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Seventeenth Meeting of SPA/BD Focal Points

Istanbul, Türkiye, 20-22 May 2025

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

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

- 1. 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.
- 2. 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 in 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).
- 3. 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.
- 4. 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 to convert Candidate Indicator 24 into Common Indicator 24 is presented in this document.
- 5. This document was presented and reviewed during the most recent CORMON meetings on Marine Litter (Online, January 2025) and on Biodiversity and Fisheries (Athens, April 2025) and is submitted to the 17th Meeting of the SPA/BD Focal Points for information.

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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, 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 regard 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 concerning 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 upon 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 and DD have been agreed and are operational for IMAP cCI24 (UNEP/MED WG.534/03³) and is given in the annex of this document.
- 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 short list of species was elaborated and agreed upon, *Caretta caretta*, commonly found in the Mediterranean, was identified as the target species where efforts should focus.
- 9. Therefore, a protocol for monitoring interactions between marine litter and marine turtles (i.e., ingestion and entanglement) and for harmonising 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, 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 the 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 the 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 turtle necropsies were completed by TCNR (Lebanon) during 2022-2023, and 356 ingested plastic items (divided into five plastic categories) were recorded, with a total dry weight of 102 g;
 - b) 65 stranded sea turtle 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 updated 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 is currently under review by the Online Working Group on Marine Litter (OWG-ML), led by Italy, following the receipt of additional datasets from the contracting parties. The document will be submitted to the CORMON Marine Litter Meeting, to be held in Athens, Greece, in May 2025.
- 17. The proposal for converting 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 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 being finalized.

Annex I Data Standards (DS) and Data Dictionaries (DD) for IMAP EO10 Marine Litter: Candidate Indicator 24 (CI24)

1. Data Standards (DS) and Data Dictionaries (DD) for IMAP EO10 Marine Litter: Candidate Indicator 24 (CI24)

1.1. Data Standards and Data Dictionaries for IMAP candidate Indicator 24 (Specimen)

Field Description		List of values		
CountryCode	Member country code as ISO two digits, for example "IT" for Italy			
Species name of the observed marine turtle, enter one value in the list.		CC = (loggerhead Caretta caretta) CM = (green Chelonia mydas) DC = (leatherback Dermochelys coriacea) NI = If the species cannot be identified		
Year	Year of finding of the specimen in YYYY format			
Month	Month of finding of the specimen in 1-12 format			
Day	Day of finding of the specimen in 1-31 format			
ID_Specimen	Specimen identification code expressed as follows: Country Code + Species + progressive number + year			
	(e.g., ITCC012019 indicates the first turtle of the Caretta caretta species collected in Italy in 2019)			
ID_Report	The Institute's own report number (Trial Report)			
Tag	Specify the tag number or the PhotoID code. Indicate the presence and code number of electronic chips of the observed marine turtle, or the PhotoID code related to the photographs of the unique pattern of scales on the animal's face.			
	(In the case a photo is uploaded, please upload it in zip format and indicate the name of the zip file in the "Photo" field which is part of this standard. Otherwise (no tag number nor PhotoID code), note NO)			
Place of discovery. Enter one of the values from the list. (The 'Beached' value includes all animals found on the beach. The 'ByCatch' value includes only those caught and delivered by fishermen. For example, if the specimen was found on the beach and the specimen shows evident signs of a previous capture that caused its death (found with hook and line), this field must be marked with		Beached = Found on the beach ByCatch = Caught and delivered by fishermen Dead RC = Dead at the Rescue Center Sea = Found at sea U = Unknown O = Other		

	ID. 1.11 1. d. ID. d. D I	1
	'Beached' and in the 'Death_Reason'	
	column the value 'ByCatch' must be	
T - 4*4 1 -	entered.)	
Latitude	Latitude of finding of the specimen in the	
	decimal degrees WGS84 reference system	
	with at least 5 digits (xx.xxxxx).	
T ', 1	T ', 1 CC 1' C.1 '	
Longitude	Longitude of finding of the specimen in the	
	decimal degrees WGS84 reference system	
	with at least 5 digits (xx.xxxxx). Use negative values for coordinates west of the	
	Greenwich Meridian (0°).	
	Greenwich Meridian (0').	
StatusSpecimen	Note the status of the observed marine	Level 1
StatusSpecimen	turtle. Enter one of the values from the list.	Level 2
	For detailed description of the different	Level 3
	levels refers to "Status Specimen" sheet.	Level 4
	levels refers to Status_Specimen sheet.	Level 5
Bycatch_gear	If the animal has been found bycaught,	L = Longlines
	specify among the proposed categories, the	T = Trawls (Bottom and Pelagic)
	by-catch gear. Enter one of the values from	N = Nets
	the list.	RL = Fishing Rods and Lines
		NI =Non-identified
		O = Other (please specify in the column
	Specify, if possible, in the column	"Remarks")
	"Remarks" the distance from the coast and	
	the duration of the deployment before the	
	gear was brought aboard.	
Status Health	Note the health status from visual	P = Poor condition (Concave plastron)
Status Health	Note the health status from visual	P = Poor condition (Concave plastron) E = Fair condition (Flat plastron)
Status Health	observation of plastron shape according to	F = Fair condition (Flat plastron)
Status Health	observation of plastron shape according to the level of body condition. Enter one of	
	observation of plastron shape according to the level of body condition. Enter one of the values from the list.	F = Fair condition (Flat plastron) G = Good condition (Convex plastron)
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage
	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection,
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described
Injuries and	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation,	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other)	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RRF = Right rear flipper
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RRF = Right rear flipper LRF = Left rear flipper
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RRF = Right rear flipper LRF = Left rear flipper N = Neck
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list.	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RRF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list. For other type, please specify it in the	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RFF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list.	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RFF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron H = Head
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list. For other type, please specify it in the	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RFF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron H = Head S = Several (if several parts of the body
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list. For other type, please specify it in the	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RFF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron H = Head S = Several (if several parts of the body are impacted)
Injuries and disfunctions	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list. For other type, please specify it in the	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RRF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron H = Head S = Several (if several parts of the body are impacted) O = Other (please specify in the column
Injuries and disfunctions InjuriesBodyPart	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list. For other type, please specify it in the column "Remarks".	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RFF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron H = Head S = Several (if several parts of the body are impacted) O = Other (please specify in the column "Remarks")
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Injuries and disfunctions InjuriesBodyPart	observation of plastron shape according to the level of body condition. Enter one of the values from the list. Major injuries and disfunctions. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list In case of injuries (fracture, amputation, sectioning, abrasion, disease, none or other) specify in which part of the body the main type of injury has been found. Enter one of the values from the list. For other type, please specify it in the column "Remarks".	F = Fair condition (Flat plastron) G = Good condition (Convex plastron) None = No damage AB = Abrasion C = Cutting F = Fracture AM = Amputation S = Suffocation O = Other type of injury (infection, malnutrition, buoyancy, etc.) U = Lesion not identified or not described RFF = Right front flipper LFF = Left front flipper RFF = Right rear flipper LRF = Left rear flipper N = Neck C = Carapace P = Plastron H = Head S = Several (if several parts of the body are impacted) O = Other (please specify in the column "Remarks")

Entanglement	Entanglement detection. Enter one of the values from the list.	Y = Yes N = No
Death_Reason	In case of dead animal, specify the cause, otherwise enter 'None'. Enter one of the values from the list.	None = Live animal B = Died by catch E= Entanglement I = Litter ingestion A = Anthropic trauma N = Natural trauma D = Disease U = Unknown O = Other Uncertain = Interaction with fishing gear, but difficult to distinguish between entanglement or by catch
Gender	Specify the gender of the specimen if male female or Not determined. Insert one of the values from the list	M = Male F = Female ND = not detected or not determined
CCL	Standard Curved Carapace Length (CCL). Measure in cm of the standard CURVED length of the carapace (precision 0.01cm)	
SCL	Standard Straight carapace length (SCL). Measure in cm of the standard Straight length of the carapace (precision 0.01cm)	
Plastron Length Type	Plastron lengths type. Enter one of the values from the list.	CPL = Curved plastron length SPL = Straight plastron length
Plastron Length	In case "Plastron Length Type" field has been filled in, enter the value of the indicated length (in centimeters, precision 0.01cm). A measuring tape should be used to measure curved lengths and a sliding caliper for straight lengths.	
Carapace Width Type	Carapace width type. Enter one of the values from the list.	CCW = Curved carapace width SCW = Straight carapace width
Carapace Width	In case "CarapaceWidthType" field has been filled in, enter the value of the indicated width (in centimeters, precision 0.01cm). A measuring tape should be used to measure curved lengths and a sliding caliper for straight lengths.	
Plastron Width Type	Plastron width type. Enter one of the values from the list.	CPW = Curved plastron width SPW = Straight plastron width
Plastron Width	In case "Plastron Width Type" field has been filled in, enter the value of the indicated width (in centimeters, precision 0.01cm). A measuring tape should be used to measure curved lengths and a sliding caliper for straight lengths.	
Weight	Weight in kg of the specimen (2 decimal places).	

Photo	Enter the name of the zip file defined as follows:	
	ID_Specimen_ <year>_<month>_<day>.zi</day></month></year>	
Remarks	Notes	

a) Status of specimen

LEVEL	Status	Description (EN)	Appearance
LEVEL 1 ALIVE Live animal - Litter can be extracted from the analysis of faeces in rescue center.			
LEVEL 2	DEAD	Recently dead animal in excellent condition - Adequate for litter ingestion analysis from necropsies	
LEVEL 3 DEAD		Partially decomposed intact animal - Adequate for litter ingestion analysis from necropsies	
Animal in an advanced state of decomposition - Allows to measure biometric data and assess the presence/absence of ingested plastic (for the evaluation of the frequency of occurrence of litter ingestion (or prevalence, FO%)) and entanglement.		decomposition - Allows to measure biometric data and assess the presence/absence of ingested plastic (for the evaluation of the frequency of occurrence of litter ingestion (or	
LEVEL 5 DEAD Mummified animal - For which individuals have usually lost the gastrointestinal material, the analysis of litter ingestion is not possible.		individuals have usually lost the gastro- intestinal material, the analysis of litter	

b) Status Health of the Specimen

Status Health	Description (EN)	Appearance
Poor	Concave plate	Concave plastron = Poor condition
Fair	Flat plate	Fat plastron = Fair condition
Good	Convex plate	Convex plastron = Good condition

1.2. Data Standards and Data Dictionaries for IMAP candidate indicator 24 (Ingestion)

Field	Description	List of values
ID_Specimen	Specimen identification code expressed as follows: Country Code + Species + progressive number + year (e.g., ITCC012019 indicates the first turtle of the Caretta caretta species collected in Italy in 2019)	
OrganOrExcrement	In the case of a dead specimen, specify whether the categories of litter have been found in the esophagus, stomach or intestine. In case of specimen death, for which excrements have been collected prior to death, enter this field with 'Intestine'. In the case of a live specimen, select the 'Excrements' category. (Enter one of the values from the list)	EX = Excrements ES = Esophagus ST = Stomach IN = Intestine
ID_Category	Identification code of the litter category. Enter one of the values of the 'CODE' column of the 'Litter_Categories' list.	
TotalDryWeight	Specify the total dry weight of the detected waste, expressed in grams (precision: second decimal place). This weight refers to the single litter category ('ID_Category') found in the specific organ (or excrements) of the specimen ('Organ/Excrement'), regardless of color. For live animals consider only the excrements while for dead animals consider separately the three tracts of the gastrointestinal system. Value this field with '0' (zero) if the ID_category field has been valued with FOO (Food) or with NFO (Elements of natural origin but not similar to food (stones, wood)).	
Num_total	Specify the number of total objects detected. The number of detected objects refers to the single litter category ('ID_Category') found in the specific organ (or excrements) of the specimen ('Organ/Excrement'), regardless of color. For live animals consider only the excrements while for dead animals consider separately	

Color	the three tracts of the gastrointestinal system. In case "ID_Category" field has been filled in with "FOO" or "NFO" this field must not be filled in. Specify the color of the detected rejection. If, for the single category of litter ('ID_Category') found in the specific organ (or excrements) of the specimen ('Organ/Excrement'), there are objects characterized by 2 or more colors, replicate the entire row, differentiating it with respect to this field. Enter one of the values from the list. In case "ID_Category" field has been filled in with "FOO" or "NFO" this field must not be filled in.	White = white, yellow, beige Black = black, violet, brown Red= red, pink, orange Blue = blue, light blue Green = green Transparent = absence of color Multicolor = multiple colors and none strictly dominant O = Other
Num_color	Specify the number of objects detected for each color, in reference to the single category of litter ('ID_Category') found in the specific organ (or excrements) of the specimen ('Organ/Excrement'). In case "ID_Category" field has been filled in with "FOO" or "NFO" this field must not be filled in.	
Remarks	Notes	

1.3. Data Standards and Data Dictionaries for IMAP candidate indicator 24 (Entanglement)

Field	Description (EN)	List of values
CountryCode	Member country code as ISO two digits, for example "IT" for Italy	
ID_Specimen	Specimen identification code expressed as follows: Country Code + Species + progressive number + year (eg. ITCC012019 indicates the first turtle of the <i>Caretta caretta</i> species collected in Italy in 2019)	
ID_Category	Specify the category of entangled waste. In case of multiple material, mark the various categories on different lines.	FN = Fishing net (source fishing or aquaculture) FL = Fishing line (source fishing or aquaculture) B = Buoys/fenders (source fishing or aquaculture) PB = Plastic bags (activities ashore, e.g. woven fertilizer bags, etc.) R = Ropes (activities ashore) P = Packaging (activities ashore) RB = Rubber bands (activities ashore) S = Synthetic sheets (activities ashore) U = No information relating to marine litter, only the presence of injuries O = Other material not listed
Source	Specify the source of the waste. Enter one of the values from the list. In case of multiple sources, mark the various sources on different lines.	F = Fishing A = Aquaculture L = Land U = Not identifiable
Entangled Body	Specify the part of the body that is entangled. Enter one of the values from the list. Enter all the entangled parts, even if multiple: in the case of multiple body parts, enter the various parts on different lines.	H = Head F = Forelimbs (Right/Left) HL = Hind limbs (Right/Left) C = Caudal tail/fin D = Dorsal fin carapace O = Other
Remarks	Notes	
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2. Classification of ingested litter and other elements for sea turtles content analysis.

CATEGORIES		CODE	Examples of ingested litter	DESCRIPTION	
	PLASTIC LITTER	Industrial plastic	IND PLA		Industrial plastic granules, usually cylindrical but also sometimes oval spherical or cubical shapes, or suspected industrial item, used for the tiny spheres (e.g., glassy, milky etc.)
		Use sheet	USE SHE		Remains of sheet (e.g., from bag, cling-foil, agricultural sheets, rubbish bags etc.)
		Use thread	USE THR	700	Threadlike materials (e.g., pieces of nylon wire, net-fragments, woven clothing etc.)
LITTER		Use foam	USE FOA	10 %	All foamed plastics (e.g., polystyrene foam, foamed soft rubber (as in mattress filling) etc.)
LII		Use fragment	USE FRAG		Fragments, broken pieces of thicker type plastics, can be a bit flexible, but not like sheet like materials.
		Other Use plastics	USE POTH		Any other plastic type of plastics, including elastics, dense rubber, balloon pieces, soft air gun bullets etc. Specify in the column "Notes"
	Litter other than plastic		OTHER		All non-plastic rubbish and pollutant (e.g. cigarette filters etc.)
OTHER ELEMENTS		Natural food	FOO		Natural food for sea turtles (e.g., pieces of crabs, jellyfish, algae etc.)
OTHER E		Natural no food	NFO		Anything natural, but which cannot be considered as normal nutritious food for sea turtle (e.g., stone, wood, pumice, etc.)