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Agenda Item 4: IMAP common indicators

4.3. Update on the progress made related to Candidate Indicator 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles

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Note by the Secretariat

The Contracting Parties (CP to the Barcelona Convention adopted (CoP 19, Athens 2016) the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) (Decision IG.22/7) within the Ecosystem Approach (EcAp) process. The IMAP requirements focus on agreed Ecological Objectives (EOs) and their related common indicators.

IMAP Ecological Objective 10 (EO10), having a focus on Marine Litter was developed on the basis of 2 Common and 1 Candidate Indicators. The implementation of IMAP EO10 has advanced significantly since 2016, resulting into national IMAP-based monitoring programmes, development of assessment criteria, and most importantly the preparation of dedicated chapters in the framework of the 2017 and 2023 Mediterranean Quality Status Reports (MED QSR).

Based on the experience gained from IMAP implementation at national, sub-regional and regional levels, and the assessment finding of the recent 2023 MED QSR (being also based on the findings of the 2017 MED QSR); the Contracting Parties to the Barcelona Convention, through Decision IG.26/3 of COP23, called for revising Ecosystem Approach (EcAp) and IMAP, and in particular the enhancement of IMAP implementation and strengthening of national monitoring and assessment capacities, with the view to delivering and reporting quality assured data and undertake reliable related assessments.

In this regard, an update on the progress made related to Candidate Indicator 24: *Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles* and the proposal for converting Candidate Indicator 24 into Common Indicator 24 is presented in this document.

This document is submitted to the present CORMON Biodiversity and Fisheries for review and endorsement, for further submission to the Meetings CORMON Marine Litter Meeting (May 2025, tbc), SPA/RAC Focal Points (May, 2025) and MED POL Focal Points (June 2025, tbc).

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Update on the progress made related to Candidate Indicator 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles

1. Introduction

- 1. The Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) adopted in 2016 (Decision IG.22/7 COP19) describes the strategy, themes, and products that the Contracting Parties to the Barcelona Convention are aiming to deliver, through collaborative efforts, over the second cycle (2016 2021) of the implementation of the Ecosystem Approach (EcAp) Process, and the undergoing third cycle, in order to assess the status of the Mediterranean sea and coast, as a basis for further and/or strengthened measures.
- 2. The 10th Ecological Objective (EO10) of IMAP has a focus on Marine Litter, having the following outline (Decision IG.22/7):
 - Common Indicator 22 (CI22): Trends in the amount of litter washed ashore and/or deposited on coastlines (EO10);
 - Common Indicator 23 (CI23): Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10); and
 - Candidate Indicator 24 (cCI24): Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (EO10).

2. Updates and Developments with regards to Monitoring and Assessment of IMAP Ecological Objective 10 (EO10) - Marine Litter

- 3. All Contracting Parties to the Barcelona Convention have established since 2016 national IMAP-based monitoring programmes in relation to the two common indicators 22, and 23 (in particular on beach macro-litter, seafloor macro-litter, and floating microplastics), and have been encouraged to also consider in their monitoring programmes the candidate common indicator 24 related to ingestion and entanglement of marine litter from sea turtles and to undertake pilot monitoring activities on the latter.
- 4. Guidance Factsheets were prepared in 2017 for all Common and Candidate Indicators of IMAP EO10 Marine Litter (UNEP/MED WG.439/12¹)
- 5. Data Standards (DS) and Data Dictionaries (DD) have been developed and agreed and are operational at IMAP InfoSystem at the level of the region for the 2 common indicators CI22 and CI23 (i.e., beach macro-litter, seafloor macro-litter, and floating microplastics) (UNEP/MED WG.473/8²). Moreover, DS-DD have been agreed and are operational for IMAP cCI24 (UNEP/MED WG.534/03³).
- 6. Threshold Values (TV) and updated Baseline Values (BV) have been agreed and developed for the 2 Common Indicators for IMAP EO10, and a process is ongoing also for IMAP Candidate Indicator 24.

¹ Meeting of the MED POL Focal Points (Rome, Italy, 29-31 May 2017).

² Meeting of MED POL Focal Points (Istanbul, Turkey, 29-31 April 2019).

³ Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring (Videoconference, 31 May 2022).

3. Towards Transforming to IMAP EO10 Common Indicator 24

- 7. Regarding ingestion and entanglement of marine litter from biota, in particular from sea turtles (Candidate Indicator 24: Trends in the amount of litter ingested by or entangling marine organisms, particularly selected mammals, marine birds, and marine turtles), a number of important developments have been carried out by UNEP/MAP SPA/RAC and MED POL since 2016, with important support provided by the EU-funded Marine Litter MED Projects I and II.
- 8. A report identifying the most representative species for assessing the amount of marine litter ingested by or entangling marine species was prepared in 2017. This report was developed following productive discussions and consultations with regional institutions and experts. It was subsequently reviewed and endorsed during several institutional UNEP/MAP meetings⁴. While a shortlisting of species was elaborated and agreed, *Caretta caretta*, commonly found in the Mediterranean, was identified as the target species where efforts should focus on.
- 9. Therefore, a protocol for monitoring interactions between marine litter and marine turtles (i.e., ingestion and entanglement) and for harmonizing data collection methods for monitoring and assessment purposes was successfully developed in collaboration with the EU-funded INDICIT-I project. It has been the subject of two training sessions (Naples in July 2017, and Monastir in November 2018) organized within the project implementation, in order to reinforce national capacities and providing tools for technicians, veterinarians and scientists involved in sea turtle stranding networks and the monitoring of marine debris ingested by sea turtles in the Mediterranean.
- 10. Meanwhile, a regional operational strategy for monitoring IMAP Candidate Indicator 24 was developed in 2019, which includes: (a) an elaboration of the tools required to collect and record standardised data on litter ingestion by sea turtles; (b) a review of the existing networks and methods for collecting specimens, processing samples, and collecting and analysing the data; (c) an evaluation of the current impact of litter on sea turtles, as well as the indicator criteria and proposed methods to assess Good Ecological Status (GES) targets; and (d) an assessment of the implementation costs and recommendations to help operationalize a monitoring programme.
- 11. Indeed, the regional operational strategy served as a framework and benchmark document for the Contracting Parties to the Barcelona Convention and has been guiding the Project's beneficiary's countries (i.e., Lebanon, Morocco and Tunisia) in developing their national monitoring programmes as well in reinforcing their national stranding networks and facilitating the organization of several awareness raising campaigns in the said countries. The national programmes prepared respectively in Tunisia and Lebanon in 2021; and in Morocco in 2023, were subsequently endorsed at national level.
- 12. National teams and stakeholders involved in monitoring IMAP Candidate Indicator 24 have benefited from national capacity-building and exchange workshops⁵. These workshops also facilitated constructive dialogue, paving the way for future collaborations at national level

⁴ MED POL Focal Points (Rome, Italy, 29-31 May 2017); 6th EcAp Coordination Group (Athens, Greece, 11 Sept.2017); CorMon Biodiversity and Fisheries (Marseille, France, 12-13 Feb. 2019); Joint Meeting of the CorMon Marine Litter and ENI-SEIS II Assessment of Horizon 2020/National Action Plans of Waste Indicators (Podgorica, Montenegro, April 2019); MED POL Focal Points (Istanbul, Turkey, 29-31 May 2019); 14th Meeting of SPA/BD Thematic Focal Points (Portoroz, Slovenia, 18-21June 2019); 7th EcAp Coordination Group (Athens, Greece, 9 Sept.2019).

⁵ Subregional training on Marine turtles monitoring and conservation (Lampedusa, Italy, 15-20 November 2021); National Training on testing the protocol for monitoring interactions between marine litter and marine turtles (Tunisia, 21-22 December 2021); Training workshop on the monitoring interactions between marine litter and marine turtles ,Tyre Coast Nature Reserve, Lebanon, (7 September 2022) (15 & 17 September 2022) (15 & 20 June 2023); Training workshop on the monitoring interactions between marine litter and marine turtles (M'diq, Morocco, 25 Sept. 2023) (Fnideq, Morocco, 18 Nov. 2023) (Belyounech, Morocco, 19 Nov 2023).

- 13. The final technical reports for all 3 Countries (i.e., Tunisia, Lebanon and Morocco) reflecting the lessons learnt and gained experience from the implementation of the pilot national monitoring programmes were delivered in December 2023 and validated by SPA/RAC. These reports⁶ include an analysis of the data collected, which have been stored in the respective IMAP InfoSystem Modules (excel files), deriving from stranded/entangled marine turtles in line with the approved regional protocol. In summary:
 - a) 139 stranded sea turtles necropsies were completed by TCNR (Lebanon) during 2022-2023, and 356 ingested plastic items (divided into five plastics categories) were recorded, with a total dry weight of 102 gr;
 - b) 65 stranded sea turtles necropsies were completed by the rescue center of Monastir (Tunisia) and 15 loggerhead turtles were entangled in debris or showed signs/scars of entanglement. A total of 99 ingested plastic items were recorded.
- 14. Moreover, the Data Standards (DS) and Data Dictionaries (DS) for IMAP Ecological Objective 10 (EO10) Candidate Indicator 24 (Ingestion and Entanglement on Marine Turtles) have been developed by MED POL, SPA/RAC and InfoRAC, already in 2022 and were reviewed and approved during the CORMON Marine Litter Meetings held on 31 May 2022 (Videoconference) and on 3 March 2023 (Athens, Greece). The approved Document was edited to meet the requirements of the IMAP InfoSystem, several online consultation meetings were organized throughout the year (2023) between MED POL, SPA/RAC and InfoRAC, to enable the preparation of the relevant Module (excel reporting template), which will enable the uploading of the collected data.
- 15. Strong synergies have been established with the EU-funded projects INDICIT I and II as well as with the INTERREG-MED Plastics Busters MPA Project regarding the elaboration of update Baseline Values (BV) and the establishment of Threshold Values (TV) for IMAP Candidate Indicator 24. Both consortia have shared with UNEP/MAP an important amount of data required for this exercise. A relevant inventory has been prepared supplemented by national data from Lebanon and Tunisia.
- 16. Further to the collection of data and the preparation of the data inventory, a proposal for updating the 2016 BV and establishing TV for IMAP Candidate Indicator 24 was completed and submitted to the CORMON Marine Litter Meeting on 29 January 2025. The methodology applied in the document was endorsed during the meeting. The document will be updated upon receipt of additional datasets from the contracting parties and its revision by the Online Working Group on Marine Litter (OWG-ML), led by Italy. The document will be submitted to the CORMON Marine Litter Meeting, to be held in Athens, Greece, in May 2025 (tbc).
- 17. The proposal for Convert Candidate Indicator 24 into Common Indicator 24 was endorsed during the last CORMON Marine Litter Meeting (online, 29 January 2025).

⁶ Regarding the work conducted in Morocco, it mainly focused on the preparation of the national Monitoring Programme for IMAP Cand. Indicator 24, including: (a) an analysis and preparation of an inventory of existing data; (b) the status of the stranded turtles (2020-2022) along the Moroccan-Mediterranean coast; and (c) the organization of exchanges and awareness workshops to inform the local community about the impact of marine debris on sea turtles and their involvement within the collection of the relevant data. Moreover, one pilot necropsy was completed on a specimen which was collected during the study period (September-December 2023).

4. Marine Litter Med Plus Project: Supporting National Operational Strategies and Monitoring Programmes for IMAP Indicator 24

18. In the framework of the of the Marine Litter Med Plus project, SPA/RAC-UNEP/MAP is supporting the beneficiary countries (Algeria, Egypt, and Libya) in developing their national operational strategies and monitoring programmes for IMAP Candidate Indicator 24. This support also includes assisting with the implementation and operationalisation of these programmes, enhancing the capacities of national teams involved in monitoring IMAP candidate Indicator 24 through capacity-building meetings and targeted technical training, and ensuring the submission of the corresponding data to the IMAP Information System.

19. The development of the National Operational Strategy for the Monitoring of IMAP Candidate Indicator 24 in Libya and Egypt is currently underway, with the first drafts expected to be completed by the end of March 2025.