260,809	243,143	503,952
ADMINISTRATIVE SUPPORT	630,803	641,707		1,272,510	675,093	690,465	1,365,558
TOTAL	965,803	853,707		1,819,510	935,902	933,608	1,869,510
PB/RAC							
TOTAL ACTIVITIES	238,000	187,000		425,000	225,908	265,000	490,908
ADMINISTRATIVE SUPPORT	532,700	532,700		1,065,400	532,700	532,700	1,065,400
TOTAL	770,700	719,700		1,490,400	758,608	797,700	1,556,308
PAP/RAC							
TOTAL ACTIVITIES	209,000	214,000		423,000	270,000	210,916	480,916
ADMINISTRATIVE SUPPORT	488,317	488,317		976,634	488,317	488,317	976,634
TOTAL	697,317	702,317		1,399,634	758,317	699,233	1,457,550
SPA/RAC							
TOTAL ACTIVITIES	304,000	246,000		550,000	351,197	372,000	723,197
ADMINISTRATIVE SUPPORT	371,547	371,547		743,094	371,547	371,547	743,094
TOTAL	675,547	617,547		1,293,094	722,744	743,547	1,466,291
INFO/RAC							
TOTAL ACTIVITIES	119,000	198,000		317,000	194,800	156,581	351,381
ADMINISTRATIVE SUPPORT	124,250	124,250		248,500	124,250	124,250	248,500
TOTAL	243,250	322,250		565,500	319,050	280,831	599,881
SCP/RAC							
TOTAL ACTIVITIES	175,000	120,000		295,000	158,500	130,168	288,668
ADMINISTRATIVE SUPPORT	140,000	140,000		280,000	140,000	140,000	280,000
TOTAL	315,000	260,000		575,000	298,500	270,168	568,668
SUBTOTAL	6,600,235	6,959,809		13,560,044	6,889,023	7,360,128	14,249,151
PSC*	809,513	856,257		1,665,770	847,055	799,841	1,646,896
GRAND TOTAL	7,409,748	7,816,066		15,225,814	7,736,078	8,159,969	15,896,047

TOTAL ACTIVITIES	2,098,000	2,171,000	4,269,000	2,027,214	2,437,499	4,464,713
TOTAL ADMIN & OPERAT.	4,502,234	4,788,809	9,291,044	4,861,809	4,922,629	9,784,438
DIRECT COSTS	6,600,234	6,959,809	13,560,044	6,889,023	7,360,128	14,249,151
PSC	809,513	856,257	1,665,770	847,055	799,841	1,646,896
GRAND TOTAL	7,409,747	7,816,067	15,225,814	7,736,078	8,159,969	15,896,047

*PSC calculation 13% and 4.5% prorated to the respective income.

Table 4a. Details of Salaries and Operational and other Activities Costs (Secretariat)

Secretariat	Approved Budget (in €)			Proposed Budget (in €)		
	2022	2023	Total 2022-2023	2024	2025	Total 2024-2025
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff ³						
Coordinator - D.1	243,737	248,612	492,349	252,341	256,126	508,467
Deputy Coordinator - P.5	219,954	224,353	444,307	227,718	231,134	458,852
Programme Officer (Governance) - P.4	189,123	192,906	382,029	195,799	198,736	394,535
Programme Officer (MEDPOL) - P.5		224,353	224,353	227,718	231,134	458,852
Programme Officer (MEDPOL) - P.4	189,123	192,906	382,029	195,799	198,736	394,535
Programme Officer (MEDPOL Monitoring & Assessment Officer) - P.3	159,967	163,166	323,133	165,613	168,097	333,710
Programme Officer (Socio-economic Activities/Sust. Development) - P.3	159,967	163,166	323,133	165,613	168,097	333,710
Programme Officer (MEDPOL Pollution) - P.3	159,967	163,166	323,133	165,613	168,097	333,710
Legal Officer - P.3	159,967	163,166	323,133	165,613	168,097	333,710
Programme Officer QSR Expert - P.3	159,967	163,166	323,133	165,613	168,097	333,710
Information and Communication Officer-P.3	159,967	163,166	323,133	165,613	168,097	333,710
Admin/Fund Management Officer - P.4 ¹	0	0	0	0	0	0
Administration Officer - P.2 ¹	0	0	0	0	0	0
Programme Officer (Marine Litter Programme Management Officer) - P.2/P.3 ⁴	0	0	0	0	0	0
Programme Officer (Offshore Programme Officer) - P.2/P.3 ⁴	0	0	0	0	0	0
Total Professional Staff	1,801,739	2,062,126	3,863,865	2,093,053	2,124,448	4,217,501
General Service Staff ³						
Meetings and Procurement Assistant - G.6 ¹	0	0	0	0	0	0
Payments and Travel Assistant - G.5 ¹	0	0	0	0	0	0
Budget Assistant - G.6 ¹	0	0	0	0	0	0
Administrative Assistant - G.6 ¹	0	0	0	0	0	0
Information Assistant- G.5	56,970	60,103	117,073	61,606	63,146	124,752
Programme Assistant - G.5	56,970	60,103	117,073	61,606	63,146	124,752
Programme Assistant - G.5	56,970	60,103	117,073	61,606	63,146	124,752
Programme Assistant (MEDPOL) - G.5	56,970	60,103	117,073	61,606	63,146	124,752
Programme Assistant (MEDPOL/CU) - G.4	50,000	52,750	102,750	54,069	55,421	109,490
Administrative Assistant - (Assistant to the Coordinator/CU) - G.6 ⁶				0	0	0
Administrative Clerk - G.4 ¹	0	0	0	0	0	0
IT Assistant - G.5 ⁵	0	0	0	0	0	0
Project posts with limited duration						
(MedProgramme) Programme Assistant - (CU) - G.5 ⁸				61,606	63,146	124,752
(MedProgramme) Finance and Budget Assistant - (CU) - G.5 ⁷				0	0	0
Total General Service Staff	277,880	293,162	571,042	362,099	371,151	733,250
TOTAL POSTS	2,079,619	2,355,288	4,434,907	2,455,152	2,495,599	4,950,751
Operational and other Activities Costs						
Travel on Official Business	80,000	80,000	160,000	64,750	64,751	129,501
Other Office costs ²	55,000	55,000	110,000	10,000	15,000	25,000
Total Operational and other Activities Costs	135,000	135,000	270,000	74,750	79,751	154,501
TOTAL Posts and Operational and other Activities Costs	2,214,619	2,490,288	4,704,907	2,529,902	2,575,350	5,105,252

(1) Post is covered by the Programme Support Costs.

(2) Allocation for MAP staff training, ICT services and MAP Office contingency plan development, and expenses to UNEP HQ on maintainance of the MAP website. Any unspent budget balances to be utilized for Activities.

(3) 1.5% annual increase for P-Staff salaries costs and 2.5% annual increase for G-Staff salaries costs in 2024 and 2025.

(4) Post to be funded by external resources or secondment.

(5) Post to be funded by external resources if mobilized.

(6) Post to be funded by CAL and in the future biennia by CAL and OTA. It will not be subject to funding through the MTF.

(7) Post to be covered by Programme Support Costs and project funding (GEF) and subject to availability of funds from both sources.

(8) The budget for this post is part of the total commitment to Medprogramme at the level of 200,000 USD per biennium. The corresponding activity budget has been reduced accordingly. The funding of this post from the MTF will end on 31 December 2025.

Table 4b. Details of Salaries and Administrative Costs (REMPEC)

REMPEC	Approved Budget 2022-2023 (in €)			Proposed Budget 2024-2025 (in €)		
	2022	2023	Total 2022-2023	2024	2025	Total 2024-2025
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff ⁽³⁾						
Head of Office P.4	175,202	176,954	352,156	179,608		179,608
Head of Office P.5 ⁽⁴⁾					182,302	182,302
Programme Officer (Prevention) P.3	133,903	135,242	269,145	137,270	139,329	276,599
Programme Officer (OPRC) P.3	139,640	141,036	280,676	143,152	145,299	288,451
Associate Professional Officer (APO) ⁽¹⁾	0	0	0	0	0	0
Total Professional Staff	448,745	453,232	901,977	460,030	466,930	926,960
General Service Staff ⁽³⁾						
Administrative/Financial Assistant - G7 ⁽²⁾	29,716	29,716	59,432	44,401	45,067	89,468
Assistant to the Director - G.7	43,131	43,131	86,262	49,312	50,052	99,364
Secretary - G.5	31,136	31,136	62,272	43,275	43,924	87,199
Total General Service Staff	103,983	103,983	207,966	136,988	139,043	276,031
TOTAL POSTS	552,728	557,215	1,109,943	597,018	605,973	1,202,991
Other Administrative Costs						
Travel on Official Business	25,000	25,000	50,000	25,000	25,000	50,000
Office costs	53,075	59,492	112,567	53,075	59,492	112,567
Total Other Administrative Costs	78,075	84,492	162,567	78,075	84,492	162,567
TOTAL POST AND OTHER ADMINISTRATIVE COSTS	630,803	641,707	1,272,510	675,093	690,465	1,365,558

(1) This post will be covered by the relevant International Maritime Organization Member State in the framework of the IMO Associate Professional Officer (APO) programme.

(2) This post is partially covered by IMO contribution (Euro 13,000 per annum) paid from IMO’s share of Project Support Costs.

(3) 1.5% annual increase for P-Staff. G-Staff salaries costs in 2024 and 2025 reflect the 2023 Local Salary Survey with an increase of 1.5% annually.

(4) The difference of EUR 55,713 of the costs between the Head of Office at P4 and P5 level in 2025 to be financed through other sources of funding.

Programme 1. Towards a Pollution and Litter Free Mediterranean Sea and Coast Embracing Circular Economy											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 1.1. Strategies and Action plan addressing marine litter and plastics developed and implemented through comprehensive, coherent and collaborative approaches						43,000 €	60,000 €	103,000 €	294,600 €	0 €	
1.1.1. Undertake national, subregional, regional actions to boost the implementation of the Marine Litter Regional Plan in the Mediterranean (In-house expertise, consultancy, SSFA, regional/sub-regional meetings, regional platform, pilots and national capacity building)	MED POL	SCP/RAC	a) EU funded Water and Environment Support (WES) Project, EU funded EPPA, GIZ, b) UNEP GPA, OSPAR, Black Sea Commission, GPML, GFCM	COP 22 Decision 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	5.5, 5.c; 12.4; 12.5; 14.1	0 €	30,000 €	30,000 €	111,000 €	0 €	External secured funding to be provided under the Marine Litter MED Plus Project
	REMPEC, CU	MED POL	IMO, FAO, GFCM, EBRD	Prevention and Emergency Protocol - Article 4 (Contingency plans and other means of preventing and combating pollution incidents); Article 14 (Port reception facilities) Offshore Protocol - Article 12 (Garbage); Article 13 (Reception facilities, instructions and sanctions) COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 18 Decision IG.21/3 - Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets COP 18 Decision IG.21/7 - Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land Based Sources Protocol	12.4; 12.5; 14.1	3,000 €	0 €	3,000 €	61,800 €	0 €	Deliverables g, h, i expected to be supported through the Marine Litter MED Plus Project, with funds indicated under the external secured funding column.
			IMO, MEDports Association	COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 21 Decision IG.24/10 - 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							
			IMO	COP 22 Decision 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							
			IMO	COP 22 Decision IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)							
1.1.2 Capitalize pilot actions addressing marine litter within Marine Protected Areas and Mediterranean Islands (In-house expertise, consultancy, pilot actions, workshops, publications)	SCP/RAC		BeMed, SMILO	COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision 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	14.1	0 €	0 €	0 €	60,000 €	0 €	CapiMed Islands Project
1.1.3. Implement and scale up a robust policy framework to reduce and prevent plastic use (In-house expertise, consultancy, pilot actions, workshops, publications, partnership agreements)	SCP/RAC	MED POL	WWF	COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision 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	12.4; 12.5; 14.1	20,000 €	15,000 €	35,000 €	0 €	0 €	
1.1.4. Engage businesses to prevent plastic use and reduce plastic leakage (In-house expertise, consultancy, pilot actions, workshops, publications, partnership agreements)	SCP/RAC	MEDPOL	GIZ, BeMed, Savethemed, Plastic Europe	COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision 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	12.4; 12.5; 14.1	20,000 €	15,000 €	35,000 €	61,800 €	0 €	External secured funding to be provided under the Marine Litter MED Plus Project
Outcome 1.2. A holistic and efficient response to land and sea -based pollution, as a part of overall Ecosystem Approach policy for the Mediterranean, (chemicals, contaminants, eutrophication, noise, oil and emerging pollution) for a sustainable Mediterranean coastal and marine ecosystem is implemented						272,500 €	47,355 €	319,855 €	5,951,700 €	562,548 €	
1.2.1.Develop new regulatory measures in line with article 15 of the LBS Protocol for priority sectors (Consultancies, regional meeting, PhD studies)	CU, MED POL	SCP/RAC, REMPEC		COP 22 Decision IG.25/5 - Amendments to Annexes I, II and IV to the LBS Protocol COP22 Decision IG.25/8 - Regional Plans on Urban Wastewater Treatment and Sewage Sludge Management	5.5; 6.3; 12.4; 14.1	0 €	28,555 €	28,555 €	0 €	61,445 €	Complementary work to be carried out by MED POL and Plan Bleu to undertake a full analysis on existing regulatory measures, drivers analysis, and impacts on marine and coastal environment from marine renewable energies. 40,000 EUR to be allocated through the Agreement with France.
	Plan Bleu	CU, MED POL				0 €	0 €	0 €	40,000 €	20,000 €	
1.2.2 Take national and regional actions including enabling investments, to implement the adopted Regional Plans (Consultancies, in-house expertise, SSFAs, Meetings)	MED POL	CU, SPA/RAC, PAP/RAC, Plan Bleu	WES, EBRD EIB Relevant national authorities/stakeholders relevant regional partners	LBS Protocol Article 13 COP19 Decision IG.22/8 - Implementation of Updated National Action Plans (NAPs), Containing Measures and Timetables for their Implementation	5.5, 5.c; 6.5; 6.6; 6.a; 12.4; 13.1; 14.1 ; 13.2; 14.2; 14.5	110,000 €	0 €	110,000 €	214,700 €	61,700 €	Secured external resources from MedProgramme C.P 1.2 Part of external resources (70,000 EUR) secured through ECAP MED Plus Project, and (24,700 EUR) through ML MED Plus Project. 60, 000 EUR to be allocated through the Agreement with France. Remaining to be mobilised for socioeconomic part of NAPs.

Programme 1. Towards a Pollution and Litter Free Mediterranean Sea and Coast Embracing Circular Economy											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
1.2.3 Promote sustainable Desalination Sector in the Mediterranean (Consultancies, SSFAs)	MED POL	CU, Plan Bleu	GEF/MedProgramme	LBS Protocol Article 13 COP19 Decision IG.22/8 - Implementation of Updated National Action Plans (NAPs), Containing Measures and Timetables for their Implementation	6.3; 6.a; 12.4; 14.1	0 €	0 €	0 €	40,000 €	0 €	40,000 EUR secured funds from MedProgramme for 2 SSFAs for deliverable (a)
	Plan Bleu	CU, MED POL				0 €	0 €	0 €	50,000 €	0 €	50,000 EUR to be allocated through the Agreement with France.
1.2.4 Enhance the implementation of MED POL reporting tools developed to assess pollution loads from land based sources and activities (Consultancies, in-house expertise, SSFAs, Regional meeting)	MED POL	InfoRAC	UNECE, EEA	LBS Protocol Article 13 and Article 8.	9.4; 12.4; 14.1	50,000 €	0 €	50,000 €	20,000 €	130,000 €	MTF funds covering costs of NBB national consultants. NBB Meeting jointly held with NAP Meeting under activity 1.2.2. 20,000 EUR to be allocated through the Agreement with France.
1.2.5 Undertake national and regional action to enhance the implementation of the Dumping Protocol (In-house expertise, regional meeting)	MED POL	CU	LC/LP, IMO, IMPEL	COP 22 Decision 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 COP 20 Decision IG.23/12 - Updated Guidelines on Management of Dredged Materials	5.5; 12.4; 14.1	15,000 €	0 €	15,000 €	0 €	50,000 €	If external resources are secured, the regional meeting will be held in -person.
1.2.6.Undertake pilot actions to prevent, eliminate and dispose in a environmentally sound manner obsolete chemicals. (Consultancies, SSFAs, Meetings, Implementation Contracts)	MED POL (MedProgram me)	CU	GEF/MedProgramme	Hazardous Waste Protocol	5.5; 12.4; 14.1; 12.6; 12.a	0 €	0 €	0 €	5,537,000 €	0 €	External resources secured from GEF MedProgramme
1.2.7. Implement strategies for the prevention of toxic chemicals, including policy support (In-house expertise, consultancy, meetings)	SCP/RAC	MEDPOL	BRS Secretariat, MedProgramme	LBS Protocol	12.4; 14.1	0 €	0 €	0 €	50,000 €	0 €	External resources secured from GEF MedProgramme Phase 2 (B&H and Montenegro - tbc)
1.2.8. Increase access to information on toxic chemicals, in particular newly listed POPs and health impact (In-house expertise, consultancy, national trainings, public webinars, awareness raising)	SCP/RAC	MEDPOL	Health authorities BRS Secretariat	LBS Protocol COP 22 Decision 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	12.4	15,000 €	5,000 €	20,000 €	0 €	40,000 €	Non secured external resources expected to be mobilised through the beInplastics Project
1.2.9. Improve follow-up of pollution events and enhance level of enforcement and the prosecution of discharge offenders (In-house expertise, conference services, venue, travel arrangements, regional meeting, technical country support)	REMPEC	CU	IMO, UNODC, INTERPOL, CBSS (ENPRO), OSPAR (NSN), Bonn Agreement, HELCOM, RAMOGE Agreement, Cedre, UPGM	Prevention and Emergency Protocol - Article 4 (Contingency plans and other means of preventing and combating pollution incidents) COP 18 Decision IG.21/9 - Establishment of a Mediterranean Network of Law Enforcement Officials relating to MARPOL within the framework of the Barcelona Convention COP 22 Decision IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	5.5; 12.4; 14.1	62,500 €	0 €	62,500 €	0 €	21,500 €	MTF funds to support deliverable (a), for 6th Meeting of MENELAS in Q1 2025 and part of deliverable (b). External resources to be mobilised for the comprehensive legal analysis for the regional "Blue Fund" and deliverable c
1.2.10. Strengthen the capacity of individual coastal states to respond efficiently to marine pollution incidents (In-house expertise, consultancy, national workshops, sub-regional workshops, training, exercises and meetings, sub-regional Cooperation Agreements)	REMPEC	CU	IMO, IPIECA, EMSA, MOIG	Prevention and Emergency Protocol - Article 4 (Contingency plans and other means of preventing and combating pollution incidents); Article 6 (Cooperation in recovery operations); Article 8 (Communication of information and reports concerning pollution incidents); Article 11 (Emergency measures on board ships, on offshore installations and in ports); Article 12 (Assistance) Offshore Protocol - Article 16 (Contingency planning); Article 17 (Notification); Article 18 (Mutual assistance in case of emergency) COP 8 Decision IG 3/5 (Appendix II) - Mediterranean Assistance Unit for combating accidental marine pollution COP 20 Decision IG.23/11: Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents COP 22 Decision IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	5.5; 12.4; 14.1	20,000 €	13,800 €	33,800 €	0 €	177,903 €	MTF support implementation of deliverable (d) (MAU) and deliverable (f) (National Preparedness Systems). All other deliverables will be carried out upon mobilisation of funds indicated as external non-secured funding.
			RAMOGE, IOPC Funds, ITOPF, Cedre, IPIECA, Sea Alarm, MONGOOS								
			IOPC Funds, ITOPF, Cedre, IPIECA, Sea Alarm, MONGOOS								
			IMO, EMSA, IPIECA, MOIG								
			IMO, IOPC Funds, IPIECA, ITOPF, Cedre, ISPRA,								
			IMO								
		CU, INFO/RAC	IMO								
SPA/RAC	Sea Alarm, EUROWA, ISPRA, CEDRE										

Programme 1. Towards a Pollution and Litter Free Mediterranean Sea and Coast Embracing Circular Economy											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
					MTS Programme 1	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	
					CU	0 €	28,555 €	28,555 €	0 €	61,445 €	
					MED POL	175,000 €	30,000 €	205,000 €	5,922,700 €	241,700 €	
					REMPEC	145,500 €	31,800 €	177,300 €	61,800 €	454,403 €	
					Plan Bleu	10,000 €	10,000 €	20,000 €	140,000 €	207,000 €	
					SPA/RAC	0 €	0 €	0 €	0 €	0 €	
					PAP/RAC	0 €	0 €	0 €	0 €	0 €	
					INFO/RAC	0 €	0 €	0 €	0 €	0 €	
					SCP/RAC	123,000 €	75,000 €	198,000 €	736,176 €	1,775,624 €	
					TOTAL	453,500 €	175,355 €	628,855 €	6,860,676 €	2,740,172 €	
											0 €
					Outcomes	453,500 €	175,355 €	628,855 €	6,860,676 €	2,740,172 €	
					Outputs	453,500 €	175,355 €	628,855 €	6,860,676 €	2,740,172 €	

Programme 2. Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 2.1. Ecosystem resilience improved through restoration of those with best regeneration potential						65,000 €	35,000 €	100,000 €	80,000 €	2,350,000 €	
2.1.1. Promote the implementation of the UN Decade on Ecosystem Restoration in the Mediterranean: Identify innovative actions, capitalize and promote replication (In-house expertise, consultancy, online meetings, in person workshops, external services)	SPA/RAC	CU, Plan Bleu, PAP/RAC and other Components as relevant	Action Plan Partners; H2020 Waterlands, Feu Vert, EuroMed Dialogue 4 Nature	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) Article 4,11,12,20 of SPA/BD Protocol	14.2; 14.4; 14.5	55,000 €	25,000 €	80,000 €	0 €	350,000 €	
	SPA/RAC	CU and other Components as relevant	Action Plan Partners, relevant Project	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) Article 4,11,12,20 of SPA/BD Protocol	14.2; 14.4; 14.5						
	SPA/RAC	CU, PAP/RAC, Plan Bleu	UNEP, GRID-ARENDAL, MedWet, Tour du Valat, H2020 Waterlands, Feu Vert,	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) Article 4,11,12,20 of SPA/BD Protocol	14.2; 14.4; 14.5						
	Plan Bleu	CU, SPA/RAC, PAP/RAC			14.2; 14.4; 14.5	10,000 €	10,000 €	20,000 €	80,000 €	0 €	Secured external resources through the EU-funded Waterlands (80,000 EUR)
	CU, Plan Bleu		UNEP, FAO, REDD+	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	15.1, 15.2	0 €	0 €	0 €	0 €	2,000,000 €	Non-secured external funds expected to be mobilised through a project by UNEP HQ.
Outcome 2.2. Comprehensive, coherent Mediterranean network of well-managed MPAs and OECMs in place, expanded, effective and sustainable						20,000 €	80,000 €	100,000 €	474,035 €	670,000 €	
2.2.1. Support the Contracting Parties in protecting and conserving the Mediterranean Sea through well-connected, ecologically representative and effective systems of marine and coastal protected areas and other effective area-based conservation measures (in-house expertise, consultancy, external services, national and regional meetings, field surveys, national and regional trainings/workshops, exchange visits, conferences, financial support to countries)	SPA/RAC	CU	ACCOBAMS, GFCM, IUCN Med, MedPAN, WWF	COP 21 Decision IG.24/6 - Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance COP 22 Decision 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	5.5; 14.2;14.5; 15.1	0 €	0 €	0 €	0 €	150,000 €	Non-secured external resources expected to be mobilised through the Post-2020 SAP BIO Concept Notes
	SPA/RAC	CU	ACCOBAMS, GFCM, IUCN Med, MedPAN, WWF	COP 21 Decision IG.24/6 - Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance COP 22 Decision 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	5.5; 14.2;14.5; 15.1	0 €	0 €	0 €	0 €	20,000 €	
	SPA/RAC, Respective Contracting Parties	CU	Relevant national authorities, relevant regional partners	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision 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	5.5 14.2;14.5; 15.1	0 €	0 €	0 €	184,000 €	0 €	Secured external resources from EU funded SEMPA Project (139,000 EUR) Secured external resources from GEF-funded MEDProgramme CP 3.1 related to Garah island management plan
	SPA/RAC, Respective Contracting Parties	CU	Relevant national authorities, relevant regional partners	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision 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	5.5 14.2;14.5; 15.1	0 €	0 €	0 €	130,000 €	0 €	Secured external resources from EU funded SEMPA Project (120,000 EUR) Secured external resources through GEF-funded MedProgramme CP 3.1 related to Garah island management plan
	SPA/RAC, Respective Contracting Parties	CU	Relevant national authorities, relevant regional partners	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision 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	5.5 14.2;14.5; 15.1	0 €	0 €	0 €	14,475 €	0 €	Secured external resources from EU funded SEMPA Project (14,475 EUR)

Programme 2. Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity												
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments	
	SPA/RAC	CU and other Components as relevant	MedPAN (co-organizer with SPA/RAC), ACCOBAMS, GFCM, IUCN Med, WWF (technical partners), host country environmental authorities, local partners.	COP 22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision 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	5.5; 14.2;14.5; 15.1	0 €	0 €	0 €	74,160 €	0 €	Secured external resources from EU funded SEMPA Project (74,160 EUR)	
	SPA/RAC, Respective Contracting Parties	CU, REMPEC, PAP/RAC	FAO, GFCM, IMO and other relevant organisations	COP22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision 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	5.5; 14.2;14.5; 15.0	0 €	0 €	0 €	10,000 €	0 €	Secured external resources through GEF-funded MedProgramme CP 3.1 related to capacity building on identification, recognition and reporting of OECMs in Libya	
	SPA/RAC	CU, Plan Bleu	Relevant national authorities/stakeholders, relevant regional partners	COP 22 Decision IG.25/11 - 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.25/12 - 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; Decision 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 COP 21 Decision IG.24/7 - Strategies and Action Plans under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, including the SAP BIO, the Strategy on Monk Seal, and the Action Plans concerning Marine Turtles, Cartilaginous Fishes and Marine Vegetation; Classification of Benthic Marine Habitat Types for the Mediterranean Region, and Reference List of Marine and Coastal Habitat Types in the Mediterranean COP 20 Decision 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 - Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria; Decision 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 COP 18 Decision IG.21/3 - Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets / Decision 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 COP 17 Decision IG.20/4 - Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap	5.5; 13.2; 14.2; 14.4	0 €	0 €	0 €	61,400 €	0 €	Secured external resources mobilised through EU funded EcAp MED Plus (61,400 EUR) for further elaborated and upgraded Programmes of Measures (Pomp) and National Action Plans (NAPs)	
2.2.2. Ensure effective SPAMI management and evaluation (In-house expertise, consultancy, external services, field trips, exchange visits)	SPA/RAC	CU	SPA/BD Focal Points, SPAMI managers	COP 22 Decision 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	5.5; Targets of SDG 14 and 15	20,000 €	80,000 €	100,000 €	0 €	500,000 €	Part of the non-secured external resources expected to be mobilised through the Post-2020 SAP BIO Concept Notes	
	SPA/RAC	CU and other Components as relevant	SPAMI managers, SPA/BD Focal Points, SPAMI stakeholders, CSOs and the private sector	COP 22 Decision 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	5.5, All SDG 14 Targets							
	SPA/RAC	CU and other Components as relevant	SPAMI managers, SPA/BD Focal Points, CSOs and the private sector	COP 22 Decision 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	5.5; All SDG 14 Targets							
	SPA/RAC	CU, PAP/RAC, Plan Bleu, SCP/RAC, and other Components as relevant	SPAMI managers, SPA/BD Focal Points, SPAMI stakeholders, CSOs and the private sector	COP 22 Decision 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	All SDG 14 Targets							
	SPA/RAC	CU and other Components as relevant	SPA/BD Focal Points, relevant national authorities, IMO, GFCM, FAO, ACCOBAMS	COP 22 Decision 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	All SDG 14 Targets							
	SPA/RAC	CU and other Components as relevant	SPAMI managers, SPA/BD Focal Points, SPAMI stakeholders	COP 22 Decision 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	All SDG 14 Targets							

Programme 2. Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity												
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments	
Outcome 2.3. Mediterranean endangered and threatened species and key habitats in favourable status of conservation						151,197 €	112,000 €	263,197 €	430,000 €	302,000 €		
2.3.1. Implement regional and national actions to boost the implementation of the Action Plans on marine key habitats (In-house expertise, consultancy, online meetings, external services, online and in person workshops at national and regional levels)	SPA/RAC	CU and other Components as relevant	National experts and organizations, NGOs, SPA/BD Focal Points, Action Plans Partners; relevant partners such as GFCM	COP 19 Decision 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", COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	14.1; 14.2; 14.4; 14.6	37,000 €	25,000 €	62,000 €	50,000 €	0 €	Secured external resources to be allocated through the Agreement with France	
	SPA/RAC			COP 22 Decision 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 COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	14.1; 14.2; 14.4; 14.6							
	SPA/RAC			COP 22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision 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 COP 22 Decision 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 COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	14.1; 14.2; 14.4; 14.6							
	SPA/RAC			COP 22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	14.1; 14.2; 14.4; 14.6							
2.3.2. Effectively implement the updated regional Strategy and Action Plans for the practices conservation of threatened and endangered species and share related best (In-house expertise, consultancy, training awareness raising)	SPA/RAC	CU and other Components as relevant	National experts and organizations, NGOs, SPA/BD Focal Points, Action Plans Partners; BlueSeeds BirdLife Europe and Central Asia, GFCM, ACCOBAMS, IUCN Med, MEDASSET, WWF, Medpan, DEKAMER, ARCHELON,	COP Decisions on Species Action Plans (Monk Seal Action Plan; Action Plan for the Conservation of Mediterranean Marine Turtles; Action Plan for the Conservation of Cetaceans in the Mediterranean Sea; Action Plan for the Conservation of Bird Species inventoried in the annex II of the SPA Protocol; Action Plan on Cartilaginous Fishes in the Mediterranean Sea; Action Plan on Introduction of Species and Invasive Species in the Mediterranean Sea; Action Plan on Coralligenous & other Calcareous Bio-concretions in the Mediterranean) COP 15 Decision IG.17/6: Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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; Decision 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	14.2; 14.4; 14.5	30,000 €	15,000 €	45,000 €	50,000 €	222,000 €	Secured external resources through the GEF-funded Fish EBM and Monk Seal Project. Part of the non-secured external resources expected to be mobilised through the Post-2020 SAP BIO Concept Notes	
	SPA/RAC	CU, Plan Bleu	Action Plans Partners, IUCN-Med,									
	SPA/RAC	Plan Bleu										
	CU, SPA/RAC		GFCM and GEF FishEBM Med partners and beneficiary countries		COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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	5.5; 14.1; 14.2; 14.4; 14.5	0 €	0 €	0 €	330,000 €	0 €	Secured external resources through the GEF-funded Fish EBM Project (217,000 for del.(h) and 113,000 for del. (i))

Programme 2. Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity																				
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments									
2.3.3. Implement conservation measures and share best practices related to threatened and endangered species listed in Annex II to SPA/BD Protocol (In-house expertise, consultancy, training awareness raising)	SPA/RAC	CU and other Components as relevant	National experts and organizations, NGOs, SPA/BD Focal Points, Action Plans Partners; BlueSeeds BirdLife Europe and Central Asia, GFCM, ACCOBAMS, IUCN Med, MEDASSET, WWF, Medpan, DEKAMER, ARCHELON,	COP Decisions on Species Action Plans (Action Plan for the management of the Monk Seal in the Mediterranean, regional Strategy for the conservation of the Monk Seal in the Mediterranean ; Action Plan for the Conservation of Marine Turtles; Action Plan for the Conservation of Cetaceans in the Mediterranean Sea; Action Plan for the Conservation of Bird Species inventoried in the annex II of the SPA/DB Protocol; Action Plan on Cartilaginous Fishes in the Mediterranean Sea; Action Plan on Introduction of Species and Invasive Species in the Mediterranean Sea; Action Plan on Coralligenous & other Calcareous Bio -concretions in the Mediterranean)	14.2; 14.4; 14.5	22,197 €	22,000 €	44,197 €	0 €	80,000 €										
				COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision IG.25/13 - Action Plans for the conservation of species and habitats under the SPA/DB Protocol; Decision 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	14.2; 14.4; 14.5															
	SPA/RAC	Plan Bleu and other Components as relevant	GFCM	COP 23 Decision IG.26/4 - Amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean	14.2; 14.4; 14.5	30,000 €	30,000 €	60,000 €	0 €	0 €										
	Plan Bleu	SPA/RAC and other Components as relevant	GFCM	COP 23 Decision IG.26/4 - Amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean	14.2; 14.4; 14.5	20,000 €	20,000 €	40,000 €	0 €	0 €										
2.3.4 Evaluation of the approach of regional action plans for selected species and habitats adopted under the SPA/BD Protocol, in the light of the New Global Biodiversity Framework and the EcAp/IMAP process of the Barcelona Convention (In-house expertise, consultancy, online Meetings)	SPA/RAC	CU and other Components as relevant		COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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	14.2	12,000 €	0 €	12,000 €	0 €	0 €										
Outcome 2.4. Non -indigenous species introductions minimized and introduction pathways under control						12,500 €	27,856 €	40,356 €	200,000 €	191,144 €										
2.4.1. Update and implement the regional action plan on Non Indigenous Species (NIS) and species introductions, as well as targeted measures of the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027) (In-house expertise, consultancy, conference services, venue, travel arrangements, regional meetings and events, national capacities building, data collection)	SPA/RAC	CU, REMPEC	Concerned CPs	Article 13 of the SPA/BD Protocol COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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 COP 19 Decision 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" COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment	14.1; 14.2; 14.4; 14.6	0 €	0 €	0 €	200,000 €	145,000 €	Secured external resources through the GEF-funded Fish EBM Project Non-secured external resources expected to be mobilised through the Post-2020 SAP BIO Concept Notes									
	SPA/RAC	CU, REMPEC	Relevant CPs	Article 13 of the SPA/BD Protocol COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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; Decision 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 COP 19 Decision 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" COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment	14.1; 14.2; 14.4; 14.6															
	SPA/RAC	CU, INFO/RAC	CPs and relevant national & regional scientific partners	Article 13 of the SPA/BD Protocol COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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 COP 19 Decision 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" COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment	14.1; 14.2; 14.4; 14.6															

Footnotes:

(1) The Secretariat has collaborated with UNEP for the preparation of a project for the Mediterranean.

Programme 3. Towards a Climate Resilient Mediterranean											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 3.1. Legal, policy and institutional framework strengthened at the regional and national level to efficiently address climate change related challenges (flooding, erosion, land degradation, pollution, disasters etc.)						0 €	0 €	0 €	160,000 €	210,000 €	
3.1.1. Mainstream adaptation to climate change into local ICZM plans (In-house expertise, consultancy, online and in person training workshops, online meetings, external services)	PAP/RAC	CU, Plan Bleu	Participating CPs and their relevant authorities and institutions, GWP-Med	Art. 5, 22 and 23 of the ICZM Protocol ; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	Targets of SDGs 5 , 11 and 13	0 €	0 €	0 €	20,000 €	0 €	Secured external resources through the GEF-funded SCCF Project
	CU, SPA/RAC		GFCM and GEF FishEBM Med partners and beneficiary countries	COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment; COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria ; COP 22 Decision IG.25/11 - Post-2020 SAPBIO and Decision 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	5.5; 13.2; 13.b	0 €	0 €	0 €	0	210,000 €	Non-secured external funds expected to be mobilised through a project by UNEP HQ.
	SPA/RAC					0 €	0 €	0 €	140,000 €	0 €	Secured external resources through the GEF-funded Fish EBM Project.
Outcome 3.2. Nature-based, technical solutions promoting prevention or reduction of the impact of climate change on coastal and marine ecosystems and increase resilience to climatic variability and change						78,000 €	51,857 €	129,857 €	362,500 €	330,000 €	
3.2.1. Mainstream nature-based solutions into regional policies implementation, including for adaptation and mitigation to climate change, disaster risk reduction and sustainable development/ green economy. (In-house expertise, consultancy, online and in person workshops and meetings)	SPA/RAC	CU, PB/RAC, PAP/RAC	IUCN-Med and other relevant organisations	COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision 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	14.1; 14.2; 14.4; 14.6	10,000 €	0 €	10,000 €	40,000 €	15,000 €	40,000 EUR to be allocated through the Agreement with France
	CU, Plan Bleu	SPA/RAC	UNEP, FAO, REDD+			0 €	0 €	0 €	45,000 €	165,000 €	Non-secured external funds expected to be mobilised through a project by UNEP HQ. 45,000 EUR to be allocated through the Agreement with France.
	PAP/RAC	SPA/RAC, PB/RAC	MedECC	Art. 5, 22 and 23 of the ICZM Protocol ; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	SDG 13 Targets	30,000 €	0 €	30,000 €	5,500 €	0 €	Secured external resources through the GEF-funded MedProgramme CP 2.1 for final conference
	Plan Bleu	SPA/RAC	Dialogue4Nature	COP22 Decision IG25/11 - Post-2020 SAPBIO and Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027	14.1; 14.2; 14.4; 14.6	24,000 €	24,000 €	48,000 €	192,000 €	0 €	
	CU	All MAP Components	UfM, PRIMA, MedECC, UNFCCC	COP 19 Decision IG. 22/6 - Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas	SDG 13 Targets	0 €	0 €	0 €	0 €	50,000 €	
	CU	All MAP Components		COP 19 Decision IG. 22/6 - Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas	SDG 13 Targets	0 €	0 €	0 €	0 €	100,000 €	
3.2.2. Mobilise and implement innovative solutions to reduce GHG emissions from ships in selected ports, including through energy efficiency and decarbonisation (In-house expertise, consultancy, national and regional workshops / capacity building)	REMPEC	CU, SCP/RAC, Plan Bleu	IMO, UNDP, EMSA, UfM, WestMed Initiative, EUSAIR, MTCC Africa	Prevention and Emergency Protocol - Article 4 (Contingency plans and other means of preventing and combating pollution incidents); Article 14 (Port reception facilities) COP 19 Decision IG.22/6 - Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas COP 22 Decision IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	13.1; 13.2	14,000 €	27,857 €	41,857 €	80,000 €	0 €	MTF will support del. (a). 80,000 EUR to be allocated through the Agreement with France.
Outcome 3.3. Better understanding and knowledge of climate change and its impacts on environment and development						25,000 €	30,000 €	55,000 €	140,000 €	200,000 €	
3.3.1. Develop and provide policy recommendations to address thematic impacts of climate change (In-house expertise, workshops, publication, translation)	Plan Bleu	INFO/RAC, Other relevant MAP Components	MedECC, PAP RAC, UfM, MASE, ADEME, Govt of Monaco	COP22 Decision IG.25/4 - Assessment studies	13.1; 13.2; 13.3	25,000 €	30,000 €	55,000 €	140,000 €	200,000 €	Secured external resources by Monaco (40,000 EUR). 100,000 EUR to be allocated through the Agreement with France.

Programme 3. Towards a Climate Resilient Mediterranean											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 3.4. Mitigation of Climate Change progressed through Circular Economy, increased resource efficiency and carbon neutrality business strategies						10,000 €	4,000 €	14,000 €	60,000 €	150,000 €	
3.4.1. Demonstrate mitigation and nature regeneration potential of Circular Economy business models, facilitating innovative solutions and engage with private and public stakeholders (In-house expertise, consultancy, reports, decision support tool)	SCP/RAC		Just2CE Partners	COP 22 Decision 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	12.13	10,000 €	4,000 €	14,000 €	60,000 €	150,000 €	Secured external resources through the Just2CE project. Additional resources to be mobilised.
						113,000 €	85,857 €	198,857 €	722,500 €	890,000 €	
Footnotes											
(1) The Coordinating Unit will associate, as appropriate, in these deliverables (3.1.1 (b), 3.2.1 (a) and (f)), the newly established CC/RAC. (2) The Secretariat has collaborated with UNEP for the preparation of a project for the Mediterranean.											
					MTS Programme 3	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	
					CU	0 €	0 €	0 €	45,000 €	525,000 €	
					MED POL	0 €	0 €	0 €	0 €	0 €	
					REMPEC	14,000 €	27,857 €	41,857 €	80,000 €	0 €	
					Plan Bleu	49,000 €	54,000 €	103,000 €	332,000 €	200,000 €	
					SPA/RAC	10,000 €	0 €	10,000 €	180,000 €	15,000 €	
					PAP/RAC	30,000 €	0 €	30,000 €	25,500 €	0 €	
					INFO/RAC	0 €	0 €	0 €	0 €	0 €	
					SCP/RAC	10,000 €	4,000 €	14,000 €	60,000 €	150,000 €	
					TOTAL	113,000 €	85,857 €	198,857 €	722,500 €	890,000 €	
					Outcomes	113,000 €	85,857 €	198,857 €	722,500 €	890,000 €	
					Outputs	113,000 €	85,857 €	198,857 €	722,500 €	890,000 €	

Programme 4. Towards the Sustainable Use of Coastal and Marine Resources Including Circular and Blue Economy											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 4.1. Sustainability of coastal and marine resources achieved through the synergetic implementation of planning and management approaches, including the adequate consideration of Land-Sea Interactions (LSI)						130,000 €	80,916 €	210,916 €	1,152,800 €	285,000 €	
4.1.1. Prepare National ICZM strategies (Workshop, in-house expertise, consultancy)	PAP/RAC	Plan Bleu	Participating CPs, GWP-Med, UNESCO-IHP	Art. 18 of the ICZM Protocol; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	All SDGs, as appropriate	25,000 €	25,000 €	50,000 €	447,600 €	100,000 €	Secured external resources through GEF-funded MedProgramme: 245,000 (PAP/RAC) and 202,600 (Plan Bleu) EUR 100,000 to be mobilized for deliverable d)
4.1.2. Implement CAMP Projects (In-house expertise, consultancy, online and in person training, workshops and meetings, external services)	PAP/RAC	All MAP Components	Participating CPs	Art. 18 of the ICZM Protocol; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	All SDGs, as appropriate	50,000 €	10,000 €	60,000 €	0 €	25,000 €	
4.1.3. Prepare ICZM or coastal plans (In-house expertise, consultancy, online and in person workshops, external services))	PAP/RAC	Plan Bleu	Participating CPs, GWP-Med, UNESCO-IHP	Art. 18 of the ICZM Protocol; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	All SDGs, as appropriate	0 €	0 €	0 €	382,600 €	0 €	Secured external resources through GEF-funded MedProgramme: 180,000 (PAP/RAC) and 202,600 (Plan Bleu)
4.1.4. Assist CPs in implementing MSP (In-house expertise, consultancy, online and in person meetings, external services)	PAP/RAC	All MAP Components	Participating CPs, IOC-Unesco	Art. 3, 6 and 9 of the ICZM Protocol; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	Targets of SDGs 8, 9, 10, 12, 13, 14 and 15	55,000 €	45,916 €	100,916 €	0 €	0 €	
4.1.5. Update methodological guidance for reaching GES through ICZM (In-house expertise, meetings)	PAP/RAC	All MAP Components	CPs	COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	All SDGs, as appropriate	0 €	0 €	0 €	0 €	160,000 €	
4.1.6. Update methodological guidance for the preparation of coastal plans (In-house expertise, consultancy, online and in person meetings, external services)	PAP/RAC	CU, Plan Bleu	CPs	Art. 18 of the ICZM Protocol; COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	All SDGs, as appropriate	0 €	0 €	0 €	242,600 €	0 €	Secured external resources through GEF-funded MedProgramme: 40,000 (PAP/RAC) and 202,600 (Plan Bleu)
4.1.7. Analyse key barriers and levers for improving marine policies coherence (In-house expertise, consultancy, online and in person training, workshop and meetings, external services)	PAP/RAC	SPA/RAC	MSP4BIO project partners (CEREMA, WWF, HELCOM, VLIZ, SYKE, UAC, NMRD, SEASCAPE)	Art. 3, 6, 9 and 10 of the ICZM Protocol	5.5, and Targets of SDG 8, 9, 10, 12, 13, 14 and 15	0 €	0 €	0 €	80,000 €	0 €	Secured external resources through the EU Horizon Europe project MSP4BIO
Outcome 4.2. Sustainable Blue and Green Economy tools and approaches in the context of Sustainable Development and MSSD implementation						71,908 €	51,000 €	122,908 €	614,000 €	355,000 €	
4.2.1. Promote sustainable and resilient tourism in the Mediterranean Region (workshop, in-house expertise, consultancy, publication, translation)	Plan Bleu	CU, MED POL, SCP/RAC, PAP/RAC	EuroMed Community4Tourism	COP 22 Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027	8.9; 12.4; 14.2	18,908 €	18,000 €	36,908 €	180,000 €	0 €	
4.2.2. Demonstrate the impact of Green and Circular Economy entrepreneurship in delivering social, economic and environmental value (in-house expertise)	SCP/RAC		Sustainable Businesses, Impact Assessment experts	COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision 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	5.5; 5.a; 8; 12	0 €	0 €	0 €	0 €	30,000 €	
	Plan Bleu	SCP/RAC		COP 22 Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027	5.5; 6.3; 12.4; 14.1	0 €	0 €	0 €	0 €	100,000 €	Non-secured external resources expected to be mobilised for port certification and greening, through partnership with MedPorts and PLIFF

[illegible]

Programme 4. Towards the Sustainable Use of Coastal and Marine Resources Including Circular and Blue Economy											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
					MTS Programme 4	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	
					CU	0 €	0 €	0 €	0 €	0 €	
					MED POL	0 €	0 €	0 €	0 €	0 €	
					REMPEC	12,500 €	54,506 €	67,006 €	0 €	45,753 €	
					Plan Bleu	43,908 €	43,000 €	86,908 €	180,000 €	190,000 €	
					SPA/RAC	0 €	0 €	0 €	0 €	0 €	
					PAP/RAC	170,000 €	100,916 €	270,916 €	1,152,800 €	300,000 €	
					INFO/RAC	0 €	0 €	0 €	0 €	0 €	
					SCP/RAC	13,000 €	13,000 €	26,000 €	434,000 €	150,000 €	
					TOTAL	239,408 €	211,422 €	450,830 €	1,766,800 €	685,753 €	
					Outcomes	239,408 €	211,422 €	450,830 €	1,766,800 €	685,753 €	
					Outputs	239,408 €	211,422 €	450,830 €	1,766,800 €	685,753 €	

Programme 5. Governance											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 5.1. Effective Implementation and Enforcement by the Contracting Parties of the Barcelona Convention, its Protocols, MAP Policies, including Ecosystem Approach related COP decisions, the MSSD and Programmes of Measures achieved at regional and national levels						62,000 €	82,770 €	144,770 €	269,100 €	111,000 €	
5.1.1. Strengthen Contracting Parties action to comply with legally binding obligations under Barcelona Convention and its Protocols (In-house expertise, consultations, online meetings)	CU	MAP Components	Participating CPs and their relevant authorities and institutions	COP 22 Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027, Decision IG.25/2 - Compliance Committee	All SDG 14 Targets; 17.14	0 €	0 €	0 €	0 €	0 €	Non-secured external resources to be mobilised for at least 2 Workshops to support 2 Contracting Parties in preparing and submitting their National Implementation Reports through the BCRS
	CU, Compliance Committee	MAP Components	MEAs, UNEP	COP 22 Decision IG.25/2 - Compliance Committee	All SDG 14 Targets; 17.14	0 €	0 €	0 €	0 €	30,000 €	
	PAP/RAC	CU /Other MAP Components	National authorities and institutions	COP 22 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	Targets of SDG2 5, 8, 9, 11, 12, 13, 14 and 15	0 €	0 €	0 €	12,000 €	0 €	Secured external resources through the GEF-funded MedProgramme
5.1.2 Advance the implementation of Ecosystem Approach in the Mediterranean and IMAP in coherence with regional and global developments (In-house expertise, consultancy, EcAp/IMAP regional governance meetings)	CU	All MAP Components	UN Ocean Science Decade, EU MSFD, GFCM, ACCOBAMS, IUCN, IAEA, EEA, BRSC, IMO, GEF, FM, RS of UNEP, UNEP Regional Seas work on indicators, Global Assessments, OSPAR, HELCOM, Black Sea Commission	COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 17 Decision IG.20/4 - Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap COP 18 Decision IG.21/3 - Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria. COP 22 Decision IG.25/3 (Annex I)- Governance	All SDG 14 Targets; 17.14; to a lesser extent SDGs 6, 12, 13	10,000 €	20,000 €	30,000 €	0 €	30,000 €	Non secured external resources to be mobilized for revision of ECAP roadmap and IMAP.
	MED POL					0 €	0 €	0 €	85,700 €	0 €	Secured external resources mobilised through the EU-funded EcAp MED PLUS Project
	PAP/RAC					0 €	0 €	0 €	48,900 €	0 €	Secured external resources mobilised through the EU-funded EcAp MED PLUS Project
	SPA/RAC					0 €	0 €	0 €	122,500 €	0 €	Secured external resources mobilised through the EU-funded EcAp MED PLUS Project
5.1.3. Ensure Contracting Parties compliance with adopted monitoring and reporting under Barcelona Convention Protocols (In-house expertise, national assistance)	REMPEC	CU, INFO/RAC	IMO, DG ECHO, EMSA	Prevention and Emergency Protocol - Article 8 (Communication of information and reports concerning pollution incidents); Article 11 (Emergency measures on board ships, on offshore installations and in ports); Article 12 (Assistance) COP 15 Decision IG.17/5 - Governance paper COP 18 Decision IG.21/1 - Compliance Committee including renewal of members, the modification of the rules of procedure and the Programme of Work of the Compliance Committee COP 18 Decision IG.21/9 - Establishment of a Mediterranean Network of Law Enforcement Officials relating to MARPOL within the framework of the Barcelona Convention COP 22 Decision IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	All SDG 14 targets	22,000 €	16,770 €	38,770 €	0 €	11,000 €	
5.1.4. Ensure MAP Data Policy full implementation at regional and as appropriate at national levels (In-house expertise, consultancy, online meetings, in person meetings)	INFO/RAC	CU, MAP Components		COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/3 - Governance COP22 Decision IG.25/10 - MAP Data Policy	SDG 14 Targets	10,000 €	6,000 €	16,000 €	0 €	40,000 €	
5.1.5.Effective Implementation and Enforcement of Post-2020 SAPBIO (In-house expertise, consultancy, external services, online meetings, in person meetings, venue, conference services, travel arrangements)	SPA/RAC	All MAP Components	CPs (SPA/BD FPs, SAPBIO Correspondents), advisory committee members	Decision IG.25.11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	SDG 14 Targets	20,000 €	40,000 €	60,000 €	0 €	0 €	
	SPA/RAC	All MAP Components	CPs (SPA/BD FPs, SAPBIO Correspondents)	COP 22 Decision IG.25.11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	Targets of SDG 14, 13 and 17						

Programme 5. Governance											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 5.2. Systemic strengthening and effective functioning and delivery of MAP decision-making and advisory bodies ensured, and efficiency enhanced with new digital approaches						275,000 €	1,025,668 €	1,300,668 €	2,995,071 €	279,000 €	
5.2.1. Deliver successfully COP 24 of MAP Barcelona Convention (In-house expertise, Host Country Agreement, conference services, venue, side events, travel arrangements)	CU	MED POL, RACs	Egypt, the Host Country, CPs, MAP Partners	COP 15 Decision IG.17/5 - Governance paper	All SDG 14 targets; 17.14	0 €	330,000 €	330,000 €	0 €	60,000 €	External non-secured funding to be mobilized for COP 24
5.2.2. Deliver successfully the 21st Meeting of the MCSD (In-house expertise, consultancy, Host Country Agreement, conference services, venue, travel arrangements, regional meetings)	CU	Plan Bleu, SCP/RAC, and other MAP Components	Host Country, MCSD Members, MAP Partners	Decision IG.25/3 - Governance	crosscutting especially on SDGs 2, 5.5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17	70,000 €	60,000 €	130,000 €	80,000 €	20,000 €	80,000 EUR to be allocated through the Agreement with France for additional consultation meeting on the MSSD
5.2.3. Deliver successfully the main institutional meetings of MAP (Bureau, Consultation FP Meeting, MAP Focal Point, EcAp Coordination Group and Thematic/Components Focal Points). (In-house expertise, consultancy, external services, online meetings, in person meetings, venue, conference services, travel arrangements)	CU	All MAP Components	UNEP, MEA, IMO and all REMPEC's Partners, Host country authorities, MAP Partners, SPA/RAC partner organizations (observers)	COP 22 Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027	All SDG 14 targets , 17.14	67,000 €	33,000 €	100,000 €	0 €	10,000 €	
	CU	All MAP components	UNEP, MEA, IMO and all REMPEC's Partners, Host country authorities, MAP Partners, SPA/RAC partner organizations (observers)	COP 22 Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027	All SDG 14 targets , 17.14	0 €	135,000 €	135,000 €	0 €	30,000 €	
	MED POL					0 €	50,000 €	50,000 €	0 €	0 €	
	REMPEC					0 €	80,000 €	80,000 €	0 €	0 €	
	SPA/RAC					0 €	50,000 €	50,000 €	10,000 €	0 €	Secured external resources through the Marine turtle project
	PAP/RAC					0 €	40,000 €	40,000 €	0 €	0 €	
	Plan Bleu					0 €	40,000 €	40,000 €	0 €	0 €	
	INFO/RAC					0 €	40,000 €	40,000 €	0 €	0 €	
	SCP/RAC					0 €	30,668 €	30,668 €	0 €	0 €	
	CU			COP 23 Decision IG.26/12 for the establishment of a Regional Activity Centre on Climate Change	All SDG 14 targets , 17.14	20,000 €	20,000 €	40,000 €	0 €	0 €	
5.2.4. Organize Compliance Committee Meetings (In-house expertise, conference services, travel arrangements)	CU, Compliance Committee	MEDPOL, RACs	Compliance Committees under relevant MEA	COP 22 Decision IG.25/2 - Compliance Committee	All SDG 14 targets; 16.3; 17.14; to a lesser extent SDGs 6, 12, 13	47,000 €	47,000 €	94,000 €	0 €	0 €	
5.2.5. Strengthen the MAP result-based programmatic framework including gender mainstreaming and sustainability of operations (In-house expertise, consultancy, MAP Task Force meetings, regional and international meetings)	CU	MEDPOL, RACs	MEAs, MAP Partners	COP 15 Decision IG.17/5 - Governance paper COP 16 Decision IG.19/5 - Mandates of the Components of MAP COP 21 Decision IG.24/2 - Governance COP 22 Decision IG.25/1 - UNEP/MAP Medium-Term Strategy 2022-2027 [Potential COP23 Decision - Governance]	5.5; 5.a; 5.b; 5.c	28,000 €	27,000 €	55,000 €	2,620,071 €	0 €	MTF funds correspond to the MedProgramme co-financing together with the staff costs of one Assistant at G-5 level, reflected in table 4a Secured external resources for GEF-funded FishEBM management (80,000 EUR) and MedProgramme (1,205,000 EUR) Secured external resources from EU funded SEMPA Project (763,071 EUR) Secured external resources from ML MED Plus 285,000 and EcAp MED PLUS 287,000
	CU	Relevant MAP Components		COP 20 Decision IG.23/5 - Updated Resource Mobilization Strategy COP 19 Decision IG. 22/6 - Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas	SDG 13 Targets	0 €	0 €	0 €	0 €	50,000 €	
5.2.6. Establish and enhance Inter-Ministerial Coordination (IMC) frameworks at national level (In-house expertise, national assistance)	CU	MAP components	CPs in particular the beneficiaries of relevant projects	COP 15 Decision IG.17/6 - Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	All SDG 14 Targets; 17.14	0 €	0 €	0 €	0 €	0 €	
	PAP/RAC	CU	CPs, GWP Med, IHP-Unesco	COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	All SDG 14 targets	0 €	0 €	0 €	40,000 €	0 €	Secured external resources from the GEF-funded MedProgramme

Programme 5. Governance											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
5.2.7. Review the MSSD through an inclusive, participatory process (In-house expertise, consultancy, workshop, publication, translation, regional meeting)	CU, Plan Bleu	Other MAP Components	MCSD members, MAP Partners	COP 19 Decision IG.22/2 - Mediterranean Strategy for Sustainable Development 2016-2025	crosscutting especially on SDGs 2,5,5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17	0 €	0 €	0 €	0 €	89,000 €	EUR 50,000 to be mobilized for MSSD revision
	Plan Bleu, CU					43,000 €	43,000 €	86,000 €	245,000 €	20,000 €	Secured external resources (65,000 EUR) from France. 180,000 EUR to be allocated through the Agreement with France.
Outcome 5.3. Policy coherence and complementarity ensured among relevant work at global, regional and national levels and among MAP-Barcelona Convention system's policy and regulatory instruments						0 €	0 €	0 €	50,000 €	80,000 €	
5.3.1. Adapt the Simplified Peer Review Mechanism (SIMPEER) to thematic strategies (In-house expertise, online workshop, publication, translation)	CU, Plan Bleu	CU, SPA/RAC	UNDESA - HPLF, OECD, UNECA, UNECE, UNESCWA, EPLO)	COP 21 Decision IG.24/3 - Implementation, Monitoring and Mid-Term Evaluation of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean	crosscutting especially on SDGs 2, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17	0 €	0 €	0 €	0 €	80,000 €	
5.3.2. Maximize synergies with Post 2020 Global agenda for the implementation of SAP BIO (In-house expertise, online meetings, relevant international events and fora attendance)	SPA/RAC	CU, PAP/RAC, REMPEC, Plan Bleu	Relevant CPs, SCBD, FAO GFCM, UNFCCC, IUCN, IMO, UN-Oceans, UNESCO- IOC, IPBS	COP 22 Decision IG.25.11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	Targets of SDG 14 and 17	0 €	0 €	0 €	50,000 €	0 €	50,000 EUR to be allocated through the Agreement with France.
Outcome 5.4. Enhanced partnerships and multi-stakeholder engagement, including with the private sector and science policy interface						19,955 €	15,000 €	34,955 €	205,700 €	518,000 €	
5.4.1. Promote dialogue and enhanced engagement of global and regional organizations, including Conventions' Secretariats and Partners (In-house expertise, online meetings, relevant international and regional events and fora attendance)	CU	RACs, MED POL	International and regional organizations, private sector/donors, UNEP, MEAs, CPs	COP 22 Decision IG.25/3 - Governance	17.14, 17.16	0 €	0 €	0 €	50,000 €	10,000 €	Secured external resources through ML MED Plus Project to support cooperation with Black Sea Commission (EUR 50,000) EUR 10,000 to be mobilized for Secretariat Contribution to the organization of OOC-9 (del.e.)
	CU		GFCM, CBD, and International and regional seas and fisheries organisations	COP Decisions on Species Action Plans (Action Plan for the management of the Monk Seal in the Mediterranean, regional Strategy for the conservation of the Monk Seal in the Mediterranean; Action Plan for the Conservation of Marine Turtles; Action Plan for the Conservation of Cetaceans in the Mediterranean Sea; Action Plan for the Conservation of Bird Species inventoried in the annex II of the SPA/DB Protocol; Action Plan on Cartilaginous Fishes in the Mediterranean Sea; Action Plan on Introduction of Species and Invasive Species in the Mediterranean Sea; Action Plan on Coralligenous & other Calcareous Bio -concretions in the Mediterranean) COP 15 Decision IG.17/6: Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment. COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO; Decision IG.25/13 - Action Plans for the conservation of species and habitats under the SPA/DB Protocol; Decision 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	14.1; 14.2; 14.4; 14.5; 14.7	0 €	0 €	0 €	0	0 €	
	SPA/RAC					0 €	0 €	0 €	20,000 €	0 €	Secured external resources through the GEF-funded Fish EBM Project
5.4.2. Strengthen participation and contribution of civil society including MAP partners and private sector to the work of MAP BC system (In-house expertise, support attendance in MAP meetings, round tables)	CU	RACs, MEDPOL	MAP Partners, NGOs, CPs	COP 22 Decision IG.25/3 - Governance	17.6; 17.9; 17.14; 17.16; 17.17	0 €	15,000 €	15,000 €	0 €	8,000 €	
5.4.3. Strengthen SPI networks and enhance partnership with scientific institutions to support MAP Barcelona Convention system (In-house expertise, workshop, publication, translation)	Plan Bleu		Scientific institutions; UNESCO; IOC; CNR	COP 22 Decision IG.25/4 - Assessment Studies	SDG 14 Targets; SDG 17.14; 17.16; 17.17	0 €	0 €	0 €	70,700 €	0 €	Secured external resources mobilised through the EU-funded ECAP MED Plus Project
	CU	All MAP Components, IMAP Task Force				0 €	0 €	0 €	0 €	0 €	
	CU	INFO/RAC, MED POL, Plan Bleu, PAP/RAC	EEA, EIONET, ETC, H2020, DG NEAR	COP 22 Decision IG.25/4 - Assessment Studies	SDG 14 Targets; SDG 17.14; 17.16; 17.17	0 €	0 €	0 €	0 €	500,000 €	Non-secured external resources to be mobilised for the implementation of the MAP-EEA Joint Work Plan 2022-2030

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Programme 6. Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 6.1. Inclusive and participatory foresight activities conducted at regional and national and local levels, with associated capacity-building						30,000 €	15,000 €	45,000 €	165,000 €	75,000 €	
6.1.1. Support transition towards a Sustainable and Inclusive Future in the Mediterranean at 2050 – Building Back Better using strategic participatory foresight (In-house expertise, consultancy, workshop, publication, translation)	Plan Bleu	CU		COP 22 Decision IG. 25/4 - Assessment studies	crosscutting especially on SDGs 2, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17	30,000 €	15,000 €	45,000 €	165,000 €	75,000 €	100,000 to be allocated through the Agreement with France. Remaining non secured external resources to be mobilised for del. (b) and (c)
Outcome 6.2. Science-based IMAP, foresight and other assessments and assessment tools for strengthened science-policy interface and decision making (in-house expertise, consultancy, publication, toolbox, national technical support, pilots(s))						125,000 €	190,000 €	315,000 €	952,455 €	575,000 €	
6.2.1. Strengthen the implementation of national IMAP-based monitoring programmes for all clusters and deliver quality assured data (In-house expertise, SSFAs, Meetings)	CU	SPA/RAC PAP/RAC	National IMAP competent laboratories/ authorities; relevant national and international scientific institutions	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies	14.1.; 14.2; 14.4; 14.5	0 €	0 €	0 €	406,000 €	0 €	Secured external resources from EU-funded SEMPA Project
	MED POL					0 €	0 €	0 €	42,900 €	0 €	Secured external resources mobilised through the EU-funded ECAP MED PLUS Project
	SPA/RAC					0 €	0 €	0 €	36,700 €	0 €	Secured external resources mobilised through the EU-funded ECAP MED PLUS Project
	PAP/RAC					0 €	0 €	0 €	36,700 €	0 €	Secured external resources mobilised through the EU-funded ECAP MED PLUS Project
	SPA/RAC	Relevant RACs, CU	National IMAP competent laboratories/ authorities; relevant national and international scientific institutions	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies	14.1.; 14.2; 14.4; 14.5	0 €	0 €	0 €	40,000 €	20,000 €	40,000 EUR to be allocated through the Agreement with France.
	MED POL	IMAP Task Force CU, SPA/RAC	National IMAP competent laboratories/authorities; relevant national and international scientific institutions; EU MSFD technical bodies;	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies		20,000 €	20,000 €	40,000 €	90,000 €	280,000 €	Secured external resources (90,000 EUR) mobilised through ML MED Plus Project. Remaining 280,000 to be mobilised for Adriatic countries and Southern Med countries and for capacity building (del d))
	PAP/RAC	CU, IMAP Task Force	CPs and their competent institutions	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria		40,000 €	0 €	40,000 €	50,000 €	0 €	Secured external resources mobilised through the EU-funded ECAP MED PLUS Project
6.2.2. Upgrade the assessment component of IMAP including possible integrated assessment for all IMAP clusters. Focus on assessment criteria and thresholds (CI 1, 2, 6, 13, 14, 16, 17, 21, 22, 23, CCI 25) (In-house expertise, consultancies, meetings)	MED POL	IMAP Task Force, CU, SPA/RAC (g-h), INFO-RAC (g)	National IMAP competent authorities; Scientific Partners/scientific national institutions; bodies EU MSFD	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies COP 22 Decision 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	14.2; 14.a	35,000 €	100,000 €	135,000 €	85,000 €	115,000 €	Secured external resources mobilised through ML MED Plus Project (55,000 EUR) for del (g) and (j) and through ECAP MED Plus Project (30,000) for CORMON. 105,000 EUR to be mobilised for del a-d.
	SPA/RAC	CU, IMAP Task Force	National IMAP competent authorities; relevant national and international scientific institutions; EU MSFD technical bodies;	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies	14.1.; 14.2; 14.4; 14.6	30,000 €	30,000 €	60,000 €	30,630 €	80,000 €	Secured external resources mobilised through the EU-funded EcAp MED PLUS Project (30,630 EUR) for CORMON meeting
	CU, SPA/RAC	Other Component(s) as relevant	GFCM and GEF FishEBM Med partners and beneficiary countries	COP 15 Decision IG.17/6-Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO	5.5; 14.1; 14.2; 14.4; 14.5	0 €	0 €	0 €	0 €	0 €	
	PAP/RAC	CU, IMAP Task Force	CPs and their competent institutions	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	Targets of SDG 11 and 15	0 €	40,000 €	40,000 €	40,000 €	0 €	Secured external resources mobilised through the EU-funded ECAP MED PLUS Project

Programme 6. Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
6.2.3. Further develop IMAP Common Indicators (In-house expertise, consultancy, online meetings, external services, online and in person training workshops, regional and national meetings)	CU	SPA/RAC, PAP/RAC	National IMAP competent authorities; relevant national and international scientific institutions;	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG.24/4 - Assessment Studies	14.1; 14.2; 14.4; 14.7	0 €	0 €	0 €	69,525 €	0 €	Secured external resources from EU-funded SEMPA Project
	SPA/RAC	CU, IMAP Task Force	National IMAP competent authorities; relevant national and international scientific institutions; EU MSFD technical bodies;	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies	14.1; 14.2; 14.4; 14.7	0 €	0 €	0 €	0 €	50,000 €	
	PAP/RAC	CU, IMAP Task Force	CPs and their competent institutions	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	Targets of SDG 11 and 15	0 €	0 €	0 €	25,000 €	0 €	Secured external resources from GEF-funded MedProgramme
6.2.4. Review and update of the common indicators factsheets related to Biodiversity (EO1) and fisheries (EO3) (In-house expertise, online meetings)	SPA/RAC	CU, IMAP Task Force	GFCM, National IMAP competent authorities; relevant national and international scientific institutions; GFCM; EU MSFD technical bodies;	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies	14.1; 14.2; 14.4; 14.8	0 €	0 €	0 €	0 €	30,000 €	
Outcome 6.3. IMAP implementation and Environment and Development Observation provide updated and quality assured data in support of decision-making by Contracting Parties and assessment of GES.						296,300 €	207,081 €	503,381 €	662,700 €	444,575 €	
6.3.1. Strengthen national capacities to apply harmonized and standardized monitoring and assessment practices related to pollution and marine litter in line with IMAP (Consultancies, UN-UN Agreement)	MED POL	CU, IMAP Task Force	National IMAP competent authorities; Scientific Partners/IAEA /scientific national institutions; bodies EU MSFD	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 20 Decision IG.23/6 - 2017 Mediterranean Quality Status Report COP 21 Decision IG.24/4 - Assessment Studies COP 22 Decision 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	14.a	90,000 €	90,000 €	180,000 €	95,000 €	70,000 €	External secured resources (95,000 EUR / 100,000 USD) from MedProgramme/CP1.1- Component 2
6.3.2. Maintain and update InfoMap System towards a fully integration into the Knowledge Management Platform (In-house expertise, consultancy, online meetings, external services)	INFO/RAC			COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG.24/4 - Assessment Studies	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	15,000 €	6,000 €	21,000 €	0 €	40,000 €	
6.3.3. Ensure effective operation of the BCRS on line reporting system. (In-house expertise, consultancy, online meetings, external services)	INFO/RAC			COP 20 Decision IG.23/1 - Revised reporting format for the implementation of the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	15,000 €	6,000 €	21,000 €	0 €	40,000 €	
6.3.4. Ensure effective operation of the NBB reporting system. (In-house expertise, consultancy, online meetings, in person meetings, external services)	INFO/RAC	MEDPOL		LBS Protocol , SAP MED and updated NAPs	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	15,000 €	6,000 €	21,000 €	0 €	40,000 €	
6.3.5. Ensure Data Centre evolution towards a standardization of the management of the data flows (In-house expertise, consultancy, online meetings, external services)	INFO/RAC			COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG.24/4 - Assessment Studies COP22 Decision IG.25/10 - MAP Data Policy	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	15,000 €	6,000 €	21,000 €	0 €	40,000 €	

Programme 6. Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
6.3.6. Maintain and update IMAP Info System with all IMAP Common Indicators fully implemented (In-house expertise, consultancy, online meetings, in person meetings, external services)	INFO/RAC	MEPOL, PAP/RAC, SPA/RAC	Accobams, GFCM	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG.24/4 - Assessment Studies COP 22 Decision IG.25/10 - MAP Data Policy	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	20,000 €	20,000 €	40,000 €	207,700 €	10,000 €	Secured external funds mobilised through EU-funded ECAP MED PLUS Project (EUR 207,700).
6.3.7. Ensure full implementation of the InfoMAP Spatial Data Infrastructure for the geographical data and maps (InfoMAPNode) (In-house expertise, consultancy, online meetings, in person meetings, external services)	INFO/RAC	MAP Components		COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG.24/4 - Assessment Studies COP 22 Decision IG.25/10 - MAP Data Policy	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	15,000 €	6,000 €	21,000 €	0 €	40,000 €	
6.3.8. Enhance the use new INFO/RAC Cloud tools for document repository and collaboration platform (In-house expertise, consultancy, online meetings, external services)	INFO/RAC			COP 22 Decision IG.25/3 - Governance	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	8,800 €	2,581 €	11,381 €	0 €	0 €	
6.3.9. Ensure visualization of integrated data through customized Dashboards (to be integrated into the Knowledge Management Platform) (In-house expertise, consultancy, online meetings, external services)	INFO/RAC			COP 22 Decision IG.25/3 - Governance	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	15,000 €	6,000 €	21,000 €	0 €	40,000 €	
6.3.10. Undertake Copernicus data analysis/integration of Copernicus Service to support indicator and data collection and ingestion (In-house expertise, consultancy)	INFO/RAC	MAP Components	EEA	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG.24/4 - Assessment Studies COP 22 Decision IG.25/3 - Governance	Crosscutting to all SDG 14 targets, especially 14.a but also 5, 6,8,9,12,13,15	10,000 €	5,000 €	15,000 €	0 €	0 €	
6.3.11. Expand and improve the monitoring and forecasting capacities in the marine environment through integrating networks of observing and forecasting systems (oceanographic observatories) across the Mediterranean Sea (In-house expertise, consultancy, online meetings, external services, online and in person training workshops, regional and national meetings , conference arrangement)	SPA/RAC	CU, INFO/RAC, REMPEC other components as per parameter monitored	Consortium of 56 Euromediterranean Partners	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 22 Decision IG.25/11 - Post-2020 SAPBIO COP 22 Decision 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	14.1; 14.2; 14.4; 14.5	0 €	0 €	0 €	30,000 €	0 €	Secured external resources through the EU-funded ILIAD Project
6.3.12. Maintain Biodiversity databases as appropriate, regularly update databases content and elaborate an operational strategy for marine biodiversity data management, in line with the UNEP/MAP Data Management Policy (In-house expertise, consultancy, external services, online meetings, training workshops)	SPA/RAC	CU, INFO/RAC	Action Plans Partners, MedPAN network, MEDACES, ACCOBAMS, GFCM	COP 19 Decision IG.22/7 - Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria COP 21 Decision IG. 24/4 - Assessment Studies COP 22 Decision IG. 25/10 - MAP Data Policy	14.1; 14.2; 14.4; 14.5: 14.a	10,000 €	15,000 €	25,000 €	0 €	40,000 €	
	SPA/RAC										
	SPA/RAC, INFO/RAC										
	SPA/RAC, INFO/RAC										
	SPA/RAC										
6.3.13. Strengthen the MSSD and SCP Regional Action Plan monitoring framework and a regional observatory on the environment and development (In-house expertise, workshop, consultancy, translation, web services)	Plan Bleu, INFO/RAC	SCP/RAC, PAP RAC, InfoRAC	UNEP-GRID, UNIGE, GEF MedProgramme; potentially PAMEX, PLIFF and its partners, EEA	COP 19 Decision IG.22/2 - Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD) COP 22 Decision IG.25/17 - Assessment studies	crosscutting	20,000 €	30,000 €	50,000 €	290,000 €	15,000 €	Secured external resources through the EU-funded Permagov Project (200,000 EUR) and France (90,000 EUR)

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Programme 7. For Informed and Consistent Advocacy, Awareness, Education and Communication											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
Outcome 7.1. Stakeholders and policymakers properly informed about the state of the Mediterranean Sea and coast and aware of the environmental priority issues						37,500 €	52,500 €	90,000 €	337,000 €	214,000 €	
7.1.1. Disseminate knowledge of the state of the Mediterranean Sea and Coast (In-house expertise, workshop, publication, translation, web services, social media channels)	CU, INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/4 - Assessment Studies COP 21 Decision IG.24/2 - Governance	14.a	4,000 €	4,000 €	8,000 €	42,000 €	0 €	42,000 EUR to be allocated through the Agreement with France.
	Plan Bleu, INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/4 - Assessment Studies COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 13 and 14 Targets	0 €	0 €	0 €	0 €	30,000 €	
	SCP/RAC, CU	MED POL MAP Communication TF		COP 22 Decision 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	12.4; 12.5; 14.1	2,500 €	2,500 €	5,000 €	0 €	20,000 €	
7.1.2. Implement MAP Communication Strategy (In-house expertise, consultancy, online meetings)	CU	MAP Communication TF			crosscutting especially SDG 14 Targets	0 €	0 €	0 €	0 €	0 €	MTF funds required for UNEP Comms Division for the maintenance of the website
	INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
7.1.3. Position COP 24 of the Barcelona Convention as an important regional conference driving the environmental and sustainable development agenda forward (In-house expertise, consultancy, online meetings, in person meetings, external services)	CU, INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	0 €	0 €	0 €	0 €	0 €	
	INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
7.1.4. Towards a MAP Knowledge Management Strategy: develop the Regional Sea KM Platform of the MAP fully integrated in UNEP KM platform and in close dialogue with other initiative as MED Programme KM platform. (In-house expertise, consultancy, online meetings, in person meetings, external services)	INFO/RAC	MAP Communication TF, Data Management Task Force		COP 21 Decision IG.24/2 - Governance COP22 Decision IG.25/10 - MAP Data Policy	12.8	4,000 €	4,000 €	8,000 €	0 €	25,000 €	
	CU	MAP Communication TF		COP 21 Decision IG.24/2 - Governance COP22 Decision IG.25/10 - MAP Data Policy	12.8	0 €	0 €	0 €	0 €	0 €	
7.1.5. Promote Mediterranean sustainability awards to shore up advocacy efforts for a transition to sustainable urban management and circular economy in the Mediterranean (In-house expertise, Communication TF, award delivery events)	CU, INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	0 €	0 €	0 €	0 €	0 €	
	SCP/RAC	MAP Communication TF		COP 22 Decision 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 COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	0 €	0 €	0 €	40,000 €	40,000 €	SwitchMed last Phase, and fund-rising stage for the rest

Programme 7. For Informed and Consistent Advocacy, Awareness, Education and Communication											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
7.1.6. Strengthen MAP Advocacy to promote enforcement of and compliance with Barcelona Convention and enlist support of key stakeholders and policymakers to a green renaissance underpinned by the circular economy and a sustainable Blue Economy. (In-house expertise, consultancy, Communication TF, regional event)	CU	MAP Communication TF		Barcelona Convention Art. 15 Antalya Ministerial Declaration COP 22 Decision IG.25/2 - Compliance Committee	crosscutting especially SDG 14 Targets	0 €	0 €	0 €	0 €	0 €	
	SCP/RAC	MAP Communication TF		COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision 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	12.8	0 €	0 €	0 €	220,000 €	0 €	Secured external resources through the EU-funded Switchmed
7.1.7. Celebrate UNEP/MAP B.C System Anniversaries (In-house expertise, consultancy, external services, online meetings and events, Communication TF, media)	CU and INFO/RAC (communication aspects) and MAP Components (for the compilation of the report)	MAP Communication TF		COP 22 Decision IG 25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	crosscutting especially SDG 14 Targets	0 €	20,000 €	20,000 €	35,000 €	75,000 €	35,000 EUR to be allocated through the Agreement with France for MAP @50 years anniversary . Remaining non-secured external resources to be further mobilized
	SPA/RAC	MAP Communication TF		COP 22 Decision IG 25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	All SDG 14 Targets	15,000 €	10,000 €	25,000 €	0 €	0 €	
	INFO/RAC	MAP Communication TF		COP 22 Decision IG 25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
Outcome 7.2. Citizen and general public awareness and outreach raised through citizen science and digital campaigns						69,854 €	79,990 €	149,844 €	175,000 €	126,000 €	
7.2.1.Enhance public awareness and outreach on UN and MAP Days observance and their topics (In-house expertise, consultancy, external services collaboration with SPAMI managers and civil society, media)	INFO/RAC	MAP Communication TF		COP 16 Decision IG.19/6 - MAP/Civil society COP 21 Decision IG.24/2 - Governance COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
	PAP/RAC	MAP Communication TF	CPs; IHP-UNESCO	COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	crosscutting especially SDG 14 Targets	15,000 €	15,000 €	30,000 €	30,000 €	20,000 €	Secured external resources through the GEF-funded MedProgramme
	SPA/RAC	MAP Communication TF		COP 22 Decision 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	All SDG 14 Targets	20,000 €	5,000 €	25,000 €	0 €	0 €	
	INFO/RAC	MAP Communication TF		COP 16 Decision IG.19/6 - MAP/Civil society COP 21 Decision IG.24/2 - Governance COP 21 Decision IG.24/5 - Common Regional Framework for Integrated Coastal Zone Management	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
	SPA/RAC	MAP Communication TF		COP 22 Decision IG 25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	All SDG 14 Targets	10,000 €	10,000 €	20,000 €	0 €	0 €	
	SCP/RAC	MAP Communication TF	BRS Secretariat	COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision 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 COP 22 Decision 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	12.4; 12.5	5,000 €	0 €	5,000 €	0 €	10,000 €	

Programme 7. For Informed and Consistent Advocacy, Awareness, Education and Communication											
Main activity	Lead Component	Other Component(s)	Partners	Related COP Decision	SDG Targets	MTF Budget 2024	MTF Budget 2025	Total MTF Budget 2024-2025	External secured Funding 2024-2025	External non-secured Funding 2024-2025	Comments
7.2.2.Enhance public awareness and outreach on key MAP topics for general and specific targets (MAP Partners, Civil Society, Private sector, Youth etc.) (In-house expertise, consultancy, external services, digital campaigns, web platforms, online and in person events and activities, publications, IT services)	REMPEC	MAP Communication TF		Prevention and Emergency Protocol - Article 4 (Contingency plans and other means of preventing and combating pollution incidents) COP 21 Decision IG.24/2 - Governance COP 19 Decision IG.22/2 - Mediterranean Strategy for Sustainable Development 2016-2025 [MSSD] COP 19 Decision IG.22/5 - Regional Action Plan on Sustainable Consumption and Production in the Mediterranean COP 22 Decision IG.25/11 - Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) COP 22 Decision IG.25/16 - Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	crosscutting especially SDG 14 Targets	4,354 €	4,354 €	8,708 €	0 €	0 €	
	INFO/RAC	MAP Communication TF		COP 16 Decision IG.19/6 - MAP/Civil society COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	5,000 €	5,000 €	10,000 €	0 €	10,000 €	
	INFO/RAC	MAP Communication TF		COP 16 Decision IG.19/6 - MAP/Civil society COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets						
	CU	MAP Communication TF		Barcelona Convention Art. 15 Antalya Ministerial Declaration	crosscutting especially SDG 14 Targets	0 €	30,136 €	30,136 €	35,000 €	0 €	MTF to support young participants in a youth "summit" 35,000 EUR to be allocated through the Agreement with France
	SCP/RAC	MAP Communication TF		COP 22 Decision 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	12.5	2,500 €	2,500 €	5,000 €	110,000 €	70,000 €	Secured external resources through the EU-funded SwitchMed (support action developers winners of the 2023 edition).
	SCP/RAC	MAP Communication TF		COP 22 Decision 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	Crosscutting, especially SDG 8 and 12 Targets						
Outcome 7.3. Towards a digital transformation: use of digital technologies to improve networking and MAP visibility						32,000 €	27,000 €	59,000 €	0 €	24,000 €	
7.3.1. Towards a digital transformation (In-house expertise, consultancy, online meetings and events, external services)	INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
	SPA/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	All SDG 14 Targets	20,000 €	15,000 €	35,000 €	0 €	0 €	
7.3.2. Promote MAP educational capacity through E-Learning (In-house expertise, consultancy, online meetings, in person meetings, external services)	INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	4.7	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
7.3.3. Enable effective MAP communication (In-house expertise, consultancy, online meetings, in person meetings, external services)	INFO/RAC	MAP Communication TF		COP 21 Decision IG.24/2 - Governance	crosscutting especially SDG 14 Targets	4,000 €	4,000 €	8,000 €	0 €	8,000 €	
						139,354 €	159,490 €	298,844 €	512,000 €	364,000 €	

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Appendix 1
Deliverables of the Programme of Work and Budget 2024 – 2025

Programme 1. Towards a Pollution and Litter Free Mediterranean Sea and Coast Embracing Circular Economy			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 1.1. Strategies and Action plan addressing marine litter and plastics developed and implemented through comprehensive, coherent and collaborative approaches			103,000 €
1.1.1. Undertake national, subregional, regional actions to boost the implementation of the Marine Litter Regional Plan in the Mediterranean (In-house expertise, consultancy, SSFA, regional/sub-regional meetings, regional platform, pilots and national capacity building)	a) Best practices shared and experiences acquired in implementing marine litter management measures. b) Synergies enhanced between the workplan of the Regional Cooperation Platform with the GPML Actions Tracks. c) Coordinated implementation of the provisions of the ML Updated Regional Plan also considering the outcome and provisions of the Global Treaty on Plastics. d) Best practices shared and promoted related to the generation of marine litter from aquaculture and fisheries in coordination with GFCM including the development of a joint workplan.	MED POL	30,000 €
	e) Relevant activities of the IMO-FAO-Norway GloLitter Partnerships Project facilitated in the Mediterranean, as appropriate.	REMPEC, CU	3,000 €
	f) Synergies between the amended Regional Plan on Marine Litter Management in the Mediterranean and the IMO Action Plan/Strategy to address marine plastic litter from ships, as well as other relevant plans or initiatives, maintained and strengthened.		
	g) Best practices for the provision of reception facilities as well as the reception and handling of ship-generated waste in ports and marinas promoted at national, subregional/regional levels; standard		

	Waste Reception and Handling Plans (WRHP) developed.		
	h) Legal and regulatory framework for lost containers at sea (focusing on non-hazardous material) in place in the Mediterranean assessed, including specific case study examples from Mediterranean countries.		
	i) Assessment study with a focus on the quantities of lost containers at sea prepared, including mapping of the respective seafloor areas around the Mediterranean; best practices for the marking and relevant retrieval actions of lost containers at sea proposed.		
1.1.2 Capitalize pilot actions addressing marine litter within Marine Protected Areas and Mediterranean Islands (In-house expertise, consultancy, pilot actions, workshops, publications)	a) 1 BeMed Islands community is managed, supported and strengthened. b) Best practices are shared across Mediterranean Islands and MPAs. c) Pilot actions involving private and public stakeholders are implemented to test innovative prevention measures.	SCP/RAC	0 €
1.1.3. Implement and scale up a robust policy framework to reduce and prevent plastic use (In-house expertise, consultancy, pilot actions, workshops, publications, partnership agreements)	a) Technical assistance and capacity building provided to 4 countries to develop national measures tackling SUPs, including EPR. b) Technical assistance and capacity building provided to at least 5 sub-national authorities to address the entire life cycle of plastics.	SCP/RAC	35,000 €
1.1.4. Engage businesses to prevent plastic use and reduce plastic leakage (In-house expertise, consultancy, pilot actions, workshops, publications, partnership agreements)	a) 1 partnership to implement a certification scheme for HORECA businesses reducing SUPs is upscaled and enlarged. b) Technical assistance and capacity building is provided to industry value chain to prevent pellet loss. c) Technical study on the potential of reuse options as alternative to SUPs of concern and enabling conditions.	SCP/RAC	35,000 €

Outcome 1.2. A holistic and efficient response to land and sea -based pollution, as a part of overall Ecosystem Approach policy for the Mediterranean, (chemicals, contaminants, eutrophication, noise, oil and emerging pollution) for a sustainable Mediterranean coastal and marine ecosystem is implemented			319,855 €
1.2.1. Develop new regulatory measures in line with article 15 of the LBS Protocol for priority sectors (Consultancies, regional meeting, PhD studies)	a) State of Play of marine renewable energies including offshore windfarms in the Mediterranean prepared. b) Technical elements to update the reporting format of the LBS Protocol and Regional Plans adopted in 2021 and expected to be adopted in 2023 identified.	CU, MED POL	28,555 €
		Plan Bleu	0 €
1.2.2 Take national and regional actions including enabling investments, to implement the adopted Regional Plans (Consultancies, in-house expertise, SSFAs, Meetings)	a) 21 NAPs/PoM developed including as appropriate project fiches on priority actions/interventions to achieve/maintain GES.b) NAP guidelines reviewed and updated.c) Quantifiable indicator-based evaluation of NAP implementation finalised for the period 2015-2025.d) Capacity building on policy formulation and implementation enhanced.e) Proposed indicator-based framework to monitor Marine Plastics.	MED POL	110,000 €
1.2.3 Promote sustainable Desalination Sector in the Mediterranean (Consultancies, SSFAs)	a) Up to 2 CPs supported for implementation of the updated desalination guidelines adopted under Article 15 of the LBS Protocol (ELVs, EIA, Standards, etc.)	MED POL	0 €
	b) Protocols elaborated to facilitate integration of more stringent sustainability criteria into desalination sector	Plan Bleu	0 €
1.2.4 Enhance the implementation of MED POL reporting tools developed to assess pollution loads from land based sources and activities (Consultancies, in-house expertise, SSFAs, Regional meeting)	a) 21 CPs prepare and report National Baseline Budget (NBB - Load of Pollutants) to the NBB/PRTR InfoSystem. b) Technical and financial support provided to up to 13 CPs for NBB preparation.	MED POL	50,000 €

1.2.5 Undertake national and regional action to enhance the implementation of the Dumping Protocol (In-house expertise, regional meeting)	a) Technical implementation of updated guidelines adopted under the Dumping Protocol reviewed; best practices collected and shared; priority actions for further work identified; countries capacities enhanced. b) Synergies with London Dumping Protocol enhanced.	MED POL	15,000 €
1.2.6.Undertake pilot actions to prevent, eliminate and dispose in a environmentally sound manner obsolete chemicals. (Consultancies, SSFAs, Meetings, Implementation Contracts)	a) Phase 1 : Disposal of 771 Tonnes of PCBs completed in Algeria and Lebanon. b) Phase 2 : 5 inventories and 3 environmental management plans completed in Albania, Algeria, Lebanon, Tunisia, Morocco. c) Phase 2 : Disposal of available PCBs quantities completed in Albania, Algeria, Lebanon, Tunisia, Morocco, Bosnia and Herzegovina, Montenegro. d) POPs remediation actions and assessments completed in two contaminated areas in Tunisia, Montenegro. e) Three (3) preparatory studies for wastewater sector studies completed in Lebanon, Egypt, Tunisia	MED POL (MedProgramme)	0 €
1.2.7. Implement strategies for the prevention of toxic chemicals, including policy support (In-house expertise, consultancy, meetings)	a) Technical support is provided to 3 countries (Morocco, Lebanon, Tunisia) for the update / adoption of new regulation for the restriction of import, manufacturing and use of new POPs. b) Technical support is provided to additional countries for the development of a roadmap for the update / adoption of new regulation for the restriction of import, manufacturing and use of new POPs.	SCP/RAC	0 €
1.2.8. Increase access to information on toxic chemicals, in particular newly listed POPs and health impact (In-house expertise, consultancy, national trainings, public webinars, awareness raising)	a) 1 awareness campaign to raise awareness on health impact of newly listed POPs, based on human biomonitoring data collected in southern Mediterranean countries. b) 2 webinars on the importance of prevention approach and tools to implement it at the national level.	SCP/RAC	20,000 €
1.2.9. Improve follow-up of pollution events and enhance level of enforcement and the prosecution of discharge offenders	a) Sixth Meeting of MENELAS organised and recommendations implemented through technical support provided to CPs, which so request.	REMPEC	62,500 €

(In-house expertise, conference services, venue, travel arrangements, regional meeting, technical country support)	b) Modalities of possible creation and operation of a regional "Blue Fund", including in terms of governance and financing, as well as a comprehensive legal analysis, finalised. c) Participation to coordinated aerial surveillance operations for illicit ship pollution discharges promoted and supported.		
1.2.10. Strengthen the capacity of individual coastal states to respond efficiently to marine pollution incidents (In-house expertise, consultancy, national workshops, sub-regional workshops, training, exercises and meetings, sub-regional Cooperation Agreements)	a) Up to four (4) coordinated spill response exercises and trainings implemented to strengthen capacities at the National and Sub-regional level to respond to HNS and oil spills and to improve the quality and interoperability of response capacities. b) Effective support provided for the development, update and implementation of four (4) Sub-regional contingency plans. c) Synergies for the implementation of the above Sub-regional contingency plans enhanced and operationalised. d) Mediterranean Assistance Unit (MAU) maintained and, where appropriate, expanded; and MAU special revolving fund balance maintained. e) Support provided for joint government/industry activities to improve the level of preparedness to respond to marine pollution incidents and to integrate respective response management structures. f) Four (4) National Preparedness and Response Systems upgraded. g) Two (2) CPs supported to update National Oil and HNS Spill Contingency Plans. h) REMPEC Guidelines on the use of dispersants (2011) revised, and Oiled Shoreline Assessment Technique (2009) developed as an electronic version.	REMPEC	33,800 €

	i) Effective support for the development of / integration in four (4) national contingency plans of oiled wildlife response		
Outcome 1.3. Systemic approaches for Circular Economy, eco-innovation as well as Sustainable Consumption and Production incorporated into key sectors of activity which are main sources of pollution			108,000 €
1.3.1. Create a Mediterranean Network of Business Support Organizations for Sustainable Business Development (In-house expertise, regional meetings/webinars, travels and accommodation)	a) 100 Mediterranean Business Support Organizations gathered in a regional network to enhance their sustainable business development services	SCP/RAC	20,000 €
1.3.2. Implement the Switchers Support Programme (regional programme for sustainable business development) (In-house expertise, external services)	a) Platforms, eco-innovative tools and methodologies strengthened: i) Business Support Organizations, entrepreneurs and circular businesses provided with an online platform offering a full set of eco-innovative methodologies and tools. ii) 200 Business Support Organizations are registered into the Platform. iii) 350 Trainers and Mentors are registered into the Platform iv) 6,500 entrepreneurs/companies registered into the Platform	SCP/RAC	40,000 €
	b) Capacities for sustainable business development created: i) 100 Experts from Business Support Organizations trained on development of sustainable business models and plans (ToT) (at least 40% are women). Support programme for sustainable entrepreneurs and start-ups ii) 400 Green Entrepreneurs supported to develop their sustainable business model by applying eco-innovation and life cycle thinking (including eco-design) (at least 40% are women). iii) 40 Green Entrepreneurs supported to develop their sustainable business plan and incubated to launch their green start-up (at least 40% are women). iv) Matchmaking events between sustainable entrepreneurs and investors/financial actors.	SCP/RAC	

1.3.3. Scale up Open Innovation and Corporate Venturing approaches (In-house expertise, consultancy, platform, training)	a) 8 Open Innovation challenges are launched in 3 key sectors: Textiles, Sustainable Tourism and Food&Beverage. b) Technical assistance delivered to innovation enablers in 4 target Mediterranean countries. c) A virtual Living Lab is established to enhance the open innovation ecosystem.	SCP/RAC	0 €
1.3.4. Enhance the Switchers Community, build a member-centered governance and internal coordination mechanisms for community development. (In-house expertise, consultancy)	a) IV and V editions of the "Switchers Talks" (community annual meeting) are organised. b) The Switchers Products platform hosts +200 products and services and offers marketing services to the community members. c) 1 Communication and Marketing Plan for 2024-2025 is developed.	SCP/RAC	14,000 €
1.3.5. Enhance and scale up the Sustainable Finance MED Observatory (In-house expertise, consultancy)	a) 1 Regional Forum on Sustainable Finance and Impact Investing is organised. b) 1 Virtual Community of Practice is developed. c) 1 communication and Advocacy Plan for 2024-2025 is developed.	SCP/RAC	14,000 €
1.3.6. Invest in innovative sustainable/circular business models, empowering start-ups to access impact investing (In-house expertise, consultancy, regional event, Partnership Agreement)	a) the SwitchersFund first investment round is launched. b) 10 MSMEs are supported with impact investing tools (equity, quasi-equity, loans) and technical assistance.	SCP/RAC	20,000 €
Outcome 1.4. One Health approach developed and implemented, linking human and ecosystems health with pollution reduction and prevention, taking into account lessons learnt from the COVID-19 pandemic			98,000 €
1.4.1. Develop and implement a one-health approach for the Mediterranean (In-house expertise, consultancy, workshop, publication)	a) initial report on health impacts of seafood consumption on coastal population due to emerging pollutants. b) proposal of health-related indicators for the post 2025 MSSD, in line with Regional Plans and NAPs and with the global One Health concept	Plan Bleu	20,000 €

1.4.2. Support the ratification and effective implementation of MARPOL Annex VI, facilitating the entry into effect of the Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter (Med SOx ECA), and explore the possible designation of the Mediterranean Sea Emission Control Area for Nitrogen Oxides (Med NOx ECA) pursuant to MARPOL Annex VI (In-house expertise, consultancy, national workshops, conference services, venue, travel arrangements, regional meeting)	a) Technical support and capacity building provided up to 6 CPs, which so request, to ratify and effectively implement MARPOL Annex VI.	REMPEC	35,000 €
	b) Support provided for the consistent implementation of the 0.10% sulphur limit under MARPOL Annex VI in the Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter (Med SOx ECA).		
	c) Technical and Feasibility Study to examine the possibility of designating the Mediterranean Sea Emission Control Area for Nitrogen Oxides (Med NOx ECA) under MARPOL Annex VI prepared under the guidance of the Med NOx ECA Technical Committee of Experts; related roadmap prepared.	REMPEC	43,000 €
		Plan Bleu	0 €
			<u>628,855 €</u>

Programme 2. Towards Healthy Mediterranean Ecosystems and Enhanced Biodiversity			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 2.1. Ecosystem resilience improved through restoration of those with best regeneration potential			100,000 €
2.1.1. Promote the implementation of the UN Decade on Ecosystem Restoration in the Mediterranean: Identify innovative actions, capitalize and promote replication (In-house expertise, consultancy, online meetings, in person workshops, external services)	a) Guidelines to develop species recovery Plans and implement emergency actions, elaborated.	SPA/RAC	80,000 €
	b) Priority actions supported for the full and effective implementation of the Restoration programme of <i>Pinna nobilis</i> .	SPA/RAC	
	c) Criteria for full inventory of ecosystems with the highest ecological relevance and/or regeneration potential developed.	SPA/RAC	
	d) Sites with best ecosystem regeneration potential identified. e) Ecological integrity and biological diversity of the North East Atlantic as well as the Black, Caspian, Baltic and Mediterranean Seas , protected, preserved and restored through emphasizing of EBSAs areas and the establishment of effective MPAs within EBSAs (5 Seas Projects) and the restoration of wetlands (Waterlands and Feu Vert projects).	Plan Bleu	20,000 €

	f) Priority actions identified, supported and implemented for the protection and enhanced management of critical forest ecosystems and watersheds in Mediterranean coastal areas, with a focus on fire management strategies to protect biodiversity, and science-based restoration of fire-affected areas to reduce disaster risks, restore biodiversity, and promote climate resilience ⁽¹⁾	CU, Plan Bleu	0 €
Outcome 2.2. Comprehensive, coherent Mediterranean network of well-managed MPAs and OECMs in place, expanded, effective and sustainable			100,000 €
2.2.1. Support the Contracting Parties in protecting and conserving the Mediterranean Sea through well-connected, ecologically representative and effective systems of marine and coastal protected areas and other effective area-based conservation measures (in-house expertise, consultancy, external services, national and regional meetings, field surveys, national and regional trainings/workshops, exchange visits, conferences, financial support to countries)	a) Support given to Contracting Parties with technical tools on (i) monitoring, documenting and communicating impacts of MCPAs with enhanced protection levels, (ii) best practices on co-management and participatory governance, and (iii) applying OECM criteria and establishing processes for identifying OECMs, to the implementation of the MCPA-OECM Strategy.	SPA/RAC	0 €
	b) Ad hoc Group of Experts for MPAs in the Mediterranean (AGEM) operational and effectively supported to guide the implementation of the MCPA-OECM Strategy.	SPA/RAC	0 €
	c) Management and business plans elaborated for MCPAs in Egypt, Libya, Morocco and Tunisia based on sound scientific knowledge, comprehensive consultation and engagement of stakeholders.	SPA/RAC, Respective Contracting Parties	0 €

	d) MCPA management effectiveness improved through the implementation of management plans and capacity building programme in Algeria, Egypt, Lebanon, Libya, Morocco and Tunisia.	SPA/RAC, Respective Contracting Parties	0 €
	e) Management effectiveness assessed in existing MCPAs/SPAMIs in Algeria, Lebanon, Morocco and Tunisia using the Integrated Management effectiveness Tool (IMET).	SPA/RAC, Respective Contracting Parties	0 €
	f) Fifth edition of the Forum of Marine Protected Areas in the Mediterranean successfully held; Direct and indirect MPA-related community gathered to allow networking and best practices shared; Priority action for effective implementation of the MCPA-OECM Strategy identified; Increased visibility and advocacy on MPAs in the Mediterranean achieved	SPA/RAC	0 €
	g) Training and capacity building activities undertaken at national and sub-regional level to enhance CPs ability for identification, recognition and reporting of OECM.	SPA/RAC, Respective Contracting Parties	0 €

	h) Further promote the uptake of the Ecosystem approach at national and regional level, under UNEP/MAP 2022-2027 Medium-Term Strategy Programme 2: Towards healthy Mediterranean ecosystems and enhanced biodiversity: i. Needs assessment for the implementation, further elaboration and upgrade of Programmes of Measures (Pomp) and National Action Plans (NAPs) under UNEP/MAP 2022-2027 Medium-Term ii) further elaborated and upgraded Programmes of Measures (Pomp) and National Action Plans (NAPs) iii) Periodic regional and sub-regional training/capacity /Best practices sharing sessions	SPA/RAC	0 €
2.2.2. Ensure effective SPAMI management and evaluation (In-house expertise, consultancy, external services, field trips, exchange visits)	a) SPAMI management status kept under review: SPAMI ordinary and extraordinary reviews undertaken: 2024 ordinary reviews (05): The Blue Coast Marine Park (FR), The Embiez Archipelago - Six Fours (FR), Capo Carbonara Marine Protected Area (IT), Penisola del Sinis - Isola di Mal di Ventre Marine Protected Area (IT), Porto Cesareo Marine Protected Area (IT) ; 2025 ordinary reviews (14): Lara-Toxeftra Turtle Reserve (CY), Port-Cros National Park (FR), Cerbère-Banyuls Marine Nature Reserve (FR), Pelagos Sanctuary for the Conservation of Marine Mammals (FR-IT-MC), Egadi Islands Marine Protected Area (IT), Landscape Park Strunjan (SI), Alboran Island (ES), Cabo de Gata-Níjar Natural Park (ES), Cap de Creus Natural Park (ES), Columbretes Islands (ES), Mar Menor and Oriental Mediterranean zone of the Region of Murcia coast (ES), Medes Islands (ES), Sea Bottom of the Levante of Almeria (ES), Cetaceans Migration Corridor in the Mediterranean (ES); and 2025 extraordinary reviews (05): Palm Islands Nature Reserve (LB), Tyre Coast Nature Reserve (LB), La Galite Archipelago (TN), Kneiss Islands (TN), Zembra and Zembretta National Park (TN).; Evaluation format and, specifically, Section II, point 4, revised through the organization of a specific workshop.	SPA/RAC	100,000 €

	b) SPAMI Twinning Programmes developed : (i) exchange visits implemented for management issues diagnosis, habitats conservation & fishing impacts, (ii) Medium-term on-the-job training implemented in twinned SPAMIs, (iii) Peer-to-peer support and mentoring: actions to strengthen management effectiveness in twinned SPAMIs and/or joint monitoring programmes implemented.	SPA/RAC	
	c) Local stakeholders and civil society involved in SPAMI/MPA management.	SPA/RAC	
	d) SPAMI Collaborative Platform maintained, including through the intervention of other MAP Components in SPAMIs (management effectiveness, ICZM, MSP, sustainable tourism, etc.).	SPA/RAC	
	e) Collaboration processes facilitated among neighbouring countries aiming at undertaking coordinated joint research and at identifying potential SPAMIs located wholly or partly in ABNJs.	SPA/RAC	
	f) A platform for Climate Change Monitoring in SPAMIs developed.	SPA/RAC	
Outcome 2.3. Mediterranean endangered and threatened species and key habitats in favourable status of conservation			263,197 €
2.3.1. Implement regional and national actions to boost the implementation of the Action Plans on marine key habitats (In-house expertise, consultancy, online meetings, external services, online and in person workshops at national and regional levels)	a) Status of implementation of the Action Plan for the conservation of the coralligenous and other calcareous bio-concretions in the Mediterranean Sea assessed and Action Plan updated	SPA/RAC	62,000 €

	b) Guidelines suited to the inventorying and monitoring of dark habitats and associated assemblages updated	SPA/RAC	
	c) Detailed guidelines for effective management measures of dark habitats developed in collaboration with relevant partners	SPA/RAC	
	d) Measures related to conservation in the Mediterranean marine ecosystems to respond to mass mortality events linked to heatwaves' events identified	SPA/RAC	
2.3.2. Effectively implement the updated regional Strategy and Action Plans for the practices conservation of threatened and endangered species and share related best (In-house expertise, consultancy, training awareness raising)	a) Status of implementation of the Action plans on marine turtles and cartilaginous fish species listed in annex II of SPA/BD Protocol assessed and action plans updated	SPA/RAC	45,000 €
	b) Status of the Monk seal regional strategy implementation in the Mediterranean assessed and strategy updated		
	c) Knowledge enhanced and awareness actions on monk seal in the Mediterranean implemented		
	d) Priority actions to fill key knowledge gaps for threatened and endangered species supported including monitoring of interactions with fisheries, mainly bycatch and other threats (i.e., Marine Litter, Underwater Noise, Collision, CC, etc.) and their mitigation.		
	e) Conservation status of threatened and endangered species improved at national and regional levels as provided for in the related updated regional Action Plans (Cartilaginous fishes, marine Turtles, cetaceans and marine & coastal Birds).		

	f) Assessment of the status and vulnerability of habitats and species included in the Annex II and III of the SPA/BD Protocol which are not in EcAp-IMAP/GES category, including recent updates and the new 2019 habitat classification, elaborated and a list of priority established.	SPA/RAC	
	g) A Mediterranean horizon scan of emerging issues impacting marine and coastal biodiversity conservation	SPA/RAC	
	h) NAP + integrating fisheries and aligned with the Post 2020 SAPBIO goals and targets, including investment plan, drafted and endorsed by decision makers in Montenegro.	CU, SPA/RAC	0 €
	i) Interested CPs supported in the establishment of a national public-private blue economy partnership.		
2.3.3. Implement conservation measures and share best practices related to threatened and endangered species listed in Annex II to SPA/BD Protocol (In-house expertise, consultancy, training awareness raising)	a) Conservation of threatened and vulnerable species improved through related awareness activities, including best practices promotion to mitigate interaction with human activities (bycatch, depredation, marine litter, underwater noise, stranding, habitat loss, etc.) at national and regional levels.	SPA/RAC	44,197 €
	b) Conservation status of vulnerable species improved through communication and advocacy/policy materials including best practices (Infographics, videos, reports, etc.) at national and regional levels.		
	c) Most recent collected data on vulnerable mobile species is analysed, gathered, promoted and made available to the contracting parties via the Marine Biodiversity Platform.		
	d) Socio-economic analysis and stock assessment studies for the implementation of Decision IG.26/4 carried out	SPA/RAC	60,000 €
		Plan Bleu	40,000 €

2.3.4 Evaluation of the approach of regional action plans for selected species and habitats adopted under the SPA/BD Protocol, in the light of the New Global Biodiversity Framework and the EcAp/IMAP process of the Barcelona Convention (In-house expertise, consultancy, online Meetings)	a) Approach of regional Action Plans for selected species and habitats adopted under the SPA/BD Protocol evaluated and recommendations for the way forward identified.	SPA/RAC	12,000 €
Outcome 2.4. Non -indigenous species introductions minimized and introduction pathways under control			40,356 €
2.4.1. Update and implement the regional action plan on Non Indigenous Species (NIS) and species introductions, as well as targeted measures of the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027) (In-house expertise, consultancy, conference services, venue, travel arrangements, regional meetings and events, national capacities building, data collection)	a) Implementation of targeted NAPs measures on NIS by at least 4 Contracting Parties (Egypt, Tunisia, Libya, Lebanon) supported in coordination with IMAP implementation.	SPA/RAC	0 €
	b) Priority actions supported for the full and effective implementation of the updated regional NIS Action Plan.	SPA/RAC	

	c) Measures to cope with the negative effects of non-indigenous species on biodiversity as well as those of other potential stressors identified and disseminated.	SPA/RAC	
	d) Assistance provided to contracting Parties to implement target measures to control and manage ships' ballast water and biofouling, to minimize the transfer of invasive aquatic species	SPA/RAC, REMPEC	
	e) Targeted technical support provided to CPs, which so request, for the ratification and implementation of the Ballast Water Management Convention as well as for the implementation of the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species.		
	f) Joint Conference on BWM organised with neighbouring regions to share experiences and promote further alignment.		
	g) Study to develop a regional information and decision support system or tool undertaken.	REMPEC, SPA/RAC	40,356 €
	h) Mid-term review of the Ballast Water Management Strategy for the Mediterranean Sea (2022-2027) undertaken; recommendations on the way forward elaborated.		
			<u>503,553 €</u>
<u>Footnotes:</u>			
(1) The Secretariat has collaborated with UNEP for the preparation of a project for the Mediterranean.			

Programme 3. Towards a Climate Resilient Mediterranean			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 3.1. Legal, policy and institutional framework strengthened at the regional and national level to efficiently address climate change related challenges (flooding, erosion, land degradation, pollution, disasters etc.)			0 €
3.1.1. Mainstream adaptation to climate change into local ICZM plans (In-house expertise, consultancy, online and in person training workshops, online meetings, external services)	a) Recommendations for adaptation measures finalized and integrated into coastal plans for the Tangier-Tetouan-Al Hoceima Region in Morocco and Kotor Bay in Montenegro, using the participatory Climagine method.	PAP/RAC	0 €
	b) Climate change adaptation planning capacities improved and supported, in particular to address issues affecting marine resources and fisheries sector, and forest ecosystems in coastal areas. ⁽¹⁾⁽²⁾	CU, SPA/RAC	0 €
		SPA/RAC	0 €
Outcome 3.2. Nature-based, technical solutions promoting prevention or reduction of the impact of climate change on coastal and marine ecosystems and increase resilience to climatic variability and change			129,857 €
3.2.1. Mainstream nature-based solutions into regional policies implementation, including for adaptation and mitigation to climate change, disaster risk reduction and sustainable development/ green economy. (In-house expertise, consultancy, online and in person workshops and meetings)	a)An assessment on nature-based technical solutions promoting prevention or reduction of the impact of climate change on coastal and marine ecosystems and increasing their resilience, including critical forest ecosystems ⁽²⁾⁽¹⁾ .	SPA/RAC	10,000 €
		CU, Plan Bleu	0 €
		c) Guidelines for nature-based solutions applicable in various coastal typologies to combat impacts of climate change finalised and disseminated.	PAP/RAC

	d) Conceptual framework for the establishment of institutional dialogues on restoration and Nature-based Solutions produced: annual events involving Mediterranean stakeholders on relevant subjects e) Links assessed between legislative processes at different governance levels affecting the adoption of nature policies that will be implemented.	Plan Bleu	48,000 €
	f) 2016 Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas updated to consider new challenges, tools and nature-based solutions. ⁽¹⁾	CU	0 €
	g) Best practices for nature-based solutions for climate change adaptation and mitigation developed and disseminated.	CU	0 €
3.2.2. Mobilise and implement innovative solutions to reduce GHG emissions from ships in selected ports, including through energy efficiency and decarbonisation (In-house expertise, consultancy, national and regional workshops / capacity building)	a) Project proposal developed for the implementation of innovative solutions to reduce GHG emissions from ships in selected ports, including through energy efficiency and decarbonisation. b) Capacity building activities on low carbon shipping and clean ports implemented at national, subregional/regional levels.	REMPEC	41,857 €
Outcome 3.3. Better understanding and knowledge of climate change and its impacts on environment and development			55,000 €
3.3.1. Develop and provide policy recommendations to address thematic impacts of climate change (In-house expertise, workshops, publication, translation)	a) 3 MedECC special reports (climate and environmental coastal risks, climate-water-energy-food-ecosystems nexus, environmental change, conflict and human migration) disseminated and brought to the attention of relevant decision makers. b) Mediterranean Assessment Report 2 prepared (to be released by 2026); MAR1 scientific knowledge on climate and environmental change updated.	Plan Bleu	55,000 €

Outcome 3.4. Mitigation of Climate Change progressed through Circular Economy, increased resource efficiency and carbon neutrality business strategies			14,000 €
3.4.1. Demonstrate mitigation and nature regeneration potential of Circular Economy business models, facilitating innovative solutions and engage with private and public stakeholders (In-house expertise, consultancy, reports, decision support tool)	a) 1 "Just Transition to Circular Economy" Decision Support System, including climate change mitigation indicators/strategies disseminated via capacity building and technical assistance. b) 3 Sector-focused reports mobilizing innovative solutions linking circular economy business models and value chains decarbonization options developed. c) 2 sector-focused reports addressing mitigation potential of sustainable consumption and 1.5 degree lifestyle policies in the Mediterranean developed .	SCP/RAC	14,000 €
			<u>198,857 €</u>
<u>Footnotes</u> (1) The Coordinating Unit will associate, as appropriate, in these deliverables (3.1.1 (b), 3.2.1 (a) and (f), the newly established CC/RAC. (2) The Secretariat has collaborated with UNEP for the preparation of a project for the Mediterranean.			

Programme 4. Towards the Sustainable Use of Coastal and Marine Resources Including Circular and Blue Economy			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 4.1. Sustainability of coastal and marine resources achieved through the synergetic implementation of planning and management approaches, including the adequate consideration of Land-Sea Interactions (LSI)			210,916 €
4.1.1. Prepare National ICZM strategies (Workshop, in-house expertise, consultancy)	a) National Strategy for Lebanon prepared and submitted for adoption by relevant national authority. b) Climagine approach applied as a participatory foresight approach supporting the preparation of National ICZM strategies. c) Support provided to the implementation of the National ICZM Strategy for Tunisia through the establishment of a national ICZM network and the preparation of a communication plan d) CPs supported in the implementation in the ICZM Protocol, in particular regarding the application of transboundary EIA and SEA in cooperation with the Espoo Convention and its Kiev Protocol implementation e) Legal study on integration of transboundary EIA/SEA into the Barcelona Convention framework including consistent draft amendments to the text of the Barcelona Convention and to those of its Protocols, elaborated and submitted to COP24	PAP/RAC	50,000 €
4.1.2. Implement CAMP Projects (In-house expertise, consultancy, online and in person training, workshops and meetings, external services)	a) CAMP Israel finalised and Final Presentation Conference organised. b) Feasibility study for a new CAMP project prepared. c) Agreement signed for a new CAMP.	PAP/RAC	60,000 €
4.1.3. Prepare ICZM or coastal plans (In-house expertise, consultancy, online and in person workshops, external services))	a) ICZM plan for Tangier-Tetouan-Al Hoceima (Morocco) finalised and Final Presentation Conference organised. b) ICZM plan for the Kotor Bay (Montenegro) finalised and Final Presentation Conference organised. c) Analytical phase of IMP plan in Damour (Lebanon) finalised. d) Vulnerability analyses for two Algerian wilayas (El Tarf and Mostaganem) finalised.	PAP/RAC	0 €

4.1.4. Assist CPs in implementing MSP (In-house expertise, consultancy, online and in person meetings, external services)	a) Baseline studies for MSP/Blue Economy prepared in Albania as a follow-up of the CAMP Otranto project, and in Tunisia following the ratification of the ICZM Protocol.	PAP/RAC	100,916 €
4.1.5. Update methodological guidance for reaching GES through ICZM (In-house expertise, meetings)	a) Methodological guidance proposed in the Common Regional Framework for ICZM updated and disseminated. b) Matrix of interactions between the ICZM Protocol provisions and EOs for the Adriatic sub-region prepared.	PAP/RAC	0 €
4.1.6. Update methodological guidance for the preparation of coastal plans (In-house expertise, consultancy, online and in person meetings, external services)	a) Methodological guidance for the preparation of coastal plans updated based on the experience gained within coastal plans prepared in Montenegro and Morocco.	PAP/RAC	0 €
4.1.7. Analyse key barriers and levers for improving marine policies coherence (In-house expertise, consultancy, online and in person training, workshop and meetings, external services)	a) State of the art on key barriers and levers prepared. b) Science-policy dialogue facilitated and recommendations drafted for strengthening biodiversity protection within MSP.	PAP/RAC	0 €
Outcome 4.2. Sustainable Blue and Green Economy tools and approaches in the context of Sustainable Development and MSSD implementation			122,908 €
4.2.1. Promote sustainable and resilient tourism in the Mediterranean Region(workshop, in-house expertise, consultancy, publication, translation)	a) Activities towards the climate change adaptation/mitigation of the sector in the Mediterranean implemented in line with the Glasgow Declaration on Climate Action in Tourism.b)Preparatory activities for the elaboration of a (Euro)Mediterranean Strategy for Sustainable Tourism, as foreseen in the 2022-2027 MTS, implemented, taking in account innovations to improve the sector resilience to emerging challenges.c) Manual for the implementation of ICZM protocol at regional level from the experiences of previous thematic projects on tourism published, and implementation by local or national projects supported.	Plan Bleu	36,908 €

4.2.2. Demonstrate the impact of Green and Circular Economy entrepreneurship in delivering social, economic and environmental value (in-house expertise)	a) 20 sustainable start-ups supported to assess their environmental, social and economic impact. b) Environmental and social positive impact of sustainable businesses has been disseminated.	SCP/RAC	0 €
4.2.3. Boost targeted actions for a sustainable and inclusive Blue economy transition at regional and national levels (in-house expertise, consultancy, workshops publication, translation, databases, policy brief)	a) Climate - resilient and decarbonizing innovations in the blue and green economy identified and disseminated. b) Barcelona Convention and Protocols application regarding marine renewable energy clarified and guidelines for its sustainable expansion issued.	Plan Bleu	0 €
	c) At Least 35 innovative transformative solutions to prevent and eliminate pollution of ocean, seas and waters are identified and documented for the Mediterranean Basin.d) 1 catalogue exploitable assets for the Mediterranean Sea basin lighthouse is prepared.e) 1 multidimensional catalogue of services and experts of the Mediterranean Sea basin lighthouse is prepared.f) 1 Strategy for the sustainability and exploitation of results of the Mediterranean Sea Basin Lighthouse is prepared (Ocean Mission) and 1 policy brief is drafted.g) Solutions provided by the 4th edition of the WeMed Award on Blue Economy are presented and disseminated.h) Results of the pilots actions on Circular Blue Economy in ports are shared and their potential for scaling up is analysed.	SCP/RAC	0 €

4.2.4. Support the implementation of SCP, circular economy and innovative sustainable economies at regional and national levels (in-house expertise, consultancy, internet portal, policy brief)	a) Technical assistance and capacity building is provided to public authorities on circular economy related instruments, including on ecodesign, product information/passport, public procurement. b) The Switchers Policy Hub on green and circular economy transition in the Mediterranean is managed, the community increased, new content is developed and activities are proposed on a regular basis. c) Policy developments and connection with the Barcelona Convention framework are facilitated in the framework of the InterregMed Community4Innovation, contribution to a Mediterranean Innovatives sustainable economy Hub is made, transferring of knowledge to southern Mediterranean countries is facilitated. d) Policy developments and connection with the Barcelona Convention are facilitated in the framework of the InterregMed Dialogue4 innovation, contribution to the monitoring of Mediterranean collaboration network is made, collaborations are facilitated, support for the replication of transformative innovation policy labs is provided.	SCP/RAC	26,000 €
4.2.5. Strengthen community of MSP practice in the Mediterranean (In-house expertise, consultancy, online and in person meetings, external services)	a) A position paper and agenda for the MSP implementation within the BC system prepared. b) Interactive MSP Workspace maintained and regularly updated with new material. c) Task Force for MSP implementation set-up. d) Cooperation with other MSP players in the Region strengthened and formalised.	PAP/RAC	60,000 €
4.2.6. Foster source-to-sea management in the Mediterranean region (In-house expertise, workshop, publication, translation)	a) Workshop organized and publication issued	Plan Bleu	0 €

Outcome 4.3. Innovative environmental management and economic instruments implemented for the protection and efficient use of coastal and marine resources			50,000 €
4.3.1. Support the effective use by CPs of economic instruments and other tools for nature conservation and sustainable development in order to diversify the policy mix in the Mediterranean (In-house expertise, workshop, publication, translation)	a) Cross-sectoral exchanges organized on environmental economic instruments in the Mediterranean, sharing good practices across sectors (climate, water, biodiversity, pollution, fisheries), and tools (such as payment for environmental services, subsidies, conservative easement tools)- at a regional level, and upon agreement with volunteering countries, at national level. b) Lessons learned shared through publication.	Plan Bleu	50,000 €
Outcome 4.4. Measures defined within the Mediterranean Offshore Action Plan applied at regional level and by each Contracting Party within their jurisdiction to ensure the safety of offshore activities and reduce their potential impact on the marine environment and its ecosystem			67,006 €
4.4.1. Implement key targeted measures of the Mediterranean Offshore Action Plan (in-house expertise, consultancy, online trainings, conference services, venue, travel arrangements, regional meeting)	a) Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) organised and held; Offshore Protocol implementation and Annexes to the Offshore Protocol kept under review; best practices and latest relevant developments shared. b) Training organised on Offshore platform Preparedness and Response and Contingency Plan Assessment, as set out in Appendix 2 of the Mediterranean Offshore Action Plan (2016-2024) and defined by the 2023 OFOG Meeting. c) Mediterranean Offshore Action Plan (2016-2024) extended and updated, as defined by the 2023 OFOG Meeting.	REMPEC, CU	67,006 €
			<u>450,830 €</u>

Programme 5. Governance			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 5.1. Effective Implementation and Enforcement by the Contracting Parties of the Barcelona Convention, its Protocols, MAP Policies, including Ecosystem Approach related COP decisions, the MSSD and Programmes of Measures achieved at regional and national levels			144,770 €
5.1.1. Strengthen Contracting Parties action to comply with legally binding obligations under Barcelona Convention and its Protocols (In-house expertise, consultations, online meetings)	a) Progress on ratification of the Protocols of the Barcelona Convention; Facilitation and/or technical support provided upon request.	CU	0 €
	b) Contracting Parties develop national policies, legislation and mechanisms for the implementation and enforcement of the BC Protocols. c) Technical assistance to CPs to develop national policies, regulatory frameworks and which are consistent with the BC and its Protocols is provided. d) Status of implementation of the Barcelona Convention and its protocols reviewed, achievements and issues at stake identified. e) Coordinated assistance to address cases of implementation difficulties and or possible noncompliance situations.	CU, Compliance Committee	0 €
	f) Coastal and marine law for Bosnia-Herzegovina drafted, in line with the provisions of the ICZM Protocol.	PAP/RAC	0 €
5.1.2 Advance the implementation of Ecosystem Approach in the Mediterranean and IMAP in coherence with regional and global developments (In-house expertise,	a) Prepare a renewed EcAp Roadmap/ policy for the implementation of the ecosystem approach and the achievement of GES beyond 2023, for review of EcAp/IMAP Governance bodies.	CU	30,000 €
	b) Review IMAP and prepare proposals for a renewed IMAP, following the experience with QSR 2023 preparation and its findings and	MED POL	0 €

consultancy, EcAp/IMAP regional governance meetings)	recommendations.	PAP/RAC	0 €
	c) Coordinated implementation of IMAP ensured through IMAP Task Force and CORMON and as appropriate online working group meetings. d) synergies maximised on ecosystem approach implementation with global and regional partners with a particular focus on EU MSFD CIS. e) Summary for Policy Makers of the 2023 MED QSR prepared for the consideration of the ECAP CG meeting in 2024. f) Roadmap for the preparation of the next QSR delivered.	SPA/RAC	0 €
5.1.3. Ensure Contracting Parties compliance with adopted monitoring and reporting under Barcelona Convention Protocols (In-house expertise, national assistance)	a) Awareness raised and support provided on reporting obligation under the Prevention and Emergency Protocol and related IMO Conventions.	REMPEC	38,770 €
	b) BCRS, REMPEC Country Profile, MEDGIS-MAR, MIDSIS-TROCS, MENELAS Information System maintained; and updated by all Contracting Parties.		
	c) Common Emergency Communication System for the Mediterranean established and awareness raised on its use.		

5.1.4. Ensure MAP Data Policy full implementation at regional and as appropriate at national levels (In-house expertise, consultancy, online meetings, in person meetings)	a) MAP Data Policy Annexes related to each UNEP/MAP data flow tuned and updated.b) Dissemination activities carried out among CPs in order to facilitate the Data Policy implementation. c) Assistance/training workshops for CPs for MAP data sharing Policy implementation on general and particular (at country level) issues (at least one workshop for each beneficiary country. d) Evaluate the effectiveness of MAP Data Policy principles application in time (e.g. though monitoring on data retrieved from Countries).e) Support MAP Components and CU in the correct and full interpretation of MAP Data Policy and its application at country level.	INFO/RAC	16,000 €
5.1.5.Effective Implementation and Enforcement of Post-2020 SAPBIO (In-house expertise, consultancy, external services, online meetings, in person meetings, venue, conference services, travel arrangements)	a) Mid-term assessment of the collective implementation of the Post-2020 SAPBIO elaborated in 2025, based on the timeline adopted part of the Post-2020 SAPBIO.	SPA/RAC	60,000 €
	b) Two meetings of the SAP BIO National Correspondants organised (one virtual meeting in 2024; one presential meeting in 2025) preceded by SAPBIO Advisory Committee meeting (both on line) and reports available.	SPA/RAC	
Outcome 5.2. Systemic strengthening and effective functioning and delivery of MAP decision-making and advisory bodies ensured, and efficiency enhanced with new digital approaches			1,300,668 €
5.2.1. Deliver successfully COP 24 of MAP Barcelona Convention (In-house expertise, Host Country Agreement, conference services, venue, side events, travel arrangements)	a) COP 24 Declaration, Decisions including the PoW 2026-2027 reviewed and adopted, recommendations of the Compliance Committee and the MCSD reviewed. b) Progress achieved during the biennium 2024-2025 reviewed and acknowledged. c) Status of implementation of the Convention and its Protocols reviewed. d) MAP visibility and outreach enhanced.	CU	330,000 €

5.2.2. Deliver successfully the 21st Meeting of the MCSD (In-house expertise, consultancy, Host Country Agreement, conference services, venue, travel arrangements, regional meetings)	a) 21st Meeting of the MCSD successfully convened; Strengthened Partnerships for Sustainable Development in the Mediterranean. b) MCSD Meeting organized with Partners, Inputs provided to COP 24 to the Contracting Parties. c) 2 meetings of the MCSD Steering Committee.	CU	130,000 €
5.2.3. Deliver successfully the main institutional meetings of MAP (Bureau, Consultation FP Meeting, MAP Focal Point, EcAp Coordination Group and Thematic/Components Focal Points). (In-house expertise, consultancy, external services, online meetings, in person meetings, venue, conference services, travel arrangements)	a) The 95 th , 96 th and 97 th Meetings of the Bureau as well as a Bureau meeting on the eve of COP 24 successfully held. b) Progress of implementation of the MAP PoW 2024-2025 reviewed on a 6-monthly basis. c) Guidance provided to the Secretariat and the Contracting Parties on specific issues. d) Main directions of the new PoW 2026-2027 defined.	CU	100,000 €
	e) Meeting of the MAP Focal Points preceded by the MAP Component/Thematic Focal Points and back-to-back with the EcAp Coordination Group Meetings. f) Progress on POW implementation reviewed; EcAp Roadmap Implementation and other related COP decisions implementation reviewed. g) Draft decisions to COP 24 reviewed and negotiated, PoW and Budget reviewed, etc. h) Technical products of MAP components reviewed by the Components Focal Points meetings. i) Integrated sessions organised based on thematic approach.	CU	135,000 €
		MED POL	50,000 €
		REMPEC	80,000 €
		SPA/RAC	50,000 €
		PAP/RAC	40,000 €
		Plan Bleu	40,000 €
		INFO/RAC	40,000 €
		SCP/RAC	30,668 €
	j) Independent mapping exercise as per decision IG.26/12 on the establishment of a Regional Activity Centre on Climate Change prepared	CU	40,000 €

5.2.4. Organize Compliance Committee Meetings (In-house expertise, conference services, travel arrangements)	a) 2 Compliance Committee Meetings successfully convened; Non-compliance situations addressed and brought to the attention of COP 24. b) Interactions and synergies with Compliance Committees of other MEAs developed	CU, Compliance Committee	94,000 €
5.2.5. Strengthen the MAP result-based programmatic framework including gender mainstreaming and sustainability of operations(In-house expertise, consultancy,MAP Task Force meetings,regional and internationalmeetings)	a) Methodology/ tool for the monitoring and evaluation of MTS and POW indicators and targets implemented; Integration of/links with other sets of MAP indicators and targets assessed. b) Resource Mobilisation Strategy implemented; New project concept notes developed. c) Externally funded projects executed effectively and in coordination with PoW. d) MAP sustainable operations and meetings/events (paperless meetings, CO2 calculation etc.) ; Staff capacities enhanced .e) Gender is mainstream in MTS, Projects and MAP Component activities Implementation	CU	55,000 €
	f) An analysis for the state of play of funding mechanisms and opportunities for climate change adaptation in the Mediterranean prepared	CU	0 €
5.2.6. Establish and enhance Inter-Ministerial Coordination (IMC) frameworks at national level	a) IMAP national steering committees fully operational in several Contracting Parties with stakeholder participation.	CU	0 €
(In-house expertise, national assistance)	b) IMC for ICZM established and functional in four CPs (BH, Lebanon, Morocco and Tunisia).	PAP/RAC	0 €
5.2.7. Review the MSSD through an inclusive, participatory process(In-house expertise, consultancy, workshop, publication, translation, regional meeting)	a) MSSD 2016-2025 evaluation successfully delivered.b) Next, reviewed, MSSD successfully prepared and submitted to MAP governing bodies through a participatory process, taking into account MED2050 results and preliminary work on sustainability indicators.	CU, Plan Bleu	0 €
		Plan Bleu, CU	86,000 €

Outcome 5.3. Policy coherence and complementarity ensured among relevant work at global, regional and national levels and among MAP-Barcelona Convention system's policy and regulatory instruments			0 €
5.3.1. Adapt the Simplified Peer Review Mechanism (SIMPEER) to thematic strategies (in-house expertise, online workshop, publication, translation)	a) Prepare methodology and identify volunteer countries for a BioSimpeer (Simpeer peer-to-peer methodology adapted to SDG 14 , Montreal-Kunming Declaration, SAPBIO and National Biodiversity Strategies), for implementation in following biennium.	CU, Plan Bleu	0 €
5.3.2. Maximize synergies with Post 2020 Global agenda for the implementation of SAP BIO (In-house expertise, online meetings, relevant international events and fora attendance)	a) Effective working exchanges with Global institutions of relevance for the implementation of Post-2020 SAPBIO actions linked to their prerogatives ensured.	SPA/RAC	0 €
Outcome 5.4. Enhanced partnerships and multi-stakeholder engagement, including with the private sector and science policy interface			34,955 €
5.4.1. Promote dialogue and enhanced engagement of global and regional organizations, including Conventions' Secretariats and Partners (In-house expertise, online meetings, relevant international and regional events and fora attendance)	a) Leading role of MAP further defined and strengthened in existing and new areas. b) New areas of cooperation identified and added to existing bilateral cooperation agendas: Focus GFCM, UfM, CBD and other Biodiversity related organisations incl, ACCOBAMS, BRS Conventions, EEA, IMO Conventions, PAMEx, PLIFF, Blue Economy Partnership, Ocean Missions, ScineMeet, UNEP GPA, UNEP Regional Seas, HELCOM, OSPAR, Black Sea Commission, EU WES, EUSAIR, WestMed, IOC UNESCO, BBNJ, Plastic Treaty, INTERREG EURO-MED, Interreg NEXT MED, INTERREG IPA ADRIATIC IONIAN etc. c) Cooperation with new partner institutions, including form private sector, initiated. d) Technical Secretariat of PAMEx delivered and Steering Committee meetings organised. e) Support and contribution provided for the organisation of the 9th international "Our Ocean Conference" (OOC-9) in 2024, in cooperation with the Government of Greece	CU	0 €

	f) Lessons learnt and best practices promoted to showcase the benefits of the concerted MAP-GFCM approach in aligning different national and regional priorities of RSO and RFBs.	CU	0 €
		SPA/RAC	0 €
5.4.2. Strengthen participation and contribution of civil society including MAP partners and private sector to the work of MAP BC system (In-house expertise, support attendance in MAP meetings, round tables)	a) MAP Policy on Partnerships updated including an Engagement mechanism/strategy for Civil Society Organisations. b) New MAP Partners added and existing MAP Partners renewed; Enhanced engagement of MAP Partners in policy development and implementation. c) Annual round table discussions held (back-to-back with other meetings). d) Comprehensive plan of actions implemented.	CU	15,000 €
5.4.3. Strengthen SPI networks and enhance partnership with scientific institutions to support MAP Barcelona Convention system (In-house expertise, workshop, publication, translation)	a) Partnership Agreement signed with scientific Institutions to support integrated assessment of GES. b) SPI platform set up to support IMAP implementation at national and regional levels.	Plan Bleu	0 €
		CU	0 €
	c) Joint Work Plan 2022-2030 between EEA and UNEP/MAP implemented (main areas of cooperation: Building strengthened knowledge base including a joint report on sustainability gaps; Responding to political priorities; Supporting digital transformation; Ensuring coordinated networking, communication and stakeholder interaction).	CU	0 €
5.4.4. Promote the title of Partner to Regional Action Plan for the conservation of threatened species and marine key habitats "Regional Action Plans Partners" (In-house expertise, online meetings)	a) Regional Action Plans Partners Title promoted, and the list of Action Plan Partners established for each Regional Action Plan	SPA/RAC	0 €
5.4.5. Implement the targeted actions of the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine	a) National Action Plans for the implementation of the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031) developed.	REMPEC	19,955 €

Pollution from Ships (2022-2031) (In-house expertise, consultancy, conference services, venue, travel arrangements, regional meeting, national assistance)	b) Biennial review of the Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031) undertaken.		
	c) Second coordination meeting on the implementation of the Mediterranean Strategy (2022-2031) organised; recommendations on the way forward elaborated.		
Outcome 5.5. Coordinated approaches implemented to strengthen public institution capacities for the implementation of the Barcelona Convention and its Protocols			40,000 €
5.5.1. Strengthening national governance frameworks for the implementation of the BC and its Protocols through education (In-house expertise, partnerships, online courses)	a) Short courses designed and organized linked to the implementation and enforcement of the BC and its Protocols in universities and other academic institutions.	CU	0 €
5.5.2. Development of project proposals to support Parties' institutions on initial implementation of Post-2020 SAPBIO (In-house expertise, consultancy, online meetings)	a) Finalization of project portfolio with donors and inception of regional/subregional level projects for key priority strategic actions of the Post-2020 SAPBIO insured.	SPA/RAC	10,000 €
5.5.3. Undertake capacity building on ICZM, MSP and CC (In-house expertise, consultancy, online and in person training, workshops and meetings, external services)	a) Training materials updated for the English and French edition of the MedOpen virtual training course. b) Two runs of MedOpen Advanced organised. c) Two sub-regional face-to-face trainings organised in support of the ICZM Protocol implementation. d) Syrian Virtual University supported through delivering seven two-hours lectures on ICZM for their Master's Degree students on Natural Resources Management.	PAP/RAC	30,000 €
			<u>1,520,393 €</u>

Programme 6. Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 6.1. Inclusive and participatory foresight activities conducted at regional and national and local levels, with associated capacity-building			45,000 €
6.1.1. Support transition towards a Sustainable and Inclusive Future in the Mediterranean at 2050 – Building Back Better using strategic participatory foresight (In-house expertise, consultancy, workshop, publication, translation)	a) Med2050 results shared using different tools.	Plan Bleu	45,000 €
	b) Spin-offs of Med2050 methodologies, for example: 1. in answer to emerging challenges 2. application at national or local levels upon request by countries / local authorities 3. applications to specific themes (such as "islands").		
	c) One Contracting Party supported for "future-proofing" assessment of national policies.		
Outcome 6.2. Science-based IMAP, foresight and other assessments and assessment tools for strengthened science-policy interface and decision making (in-house expertise, consultancy, publication, toolbox, national technical support, pilots(s))			315,000 €
6.2.1. Strengthen the implementation of national IMAP-based monitoring programmes for all clusters and deliver quality assured data (In-house expertise, SSFAs, Meetings)	a) At least 7 CPs supported through capacity building, monitoring directives application and quality assured data production.	CU	0 €
		MED POL	0 €
		SPA/RAC	0 €
		PAP/RAC	0 €

	b) 21 CPs implement national IMAP and report quality assured data to the IMAP InfoSystem in a timely manner on biodiversity and NIS.	SPA/RAC	0 €
	c) 21 CPs implement national IMAP and report quality assured data to the IMAP InfoSystem in a timely manner on pollution and litter. d) Capacity building programme prepared and conducted to support the application of the Monitoring Guidelines for IMAP CIs 13, 14, 17, 18 and 20 in up to 4 CPs. e) Support is provided to monitoring of IMAP Ecological Objective 10 (EO10) Marine Litter including: (i) monitoring of IMAP Common Indicator 22 (beach macro-litter) and Common Indicator 23 (seafloor and floating marine litter/microplastics); (ii) pilot monitoring for riverine inputs of marine litter and microplastic coming from WWTP; (iii) data flow and upload from CPs into IMAP InfoSystem for all IMAP EO10 Common Indicators; and (iv) National capacities in monitoring IMAP Candidate Indicator 24 through the establishment and operationalization of national IMAP-based monitoring programmes across the region and enabling data submission to IMAP InfoSystem.	MED POL	40,000 €
	f) CPs implement national IMAP and report quality assured data to the IMAP InfoSystem in a timely manner on coast and hydrography. g) Support provided to up to 4 CP.	PAP/RAC	40,000 €
6.2.2. Upgrade the assessment component of IMAP including possible integrated assessment for all IMAP clusters. Focus on assessment criteria and thresholds (CI 1, 2, 6, 13, 14, 16, 17, 21, 22, 23, CCI 25) (In-house expertise, consultancies, meetings)	a) National capacities enhanced to use the assessment methodologies (NEAT GES Assessment; CHASE+ assessment; Conversation of satellite products into eutrophication data; EQR assessment) including provision of software and capacity building needed for application of related statistical calculations as appropriate. b) A review is undertaken of all sources of relevance for setting database for the calculation of the CI 17 EACs in the Mediterranean (at sub-regional and regional levels), i.e., undertake survey of available literature sources; prepare a questionnaire aimed at collecting ecotoxicological data that might be available at national and international levels for setting the methodology for calculation of the EACs	MED POL	135,000 €

	by using available data. c) Assessment criteria for CI 18 elaborated based on biological effects data available from various sources. d) In one MED sub-region (e.g., in AEL, CEN or WMS) the methodology for setting DIN and TP reference and boundary values is developed and applied similar to the Adriatic Sea Sub-region based on various sources. e) IMAP pollution and marine Cluster CIs Guidance Factsheets updated. f) DS-DDs prepared for reporting data on monitoring for riverine inputs of marine litter and microplastic coming from WWTP g) IMAP Ecological Objective 10 (EO10) Marine Litter is upgraded including IMAP EO10 Indicators in order to reflect riverine input of marine litter and microplastics coming from wastewater treatment plants; as well as (ii) supporting the transformation of IMAP Candidate Indicator 24 among IMAP Common Indicators h) CORMON Pollution meeting organized annually (one online) i) CORMON ML meeting organized annually (one online) j) Contribution provided to organize, in cooperation with OSPAR, HELCOM, BSC an international conference on riverine sources of marine litter.		
	k) Assessment methodologies concluded for biodiversity common indicators CI1 and CI 2) based on MedQSR 2023 recommendation l) Assessment criteria and thresholds defined for biodiversity (CI1 and 2) based on MedQSR 2023 recommendation m) CORMON meetings on biodiversity and NIS organized annually	SPA/RAC	60,000 €
	n) Monitoring of good environmental status of Mediterranean ecosystems and biodiversity is ensured in the framework of ecosystem-based management tools and circular economy by establishing link with pollution impacts and sustainable use of marine ecosystem services	CU, SPA/RAC	0 €

	o) Assessment criteria for CCI 25 on land-use change defined and submitted to CORMON Coast and Hydrography.	PAP/RAC	40,000 €
6.2.3. Further develop IMAP Common Indicators (In-house expertise, consultancy, online meetings, external services, online and in person training workshops, regional and national meetings)	a) Further development of the IMAP Ecological Objective related to Biodiversity and Coast and Hydrography	CU	0 €
	b) Further development of the IMAP Ecological Objective 4 on marine food webs under the Barcelona Convention. c) Development of EO1 CI1 and CI2 on pelagic habitats.	SPA/RAC	0 €
	d) Training sessions for the application of the updated methodology for CCI 25 organised for GEF eligible countries. e) Updated methodology for CCI 25 tested in the GEF eligible countries.	PAP/RAC	0 €
6.2.4. Review and update of the common indicators factsheets related to Biodiversity (EO1) and fisheries (EO3) (In-house expertise, online meetings)	a) Common indicators factsheets updated as appropriate for biodiversity. b) Common indicators factsheets updated as appropriate for fisheries in collaboration with GFCM. c) Preparatory work undertaken on the needs to revise/develop CI factsheets of the upgraded IMAP.	SPA/RAC	0 €
Outcome 6.3. IMAP implementation and Environment and Development Observation provide updated and quality assured data in support of decision-making by Contracting Parties and assessment of GES.			503,381 €

6.3.1. Strengthen national capacities to apply harmonized and standardized monitoring and assessment practices related to pollution and marine litter in line with IMAP (Consultancies, UN-UN Agreement)	a) Intercalibration exercise is set to support the Quality Assurance related to IMAP Common Indicator 18. b) Analyses undertaken in up to 7 CPs to identify national counterparts with the greatest needs regarding provision of equipment for sampling, analysis, processing and quality assurance of data. c) Intercalibration exercise and TC are undertaken to support the Quality Assurance related to IMAP Common Indicators 17 and 20. d) Intercalibration exercise and TC are undertaken to support the Quality Assurance related to IMAP Common Indicators 13 and 14. e) Proposal prepared to support the establishment of governance mechanisms for designated laboratories in the Mediterranean that can support the process for an intercalibration exercise for floating microplastics (IMAP CI23).	MED POL	180,000 €
6.3.2. Maintain and update InfoMap System towards a fully integration into the Knowledge Management Platform (In-house expertise, consultancy, online meetings, external services)	a) Hardware and software upgrade of the InfoMAP System in order to host in a fully efficient way the datasets collected by UNEP/MAP. b) InfoMap technological infrastructure implemented into the Knowledge Management Platform: architecture, functionalities and usage.	INFO/RAC	21,000 €
6.3.3. Ensure effective operation of the BCRS on line reporting system. (In-house expertise, consultancy, online meetings, external services)	a) Reporting system maintained, tuned and upgraded. b) System management: profiles, users, access rights managed and updated. c) Dedicated assistance and training for access and filling reporting modules (at least one workshop for each beneficiary country). d) Towards a full interoperability with EEA ReportNET 3 model with collaborative approach, API integration e) Consolidated dashboard of the data entered in the System. f) Interoperability: possibility of downloading data in different formats.	INFO/RAC	21,000 €

6.3.4. Ensure effective operation of the NBB reporting system. (In-house expertise, consultancy, online meetings, in person meetings, external services)	a) Reporting system maintained, tuned and upgraded. b) Integration of Quality Controls (QCs) c) System management: profiles, users, access rights managed and updated. d) Dedicated assistance and training for access and filling of NBB reporting modules (at least one workshop for each beneficiary country). e) Relationship with the PRTR and EU Registry component implemented and assessment functions strengthened at regional, subregional, national and river basin scale. f) Summary dashboard of the data entered in the System. g) Interoperability: possibility of downloading files in different formats.	INFO/RAC	21,000 €
6.3.5. Ensure Data Centre evolution towards a standardization of the management of the data flows (In-house expertise, consultancy, online meetings, external services)	a) State of the harmonization of dataflows present into the Data Centre. b) Vulnerabilities identified and systems configured to enhance existing security features to prevent cyber attacks. c) System management for Users Directory and Groupware performed and upgraded. d) Dedicated assistance and training for access and use of Groupware and consultation of Data Dictionaries and Data Repository. e) MAP components and regional organizations supported to collect metadata and data in the Metadata Catalogue.	INFO/RAC	21,000 €
6.3.6. Maintain and update IMAP Info System with all IMAP Common Indicators fully implemented (In-house expertise, consultancy, online meetings, in person meetings, external services)	a) IMAP Info System hardware and software platform upgraded and expanded to include all mandatory and candidate IMAP CIs in order to ensure fully operational reporting by CPs. b) Data Standards (DSs) and Data Dictionaries (DDs) developed for remaining Candidate IMAP Common Indicators.c) Data Standards (DSs) and Data Dictionaries (DDs) tuned for IMAP Common Indicators already in place; d) QA/QC tool upgraded and developed for all the remaining IMAP CIs data flows on the basis of the nature of the indicator.e) QA/QC tool tuned and integrated for all the existing IMAP CIs data flows. f) Helpdesk human resources dedicated to support h24 Contracting Parties in the reporting process.g) An additional automatic "Helpdesk" section implemented into the IMAP Info System to support CPs into the reporting process, recording all the requests to be used for statistical purposes. h) IMAP Assistance/Training meetings organized with Contracting Parties (at least un workshop for each beneficiary country) dedicated to the IMAP reporting process.i) Cooperation with relevant Regional Organization (i.e. Accobams,	INFO/RAC	40,000 €

	GFCM, etc.) in order to facilitate the interoperability between IMAP and their Infosystems and databases as appropriate.j) A specific section implemented into the IMAP Info System, as webform, to allow the CPs to officially provide information about the state of reporting in the country.k) "User management" system upgraded and adapted to MAP CU and MAP Components needs. l) A Data Analytics dashboard implemented into the IMAP Info System providing aggregation of monitoring data, dedicated to MAP Components assessment and also accessible to public users. m) Geographical section upgraded and customized for IMAP monitoring data visualization into the IMAP Info System and fully integrated in InfoMAPNode and KMP.n) Additional functionalities implemented in the IMAP Info System dedicated to MAP Components: data analysis and data export in different formats through specific tools implemented ad hoc; possibility of queries and layout the results in tables with data filtering; extensive customization, analysis and data visualization through Python modules (Python notebook, ex. Jupiter lab of WEKEO DIAS-CMEMS).		
6.3.7. Ensure full implementation of the InfoMAP Spatial Data Infrastructure for the geographical data and maps (InfoMAPNode) (In-house expertise, consultancy, online meetings, in person meetings, external services)	a) InfoMAPNode maintained, tuned and upgraded. Implementation in the InfoMAPNode of information layers provided. Interoperability with CPs information systems strengthened. b) Dedicated assistance and support trainings to CPs to organize, upload and consult Spatial Data (at least one workshop for each beneficiary country) . c) Creation of user profiles and groups for InfoMAPNode ensured. d) Geoviewer for the visualization of georeferred data developed and implemented. e) Basic and thematic layers collected, developed and visualized. f) Spatial data and metadata from UNEP/MAP, CPs, RACs and other sources integrated in the InfoMapNode platform. g) Integration of InfoMAP Node into the Knowledge Management Platform.	INFO/RAC	21,000 €
6.3.8. Enhance the use new INFO/RAC Cloud tools for document repository and collaboration platform (In-house expertise, consultancy, online meetings, external services)	a) New INFO/RAC Cloud implemented (i.e. Teams) for document repository, networking and information exchange.	INFO/RAC	11,381 €

6.3.9. Ensure visualization of integrated data through customized Dashboards (to be integrated into the Knowledge Management Platform) (In-house expertise, consultancy, online meetings, external services)	a) Data Analytics dashboards implemented: rationale behind the choice of data fluxes represented (user requirements) and functioning. b) Elaboration of pre-compiled data products as aggregation and integration of data for different targets.	INFO/RAC	21,000 €
6.3.10. Undertake Copernicus data analysis/integration of Copernicus Service to support indicator and data collection and ingestion (In-house expertise, consultancy)	a) Analysis of Copernicus Services products in cooperation with EEA to promote fully exploitation for IMAP data collection. b) Use of Copernicus Services products and integration in IMAP Contracting Parties' national programmes.	INFO/RAC	15,000 €
6.3.11. Expand and improve the monitoring and forecasting capacities in the marine environment through integrating networks of observing and forecasting systems (oceanographic observatories) across the Mediterranean Sea (In-house expertise, consultancy, online meetings, external services, online and in person training workshops, regional and national meetings , conference arrangement)	a) Capacity building and workshops coordinated and organized for interfacing oceanographic digital data and tools among CPs and Mediterranean countries beneficiaries of EU ILIAD Project Consortium to support an enhanced implementation of the Post 2020 SAPBIO, the IMAP and the ballast water Strategy.	SPA/RAC	0 €
6.3.12. Maintain Biodiversity databases as appropriate, regularly update databases content and elaborate an operational strategy for marine biodiversity data management, in line with	a) SPA Directory web application operational and linked to the Mediterranean biodiversity Platform.	SPA/RAC	25,000 €
	b) Data and metadata made available in the Mediterranean Biodiversity Platform (MBP) and other biodiversity databases such as MAPAMED, continuously maintained and updated	SPA/RAC	

the UNEP/MAP Data Management Policy (In-house expertise, consultancy, external services, online meetings, training workshops)	c) UNEP/MAP Data Management Policy applied to marine and coastal biodiversity.	SPA/RAC, INFO/RAC	
	d) Different Marine Biodiversity databases and web platforms promoted among Mediterranean countries through training sessions and capacity building actions.	SPA/RAC, INFO/RAC	
	e) Marine biodiversity data exchange improved through establishing partnerships with other relevant data providers.	SPA/RAC	
6.3.13. Strengthen the MSSD and SCP Regional Action Plan monitoring framework and a regional observatory on the environment and development(In-house expertise, workshop, consultancy, translation, web services)	a) MSSD dashboard updated.b) Exploration of potential new indicators and data for consideration by the Contracting Parties, in particular for monitoring of blue economy impacts, of the relation between health and environment, of sustainability gaps, of legal enforcement of the Convention and its Protocols. c) Further develop WESR Med functionalities through enhanced collaboration with UNEP-GRID.d) Capacity-building through workshop and on-line assistance to support national and regional partners giving access to their data and using data-sharing functionalities, in coordination with IMAP indicator processes.e) Further expand network of partners involved in data-sharing.f) Explore linkages with citizen science and initiate pilot projects.	Plan Bleu, INFO/RAC	50,000 €
	g) SCP indicators dashboard is updated and the latest data is uploaded within WESR Mediterranean (MapX).h) Initial screening of indicators to measure circularity is completed.	SCP/RAC	5,000 €
6.3.14. Streamline shipping and offshore data-sharing and monitoring platform with Info-MAP Data management system (In-house expertise,	a) MEDGIS-MAR linked to Info-MAP Data management system.	REMPEC	30,000 €

consultancy, IMAP TF, awareness raising)	b) IMAP CI 19 Guidance Factsheets updated.		
	c) MEDEXPOL 2024 on Data Sharing, Monitoring and Reporting organised; latest developments and achievements shared; improvements or alignment on ways to assist CPs in meeting their commitments under the 2002 Prevention and Emergency Protocol agreed.		
6.3.15. Migrate, integrate, harmonize, manage and update MAP Component databases and platforms into InfoMap System towards a fully integration into the Knowledge Management Platform (In-house expertise, consultancy, online meetings, external services)	a) ICZM platform maintained and updated (evolution process to be discussed with PAP/RAC). b) Adriadapt portal hosted, maintained and updated in active cooperation with PAP/RAC. c) Adriatic.eco portal hosted, maintained and updated in active cooperation with PAP/RAC. d) MSP platform hosted, maintained and updated in active cooperation with PAP/RAC. e) MEDGISMAR database hosted, maintained and valorization in active cooperation with REMPEC. f) PoSOW and MENELAS databases hosting, maintenance and valorization in active cooperation with REMPEC etc.	INFO/RAC	21,000 €
			<u>863,381 €</u>

Programme 7. For Informed and Consistent Advocacy, Awareness, Education and Communication			
Main activity	Expected deliverable	Lead Component	Total MTF Budget 2024-2025
Outcome 7.1. Stakeholders and policymakers properly informed about the state of the Mediterranean Sea and coast and aware of the environmental priority issues			90,000 €
7.1.1. Disseminate knowledge of the state of the Mediterranean Sea and Coast (In-house expertise, workshop, publication, translation, web services, social media channels)	a) (After COP23 adoption) MED QSR 2023 communicated and disseminated as part of a system-wide communication plan including media engagement and outreach activities.	CU, INFO/RAC	8,000 €
	b) Communication material, messages and events organized to enhance knowledge and disseminate information on Plan Bleu assessment findings (at least 24 web articles per year, 2 webinars/events for the general public per year, at least 5 publications per year, communication material such as a calendar). c) Med2050 messages: Press release, Webinar, Major publication. d) MedECC special Reports: i) Climate and environmental coastal risks ii) Climate-food-water-energy-ecosystems nexus iii) Environmental change, conflict and human migration. e) WESR Med page updated. f) Dashboard implemented in WESR website as a digital component. g) Specific Mediterranean events and related communication, including around BC 50th anniversary, during UN Ocean conference in 2025 in Nice (France).	Plan Bleu, INFO/RAC	0 €

	h) Dissemination and awareness-raising campaign on UNEP/MAP's approach addressing the full life cycle of plastic in the Mediterranean, in line with the Intergovernmental Negotiating Committee (INC) aiming at developing an international legally binding instrument on plastic pollution.	SCP/RAC, CU	5,000 €
7.1.2. Implement MAP Communication Strategy	a) UNEP/MAP Website updated regularly with new content reflecting the delivery of the POW and MTS and new developments.	CU	0 €
(In-house expertise, consultancy, online meetings)	b) MAP Operational Communication Strategy 2024-25 implemented in the framework of the 2024-2029 MAP Com Strategy. c) MAP Operational Communication Strategy updated for the biennium 2026-2027. d) MED News - The MAP Newsletters (New format launched in 2023 released monthly).	INFO/RAC	8,000 €
7.1.3. Position COP 24 of the Barcelona Convention as an important regional conference driving the environmental and sustainable development agenda forward	a) Develop and Implement COP 24 Communication Plan (in-house expertise, external expertise, Communication TF, COP Host Country Agreement, publication, side event).	CU, INFO/RAC	0 €
(In-house expertise, consultancy, online meetings, in person meetings, external services)	b) Short video capturing the main results achieved during the biennium. c) Special issue of the MAP Newsletter capturing the main achievements of the biennium. d) COP24 website in close cooperation with the host Country. e) COP24 Communication Pavilion in close cooperation with the host Country.	INFO/RAC	8,000 €

7.1.4. Towards a MAP Knowledge Management Strategy: develop the Regional Sea KM Platform of the MAP fully integrated in UNEP KM platform and in close dialogue with other initiative as MED Programme KM platform.(In-house expertise, consultancy, online meetings, in person meetings, external services)	a) MAP Knowledge Management Strategy implemented.b) Knowledge Hub fully developed for the harmonization of all the documental heritage of the MAP System (integrated in the Knowledge Platform).c) Connecting MAP and the community through the Knowledge Exchange hub of the Knowledge Management Platform: Update of existing tools and implementation.d) Harmonized data, linked data integrated into the Knowledge Management Platform and interoperability among existing systems ensured.e) MED QSR 2023 integration in the Knowledge Management Platform for an interactive consultation.f) MedProgramme KMP harmonized and interoperable with MAP KMP.g) Feasibility study for the future interoperability with WESR.h)Promotion of KMP and its links with global and regional platforms through digital campaigns and social media.	INFO/RAC	8,000 €
	i) MedProgramme Knowledge management platform in place, serving as central repository of all the data generated by the eight Child Projects of the MedProgramme and hosting: i) a project management tool; ii) a public/outward-facing portal, including subwebpages for each Child Project; iii) visualization tool(s) to display a digitalized representation of data through GIS and other suitable means; and iv) a database for raw/primary data.	CU	0 €
7.1.5. Promote Mediterranean sustainability awards to shore up advocacy efforts for a transition to sustainable urban management and circular economy in the Mediterranean (In-house expertise, Communication TF, award delivery events)	a) Award Organization (CU): call preparation, procedure implementation, selection of candidates and Award presentation at COP. b) Promotion of IEFCA Award (INFO/RAC): IEFCA website update, on-line application form update, promotional winner video and promotional event with Coastal Cities representatives.	CU, INFO/RAC	0 €
	c) 4th and 5th editions of the WeMed Mediterranean Sustainability Award celebrated to acknowledge the key importance of sustainable business models and supporting ecosystems (4th edition focusing on Blue Economy). d) 2 award events and awareness-raising associated campaigns.	SCP/RAC	0 €

7.1.6. Strengthen MAP Advocacy to promote enforcement of and compliance with Barcelona Convention and enlist support of key stakeholders and policymakers to a green renaissance underpinned by the circular economy and a sustainable Blue Economy. (In-house expertise, consultancy, Communication TF, regional event)	a) Report on the status of implementation of the Barcelona Convention and its Protocols based on the reports submitted by the Contracting Parties as per Art. 26 of the Barcelona Convention.	CU	0 €
	b) Designing and organizing the event SwitchMed Connect 2024, a 3-days forum engaging +200 stakeholders from the Southern & Northern Med, including policy-makers, BSOs representatives, industries, entrepreneurs and practitioners. c) An integrated social media campaign raising awareness on the importance of SCP & CE in the Med.	SCP/RAC	0 €
7.1.7. Celebrate UNEP/MAP B.C System Anniversaries (In-house expertise, consultancy, external services, online meetings and events, Communication TF, media)	a) 50 years of MAP (MAP @50) celebrated through a high-level event (Co-organized with Egypt and Spain). b) MAP@50 Report on MAP achievements since its inception (this will require formal endorsement by the RACs who will contribute to putting this report together). c) MAP@50 Communication campaign and outreach events.	CU and INFO/RAC (communication aspects) and MAP Components (for the compilation of the report)	20,000 €
	d) SPA/RAC 40th anniversary (1985-2025).	SPA/RAC	25,000 €
	e) INFO/RAC 20th anniversary (2005-2025).	INFO/RAC	8,000 €
Outcome 7.2. Citizen and general public awareness and outreach raised through citizen science and digital campaigns			149,844 €
7.2.1. Enhance public awareness and outreach on UN and MAP Days observance and their topics (In-house expertise,	a) Digital Campaign for enhancing knowledge of UN and MAP Days (i.e. Mediterranean Coast Day, Biodiversity Day, Air Pollution on the International Day of Clean Air for blue skies observance etc.), through web page; interactive story; hot topics; story map; Infographics; Twitter cards; Video; articles and interviews; focus in section in MED News.	INFO/RAC	8,000 €

consultancy, external services collaboration with SPAMI managers and civil society, media)	b) Mediterranean Coast Day celebrated: Promotional/awareness raising material prepared; Two regional celebrations organised; Support provided to local Coast Day celebrations.	PAP/RAC	30,000 €
	c) SPAMI Day celebrated in collaboration with SPAMI managers and CSOs, through awareness raising activities and digital campaigns, and SPAMI Certificates delivered to SPAMI management authorities.	SPA/RAC	25,000 €
7.2.2. Enhance public awareness and outreach on key MAP topics for general and specific targets (MAP Partners, Civil Society, Private sector, Youth etc.) (In-house expertise, consultancy, external services, digital campaigns, web platforms, online and in person events and activities, publications, IT services)	a) Digital Communication Campaigns enhancing knowledge about the main topics of Barcelona Convention to strengthen action of CU and MAP Components (i.e. Pollution, Climate Change, Circular economy etc.) through web pages; interactive stories; burning issues; story maps; Infographics; Twitter cards; Video; articles and interviews; focus in section in MED News.	INFO/RAC	8,000 €
	b) Communication material and events developed to improve knowledge on SPA/RAC action in biodiversity conservation, and to raise the participation of key stakeholders and decision-makers in the conservation and sustainable use of biodiversity (agenda, web articles/items, webinars/activities, reports and other communication material on MPAs, species & habitats conservation, sustainable use of marine resources).	SPA/RAC	20,000 €
	c) Digital Communication Campaign: Dissemination & Communication Package on hazardous chemicals and alternative eco-innovative solutions.	SCP/RAC	5,000 €
	d) Awareness, information materials on marine pollution from ships and offshore installations produced and disseminated.	REMPEC	8,708 €
	e) Web APP for Citizen Science updated and promoted specifically for different targets (citizens, scientists, students). f) Video Contest on the key topics of the biennium launched.	INFO/RAC	10,000 €

	g) Promotion of environmental education courses in schools aimed at increasing knowledge of the role of UNEP/MAP to the younger generation; Dissemination of the young person guide document.	INFO/RAC	
	h) Youth for Mediterranean workshop organized to enhance young persons' awareness of the BC and Protocols.	CU	30,136 €
	i) 3rd and 4th Euro-Med Weeks for Waste Reductions (2024-2025): i) Communication and Marketing Plan 2024-2025 ii) Dissemination campaigns and awareness-raising activities to engage action developers in Southern Mediterranean countries iii) Actions developers engaged and supported to develop actions in the southern Med.	SCP/RAC	5,000 €
	j) Switchers Support Programme Dissemination & Communication Package: 1) The Switchers Community Communication and Marketing Plan 2024-2025 2) We are the Switchers dissemination campaign 3) Digital campaign on Sustainable Fashion 4) Marketing promotion of the Switchers Products platform 5) Marketing promotion of the Open Eco-Innovation Platform 6) Marketing promotion of the SwitchersFund 7) Marketing promotion of the Policy Hub.	SCP/RAC	
Outcome 7.3. Towards a digital transformation: use of digital technologies to improve networking and MAP visibility			59,000 €
7.3.1. Towards a digital transformation (In-house expertise, consultancy, online meetings and events, external services)	a) Digital transformation strategy implemented: priorities, focus and adaptation to the MAP System. b) Digitalization of the MAP publication heritage: Catalogue developed for MAP Publication harmonized in Publication series layouts.	INFO/RAC	8,000 €
	c) Digital communication strategy of SPA/RAC elaborated and implemented to improve UNEP/MAP - SPA/RAC visibility	SPA/RAC	35,000 €

7.3.2. Promote MAP educational capacity through E-Learning (In-house expertise, consultancy, online meetings, in person meetings, external services)	a) E-Learning platform maintained and further developed. b) On-line general courses on MAP System and Barcelona Convention developed. c) On-line thematic courses on MAP Components main topics developed. (POSOW-REMPEC, PAP/RAC for ICZM training courses, SCP/RAC Switchers' training courses).	INFO/RAC	8,000 €
7.3.3. Enable effective MAP communication (In-house expertise, consultancy, online meetings, in person meetings, external services)	a) Directory of all the MAP network maintenance and update (repository of NFPs designations). b) On-line Event Calendar of all the MAP network initiatives maintenance and update. c) MAP Communication Task Force on-line network enhanced. d) Survey tool further developed and maintained. e) Impulse to social media in the MAP system: Social media account followers increased.	INFO/RAC	8,000 €
			<u>298,844 €</u>