





programme



Mediterranean Action Plan Barcelona Convention

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Meeting of the Ecosystem Approach Correspondence Group on on Pollution Monitoring (CorMon Pollution)

Teleconference, 26-28 Avril 2021

**Report of the Meeting** 

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#### Introduction

- 1. In accordance with the UNEP/MAP Programme of Work adopted by COP 21 for the biennium 2020-2021, the United Nations Environment Programme/Mediterranean Action Plan-Barcelona Convention Secretariat (UNEP/MAP) and its Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL) organized the Meeting of the Ecosystem Approach Correspondence Group on Pollution Monitoring (CorMon on Pollution Monitoring). The Meeting was held via videoconference on 26-27 April 2021.
- 2. The main objectives of the Meeting were to:
  - a) Review the Monitoring Guidelines/Protocols for IMAP Common Indicator 18, as well as the Monitoring Guidelines/Protocols for Analytical Quality Assurance and Reporting of Monitoring Data for IMAP Common Indicators 13, 14, 17, 18 and 20;
  - b) Take stock of the state of play of inter-laboratory testing and good laboratory practice related to IMAP Ecological Objectives 5 and 9;
  - c) Analyze the proposal for the integration and aggregation rules for IMAP Ecological Objectives 5, 9 and 10 and assessment criteria for contaminants and nutrients;
  - d) Recommend the ways and means to strengthen implementation of IMAP Pollution Cluster towards preparation of the 2023 MED Quality Status Report.

#### **Agenda item 1: Opening of the Meeting**

- 3. The Meeting was opened by Ms. Tatjana Hema, the Deputy Coordinator of UNEP/MAP-Barcelona Convention. Ms. Hema explained the content of the eleven documents that were prepared for the review of the Meeting in order to direct the priorities in the upcoming biennia for achieving the progress towards preparation of the 2023 MED QSR. She added that the Meeting is also expected to provide an important input to the next UNEP/MAP Mid-Term-Strategy for 2022-2027 and the next Programme of Work for 2022-2023, the preparation of which has been launched whereby the ecosystem approach and IMAP implementation keep the central place.
- 4. The Meeting was attended by representatives from the following Contracting Parties: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, the European Union, Greece, France, Israel, Italy, Lebanon, Malta, Montenegro, Morocco, Slovenia, Spain, Tunisia and Turkey.
- 5. The following United Nations bodies, specialized agencies, convention secretariats and intergovernmental organizations were represented as observers: the European Marine Observation and Data Network (EMODNET), the International Atomic Energy Agency (IAEA), the Regional Organization for Conservation of the Environment of the Red Sea & Gulf of Aden (PERSGA) and the United Nations Environment Programme (UNEP).
- 6. The following non-governmental organizations and other institutions were represented as observers: the Human Environmental Association for Development (HEAD); the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE); and the Mohammed VI Foundation For Environmental Protection.
- 7. The United Nations Environment Programme (UNEP), including the Secretariat of the Barcelona Convention was represented by the MAP Coordinating Unit and the Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL), the Regional Activity Centre for Information and Communication (INFO/RAC), and the Priority Actions Programme Regional Activity Centre (PAP/RAC).
- 8. The full list of participants is attached to the present report as Annex I.

#### **Agenda items 2: Organizational Matters**

## a) Rules of Procedure for the Meeting on IMAP Implementation: Best Practices, Gaps and Common Challenges

9. The rules of procedure for meetings and conferences of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols applied mutatis mutandis to the present Meeting (UNEP/IG.43/6, Annex XI).

#### b) Election of officers

10. In accordance with the Rules of procedures for meetings and conferences of the Contracting Parties, the Meeting elected one (1) President, three (3) Vice-Presidents and one (1) Rapporteur from among the participants, as follows:

Chair: Ms. Slavica Matijevic, Croatia Vice-Chair: Mr. Yassine Marzougui, Tunisia Vice-Chair: Mr. Sameh Ayoub, Egypt Vice Chair: Ms. Sevil Oksuz, Turkey

Rapporteur: Ms. Ivana Stojanovic, Montenegro

#### c) Adoption of the Provisional Agenda

11. The proposed Provisional agenda appearing in document UNEP/MED WG.492/2, was adopted without changes.

#### d) Organization of Work

- 12. Discussions were held in online plenary sessions with support of the KUDO platform, as follows:
  - 26 April 2021: 09:45-11:45; 12:15-14:15; 15.30-17:30, (EST- Athens time);
  - 27 April 2021: 10:00-12:00; 12:30-14:30, (EST- Athens time);
  - 28 April 2021: 10:00-12:00, (EST- Athens time).

Simultaneous interpretation into English and French was provided during the Meeting.

#### Agenda item 3: Monitoring Guidelines/Protocols for IMAP Common Indicator 18

- 13. Ms. Jelena Knezevic, UNEP/MAP-MED POL Monitoring and Assessment Officer, presented the Working Documents WG.493/3-5 on the Monitoring Guidelines/Protocols for IMAP Common Indicator 18. She explained that these new monitoring guidelines form a coherent manual to guide technical personnel of IMAP competent laboratories of the Contracting Parties for the implementation of monitoring practices related to a IMAP Common Indicator18 (i.e. sampling methods, sample preservation and transportation, sample preparation and analysis, along with quality assurance and reporting of monitoring data). They introduce the best available analytical practices employed in marine monitoring to ensure the representativeness and accuracy of the analytical results needed for generation of quality assured monitoring data. They also establish a sound ground for further regular update of monitoring practice for the purpose of successful implementation of IMAP Common Indicator 18.
- 14. In responding to the proposal of one participant to change the format of the Monitoring Guidelines/Protocols and adjust them to direct use in the laboratories, the Secretariat explained that the present format of the documents is requested for preparation of the working documents of

UNEP/MAP; however, once all Monitoring Guidelines/Protocols are agreed, they will be designed to support their practical use in national IMAP competent laboratories. This participant also provided several technical proposals aimed at improving the document UNEP/MED WG.492/3 as follows: i) undertaking evaluation of the stage of gonadal development in the sampled molluscs, however, continuing with sampling of wild native mussels; ii) specifying that longer time of exposure (i.e., 2 months or longer) may be applied; iii) adding that the mussels have to be caged in containment structures (e.g. polyethylene bags, or better, non-plastic bag, mounted on PVC tubing); iv) precising that divers must collect manually the live mussels (wild or caged) at 5-7 m water depth; v) adding Chl a concentration in the sampling report; vi) specifying a need to provide on board clean space/laboratory facilities for rapid dissection after molluscs are samples; vii) adding dry soft tissues mass/dry shell mass as an additional parameter for recording.

- 15. One meeting participant took the floor proposing the following aspects to be further addressed in the document UNEP/MED WG.492/3 by: i) emphasizing that SoS is not a mandatory biomarker; ii) indicating the complexity of monitoring of LMS in *Mullus barbatus* and therefore the need to plan its inclusion as a mandatory parameter only if the capacities will be strengthened enough through the inter-laboratory comparison; iii) indicating difficulties for transportation of the mussels within a period of 8 hrs; iv) adding an alternative use of filtered seawater, collected at the clean/reference sites in national coastal areas; v) adding other relevant references; vi) adding the need to use the same specimen for biomarker and chemical analysis; vi) adding a recording of new environmental data i.e. water temperature, salinity and dissolved oxygen at the depth of fish sampling, as well as the use of CTD, whenever possible; vii) suggesting the use of the fish for evaluation of AChE activity; viii) adding the need for living fish (*Mullus barbatus*) to be killed on board immediately after collection by severing the spinal cord and rapidly dissected to obtain the tissues for the selected biomarker analysis; and viii) adding the eviscerated weight in fish biometrics.
- 16. One meeting participant proposed amending the Meeting document UNEP/MED WG.492/3 by adding Fulton's condition factor.
- 17. Regarding working document UNEP/MED WG.492/4, one participant asked for deleting indicated use of specific product as it was included in paragraphs 18 and 19 to reduce the quantitative differences in the results of the analysis.
- 18. Another meeting participant elaborated the need for amending the document UNEP/MED WG.492/4 by i) revising Table 1 related to evaluation of the results related to determination of lysosomal membrane stability (LMS); ii) adding a new reference for NRRT analysis in mussel haemocytes, as well as including data on percentage LMS for NRRT analysis, along with its inclusion in the proposed Data Dictionaries for IMAP CI 18, as provided in working document UNEP/MED WG.492/8; and iii) including specific image of fish cryostat sections for analysis of LMS in fish, along with inclusion of a few additional references.
- 19. One meeting participant suggested elaboration of the following issues in UNEP/MED WG.492/5: i) compliance of the assessment criteria for SoS with the ICES Cooperative Research Report No. 315.277pp, as well as their application for assessment in the Mediterranean; ii) use of intercalibration on protein determination as a part of the intercalibration exercise for AChE activity, as well as application of Bradford (1976) for protein determination in line with ICES 22; and iii) use of agranular hemocytes for the scoring of genotoxic damage within analysis of MNi and other nuclear anomalies.
- 20. The Secretariat welcomed all proposals of the Meeting participants and provided related explanations and information while confirming that written responses will be provided to the comments shared during the Meeting and those that will be submitted in writing immediately after the Meeting.
- 21. The Secretariat also confirmed that written responses will be provided to the written comments provided for all the steps of analytical chain during the Meeting or immediately after the Meeting, ensuring their consideration for revision of the working documents UNEP/MED WG.492/3-5, as appropriate.

- 22. Further to discussion the Meeting participants recommended submission of the three documents for the consideration of the MED POL Focal Points Meeting by incorporating as appropriate the written technical proposals that have been provided during the Meeting.
- 23. The presentation of the Monitoring Guidelines/Protocols related to IMAP CI 18 was followed with a presentation of the Working Document UNEP/MED WG.492/6 on Implementation of IMAP Common Indicator 18 on Biomonitoring. It provides a proposal for setting the inter-calibration testing and organization of the training course to support the Quality Assurance for Biomonitoring. Launching the proficiency testing and training course for four biomarkers will support efforts of national IMAP competent laboratories, not only to verify the accuracy of the laboratories' analytical results, but also to evaluate their analytical performance. The Secretariat pointed out that this new component of inter-calibration exercise related to IMAP Common Indicator 18 will complement the measurement of performance that has been provided via proficiency tests and training courses for MED POL IV/IMAP Common Indicator 17 through the collaboration of UNEP/MAP and the International Atomic Energy Agency/Marine Environmental Studies Laboratory (IAEA/MESL). She also explained the reflections on integrated chemical and biological monitoring elaborated in this document.
- 24. One meeting participant provided written suggestions related to inter-calibration comparison for the biomarkers of IMAP Common Indicator 18 as follows: i) taking the independent samples of both bioindicator species (*Mullus barbatus* and *Mytilus galloprovincialis*) in the intercalibration comparison for LMS evaluated by the histochemical method; ii) providing detail information on the conditions needed to minimize the effect of potential confounding factors; iii) organizing intercalibration for NRRT method applied for LMS evaluation; and iv) explaining the variation of the biomarkers by more than 20% compared to controls that present the animals sampled in reference, pristine areas.
- 25. A few meeting participants took the floor explaining the importance of proposed approaches towards an integrated assessment of biological and chemical data of IMAP Common Indicators 17 and 18, suggesting: i) establishment of the integrated assessment of biological and chemical monitoring data to support evaluation of the risk related to marine organisms exposed to contaminated waters and sediments, including its testing by using real-time data collected in the course of relevant field surveys; and ii) preparation of the guideline to illustrate the numeric calculation of EnvRi index allowing the users to follow the steps of data integration, and how it can be interrelated with the traffic light system established for the assessment criteria related to Common Indicators 17 and 18, along with understanding how these two approaches can be merged.
- 26. In responding to the comments raised during the discussions, the Secretariat explained that due consideration will be provided to the written comments provided for inter-calibration comparison for the biomarkers of IMAP Common Indicator 18, including through the submission of written responses by the Secretariat. It was also explained that the present document provides only the first reflection on possible further developments of the integrated assessment of biological and chemical monitoring in line with the Decision IG.23/6 on the 2017 MED QSR. However, significant further work needs to be undertaken, including use of sufficient data on biological effects and the scientific support of the Online Working Group on EO9, before it can be considered for preparation of the assessment products.
- 27. Further to the discussion and explanation provided by the Secretariat, the Meeting expressed appreciation for the well-established practice regarding intercalibration for IMAP Common Indicator 17 and pointed out the need for further assistance to the Contracting Parties for inter-laboratory comparison related to IMAP Common Indicator 18, by focusing on the organization of the intercalibration exercise and related training course for IMAP Common Indicator 18.
- 28. The final conclusions and recommendations of the Meeting related to this agenda item are presented in Annex III.

- 29. The Secretariat presented the Working Documents UNEP/MED WG.492/7-8 related to Monitoring Guidelines for Analytical Quality Assurance and Reporting Monitoring Data for IMAP Common Indicators 13, 14, 17, 18 and 20. She explained that these two Monitoring Guidelines along with the Monitoring Guidelines related to IMAP Common Indicators 13, 14, 17, 18 and 20 form a coherent manual to guide technical personnel of IMAP competent laboratories of the Contracting Parties for the implementation of standardized and harmonized monitoring practices. The Monitoring Guideline for Analytical Quality Assurance provides four protocols setting the quality assurance procedures for each step of the analytical chain. The Monitoring Guideline on Reporting Monitoring Data elaborates the protocols for reporting of monitoring data for IMAP Common Indicators 13/14, 17, 18 and 20 into IMAP (Pilot) Info System by building on relevant documents previously agreed and approved by the Contracting Parties. This document also defines the elements of Data Standards (DSs) and Data Dictionaries (DSs) for IMAP Common Indicators 18 and 20 in order for the Meeting to provide recommendations of relevance for the ongoing work of INFO/RAC and MED POL.
- 30. A few meeting participants took the floor providing technical suggestions accompanied with more detailed written explanations of relevance for amending the Monitoring Guidelines/Protocols related to Analytical Quality Assurance, including the following: i) elaboration of LOD and LOQ method validation parameters for metals and organic contaminants in the mussels and fish samples; ii) adding sampling of additional biological material during monitoring surveys to be used for internal Quality Control Material as CRM; iii) adding specifics related to sample processing for monitoring of IMAP Common Indicator 18 (i.e., mesh size for pre-filtration of seawater; eviscerated weight; liver weight; gonad weight; filtration using 0.7  $\mu$ m GF/F pre combusted glass fiber filters of organic contaminants and 0.45  $\mu$ m polycarbonate filters for the analysis of heavy metals (except mercury)); and iv) collection of extra-biological material during monitoring surveys to be used later in time as Biomarker internal Quality Control Material as CRM are not available.
- 31. One meeting participant suggested amending the elements proposed for Data Dictionaries of IMAP Common Indicator 18 as provided in Annex II of the Monitoring Guidelines/Protocols related to Reporting of Monitoring Data, by adding the following new parameters/fields: gender; pressure type: AG = Agriculture and livestock and MN = Mining; Maturity Key for demersal species; description list of values sex gender; pooling\_N; pooling\_SD/SE; tissue\_weight; tissue\_weight\_SD/SE. Furthermore, non-mandatory status was suggested to be added for better explaining the purpose of a column titled "additional" in table 2 of Annex II, therefore making clear understanding that SoS is not a mandatory biomarker of IMAP Common Indicator 18. Adding of an EROD or Metallothionein biomarker was also proposed in the column Additional.
- 32. The Secretariat confirmed that written responses will be provided to the written comments shared during the Meeting and those that will be submitted immediately after the Meeting, ensuring their consideration for revision of the Meeting documents UNEP/MED WG.492/7-8, as appropriate.
- 33. Furthermore, Meeting participants agreed on a need for INFO/RAC to integrate additional reporting parameters as suggested during the discussions for the elements provided in Annexes II and III of UNEP/MED WG.492/8 towards finalizing Data Standards (DSs) and Data Dictionaries (DDs) for IMAP Common Indicators 18 and 20.
- 34. The Meeting participants put an emphasis on the necessity to ensure interoperability of the IMAP Info System with different databases existing in the Mediterranean, in particular with EMODnet, in order to profit from the synergies and save resources of the Contracting Parties.
- 35. Further to the discussion and explanation provided by the Secretariat, the Meeting participants agreed to recommend the Monitoring Guidelines/Protocols related to Analytical Quality Assurance and Reporting of Monitoring Data for further use of the technical personnel working in national IMAP competent laboratories. The Meeting participants also recommended the submission of both

documents to the Meeting of MED POL Focal Points by integrating as appropriate the written technical proposals that have been provided during the Meeting.

36. The final conclusions and recommendations of the Meeting related to this agenda item are presented in Annex III.

### Agenda item 5: State of Play of Inter-laboratory Testing and Good Laboratory Practice related to IMAP Ecological Objectives 5 and 9

- 37. Ms. Sylvia Sander, Head of Marine Environmental Studies Laboratory (IAEA), presented on behalf of the Secretariat Working Document UNEP/MED WG. 492/9 related to the results of 2019 and 2020 Proficiency Tests on the determination of trace elements and organic contaminants in sediment and biota samples along with the results of related Training Courses. Further to the conclusion of the Meeting of CorMon on Pollution Monitoring (2-3 April 2018, Podgorica, Montenegro), the 2019 and 2020 Proficiency Tests (PTs) were organized to implement a comprehensive and interactive strategy for quality assurance and quality control related to IMAP Common Indicator 17. To this aim, this document provides an overview of the outcomes of the following activities undertaken in 2019 and 2020: a) organization of the trace elements and organic Proficiency tests (PTs); b) preparation of the good laboratory practice (GLP) training courses; c) organization of the expert missions to laboratories in special need to support the strengthening of their capacities. She concluded the introduction of this document by proposing the recommendations on the way forward to address the needs of individual laboratories aiming to apply good laboratory practices for the analysis of trace elements and organic contaminants.
- 38. The meeting participants welcomed the findings of 2019 and 2020 Reports on the Proficiency Testing and Training Courses, and related recommendations provided by the Secretariat to guide the future work.
- 39. Further to improved participation rate of IMAP Pollution Cluster competent laboratories resulted from the additional efforts of MESL and MEDPOL undertaken in line with the stricter criteria introduced following the conclusions of the Meeting of CorMon Pollution (2-3 April, 2019), the findings of 2019 and 2020 Reports on the Proficiency Testing and Training Course recommend for future inter-laboratory comparison/proficiency testing to be focused on i) achieving the satisfactory results for all mandatory organic contaminants given the present unsatisfactory results of the analysis of organic contaminants in marine samples; ii) addressing the persisting needs of under-capacitated laboratories including the provision of CRMs; iii) supporting participation of more than two laboratories in proficiency testing for those Contracting Parties where the emerging needs are recognized; iv) strengthening present scope of the quality assurance aspects related to metrology, including use of other opportunities being offered free of charge for the IMAP competent laboratories (e.g., free online courses); and v) increasing the consistency of biota sampling along with application of Quality Assurance measures.
- 40. One meeting participant proposed the provision of standard solutions for undertaking the Proficiency testing related to organic contaminants by IMAP competent laboratories. The Secretariat provided an explanation on technical and financial concerns that the use of the standard solution might impose.
- 41. The Secretariat pointed out the necessity for MEDPOL Focal Points to further follow up more closely with national IMAP competent laboratories participating in IMAP Pollution Cluster monitoring, in order to apply the recommendations provided in 2019 and 2020 Reports on the Proficiency Testing and Training Courses, with a view of further supporting national efforts to implement the quality assurance and quality control measures and ensuring that identified gaps are optimally addressed.
- 42. Due to the current travel restrictions under COVID-19, the Secretariat informed that in 2020 the expert missions might be prepared through email and virtual meeting discussions, and should COVID-19 restrictions allow on-site visits, they will take place in the second half of the year or by the beginning of 2022.

- 43. The presentation of the Working Document UNEP/MED WG. 492/10 related to the assessment of the presentation of the Working Document UNEP/MED WG. 492/10 related to the assessment of the capacities of national laboratories responsible for Monitoring of IMAP Common Indicators 13, 14, 17, 18, and 20. The representative of IAEA/MESL explained that the present document has been prepared in line with the conclusions of the Meeting of CorMon on Pollution Monitoring (2-3 April 2018, Podgorica, Montenegro) in order to assess the capacities of national laboratories concerning the monitoring of IMAP Common Indicators 13, 14, 17, 18 and 20. She noted that the document reports on the capacities of 36 national IMAP competent laboratories to apply the analytical methodologies as provided in relevant IMAP Monitoring Guidelines for sampling, sample preservation and preparation, analysis of monitoring parameters, analytical quality assurance, and monitoring data reporting; adding that the assessment is based on the questionnaires that were distributed through respective MED POL Focal Points to designated national IMAP competent laboratories. She concluded the introduction of this document by proposing the recommendations on the way forward.
- 44. One meeting participant excused for not providing timely responses to the questionnaires used for the assessment of the national laboratories' capacities, explaining it occurred due to restrictions in institutional functioning related to the COVID pandemic, adding that national competent laboratories of this Contracting Party most probably fulfill all IMAP monitoring requirements. In that regard the Secretariat explained that the national fact findings can be submitted even now; however, revision of the Working Document UNEP/MED WG.492/9 cannot be undertaken, but the information reported with a delay can be used for the assessment that will be undertaken during the next biennium.
- 45. A few meeting participants asked for an extension of the scope of inter-laboratory comparisons and training courses to also include the analysis of nutrients, biomarkers, marine litter and contaminants in commonly consumed seafood.
- 46. The Meeting participants recommended establishing regular interlaboratory comparisons/proficiency testing for the analysis of nutrients, biomarkers and contaminants in commonly consumed seafood, along with the continual strengthening of the capacities through the Proficiency Tests and Training Courses organized for IMAP Common Indicator 17, as well as undertaking the assessment of the capacities of national IMAP competent laboratories as a biennial effort.
- 47. The final conclusions and recommendations of the Meeting related to this agenda item are presented in Annex III.

## Agenda item 6: Cross-Cutting Issues -The Integration and Aggregation Rules for IMAP Ecological Objectives 5, 9 and 10 and Assessment Criteria for Contaminants and Nutrients

- 48. Mr. Robert Precali, MEDPOL Consultant, presented working document UNEP/MED WG. 492/11 related to the Assessment Criteria Methodology for IMAP Common Indicator 13: Pilot Application in Adriatic Sub-region. He explained that further to findings of data availability for setting the assessment criteria for nutrients, this working document elaborates possible use of the following tools and methods for setting the reference conditions and boundary values for Dissolved Inorganic Nitrogen (DIN) and Total Phosphorous (TP): methodological approach developed for the Adriatic Sea; Best Practice Guide for nutrients toolkit (JRC) and FAN/FLU index (Spain), in relevant sub-areas. n addition to that the document showcases practical application of the methodological approach for the Adriatic Sea.
- 49. One meeting participant expressed an appreciation for the work undertaken, asking for the clarification of the following aspects: i) use of the statistical approaches for calculation of the assessment criteria for nutrients; ii) sufficiency of data used for computation of the reference and boundary values of DIN and TP in Adriatic; iii) harmonization of the methods that need to be applied in adjacent areas, further to the methods and areas proposed in Table 8; iv) a necessity for prompt launching of the online working group in order to undertake further work for the elaboration of the methods provided by this document.

- 50. Another meeting participant asked for clarification of this document's finding on the prematurity of further work related to setting the assessment criteria for DO.
- 51. Given the present scarcity of data reported, the Secretariat invited the Contracting Parties to urgently report all pending datasets related to IMAP Common Indicators 13 and 14 into IMAP Info System.
- 52. Expressing appreciation for the work undertaken by the Secretariat, the Meeting agreed on submission of the Meeting document UNEP/MED WG. 492/11 for consideration of the Meeting of MED POL Focal Points.
- 53. Furthermore, the Meeting recommended the use of this document as a basis for progressing towards setting the assessment criteria for DIN and TP. In that respect the importance of the scientific assistance of the OWG on Eutrophication was also emphasized, including for the elaboration of additional methodologies that could be suggested from this OWG in line with the conclusions of the Meeting.
- 54. The Secretariat provided related technical explanations and confirmed its written responses will be provided to the written comments shared during the Meeting or immediately after the Meeting. These responses will guide revision of the Meeting documents UNEP/MED WG.492/11 and UNEP/MED WG.492/Inf.12, as appropriate, with a view of their further elaboration, including through OWG on Eutrophication.
- 55. Ms. Nurit Kress, MEDPOL Consultant, presented working document UNEP/MED WG.492/12 related to the Background (Assessment) Concentrations (BC/BAC) for Common Indicator 17 and Upgraded Approach for Environmental Assessment Criteria (EAC) for IMAP Common Indicators 17, 18 and 20. This document provides new upgraded regional and sub-regional Mediterranean BC and BAC values for CI17; a proposal of the criteria for IMAP CI20, as well as an approach to upgrade the Mediterranean EACs. She explained that the data used for developing updated assessment criteria were collected in the IMAP Pilot Info System during its testing phase, and in particular after launching a formal call for reporting of monitoring data in June 2020, along with the monitoring data stored in MEDPOL database that have not been previously used for calculation of the assessment criteria applied in the 2017 and 2019 assessments. Data from European Marine Observation and Data Network EMODnet, were also considered as a reliable external data source, as well as data collected from the scientific literature.
- 56. One meeting participant recommended that documents UNEP/MED WG.492/12 and UNEP/MED WG.492/Inf.11 take note of the positive practice in OSPAR related to establishment of the BAC and EAC for certain biomarkers in the fish *Mullus barbatus*, along with BAC and some EAC values for 21 biomarkers for species other than *M. galloprovincialis*, as well as by considering the new proposed reference papers.
- 57. Another meeting participant expressed an appreciation for the work undertaken by the Secretariat and asked for several explanations related to the proposals submitted in written form during the Meeting, including the following: i) the methodology used to derive BC values using sediment cores; ii) adding a reference to OSPAR's methodology for choosing the reference stations where the 95<sup>th</sup> percentile of the data were below the overall median in relation to application of the 75<sup>th</sup> percentile for IMAP Common Indicator 17; iii) relationship of BC values with low concentrations values (LCs) that could be derived from reliable datasets of analytical variability information reported from either certified reference materials (CRMs) or independent proficiency testing (PTs) scheme databases; iv) normalization of data used for calculation of BC values (i.e., data on Al and total organic carbon (TOC) as normalizers; v) calculation of updated BACs for synthetic substances (PCBs and pesticides); vi) calculation of the multiplication factors to calculate BACs from BCs; vii) use of environmental and human health thresholds as assessment criteria for contaminants in biota; and viii) accuracy/high values of BC and BAC for IMAP CI 17 for trace metals and PAHs in sediments.
- 58. Furthermore, a few participants expressed concerns regarding use of human health parameters for environmental assessment.

- 59. In responding to the comments of the participants, the Secretariat provided relevant clarifications and explanations. The methodology used for setting the assessment criteria was agreed upon in 2016 and 2017. It was also applied for the present upgrade of the assessment criteria. In that regard and considering the QSR roadmap and related Decisions, present work does not foresee changing methodologies applied to set the assessment criteria but use of more datasets to increase accuracy of the assessment criteria.
- 60. Expressing appreciation for the work undertaken by the Secretariat to upgrade the assessment criteria for IMAP Common Indicators 17, 18 and 20, the Meeting recommended submission of the working document UNEP/MED WG.492/12 to the Meeting of MED POL Focal Points.
- 61. Furthermore, the Meeting recommended the use of this document as a basis for progressing towards development and testing of the methodology for GES assessment related to Ecological Objective 9. In that respect the importance of the scientific assistance of the OWG on Contaminants was pointed out, including its support to preparation of GES assessment methodology for IMAP Ecological Objective 9 in line with the conclusions of the Meeting.
- 62. The Secretariat also confirmed its written responses will also be provided to the written inputs shared with the Meeting participants during the Meeting or immediately after the Meeting. These responses guide revision of the Meeting documents UNEP/MED WG.492/12 and UNEP/MED WG.492/Inf.11, as appropriate, with a view of their further elaboration, including through OWG on Contaminants.
- 63. The Secretariat presented working document UNEP/MED WG.492/13. She explained that this document provides proposals for i) strengthening IMAP Pollution and Marine Litter implementation at national level; ii) integration and aggregation rules for monitoring and assessment for IMAP Pollution and Marine Liter Cluster; iii) elaboration of the scales of assessment by proposing upgraded aggregation scheme for the areas of assessment for EOs 5, 9 and 10 within the nested approach; and iv) the rules for integration of assessments within the nested approach for IMAP Pollution and Marine Litter Cluster.
- 64. Ms. Kalliopi Pagkou, MED POL Consultant, presented the results of different case studies regarding testing of the NEAT tool application in order to explain its possible application for GES assessment of Ecological Objectives of IMAP Pollution Cluster.
- 65. A discussion by the meeting participants ensued bringing to the attention of the Secretariat the suggestions aimed at getting relevant clarifications or further elaborating some elements provided in UNEP/MED WG.492/13 as follows: i) monitoring of biomarkers of IMAP Common Indicator 18 in national offshore waters; ii) correcting Table 4 by taking out monitoring of IMAP Common Indicators 13 and 14 in sediments or water sediment-interface; iii) improving the clarity of the weighing method presented within proposed GES assessment by applying the NEAT approach and iv) better explaining the GRID table.
- 66. One participant proposed comparative testing of COMPETE tool along with application of NEAT tool for GES assessment.
- 67. Welcoming preparation of the Working document UNEP/MED WG.492/13, the Meeting recommended its submission to the Meeting of the MED POL Focal Points.
- 68. Furthermore, the Meeting recommended the use of this working document as a basis for progressing towards integrated GES assessment methodologies for IMAP Ecological Objectives 5, 9 and 10.
- 69. Concerning further elaboration of the Working document UNEP/MED WG.492/13, the Meeting requested the Contracting Parties to support the work of the Secretariat/ MED POL including in the framework of the OWGs for Eutrophication, Contaminants and Marine Litter.
- 70. In responding to the comments and questions raised during the discussion, the Secretariat provided related explanations and confirmed its written responses will be provided to the written comments shared during the Meeting or immediately after the Meeting. These responses will guide

revision of the Meeting document UNEP/MED WG.492/13, as appropriate, with a view of its further elaboration, including through OWGs.

- 71. Ms. Tatjana Hema, Deputy Coordinator of UNEP/MAP, clarified that Online correspondence working groups (OWGs) have different statuses from respective CorMons, and therefore they cannot be considered the formal forums within the governance structure of EcAp. To that effect, the OWGs cannot replace respective CorMons. In line with the agreement of the Meeting to submit Working documents UNEP/MED WG. 492/11-13 to the Meeting of MED POL Focal Points, the main task of the OWGs should be to undertake a follow up on the comments provided by the CPs during the Meeting of CorMon on Pollution Monitoring given the evolving nature of these documents and provide scientific inputs along the lines of the agreed conclusions of the CORMONs and not to reopen the discussions from scratch. It is important that the scope of work of the OWG is defined based on specific needs and concrete CORMON recommendations.
- 72. The final conclusions and recommendations of the Meeting related to this agenda item are presented in Annex III.

#### **Agenda item 7:** Any Other Business

73. Under this agenda item, two presentations were made by: a) Mr. Michele Giani, representative of the National Institute of Oceanography and Experimental Geophysics (OGS), who presented initial results of applying NEAT tool for assessment of eutrophication in Adriatic within the realization of MED REGION project; and b) Ms. Marina Lipizer, representative of the National Institute of Oceanography and Experimental Geophysics (OGS), who presented HarmoNIA methodological proposals related to sampling, analytical determinations and proficiency testing procedures.

#### **Agenda item 8: Conclusions and Recommendations**

74. The Meeting reviewed, commented on, and approved the draft Conclusions and Recommendations as attached to the present report as Annex III. This includes final refinements to ensure full consistency between the English and French versions.

#### **Agenda item 9:** Closure of the Meeting

75. After expressing the usual courtesies, the Chair declared the Meeting closed at 12:30 pm on Wednesday 28 April 2021.

Annex I List of Participants

## REPRESENTATIVES OF THE CONTRACTING PARTIES / REPRESENTANTS DES PARTIES CONTRACTANTES

ALBANIA / ALBANIE	Ms. Klodiana Marika
	Director of Development Programmes on Environment
	Ministry of Tourism and Environment
	Ms. Ledjana Bojaxhi
	Ministry of Tourism and Environment, Tirana
ALGERIA / ALGERIE	Ms. Naila Benarab Naila
	State Engineer
	Ministry of Environmental
BOSNIA AND HERZEGOVINA /	Ms. Selma Cengic,
BOSNIE AND HERZEGOVINE	Deputy Director
	Hydro-Engineering Institute
	Mu Provincia Deinovo
	Mr. Branimir Drinova
	Professional Associate
	Institute for Public Health FB&H
	Ms. Senida Dzajic - Rghei,
	Focal Point
	rocai roint
	Mr. Boris Kresic,
	Institute of Public Health FBiH
	Ms. Ana Sudar,
	Agency for Watershed of the Adriatic Sea
CROATIA / CROATIE	Ms. Slavica Matijević
	Scientific Advisor
	Institute of Oceanography and Fisheries
	Ms. Jelena Lusic
	Institute of Oceanography and Fisheries
	M D (0)
	Mr. Pero Tutman
	Scientific adviser, Institute of Oceanography and Fisheries
CYPRUS / CHYPRE	Mr. Konstantinos Antoniadis
CIFRUS/ CHIFRE	
	Department of Fisheries and Marine Research
	Mr. Lavrentios Vasiliades
	Fisheries and Marine Research Officer
	Department of Fisheries & Marine Research (DFMR), Nicosia
	Department of Fisheries & Marine Research (DI MIK), Medsia
EGYPT / EGYPTE	Mr. Sameh Ayoub
	MED POL Focal Point
	TILD I OUI I OUI

	Egyptian Environmental Affairs Agency (EEAA)
EUROPEAN UNION / UNION	Mr. Georg Hanke
EUROPEENNE	European Commission
	Ms. Victoria Tornero
	JRC
	European Commission, Ispra
FRANCE / FRANCE	Mme. Laure Ducommun
	Good Environmental Status of Marine Waters Policy Officer,
	Ministère de la Transition Ecologique
	(French Ministry in charge of the ecological transition), Paris
	Mme. Emmanuelle Thiesse
	Ministère de la Transition Ecologique
	Ms. Dorothée Vincent
	Project Manager of French MSFD monitoring programmes for
	Eutrophication and Pelagic Habitats
	French Biodiversity Agency
ISRAEL / ISRAEL	Mr. Dror Zurel
	Israel Ministry of Environmental Protection, Haifa
	Mr. Moshe Tom
	Senior researcher
	Israel Oceanographic and Limnological research, Haifa
ITALY / ITALIE	Ms. Erika Magaletti,
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	Ispra, Rome
	Ms. Daniela Berto
	Ispra, Chioggia
	Ms. Nicoletta Calace
	Ispra, Rome
	Ms. Ginevra Moltedo
	Researcher biologist
	Ispra, Rome
LEBANON / LIBAN	Mr. Milad Fakhry
	Director
	National Council for Scientific Research, Beirut
MALTA / MALTE	Ms. Tamara Micallef
	Senior Officer Thematic
	Environment and Resources Authority, Marsa
	Ms. Margherita Muscat
	Assistant Environment Protection Officer

	Environment and Resources Authority
MONTENEGRO /MONTENEGRO	Ms. Ivana Stojanovic Adviser, Ministry of Ecology, Spatial Planning and Urbanism  Ms. Ivana Mitrovic Advisor, Environment Protection Agency, Podgorica
MOROCCO /MAROC	Mr. Mohammed El Bouch Département de l'Environnement  Mr. Abdeslam Abid Ministry of Energy, Mines and the Environment / Department of the Environment
SLOVENIA /SLOVENIE	Mr. Mitja Bricelj Ministry of the Environment and Spatial Planning  Mrs Elizabeta Gabrijelcic Under Secretary Slovenian Environment Agency  Ms. Mateja Poje Slovenian Environment Agency
SPAIN /ESPAGNE	Ms. Beatriz Fernandez Spanish Institute of Oceanography (IEO)  Ms. Candela García Gómez Instituto Español de Oceanografía  Ms. Concepción Martínez-Gómez Instituto Español de Oceanografía San Pedro Del Pinatar  Mr. Rubén Moreno-González Spanish Oceanographic Institute  Ms. Beatriz Sánchez Ministry for the Ecological Transition and the Demographic Challenge
TUNISIA / TUNISIE  TURKEY /TURQUIE	Mr. Yassine Marzougui, Agence Nationale de Protection de l'Environnement  Ms. Sevil Oksuz
	Environment and Urbanization Expert Ministry of Environment and Urbanization  Ms. Hacer Selamoğlu Cağlayan Environnemental Expert Ministry of Environment and Urbanization

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

EMODNET/ HERMONIA INTERREG ADRION	Ms. Marina Lipizeri, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS Borgo Grotta Gigante, 42/C - 34010 Sgonico (TS) - Italia
IAEA- MESL	Ms. Sylvia Sander Section Head Marine Environmental Studies Laboratory, Monaco  Mr. Micahel Angelidis  Mr. Aldo Viarengo
MEDREGION PROJECT	Mr. Michele Giani, Senior researcher, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale . OGS, Trieste
REGIONAL ORGANIZATION FOR CONSERVATION OF THE ENVIORNMNET OF THE RED SEA & GULF OF ADEN	Mr. Maher Amer Regional Coordinator of Biodiversity & MPAs Program, Jeddah

## NON-GOVERNMENTAL ORGANIZATIONS ORGANISATIONS NON-GOUVERNEMENTALES

HUMAN ENVIRONMENTAL	Ms. Marie Therese Merhej Seif
ASSOCIATION FOR	Chairman & Executive director
DEVELOPMENT (HEAD)	
MEDITERRANEAN	Ms. Thomais Vlachogianni
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(MIO-ECSDE)	
THE MOHAMMED VI	Mr. Sami EL Iklil
FOUNDATION FOR	
ENVIRONMENTAL	
PROTECTION	

# UNITED NATIONS ENVIRONMENT PROGRAMME - COORDINATING UNIT AND COMPONENTS OF THE MEDITERRANEAN ACTION PLAN PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT - UNITÉ DE COORDINATION ET COMPOSANTES DU PLAN D'ACTION POUR LA MÉDITERRANÉE

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UNEP/MAP COORDINATING UNIT	Mrs Tatiana Hema
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	Mr. Mohamad Kayyal
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	Ms. Jelena Knezevic
	Monitoring and Assessment Officer
	Wontornig and Assessment Officer
	Ms. Nurit Kress
	Ms. Kaliopi Pagkou
	Ms. Christina Zeri
	Mr. Robert Precali
	15 A 15 A 41 B
	Mr. Angel Borja, Azti, Pasaia
REGIONAL ACTIVITY CENTRE FOR	Mr. Arthur Pasquale
INFORMATION AND	Deputy Director
COMMUNICATION (INFO/RAC) /	Beputy Breeter
CENTRE D'ACTIVITES REGIONALES	
POUR L'INFORMATION ET LA	
COMMUNICATION (CAR/INFO)	
REGIONAL ACTIVITY CENTER FOR	Me. Ivan Sekovski
THE PRIORITY ACTIONS	Programme Officer
PROGRAMME (PAP/RAC) / CENTRE	
D'ACTIVITÉS RÉGIONALES	
PROGRAMME D'ACTIONS	
PRIORITAIRES (CAR/PAP)	

Annex II Agenda of the Meeting

#### **Provisional Agenda**

**Agenda Item 1**: Opening of the Meeting

**Agenda Item 2**: Organizational Matters

**Agenda Item 3**: Monitoring Guidelines/Protocols for IMAP Common Indicator 18

**Agenda item 4**: Monitoring Guidelines/Protocols for Analytical Quality Assurance and

Reporting of Monitoring Data for IMAP Common Indicators 13, 14, 17, 18

and 20

**Agenda item 5**: State of Play of Inter-laboratory Testing and Good Laboratory Practice related

to IMAP Ecological Objectives 5 and 9

**Agenda item 6**: Cross-Cutting Issues:

a) The Integration and Aggregation Rules for IMAP Ecological Objectives 5,

9 and 10 and

b) Assessment Criteria for Contaminants and Nutrients

**Agenda Item 7**: Any Other Business

**Agenda Item 8**: Conclusions and Recommendations

**Agenda Item 9**: Closure of the Meeting

#### Annex III Conclusions and Recommendations

#### **Conclusions and Recommendations**

On 26-28 April, the Meeting of the Ecosystem Approach Correspondence Group on Pollution Monitoring (CorMon Pollution) was held by videoconference. The meeting was organized by UNEP/MAP Secretariat (MED POL Programme).

Following the review and discussions of all agenda items, the Meeting appreciated the work undertaken and documents prepared by UNEP/MAP Secretariat/MED POL Programme, and agreed on the following conclusions and recommendations:

#### Agenda item 3: Monitoring Guidelines/Protocols for IMAP Common Indicator 18

- 1. The Meeting reviewed and agreed on the monitoring methodologies and practices elaborated for sampling, sample preservation and transportation, as well as sample preparation and analysis for IMAP Common Indicator 18 (UNEP/MED WG.492/3, WG.492/4 and WG.492/5). The Meeting recommended submission of these three documents for the consideration of the MED POL Focal Points Meeting. To this aim, the Secretariat/MED POL was requested to reflect onto the revised versions of these documents by addressing the technical proposals that have been provided and agreed during the Meeting, including the specifics provided for all the steps of analytical chain that are based on the best available practices of relevance for IMAP implementation.
- 2. Further to the formal approval from the Meeting of the MED POL Focal Points, the Meeting encouraged the effective use of the Monitoring Guidelines/Protocols by the technical personnel working in national IMAP Competent Laboratories (IMAP Pollution Cluster) to move forward in using standardized and harmonized IMAP monitoring practices. In this respect the Meeting highlighted the need for supporting the Countries in strengthening national capacities for their effective implementation.
- 3. The Meeting acknowledged the benefit of restructuring the set of Monitoring Guidelines/Protocols for IMAP Common Indicators 13, 14, 17, 18 and 20, after completing their formal approval process, to make them in format that would facilitate their more practical use by national IMAP competent laboratories (IMAP Pollution Cluster). This restructuring could be done through online publication with the external support and pending availability of the resources.
- 4. Following discussions and agreement on the document UNEP/MED WG.492/6, the Meeting appreciated the well-established practice regarding intercalibration for IMAP Common Indicator 17, and pointed out the need for assistance and interlaboratory comparison and related training course for IMAP Common Indicator 18.
- 5. With regard to future work on the Biomonitoring, as elaborated and proposed in the document UNEP/MED WG.492/6, the Meeting appreciated the proposal made and requested the further discussion to be held in the Online Working Group on Contaminants before it is submitted to the Meeting of CorMon Pollution during next biennium.
- Agenda item 4: Monitoring Guidelines/Protocols for Analytical Quality Assurance and Reporting of Monitoring Data for IMAP Common Indicators 13, 14, 17, 18 and 20
- 6. The Meeting reviewed the Meeting documents UNEP/MED WG.492/7 and UNEP/MED WG.492/8, addressing the procedures for Analytical Quality Assurance and Reporting of Monitoring Data elaborated in respective protocols in order to ensure the representativeness and accuracy of the analytical results for generation and reporting of quality assured monitoring data, and agreed to recommend their submission to the Meeting of the MED POL Focal Points, with minor changes as indicated in the conclusion number 9 below.

- 7. Considering that the Meeting documents UNEP/MED WG 7 and UNEP/MED WG. 8 are building on the respective IMAP Guidance Fact Sheets for IMAP Common Indicators 13, 14, 17, 18 and 20 (UNEP/MED WG.467/5); Data Quality Assurance schemes (UNEP/MED WG.467/13); Data Standards (DSs) and Data Dictionaries (DDs) for Common Indicators related to Pollution and Marine Litter (UNEP/MED WG.467/8); and IMAP Pilot Info System: Quality Assurance and Quality Controls (UNEP/MED WG.467/12), the Meeting recommended that this set of documents should govern the monitoring data flows and quality assurance procedures related to IMAP Ecological Objectives 5 and 9 in order to allow the comparability of the data for reliable assessment of GES.
- 8. The Meeting recommended the Monitoring Guidelines/Protocols related to Analytical Quality Assurance and Reporting of Monitoring Data (UNEP/MED WG.492/7 and UNEP/MED WG.492/8) for further use of the technical personnel working in national IMAP competent laboratories in order to move forward the implementation of standardized and harmonized IMAP monitoring practices.
- 9. As indicated in conclusion 6, the Secretariat/MED POL should amend documents UNEP/MED WG.492/7 and UNEP/MED WG.492/8, for submission to the Meeting of MED POL Focal Points by addressing agreed technical proposals that have been provided during the meeting, including the specifics related to mesh size for pre-filtration of seawater; LOD and LOQ for metals and organic contaminants in the mussels and fish samples; sampling additional biological material during monitoring surveys to be used for internal Quality Control Material as CRM; as well as the need to work towards interoperability of IMAP Info System with different data bases existing in Mediterranean, in particular with EMODnet, in order to profit from the synergies and save resources of the Contracting Parties.
- 10. The Meeting requested the Secretariat/INFO/RAC to take into account the proposals for inclusion of additional reporting parameters as they have been provided during the Meeting when finalizing Data Standards (DSs) and Data Dictionaries (DDs) for IMAP Common Indicators 18 and 20 in course of their ongoing development by INFO/RAC in line with the elements provided in Annexes II and III of the Meeting document UNEP/MED WG.492/8 and further inputs that could be suggested from OWG on Contaminants.
- 11. The Meeting suggested a few changes for existing DDs and DSs and IMAP Guidance Facts Sheets for IMAP Common Indicators 13 and 14 for the consideration of the Meeting of CorMon Pollution, once a decision on amending IMAP will be undertaken.

## Agenda item 5: State of Play of Inter-laboratory Testing and Good Laboratory Practice related to IMAP Ecological Objectives 5 and 9

- 12. The meeting generally agreed with the findings of 2019 and 2020 Reports on the Proficiency Testing and Training Courses, and recommended the following elements, as presented in the Meeting document UNEP/MED WG.492/9, for the future work:
  - a) Ensure that future inter-laboratory comparison/proficiency testing has a particular focus on achieving the satisfactory results for all mandatory organic contaminants given the present unsatisfactory results of the analysis of organic contaminants in marine samples;
  - b) Give a priority to: (i) addressing the persisting needs of under-capacitated laboratories including the provision of CRMs/standard solutions for organic contaminants; (ii) supporting participation of more than two laboratories in proficiency testing for those Contracting Parties where the emerging needs are recognized; and (iii) strengthening present scope of the quality assurance aspects related to metrology, including use of other opportunities being offered free of charge for the IMAP competent laboratories (e.g., free online courses).

- 13. Aware of the specific knowledge and technical needs of individual laboratories identified though assessment of the capacities of 36 different national IMAP competent laboratories, as presented in the Meeting document UNEP/MED WG.492/10, the Meeting recommended the following directions to guide future work of the Secretariat:
  - a) Establishing regular inter-laboratory comparisons/proficiency testing for the analysis of nutrients (Common Indicators 13 and 14); biomarkers (Common Indicator 18); and contaminants in commonly consumed seafood (Common Indicator 20), along with the continual strengthening of the capacities through the Proficiency Tests and Training Courses organized for IMAP Common Indicator 17.
  - b) Undertaking biennial evaluation of the capacities of national IMAP competent laboratories in order to support gradual improvement of their performances with a view of reaching optimal compliance of data processing and reporting with the methods recommended in the Monitoring Guidelines for IMAP Common Indicators 13,14,17, 18 and 20.
- 14. The Meeting pointed out the need for the Contracting Parties to undertake the following steps defining their way forward:
  - a) Ensure that national IMAP competent laboratories are able to measure all mandatory trace elements, organic contaminants and biomarkers, as established for monitoring of IMAP Common Indicators 17 and 18;
  - b) Continue work progress towards harmonization of laboratories' analytical performance in line with the Monitoring Guidelines for IMAP Common Indicators 13, 14, 17, 18 and 20;
  - c) Increase consistency of biota sampling along with application of Quality Assurance measures;
  - d) Provide information on their IMAP competent laboratories dealing with monitoring of IMAP CI 18, given only two laboratories participated in presently undertaken capacity assessment.

## Agenda item 6: Cross-Cutting Issues -The Integration and Aggregation Rules for IMAP Ecological Objectives 5, 9 and 10 and Assessment Criteria for Contaminants and Nutrients

- 15. Considering the evolving nature of the Meeting document UNEP/MED WG.492/11, addressing the proposal for setting the reference conditions and boundary values for Dissolved Inorganic Nitrogen (DIN) and Total Phosphorous (TP), along with testing practical application of the methodological approaches for their calculation in relevant sub-areas, the Meeting agreed to recommend its use as a basis for progressing towards setting the assessment criteria for DIN and TP, and recommended its submission to the Meeting of the MED POL Focal Points for its consideration, while work on its further elaboration will continue as indicated in paragraph 16 below, including through OWG on Eutrophication.
- 16. Acknowledging the complexities and challenges related to setting the reference conditions and boundary values for nutrients within development and testing of the methodology for GES assessment related to Ecological Objective 5 towards preparation of 2023 MED QSR, the Meeting requested:
  - a) The Contracting Parties to support present work in the framework of the Online Working Group (OWG) on Eutrophication through: i) analysis of available/ new monitoring data; and ii) elaboration and testing of proposed methodological approaches for setting boundary values, including relevant statistical approaches, as suitable for specific areas in Mediterranean sub-regions;
  - b) The Secretariat to keep this document open for elaboration of additional methodologies that could be suggested from the OWG on Eutrophication;
  - c) The Contracting Parties to urgently report all pending datasets related to IMAP Common Indicators 13 and 14 into IMAP Info System.

- 17. Considering the evolving nature of the Meeting document UNEP/MED WG.492/12, addressing the need to further upgrade the assessment criteria for IMAP Common Indicators related to Ecological Objective 9, the Meeting agreed to use this document as a basis for progressing towards development and testing of the methodologies for GES assessment related to Ecological Objective 9 towards preparation of the 2023 MED QSR, and recommended its submission to the Meeting of the MED POL Focal Points for its consideration, while work on its further elaboration will continue as indicated in paragraph 18 below, including through OWG on Contaminants.
- 18. Aware of the present status of existing and submission of new datasets related to IMAP Ecological Objective 9, the Meeting:
  - Took note on the findings and recommendations, as provided in the Meeting document UNEP/MED WG.492/12 with the view of developing and testing of the methodology for GES assessment related to EO9 towards preparation of the 2023 MED QSR;
  - b) Requested the Contracting Parties to support present work including in the framework of the Online Working Group (OWG) on Contaminants (EO9) by: i) undertaking analysis of proposed values of the assessment criteria against the new monitoring data to be reported into IMAP Pilot Info System, as well as to be made available through another relevant sources; ii) supporting improvements of existing methodology for calculation of the assessment criteria; and iii) supporting preparation of agreed and integrated GES assessment methodology for IMAP Ecological Objective 9.
- 19. Considering the evolving nature of the Meeting document UNEP/MED WG.492/13, addressing: i) the methodology for proposing the spatial scales of assessment from the scales of monitoring; ii) the rules for integration of monitoring and assessment areas within the IMAP Pollution and Marine Litter Cluster (EO5, EO9, EO10); and iii) the rules for aggregation and integration of assessments for specific Common Indicators/Ecological Objectives of IMAP Pollution and Marine Litter Cluster, the Meeting agreed to recommend its use as a basis for progressing towards integrated GES assessment methodologies for IMAP Ecological Objectives 5, 9 and 10, and recommended its submission to the Meeting of the MED POL Focal Points, while work on its further elaboration will continue, including through OWG on Contaminants.
- 20. Finally, and in order to optimally progress with the preparation of the assessment inputs for the 2023 MED QSR, the Meeting requested the Contracting Parties to support the work of the Secretariat/MED POL including in the framework of the OWGs for Eutrophication, Contaminants and Marine Litter, to discuss and test the methodologies for aggregation and integration of Common Indicators within and across IMAP Pollution Cluster Ecological Objectives in an attempt to propose an integrated GES assessment based on actual monitoring data for EO5, EO9 and EO10, including possible elaboration of other suitable methodologies that can be suggested from the members of this OWG.