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Seventeenth Meeting of SPA/BD Focal Points

Istanbul, Türkiye, 20-22 May 2025

Agenda item 7: Status of implementation of the Ecosystem Approach (EcAp) Roadmap (Progress)

Report of the Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) for Biodiversity and Fisheries, by videoconference on 6 and 7 June 2024

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Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries

Videoconference, 6-7 June 2024

Report of the Meeting

SPA/RAC
Tunis, 2024

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Report of the Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries

I. Introduction

1. In accordance with the Programme of Work (PoW) of the Specially Protected Areas Regional Activity Centre (SPA/RAC) of the United Nations Environment Programme Mediterranean Action Plan (UNEP/MAP) for the period 2024-2025, as adopted by the 23rd Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (COP 23, Portorož, Slovenia, 5-8 December 2023), the SPA/RAC convened the Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) for Biodiversity and Fisheries, by videoconference on 6 and 7 June 2024.

2. The main objectives of the meeting are to review the following documents:
   (i) Development of the Integrated Monitoring and Assessment Programme (IMAP) Ecological Objectives EO4 on marine food webs and EO6 on sea-floor integrity;
   (ii) Monitoring and assessment elements for the IMAP Common Indicators (CI1 and CI2) on benthic and pelagic marine habitats; and
   (iii) IMAP revision and preparatory elements for biodiversity and non-indigenous species (NIS).

II. Attendance

3. The following Contracting Parties to the Barcelona Convention were represented at the meeting: Bosnia & Herzegovina, Croatia, Cyprus, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Slovenia, Syria, Tunisia.

4. The following intergovernmental organization was represented as observer: the General Fisheries Commission for the Mediterranean (GFCM).

5. The following non-governmental organizations and other entities were represented as observers: the ARION Cetacean Rescue and Rehabilitation Research Centre - Greece, the Aristotle University of Thessaloniki (AUTH) - Greece, the Network of Marine Protected Areas Managers in the Mediterranean (MedPAN), the University of Thessaly - Greece, the World Wide Fund for Nature North Africa (WWF NA).

6. The United Nations Environment Programme Mediterranean Action Plan - Barcelona Convention Secretariat (UNEP/MAP) and the following regional activity centres of the Mediterranean Action Plan: Regional Activity Centre for Information and Communication (INFO/RAC), Regional Activity Center for the Priority Actions Programme (PAP/RAC) were represented at the meeting.

7. SPA/RAC acted as the secretariat of the meeting.

8. The full list of participants is attached as **Annex I** to the present report.

III. Opening of the meeting (agenda item 1)

9. The meeting was opened at 8.30 a.m. UTC+1 on Thursday, 6 June 2024 by Mr. Mahmoud Elyes Hamza, Director of SPA/RAC, who made an opening statement.

10. In his opening remarks, Mr. Hamza welcomed the participants and congratulated the Contracting Parties on the publication of the Mediterranean Quality Status Report (MED QSR) 2023. He highlighted the cooperation between experts, institutions, Contracting Parties and the MAP system and recognized their efforts to implement the ecosystem approach roadmap. He also announced that two CORMON meetings for biodiversity and fisheries are scheduled for the 2024-2025 period, including this online meeting and a face-to-face meeting planned for 2025.

11. The SPA/RAC Director set out the objectives and agenda of the meeting, including the interactive presentations by leading scientists on three best practices on sea-floor integrity monitoring, marine food webs and climate change impacts on the good environmental status of the Mediterranean Sea. While acknowledging the weighty agenda, he expressed his confidence in the participants' ability to achieve the meeting's objectives and deliver the planned outcomes. He concluded by wishing the group a fruitful discussion and thanked them in advance for their contributions to the meeting.

12. Ms. Tatjana Hema, MAP Coordinator, made a statement at the beginning of the second day of the meeting, in which she provided an overview of the MAP Secretariat's ongoing work to streamline and update the implementation of IMAP based on the MED QSR 2023 and recommendations from Contracting Parties. She emphasized that the aim was to update, rather than substantially revise, the IMAP based on the experience of recent biennia. Key areas of focus include better definition of selected Good Environmental Statuses (GES), adjustment or addition of indicators and evaluation criteria, and further development of quantitative thresholds for more robust evaluation of GES.

13. The Coordinator outlined plans to engage CORMONs this year for feedback on proposed IMAP revisions, including a focus on biodiversity, with the aim of finalizing changes for COP 24 consideration. Separate efforts are also underway to develop a summary for policymakers, involving Contracting Parties' experts, and to revise the EcAp roadmap, pending feedback from the current evaluation of the EU Marine Strategy Framework Directive (MSFD).

14. Assistance will also be provided to eligible countries to revise national IMAPs following agreement on regional updates. This will take place at a later stage after 2025. Overall, the secretariat aims to work collaboratively through established structures and to take a pragmatic, step-by-step approach to strengthening implementation and regional assessment capacity. Emphasizing balance and realism in the IMAP updating scope given the implementation requirements, Ms. Hema welcomed the outcome of the discussions to inform the ongoing refinement of the proposals with a view to presenting a robust package for approval by Parties in Egypt in late 2025

IV. Organizational matters (agenda item 2)

A. Rules of procedure

15. The meeting 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 mutatis mutandis* to their deliberations at the meeting.

B. Election of officers

16. In accordance with rule 20 of the rules of procedure and with the principles of geographical and equitable gender representation, the meeting unanimously elected the following officers from among the representatives of the Contracting Parties:

Chairperson:	Mr. Abdelmaula Hamza (Libya),
Vice-chairpersons:	Ms. Anna Lizinska (France),
	Ms. Tina Centrih Genov (Slovenia),
Rapporteur:	Mr. Luke Tabone (Malta).

C. Adoption of the agenda

17. The meeting adopted its agenda on the basis of the provisional agenda circulated in document UNEP/MED WG.592/1.

18. The agenda is attached as **Annex II** to the present report.

D. Organization of work

19. The meeting agreed to follow the timetable proposed in the annotated provisional agenda (UNEP/MED WG.592/2).

20. The working languages of the meeting were English and French. Simultaneous interpretation was available.

V. Development of EcAp ecological objectives (agenda item 3)

A. Development of the IMAP Ecological Objective 6 on sea-floor integrity under the Barcelona Convention (agenda sub-item 3.1)

21. This agenda sub-item was initiated by an introduction to the topic of sea-floor integrity in the Mediterranean. The presentation provided an overview of the characteristics of the sea-floor in the Mediterranean, the main threats to it, the importance of monitoring and assessment, best practices for monitoring and assessment in the context of the MSFD, and the relationship to Ecological Objective 1 (EO1) on benthic habitats.

22. The meeting engaged in a discussion about baseline data collection and monitoring of sea-floor integrity, particularly in non-EU Mediterranean countries where data availability and quality varies significantly. It was noted that while field monitoring is important, an initial broad assessment of pressures and their distribution could be conducted using existing desk-based data sources to provide an overview. Such remote analyses could assist in prioritizing areas for further validation through on-site monitoring. This pragmatic approach acknowledges the broader scope of Ecological Objective 6 (EO6) in comparison to the habitat-specific focus of EO1. It allows for a more cost-effective starting point for the monitoring framework.

23. Furthermore, a representative highlighted the need to consider differences between coastal and deep-sea areas when implementing monitoring efforts. The coastal zone below 200 m was highlighted as having much higher habitat diversity and facing greater human pressures. Establishing monitoring priorities could thus give initial focus to this vital nearshore environment, which is also afforded some legal protections like fishing restrictions. However, it was emphasized that developing indicators and collecting baseline data is a long-term endeavor that will require the collection of data across the full range of habitats across the Mediterranean sea-floor over time.

24. Another representative highlighted the variation in data availability across the Mediterranean region, with a greater volume of data available in northern and western areas compared to the south and east. The secretariat acknowledged the uneven distribution of data but noted that some southern and eastern countries have well-developed data collection processes that could facilitate the availability of their data. It was further noted that, despite the lack of data previously available, significant efforts have been made by the EU countries to develop assessment indicators and systems through extensive data collection projects across regions like the North-East Atlantic and Baltic seas since 2010. This provides hope that continuing advances can be achieved step-by-step in the Mediterranean over the coming years through similar collaborative work.

25. The depth from which data is collected was also discussed. The secretariat clarified that the type of data determines the depth at which it should be gathered. Some physical disturbance data should be gathered below 1000 m, while this depth marks an important threshold for bottom trawling pressures and management. It was highlighted that data originates primarily from assessing human activities, their distribution and their related pressures, providing a more straightforward way to gather information compared to intensive direct seabed monitoring across the entire region.

26. Following the introductory presentation and ensuring discussion, the secretariat introduced document UNEP/MED WG.592/3 entitled “Development of the IMAP Ecological Objective 6 on sea-floor integrity under the Barcelona Convention”.

27. The Chair posed a question regarding the restoration of habitats, given that much of the Mediterranean seabed has undergone significant changes over the past 100-150 years due to human pressures. It was observed that if the natural baseline is uncertain, it may be challenging to define restoration goals aligned with a hypothetical past natural state. In response, the expert representing the secretariat acknowledged that it is not feasible to fully return ecosystems to their original state before major alterations were made. However, he proposed that restoration efforts could still aim to improve conditions by quantifying the key human pressures currently affecting specific areas and subsequently reducing or removing those pressures. This approach would facilitate the recovery of ecosystems towards a healthier state, which would establish a new ecological balance and represent a significant improvement.

28. The discussion further highlighted the challenge of restoration goals for a sea that has experienced significant transformation over many decades. One proposed solution was to examine less impacted regions, such as those in the southern Mediterranean, to gain a better understanding of the past range of natural diversity and integrity, which could then be used as a reference for restoration measures elsewhere.

29. A representative noted an inconsistency between document UNEP/MED WG.592/3 under consideration and a previous document prepared for the MSFD GES Working Group meeting regarding identification of pressures associated with seabed physical disturbance. Specifically, the paper referenced includes oil and gas “extraction” but not “exploration” as a pressure type. However, in the document before the meeting, oil and gas exploration is listed under the activity theme of extraction of non-living resources. Considering that exploration does not involve actual extraction, has limited impacts on the seabed compared to exploitation, and to ensure alignment with other relevant documents, it was proposed to amend the pressure activity to be “Gas and oil exploitation” rather than including exploration.

30. Another representative raised the concern that monitoring and data collection for seabed integrity could require an expensive programme. In response, the secretariat noted that much of the data used in assessments in other regions like the Atlantic and Baltic seas is obtained through desk-based collection and modeling of pressures rather than costly in situ monitoring, providing a relatively inexpensive approach.

31. A third representative suggested optimizing budgets and efforts by combining implementation of EO1 and EO6 in the field, as they share some common indicators. It was acknowledged that data collected under EO1 assessing specific priority habitats could feasibly feed into the broader seabed integrity monitoring under EO6, helping to streamline efforts and resources over the long term.

32. The meeting emphasized the need to keep the EOs conceptually separate while demonstrating their relationships and exploring compatible implementation approaches. This balanced approach avoids diluting the habitat focus of EO1 while capturing linkages and synergies where practical.

33. A representative informed the meeting of ongoing discussions within the Technical Group TG Seabed for the EU MSFD regarding the establishment of a Mediterranean focused sub-group. The aim of this sub-group would be to specifically assess potential indicators and thresholds for determining GES in the Mediterranean context. In this context, it was suggested that discussions on the development of appropriate indicators and standards for EO6 on sea-floor integrity under the Barcelona Convention could usefully take place within this proposed Mediterranean sub-group, in coordination with relevant structures such as CORMON and SPA/RAC.

34. The meeting eventually agreed on making the document on the development of IMAP EO6 on sea-floor integrity clearer by outlining the linkages between EO6 and EO1 and synergies in their monitoring, and to submit the improved version of the document to the EcAp Coordination Group for their consideration at its meeting scheduled for October 2024.

B. Update regarding the development of the IMAP Ecological Objective 4 on marine food webs under the Barcelona Convention (agenda sub-item 3.2)

35. This agenda sub-item was initiated by an introduction to the topic of marine food webs by an expert representing a Contracting Party. The presentation provided an overview of marine food webs and food web assessments, as well as an example of their applications in the Italian waters under the EU MSFD. It also showcased some best practices for future developments.

36. The Chair commented on the close linkages between the proposed EO4 on marine food webs and EO3 on the harvest of commercially exploited fish and shellfish and enquired about the possibility of integrating the two. The expert clarified that while EO3 assesses the status of exploited stocks, EO4 takes a broader view of the full food web, using indicators such as the mean trophic level of catches. The data from EO3 on exploited stocks would directly inform the assessment of EO4. He views the objectives as highly integrated, with food web productivity under EO4 influencing stock abundance and quality as measured in EO3. The expert went on to remark potential relationships between EO4 and EO1 on benthic habitats. He emphasized the importance of considering linkages across objectives to better understand ecosystem patterns and attribute changes to factors such as climate change or management effectiveness. This holistic perspective is crucial for managers evaluating the achievement of targets across the IMAP ecological objectives.

37. A representative expressed concern about the use of complex models due to their data-demanding nature and the assumptions required due to the actual lack of data, which could undermine their application in assessments. The expert acknowledged the limitations of models while also highlighting their utility. He explained that models can improve understanding of ecosystem processes, and that their outputs should be calibrated against observed field data. The expert drew parallels to how stock assessment models are now widely used in fisheries science following decades of development. A long-term vision sees the gradual, knowledge-building use of models to complement field data in an ecosystem approach. Specifically, models were noted as helpful for investigating impacts of stressors on trophic guilds and species' responses, which can guide selection of cost-effective field indicators.

38. Following this interactive presentation, the secretariat introduced document UNEP/MED WG.592/4 entitled "Way forward to develop IMAP common indicators for the Ecological Objective 4 on marine food webs under the Barcelona convention".

39. A representative of an observer organization highlighted the value of marine mammals as bioindicators for food web assessments, given their central role in ecosystems and ability to reflect anthropogenic impacts through population monitoring, genetics, and disease monitoring, especially when combined with physical and chemical oceanography data. The expert agreed that marine mammals represent a relevant group but emphasized the need for a more holistic, multiple indicator approach encompassing different trophic levels for an integrated view of the full food web. The expert also recognized the potential value of simplifying indicators to those that could be representative, emphasizing the importance of testing their applicability in the Mediterranean context.

40. Following a call by the Chair for voluntary Contracting Parties to assist in further developing the proposed EO4 on marine food webs, Italy responded that they would be willing to help lead this effort and welcomed cooperation across the entire Mediterranean region, given the complexity of assessing trophic interactions throughout the marine ecosystem. Italy has proposed extending the

Italian working group for the monitoring of marine food webs under the MSFD to involve the SPA/RAC secretariat and experts from the entire Mediterranean region in the group's work.

41. The representative of an observer organization commended participants for their work advancing the second cycle of implementation of the IMAP and expressed his organization's readiness to directly engage in the core team tasked with developing EO4 on marine food webs and to share relevant data within its possession to facilitate this technical process.

42. The secretariat welcomed this organization's proposal and confirmed that the working group will be open to drawing on the expertise of experts from both Contracting Parties as well as partner organizations.

43. The meeting took note of the update on the development of the IMAP EO4 on marine food webs and welcomed Italy's proposal to extend the Italian working group on the topic to the whole Mediterranean region.

VI. IMAP common indicators on marine habitats (agenda item 4)

A. Element for the preparation of the assessment methodologies: assessment criteria and thresholds for biodiversity common indicators CI1 and CI2, based on the MED QSR 2023 recommendations (agenda sub-item 4.1)

44. Referring to document UNEP/MED WG.592/5, the secretariat presented elements for the preparation of the assessment methodologies, Assessment criteria and thresholds for biodiversity common indicators CI1 and CI2, based on the MED QSR 2023 recommendations.

45. In response to a question about the main barriers to implementation experienced for common indicators 1 and 2 during the first IMAP cycle, and how monitoring and assessment efforts could be improved going forward, while recognizing logistical challenges, the secretariat acknowledged that while Contracting Parties had undertaken significant data collection efforts, the 2023 MED QSR was not able to conduct quantitative assessments due to undefined assessment methods, criteria and thresholds. To provide a meaningful status evaluation in the next MED QSR 2029, it is essential to define such evaluation elements and continue data gathering.

46. A representative expressed concern about the recommendation in document UNEP/MED WG.592/5 to expand the number of monitoring sites within certain habitat monitoring programmes to 100 or more sites. He noted that such an extensive scale-up may not always be applicable or necessary, given the variability in coastline extension across countries and the variability in habitats' susceptibility to change. In response, the secretariat agreed that this aspect requires further reflection by a dedicated working group to define habitat-specific minimum monitoring sites requirements.

47. In response to a comment by another representative on the necessity to highlight a preferred methodology and possibly the others as auxiliary methodologies, the secretariat highlighted several issues that need to be addressed to strengthen habitat assessments under IMAP. While IMAP monitoring manuals provide a variety of methodologies, the working group must define a standardized set of preferred indicators and assessment approaches. This would ensure consistency across the Mediterranean while allowing for the diversity of monitoring methods currently employed by the Contracting Parties.

48. When developing the 2023 MED QSR, the ambition was to base evaluations on data submitted through the InfoMAP system for the three habitat types in question: Posidonia, maerl and coralligenous. However, only six to eight countries had provided monitoring data for each habitat type, which limited the geographical scope of the analysis. It is therefore essential that monitoring information from a greater number of countries is made available. The data also indicates that monitoring employs a variety of sampling techniques, including for example video and diving surveys.

However, the current guidance does not provide clear instructions on how to aggregate different data types into a coherent assessment.

49. It is therefore essential that the working group discusses approaches to interpreting and combining different monitoring data. They should also define the most appropriate indicators for integrating such data, establish ecological thresholds for determining habitat quality status, and identify the appropriate density of monitoring data. This is particularly important given the variety of methodologies outlined in IMAP manuals and used in practice.

50. Furthermore, the expert representing the secretariat acknowledged the challenge of finding an appropriate compromise between Contracting Parties continuing established monitoring methodologies and the need for data consistency and comparability across the Mediterranean region. He went on to explain that a fully integrated evaluation at the Mediterranean scale necessitates the collection and reporting of data using standardized parameters. The working group must therefore navigate two priorities that sometimes conflict: allowing flexibility for countries' existing practices versus facilitating rigorous collective assessment.

51. Based on the previous discussions, the meeting recommended the establishment of dedicated CI1 and CI2 working groups for the three habitat types (Posidonia, coralligenous, and maerl), involving experts from all Mediterranean sub-regions, to provide technical and operational science-based and cost-effective guidance, including the identification of the monitoring protocols' minimum common set of features, intercalibration exercises and the definition of assessment methodologies, assessment criteria and thresholds.

52. The meeting further recommended the mobilization of a consultant to assist the SPA/RAC in coordinating, moderating and compiling the results of the work of the CI1 and CI2 dedicated working groups for the three habitat types and to propose the elements for the preparation of assessment methodologies, assessment criteria, and thresholds for the common biodiversity indicators CI1 and CI2 for review and discussion by the meeting of the CORMON for biodiversity and fisheries in 2025.

B. Way forward to develop common indicators using phytoplankton and zooplankton for pelagic habitats (agenda sub-item 4.2)

53. Under this agenda sub-item, a representative of the secretariat introduced document UNEP/MED WG.592/6 entitled "Way forward to develop common indicators using phytoplankton and zooplankton for Pelagic Habitats". He reminded the meeting of the conclusions and recommendations of the Multidisciplinary group of experts to define parameters allowing to use phytoplankton and zooplankton for relevant IMAP biodiversity indicators and provide the way forward to develop the common indicator on pelagic habitats set up by COP 23, and the steps that will be followed to develop common indicators using phytoplankton and zooplankton for pelagic habitats.

54. This introduction was complemented by key messages from the project to support coherent and coordinated assessment of biodiversity and measures across the Mediterranean for the next 6-year cycle of MSFD implementation (ABIOMMED project) by the Chair of the Multidisciplinary group of experts. She emphasized that the work of the zooplankton and phytoplankton experts in the Mediterranean Sea is not yet mature enough to allow the identification of reference conditions and thresholds (except for Chl-a) as well as evaluation criteria for pelagic habitats. While highlighting the necessity of further work, she recalled the importance of monitoring the phytoplankton and zooplankton in the long-term perspective in order to be able to assess trends and include these groups in the assessment of food webs.

55. The Chair of the Multidisciplinary group of experts presented some messages from a workshop organized by the EU Joint Research Centre (JRC) and other partners on 4-6 June 2008 to improve and harmonize the monitoring of marine biodiversity across Europe. Discussions at the

workshop highlighted the following opportunities and challenges related to the monitoring of phytoplankton and zooplankton as indicators in food web and environmental assessments:

- The diversity of phytoplankton and zooplankton assemblages alone does not fully capture the environmental status of water bodies. Continued technological advances can improve and extend this understanding.
- Indicators involving phytoplankton and zooplankton, such as the development of functional groups and ratios among these groups, which are being used or developed in other regional seas conventions such as the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the Baltic Marine Environment Protection Commission (Helsinki Commission, HELCOM), are still being refined and are not yet operational in these regions.
- While light microscopy remains the standard monitoring method for zooplankton and phytoplankton, new techniques like environmental DNA (eDNA) and omics show potential when combined with traditional methods to provide higher resolution data. Remote sensing, machine learning and pigment analysis can also improve characterization of communities at larger scales.
- Given the oligotrophic nature of the Mediterranean, care should be taken to monitor smaller and bigger phytoplankton which is sometimes overlooked.
- It was proved that with climate change, the proportion of phytoplankton is raising in many areas of the Mediterranean.
- Both phytoplankton and zooplankton respond sensitively to climate change, but disentangling this influence from other stressors poses difficulties and should be explored in the future.

56. Before concluding this agenda item, the meeting agreed to mandate the Multidisciplinary group of experts on pelagic habitats to discuss and agree on the ways, means and timeline to advance the development of common indicators using phytoplankton and zooplankton for pelagic habitats.

57. Given that only seven Mediterranean countries were represented in the multidisciplinary group of experts, SPA/RAC will invite the Contracting Parties who have not yet appointed members to the group to do so as soon as possible. This will allow to take advantage of the diversity of skills and expertise across the region.

VII. Elements for IMAP revision related to biodiversity and non-indigenous species (NIS) (agenda item 5)

58. The secretariat began this agenda item with an introductory presentation on the impact of climate change on the assessment of the environmental status of the Mediterranean Sea. The presentation provided an overview of the state of the art in terms of the policy context and the impact of climate change on the marine environment. The example of assessing the GES of *Posidonia oceanica* meadows in the context of climate change was given as an illustration, and the presentation concluded with suggestions on how to adapt the IMAP monitoring programme to the climate change context and a possible way forward, including the possibility of organizing a workshop on integrating climate change impacts into IMAP.

59. A representative inquired whether a separate ecological objective (EO) on climate change should be added or if existing EOs should be revised. The expert representing the secretariat responded that climate change impacts could be better measured by adjusting common indicators within current EOs to capture effects on habitats, pelagic systems, food webs, etc. This would optimize efforts, time and resources to adapt monitoring to climate change questions and understand biodiversity responses and adaptation mechanisms.

60. Another representative commented that there should not be a separate EO on climate change. In his view, EOs define obligations for Contracting Parties, and a separate objective was not deemed necessary given climate impacts could sufficiently be tracked by revising indicators under the established EOs.

61. The secretariat introduced document UNEP/MED WG.592/7 containing “Elements for IMAP revision related to biodiversity and non-indigenous species”. The secretariat explained that this document had been prepared on the basis of the knowledge and experience gained during the implementation of the current IMAP and included a compilation of recommendations from various sources, including the MED QSR 2023 and CORMON meetings on biodiversity and fisheries. The document is intended to inform discussions on the elements and recommendations to be considered for improving the IMAP concerning biodiversity, non-indigenous species, and fisheries-related ecological objectives, as well as those currently under development on marine food webs and sea-floor integrity.

62. The meeting discussed the length of long-term data required under IMAP to distinguish natural variability from anthropogenic impacts on habitats and species distributions. Representatives of the secretariat noted that requirements varied according to species and habitat characteristics. Fast-changing species such as *Cymodocea nodosa* seagrass beds may require less data than slower-changing habitats such as *Posidonia oceanica* meadows. However, it was also pointed out that the ecosystem approach aims to assess both biodiversity and anthropogenic pressures at the same time, which could allow impacts to be identified more quickly than by monitoring biodiversity variability alone, as is currently done. Nevertheless, the secretariat expert suggested that in order to adequately separate natural variability from anthropogenic change when considering biodiversity trends, data collection periods should not be less than 10 years.

63. A representative inquired if artificial intelligence (AI) could overcome the need to collect long data sets by forecasting outputs without waiting 10 years. The secretariat expert acknowledged AI can more rapidly process data, such as through automatically analyzing video transects, but cautioned that a baseline volume and time series of information acquisition is still required for models to be properly trained and validated. Going backwards by integrating historical, underutilized data into models complementing new data collection was proposed as a more reliable approach than solely forecasting forward without sufficient grounding in long-term monitoring records.

64. Another representative stressed the importance of incorporating recent raw and open monitoring data into IMAP assessments and future work. She noted that her country had submitted open datasets from recent or ongoing national programmes covering areas such as marine mammals, turtles and coralligenous habitats to the secretariat earlier this year, but had not seen references to this recent information. Given the value of this recent data, a review or inclusion was deemed necessary, particularly for priority habitats and species in the Aegean and Ionian seas.

65. In addition, the representative of an observer organization reported on the establishment of the first academic marine mammal monitoring unit, using traditional techniques such as visual, acoustic and aerial survey, and innovative techniques such as eDNA, to provide a holistic assessment of the abundance and distribution of marine mammals over nearly three years. The organization offered to share the datasets collected in support of the IMAP marine mammal indicators. While recognizing excellent ongoing work under IMAP, the representative did not see an adequate reflection of bioindicators for these species in the Eastern Mediterranean.

66. The secretariat acknowledged the insightful comments on the importance of data for IMAP assessments and evaluations of GES and thanked all Parties for the data provided to date, recognizing that all information is critical to the process.

67. It was further noted that the forthcoming IMAP update will be grounded in the latest science and knowledge. Revisiting monitoring methods for each ecological objective and species tracked under IMAP will also be necessary. An array of techniques should be validated at the regional scale drawing on support from academia to harness innovative technologies and other emerging approaches to collect integrated data more efficiently.

68. On integrating new techniques, a secretariat expert rightly cautioned about maintaining comparability with historical data given IMAP's aim to track long-term trends. Results from innovative and traditional methods require harmonization.

69. The Chair suggested that universities could serve as centres of excellence to assist others, which the secretariat welcomed as consistent with the objective of this meeting. Countries and scientists are encouraged to share all new surveillance, monitoring and assessment results with the MAP system to strengthen IMAP implementation over time. Contracting Parties are also invited to engage their scientific communities to contribute evolving research to inform ecosystem-based management of the Mediterranean Sea. Representatives expressed willingness to share research results, such as a recent internationally presented study on monk seals.

70. One representative expressed that while their national monitoring meets IMAP data collection needs, issues have arisen over the years in uploading information to the InfoMAP system. The expected revision provides an opportunity to better align data methodologies between the regional IMAP and national programmes, rather than countries solely adapting to pre-defined regional requirements. Better coordination has been sought.

71. The secretariat acknowledged that all contributions will be considered in the process of updating the IMAP on biodiversity in order to ensure a balanced approach. Recommendations from other discussions will also be considered in the development of updated regional guidance, taking into account both scientific advances and the monitoring capacities and needs of Parties.

72. Following the discussion, the meeting took note of the elements for IMAP revision related to biodiversity and non-indigenous species (NIS) contained in document UNEP/MED WG.592/7 and requested the SPA/RAC secretariat to use it as a basis to contribute for the updating process of the IMAP related to biodiversity and fisheries.

73. The meeting also called on the Contracting Parties to actively support the Ecosystem Approach Roadmap Policy revision, including the biodiversity and fisheries IMAP updating process.

VIII. Any other business (agenda item 6)

74. No additional element was presented under this agenda item.

IX. Conclusions and recommendations (agenda item 7)

75. At the request of the meeting, participants were invited to provide their possible comments on the working documents by 28 June 2024, bearing in mind that these comments will not call for the conclusions and recommendations of the meeting.

76. The meeting reviewed, commented on, and approved the draft conclusions and recommendations as amended and attached to the present report as **Annex III**.

X. Closure of the meeting (agenda item 8)

77. In his concluding remarks, the Director of SPA/RAC expressed gratitude to participants for their active engagement and valuable contributions over the two-day meeting. He noted that the meeting had brought together Contracting Parties, partner organizations and the MAP secretariat and components in a collaborative spirit that was central to their collective success.

78. The Director reflected that significant progress had been made on each agenda item. In-depth discussions and expert input considerably advanced the understanding of EO4 and EO6, with the sea-floor integrity document agreed for submission to the October EcAp Coordination Group meeting. He highlighted the encouraging proposal from Italy to expand its food web working group to a regional, cross-Mediterranean scope, as an exemplar of the inter-organizational cooperation needed.

79. The establishment of working groups on CI1 and CI2 indicators and pelagic habitat monitoring was also highlighted. Discussions on the IMAP revision provided useful recommendations stemming from the MED QSR 2023 and CORMON meetings on biodiversity and fisheries. Presentations on best practices in key areas under the EOs and climate change impacts enriched the discussions.

80. In closing, the Director thanked the Chair, Vice-Chairs and Rapporteur for their leadership and exemplary facilitation of the dense agenda and expressed confidence that the outcomes of the meeting would significantly advance the objectives of IMAP and the overall mission of SPA/RAC. He conveyed gratitude to all participants for their contributions to furthering regional cooperation on environmental protection.

81. After expressing the usual courtesies, the Chair declared the meeting closed at 11.40 a.m. UTC+1 on Friday, 7 June 2024.

Annex I

List of participants

REPRESENTATIVES OF THE CONTRACTING PARTIES / *REPRÉSENTANTS DES PARTIES CONTRACTANTES*

BOSNIA & HERZEGOVINA / *BOSNIE-HERZÉGOVINE*	**Mr. Admir ALADZUZ** Researcher/Consultant Hydro-Engineering Institute Sarajevo
CROATIA / *CROATIE*	**Ms. Martina MARIĆ** Ministry of Environmental Protection and Green Transition, Institute for Environment and Nature
	Ms. Natalia BOJANIĆ PhD, Institute of Oceanography and Fisheries
	Mr. Igor ISAJLOVIĆ PhD, Institute of Oceanography and Fisheries (fisheries)
	Ms. Sanda SKEJIĆ PhD, Institute of Oceanography and Fisheries
	Ms. Stefanija ŠESTANOVIĆ Institute of Oceanongraphy and Fisheries (marine food webs)
	Ms. Barbara ZORICA PhD, Institute of Oceanography and Fisheries (marine food webs, fish)
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	Ms. Evangelia DATSI Marine Research Officer Department of Fisheries and Marine Research
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WWF NA **World Wide Fund for Nature North Africa /** ***Fonds mondial pour la nature Afrique du Nord***	**Mr. Medhi AISSI** Marine Programme Manager WWF North Africa Tunis, Tunisia

UNITED NATIONS SPECIALIZED AGENCIES AND OTHER INTERGOVERNMENTAL ORGANIZATIONS / *INSTITUTIONS SPÉCIALISÉES DES NATIONS UNIES ET AUTRES ORGANISATIONS INTERGOUVERNEMENTALES*

GFCM - General Fisheries Commission for the Mediterranean - Food and Agriculture Organization of the United Nations (FAO) / *CGPM - Commission générale des pêches pour la Méditerranée - Organisation des Nations unies pour l'alimentation et l'agriculture (FAO)*	**Mr. Stefano LELLI** Technical Coordinator of fisheries activities in the Eastern Mediterranean General Fisheries Commission for the Mediterranean Rome, Italy

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

UNEP/MAP / *PNUE/PAM* **United Nations Environment Programme / Coordinating Unit for the Mediterranean Action Plan - Barcelona Convention Secretariat / *Programme des Nations unies pour l'environnement / Unité de coordination pour le Plan d'action pour la Méditerranée - Secrétariat de la Convention de Barcelone***	**Ms. Tatjana HEMA** MAP Coordinator UNEP/MAP Coordinating Unit - Barcelona Convention Secretariat Athens, Greece **Mr. Christos IOAKEIMIDIS** QSR Programme Management Officer UNEP/MAP Coordinating Unit - Barcelona Convention Secretariat
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PAP/RAC - Priority Actions Programme/Regional Activity Centre / *Centre d'activités régionales pour le Programme d'actions prioritaires*	**Marko PREM** Deputy Director **Mr. Ivan SEKOVSKI** Programme Officer

SECRETARIAT OF THE MEETING / *SECRÉTARIAT DE LA RÉUNION*

SPA/RAC **Specially Protected Areas Regional Activity Centre / *Centre d'activités régionales pour les Aires spécialement protégées*** Boulevard du Leader Yasser Arafat B.P. 337, 1080 Tunis Cedex, Tunisia	**Mr. Mahmoud Elyes HAMZA** SPA/RAC Director **Mr. Yassine Ramzi SGHAIER** Projects Officer - Ecosystem Approach **Mr. Anis ZARROUK** Biodiversity Programme Coordinator

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Consultants

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Ms. Maïa FOURT
Expert in marine ecology

Ms. Souha EL ASMI
Expert in marine environment and biodiversity

Interpreters / *Interprètes*

Ms. Hanem ATTIA

Ms. Samia BEN ROMDHANE

Mr. Mondher KALAI

Ms. Nejet MCHALA

Annex II

Agenda

Agenda item 1 **Opening of the meeting**

Agenda item 2 **Organizational matters**

2.1. Rules of procedure

2.2. Election of officers

2.3. Adoption of the agenda

2.4. Organization of work

Agenda item 3 **Development of EcAp ecological objectives**

3.1. EO6: Sea-floor integrity

3.2. EO4: Marine food webs

Agenda item 4 **IMAP common indicators on marine habitats**

4.1. Element for the preparation of the assessment methodologies: assessment criteria and thresholds for biodiversity common indicators CI1 and CI2, based on the MED QSR 2023 recommendations.

4.2. Way forward to develop common indicators using phytoplankton and zooplankton for pelagic habitats

Agenda item 5 **Elements for IMAP revision related to biodiversity and non-indigenous species (NIS)**

Agenda item 6 **Any other business**

Agenda item 7 **Conclusions and recommendations**

Agenda item 8 **Closure of the meeting**

Annex III

Conclusions and recommendations

Introduction

1. The Specially Protected Areas Regional Activity Centre (SPA/RAC) of the United Nations Environment Programme / Mediterranean Action Plan - Barcelona Convention Secretariat (UNEP/MAP) organized the Meeting of the Ecosystem Approach Correspondence Group on Monitoring (CORMON) Biodiversity and Fisheries (hereinafter referred to as the "meeting") on 6 and 7 June 2024 by videoconference.

Participation

2. All the Specially Protected Areas and Biological Diversity (SPA/BD) Focal Points and/or Ecosystem Approach Coordination Group members and the relevant partners for the Integrated Monitoring and Assessment Programme (IMAP) implementation, as appropriate, have been invited to designate their representatives to the CORMON meeting.

3. The following Contracting Parties to the Barcelona Convention were represented at the meeting: Bosnia & Herzegovina, Croatia, Cyprus, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Slovenia, Syria and Tunisia.

4. The following organizations were represented as observers: the ARION Cetacean Rescue and Rehabilitation Research Centre - Greece, the Aristotle University of Thessaloniki (AUTH) - Greece, the General Fisheries Commission for the Mediterranean (GFCM), the Network of Marine Protected Areas Managers in the Mediterranean (MedPAN), the University of Thessaly - Greece and the World Wide Fund for Nature North Africa (WWF NA).

5. The following MAP Components: the Information and Communication Regional Activity Centre (INFO/RAC) and the Priority Actions Programme Regional Activity Centre (PAP/RAC) were represented at the meeting.

6. The Coordinating Unit for the Mediterranean Action Plan - Barcelona Convention Secretariat (UNEP/MAP) was represented at the meeting.

7. SPA/RAC acted as the secretariat of the meeting.

Objectives of the meeting

8. The main objective of the meeting was to review the following documents:

- Development of IMAP Ecological Objectives (EOs): EO4 on marine food webs and EO6 on sea-floor integrity;
- Monitoring and assessment elements for the IMAP Common Indicators (CI1 and CI2) on benthic and pelagic marine habitats; and
- IMAP revision and preparatory elements for Biodiversity and Non-indigenous species (NIS).

Organizational matters

9. The meeting agreed that the rules of procedure for meetings and conferences of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its related Protocols (UNEP/IG.43/6, Annex XI), as amended by the Contracting Parties (UNEP(OCA)/MED IG.1/5 and UNEP(OCA)/MED IG.3/5), would apply *mutatis mutandis* to their deliberations.

10. The meeting unanimously elected the following officers:

Chairperson:	Mr. Abdelmaula Hamza (Libya),
Vice-chairpersons:	Ms. Anna Lizinska (France),
	Ms. Tina Centrih Genov (Slovenia),
Rapporteur:	Mr. Luke Tabone (Malta).

11. The meeting agreed on the following conclusions and recommendations:

General considerations

12. The meeting expressed their gratitude for the clarity and comprehensiveness of the presentations made by the secretariat.

13. At the request of the meeting, participants are invited to provide their possible comments on the working documents by 28 June 2024, bearing in mind that these comments will not call for the conclusions and recommendations of the meeting.

Agenda Item 3: Development of EcAp ecological objectives

3.1. Development of the IMAP Ecological Objective 6 on sea-floor integrity under the Barcelona Convention

14. The meeting recommended maintaining EO1 (biodiversity) and EO6 (sea-floor integrity) as distinct ecological objectives, while optimizing and integrating their monitoring and data collection processes.

15. The meeting discussed and reviewed the document UNEP/MED WG.592/3, titled "Development of the EcAp Ecological Objective 6 on sea-floor integrity under the Barcelona Convention", and agreed to submit it to the EcAp Coordination Group for consideration, at its meeting in October 2024.

3.2. Update regarding the development of the IMAP Ecological Objective 4 on marine food webs under the Barcelona Convention

16. The meeting welcomed the proposal by Italy to extend the Italian Working Group for the monitoring of marine food-webs under the Marine Strategy Framework Directive (MSFD), to involve the SPA/RAC Secretariat and experts from the whole Mediterranean region in its work.

Agenda Item 4: IMAP common indicators on marine habitats

4.1. Element for the preparation of the assessment methodologies: assessment criteria and thresholds for biodiversity common indicators CI1 and CI2, based on the MED QSR 2023 recommendations

17. The meeting recommended the establishment of a dedicated CI1 and CI2 Working Groups for the three habitat types (Posidonia, Coralligenous, and Maerl), involving experts from all Mediterranean sub-regions, to provide technical and operational science-based and cost-effective guidance, including the identification of the monitoring protocols' minimum common set of features, intercalibration exercises and the definition of assessment methodologies, assessment criteria and thresholds.

18. The meeting recommended the mobilization of a consultant to assist the SPA/RAC in coordinating, moderating and compiling the results of the work of the CI1 and CI2 dedicated working groups for the three habitat types (Posidonia, Coralligenous, and Maerl) and to propose the elements for the preparation of assessment methodologies, assessment criteria, and thresholds for the common biodiversity indicators

CI1 and CI2 for review and discussion by the meeting of the CORMON for biodiversity and fisheries in 2025.

4.2. Way forward to develop common indicators using phytoplankton and zooplankton for pelagic habitats

19. The meeting agreed to mandate the multidisciplinary group of experts on pelagic habitats to discuss and agree on the ways, means and timeline to advance in the development of the indicators using phytoplankton and zooplankton for relevant IMAP biodiversity indicators.

Agenda item 5: Elements for IMAP revision related to biodiversity and non-indigenous species (NIS)

20. The meeting stressed the importance of not adding a separate Ecological Objective (EO) on climate change, but rather adapting the existing EOs and Common Indicators (CIs) to integrate climate change aspects.

21. The meeting took note of the "Elements for IMAP Revision related to Biodiversity and Non-Indigenous Species (NIS)" contained in document UNEP/MED WG.592/7 and requested the SPA/RAC secretariat to use it as a basis to contribute for the updating process of the IMAP related to biodiversity and fisheries.

22. The meeting called on the Contracting Parties to actively support the Ecosystem Approach Roadmap Policy revision, including biodiversity and fisheries IMAP updating process.