



UNITED
NATIONS

EP

UNEP/MED WG.601/3



**Mediterranean
Action Plan**
Barcelona
Convention

29 December 2024
Original: English

Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring (CORMON Marine Litter)

Videoconference, 29 January 2025

Agenda item 3: Proposal for Revising IMAP Ecological Objective 10 (EO 10) on Marine Litter

Preliminary Proposal for Revising IMAP Ecological Objective 10 (EO 10) on Marine Litter

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Note by the Secretariat

The Integrated Monitoring Programme for the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) was established in 2016 during COP19 (Decision IG.22/7), containing elements pertinent to its principles and structure, integrated monitoring and assessment, integrated data and information system, as well as monitoring and assessment requirements for 11 Ecological Objectives (EOs) and the corresponding 27 Common and/or Candidate Indicators (CIs). All these information was further detailed in the IMAP Guidance (UNEP(DEPI)/MED IG.22/Inf.7).

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, the Secretariat has undertaken preliminary work and submitted to this Meeting a preliminary proposal for updating IMAP EO10 – Marine Litter.

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

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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 (Table 1), 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).

Table 1: Threshold Values and Updated Baseline Values for IMAP Common Indicators CI22 and CI23 (i.e., beach macro-litter, seafloor macro-litter and floating microplastic).

IMAP Indicators	Categories of Marine Litter	Threshold Value	Updated Baseline Values
CI22	Beach Macro-litter	130 items/100m	369 items/100m
CI23	Seafloor Macro-litter	38 items/km ²	135 items/km ²
CI23	Floating Microplastics	0,000845 items/m ²	0.044338 items/m ²

7. Regarding beach macro- litter (CI22), cost-efficient and easy to follow monitoring and sampling methodologies and techniques are well established, as described in the Integrated Monitoring and Assessment Guidance, with at least two surveys per year in spring and autumn recommended and ideally 4 surveys per year in spring, summer, autumn and winter.

8. An updated list of litter categories and items has been also included in the Integrated Monitoring and Assessment Guidance and also integrated into the respective DS-DD, with the most frequent items found in Mediterranean beaches.

9. One aspect which requires for update within IMAP with regards to beach macro-litter is the minimum size of recorded marine litter items which need to increase from 0.5cm to 2.5cm.

10. Further alignment with the EU/MSFD joint list can be considered for beach macro-litter, however this process can be only initiated once this list is finalized and its ongoing update process is completed.

11. Regarding monitoring of marine litter at the sea (Common Indicator 23), due to the low occurrence of litter in midwater, the common indicator focuses on floating and seafloor litter, including macro-litter and microplastics.

12. Regional guidelines detailing the monitoring of floating microplastics have been developed by UNEP/MAP– MED POL and agreed at regional level.

13. Regarding seafloor macro-litter (Common Indicator 23), opportunistic monitoring is the most cost-efficient method for sea-floor monitoring being jointly implementation with national/regional fish-stock assessment survey programmes (e.g., the Mediterranean International Bottom Trawl Surveys (MEDITS)), with the use of compatible professional trawling operations. There may be other opportunities to couple marine litter surveys with other regular surveys (e.g., monitoring in marine reserves, passenger ships for visual monitoring, etc.) or programmes on biodiversity, with methodologies and technical requirements prescribed in the Integrated Monitoring and Assessment Guidance Document.

14. Furthermore, it is important to note that while micro-litter and in particular microplastics are considered in IMAP-EO10, further work is still necessary at regional level, recognizing that our understanding of the potential impacts of microplastic on organisms and the environment is still under development. Contracting Parties are thus encouraged also to undertake pilots, further research and relevant work in this area (e.g., microplastics on beaches, microplastics on sediment, etc.).

2.1. Towards Transforming to IMAP EO10 Common Indicator 24

15. 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, MED POL and SPA/RAC since 2016, with important support provided by the EU-funded Marine Litter MED Projects I and II.

16. 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.

17. 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.

18. 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.

19. 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.

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, 18-21 June 2019); 7th EcAp Coordination Group (Athens, Greece, 9 Sept.2019).

20. National teams and stakeholders involved in monitoring IMAP Candidate Indicator 24 have benefited from **national capacity-building and exchange workshops**⁵. These workshops also facilitated constructive dialogue, paving the way for future collaborations at national level.

21. 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.

22. 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.

23. 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. 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 is submitted to this meeting for review and hopefully endorsement (UNEP/MED WG.601/4).

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).

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).

24. In conclusion, within IMAP EO10, Candidate Indicator 24 "Trends in the amount of litter ingested by or entangling marine organisms, focusing on selected mammals, marine birds, and marine turtles" the aforementioned requirements are met and thus the Secretariat is **proposing to transform it into a Common Indicator**.

2.2. Addressing Riverine Sources of Litter

25. A number of important steps have been also carried also with regards to riverine marine litter:

- a) The "Guidelines for Monitoring Riverine inputs of Marine Litter" were developed and approved in 2023 (UNEP/MED WG.550/14/Rev.1⁷);
- b) Pilot monitoring has been tested in Israel and Morocco during the implementation of the EU-funded Marine Litter MED II Project (2020-2024); and
- c) The Meeting "Enhancing Interregional Cooperation for Monitoring and Assessing Riverine Input of Marine Litter" was organized jointly with OSPAR, HELCOM and Black Sea Commission in the framework of MARLICE 2024 (Valencia, Spain, 23 May 2024).

26. In this regard, the Secretariat proposes to add a new indicator or sub-indicator addressing riverine sources of litter.

3. Proposed Updated Outline for IMAP EO10 – Marine Litter

27. Considering the above-stated important developments, the Secretariat is proposed the below-listed updated outline for IMAP EO10 – Marine Litter:

<u>Marine Litter (EO10):</u>	'Marine and coastal litter do not adversely affect coastal and marine environment.'
Common Indicator 22:	Trends in the amount of litter washed ashore and/or deposited on coastlines (EO10).
Common Indicator 23:	Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10).
Common Indicator 23 (bis):	Trends in the amount of litter coming from riverine sources (EO10).
Candidate Common Indicator 24:	Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (EO10).

4. IMAP EO10 Marine Litter: Operational Objectives, Indicators, GES Definitions and Targets

28. Table 2 consolidates the list of respective indicators, GES definitions and targets for IMAP EO10, as previously prepared for the 11th EcAp Coordination Group Meeting (2 October 2024, Online, UNEP/MED WG.595/Inf.4).

⁷ Integrated Meeting of the Ecosystem Approach Correspondence Groups (Athens, Greece, 27-28 June 2023).

Table 2: Operational Objectives, Indicators, GES Definitions and Targets for IMAP EO10.

Ecological Objective 10 (EO10): Marine and coastal litter do not adversely affect coastal and marine environment			
Operational Objective	Indicator	GES Definition	Proposed GES Targets
10.1 The impacts related to properties and quantities of marine litter in the marine and coastal environment are minimized	10.1.1 Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source)	Number/amount of marine litter items on the coastline do not have negative impacts on human health, marine life and ecosystem services	Decreasing trend in the number of/amount of marine litter (items) deposited on the coast
	10.1.2 Trends in amounts of litter in the water column, including micro- plastics, and on the seafloor	Number/amount of marine litter items in the water surface and the seafloor do not have negative impacts on human health, marine life, ecosystem services and do not create risk to navigation	Decreasing trend in the number/amount of marine litter items in the water surface and the seafloor
	10.1.3 Trends in the amount of litter coming from riverine sources⁸.	N/A	N/A
10.2 Impacts of litter on marine life are controlled to the maximum extent practicable	10.2.1 Trends in the amount of litter ingested by or entangling marine organisms, especially mammals, marine birds and turtles	N/A	Decreasing trend in the cases of entanglement or/and a decreasing trend in the stomach content of the sentinel species.

⁸ Preliminary proposal for the development of a new indicator having a focus on riverine litter, subject to review and endorsement by this meeting.