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Agenda Item 4: 2023 Mediterranean Quality Status Report (QSR): Marine Litter Ecological Objective (EO10)

Data Standards (DS) and Data Dictionaries (DD) for IMAP Ecological Objective 10 (EO10) Candidate Indicator 24 (Ingestion and Entanglement on Marine Turtles)

UNEP/MAP
Athens, 2023

Note by the Secretariat

The 2023 MED QSR Roadmap and Needs Assessment was endorsed by COP 21 (Naples, Italy, December 2019) with Decision IG.24/4. It defines the vision for the successful delivery of the 2023 MED QSR, and outlines key IMAP-related processes, milestones and outputs to be undertaken, with their timelines. In the biennium 2020/2021 the Secretariat developed an Operational Plan (UNEP/MED WG.514/Inf.7) with concrete activities per each Milestone/Output of the Roadmap, supported by the UNEP/MAP Programme of Work 2020-2021, the Programme of Work 2022-2023, and externally funded projects (namely, the EU-funded EcAp MED III, IMAP MPA, Marine Litter Med II projects and the GEF-funded MedProgramme).

INFO/RAC, leads the work on the development and completion of the "Info/MAP platform and platform for the implementation of IMAP fully operative and further developed, connected to MAP components' information systems and other relevant regional knowledge platforms, to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public" (COP 21, Decision IG.24/14). The EU funded EcAp MED II Project (2017-2019) has supported this process with the development of a Pilot IMAP Compatible Data and Information System (IMAP (Pilot) Info System), that has enabled the Contracting Parties to start reporting data as of mid-2020 for selected 11 IMAP Common Indicators. The IMAP Info System laid down the basis for building a fully operational IMAP Info System as provided for by Decision IG.22/7 (COP19). At present, the IMAP Info System supports the reporting data for 11 of the 27 IMAP Common Indicators, namely Common Indicators 1, 2, 6, 13, 14, 15, 16, 17, 21, 22, 23. The criteria used for selecting the 11 Common Indicators as part of the IMAP (Pilot) Info System have been: (a) maturity of Common Indicators as of 2017, in terms of monitoring experiences and best practices; (b) existing data collection and availability representing all IMAP clusters; and (c) availability of Common Indicators Guidance Factsheets and/or metadata templates.

The IMAP Info System has been developed by INFO/RAC under the coordination of the Secretariat and in close consultation with all relevant MAP Components. The IMAP Info System is now evolving towards a fully operational IMAP Info System and is able to receive and process data according to the proposed Data Standards (DSs) and Data Dictionaries (DDs) that set the basic information on data reporting within IMAP.

Data Standards (DSs) and Data Dictionaries (DDs) are a set of information describing the content, format and structure of a database and relationship between the elements. DSs are prepared in a form of Excel spreadsheets in which every row indicates a field to be filled by the data providers. The DSs are accompanied by DDs provided in a form of a column next to each Data Standard or excel spreadsheet to guide the data provider. It is a crucial component of any relational database, invisible to most database users. Typically, only database administrators interact with the data dictionary.

DSs and DDs for IMAP EO10 Common Indicators 22 and 23 have been already developed and approved since 2019 by the MED POL Focal Points (Istanbul, Turkey, 29-31 April 2019) and the 7th Ecosystem Approach Coordination Group (Athens, Greece, 9 September 2019) Meetings.
Subsequently relevant data have been already uploaded, or are in the process of uploading, by the vast majority of the Contracting Parties to the Barcelona Convention.

The DS and DD for IMAP Candidate Indicator 24 have been prepared in the framework of the EU-funded Marine Litter MED II Project (2020-2023) and were reviewed and approved during the CORMON Marine Litter Meeting held on 31 May 2022 (Videoconference). This proposal of DSs and DDs provides broader data sets and associated dictionaries, requested as mandatory by the relevant region-wide agreed protocols for monitoring interactions between marine litter and marine turtles (ingestion and entangling) with a view to harmonizing methods of data collection for monitoring and assessment developed in the framework of the EU-funded Marine Litter MED I Project (2016-2019). The present document includes a number of editorial revisions to meet the IMAP InfoSystem requirements and represent the final version of the DS-DD for IMAP Candidate Indicator 24.

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Annex I: Glossary

List of Abbreviations / Acronyms

CI	Common Indicator
CORMON	Correspondence Group on Monitoring
DDs	Data Dictionaries
DSs	Data Standards
EcAp	Ecosystem Approach
EEA	European Environmental Agency
EO	Ecological Objective
IMAP	Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria
INFO/RAC	Regional Activity Centre for Information and Communication
MAP	Mediterranean Action Plan
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
MED QSR	Mediterranean Quality Status Report
MSFD	Marine Strategy Framework Directive
PoW	Programme of Work

1. Introduction

1. IMAP EO10 Marine Litter consists of two Common Indicators and a single Candidate Indicator. IMAP EO10 Candidate Indicator 24 is referring to the "*Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles*". Marine turtles have been proposed as an indicator species to study and document marine litter ingestion on biota through the development and the implementation of one major indicator "Litter ingested by sea turtles".

2. In the Mediterranean, the loggerhead turtle *Caretta caretta* (Linnaeus,1758) has been adopted as the most appropriate species for this indicator, taking into account the mature monitoring methodologies and protocols (Matiddi et al., 2011; 2017; 2019). Indeed, the occurrence and quantities of marine litter ingestion are particularly high in the loggerhead turtle and would be highest in the Mediterranean Sea (Dell'Amico and Gambaiani, 2013; Darmon, INDICIT consortium, Miaud, 2019). In addition, its wide distribution, and the extensive existing networks for collecting specimens and data on litter ingestion by the said species make it a good candidate for evaluating the impacts of marine litter in various marine compartments and at a large spatial scale. In a lesser extent, the green turtle *Chelonia mydas* being also regularly encountered in the Mediterranean, can also be used for IMAP Candidate Indicator 24, the networks and standard methodologies being the same than those employed for the loggerhead turtle.

3. Standardized region-wide methodologies for extracting marine litter ingested from dead and live individuals have been developed by UNEP/MAP in the "*Protocols for monitoring interactions between marine litter and marine turtles (ingestion and entangling) with a view to harmonising methods of data collection for monitoring and assessment*". The protocol originates from the synergies between, the INDICIT protocol (INDICIT1, 2018) established from original methodologies tested first ever in Italy (Matiddi et al., 2011), later transposed into the MSFD guideline (MSFD TG ML, 2013), regularly improved in cooperation with various stakeholders (rescue centres, stranding networks, etc.); and within the framework of the EU-funded Marine Litter MED Project (2016-2019) protocol (UN Environment/MAP Specially Protected Areas Regional Activity Centre, 2017).

4. Data Standards (DSs) are prepared in the form of Excel spreadsheets in which every column indicates a field to be filled by the data providers. Data Dictionaries (DDs) are prepared in the form of Excel spreadsheets in which every row contains information to guide the data provider. DSs and DDs are spreadsheets included in the same Excel file, downloadable from the IMAP (Pilot) info system. The data uploaded using the Data Standards will be suitable for the inclusion in the database.

5. The proposal of DSs and DDs provides broader data sets and associated dictionaries than requested as mandatory by the related "*Protocols for monitoring interactions between marine litter and marine turtles (ingestion and entangling) with a view to harmonising methods of data collection for monitoring and assessment*".

6. The protocol recommends collecting a set of so-called 'basic' and 'optional' parameters. The *basic parameters* are the minimum data fundamental to assess the occurrence and quantity of marine litter ingestion in sea turtles. The *optional parameters* provide more knowledge regarding the characteristics of the ingested marine litter and the impacts of its ingestion on an individual's health. It is therefore highly recommended to also collect information from the so-called optional parameters in order to better understand the factors leading to marine litter ingestion, which will later allow a more accurate and comprehensive assessment of the indicator's biological constraints. It is also recommended to take pictures regularly, throughout all the steps of the procedure, with a reference of measurement to indicate the order of magnitude (e.g., a measuring tape).

[1] https://www.indicit-europa.eu

7. In the DSs the mandatory data are represented in black and the non-mandatory ones in red. The possibility to fill in also non-mandatory fields is given to allow the Contracting Parties to the Barcelona Convention that already have monitoring systems in place and collect a wider set of data, to report them as the additional data. Although it is at the discretion of the Contracting Parties to decide, reporting on non-mandatory data sets is strongly encouraged to avoid knowledge gaps between IMAP and other national data flows.

8. The UNEP/MAP Protocols describe in detail the technical operations that should be implemented during the recording of information, and while taking samples from live or dead marine turtles. For reasons of hygiene, it is recommended that at least two people are involved in the operations: one to operate, protect himself and handle the soiled objects; the other to take photos, note information etc. Certain definitions must be clearly provided to ensure optimum harmonization during the collection of information. Acceptance of certain terms may differ from one person to the other and thus may represent a source of bias (see Annex 1).

9. The Protocol details the required steps for recording data on ingested marine litter, which are subsequently reflected in the present DDs and DSs and detailed hereunder:

i) Recovering the animal: describing the location and circumstances of the discovery and the initial assessment of the individual's body condition.
ii) Extracting the marine litter ingested by the animal:
    a. dead individuals: performing a necropsy in an authorized service centre and extracting the digestive tract.);
    b. live individuals: collecting all the faeces excreted by an individual for at least 1 month and ideally 2 months from the individual's arrival at the rescue centre (individuals leaving the rescue centre before 1 month are excluded from the analyses).
iii) Evaluating the possible impacts of marine litter on the individual's health and body condition through external observation, as well as an internal diagnostic during a necropsy (on a dead individual).
iv) Classifying and quantifying the marine litter found ingested (same procedure for dead and live individuals).

10. In order to facilitate data banking and statistical analysis, data must be filled in the corresponding **standardized table**, by respecting the units and proposed menu choices, and specifying remarks or other proposals in the last column "Remarks". **All boxes must be filled,** either by the information (quantitative or qualitative data), by 0 or by "NA" (information not available or not evaluated).

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

2.1 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	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. Indicate the presence and code number of electronic chips of the observed marine turtle. *(Otherwise, note NO)*	
Discovery_place	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' and in the 'Death_Reason' column the value 'ByCatch' must be entered.)*	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
Latitude	Latitude of finding of the specimen in the decimal degrees WGS84 reference system with at least 5 digits (xx.xxxxx).	
Longitude	Longitude of finding of the specimen in the decimal degrees WGS84 reference system	

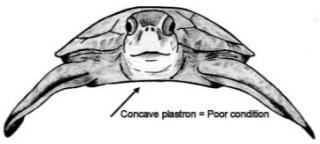
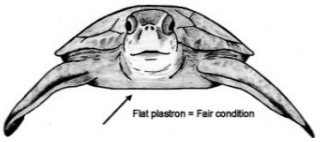
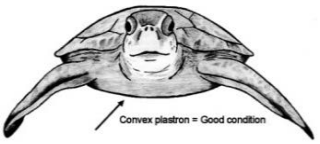
	with at least 5 digits (xx.xxxxx). Use negative values for coordinates west of the Greenwich Meridian (0°).	
StatusSpecimen	Note the status of the observed marine turtle. Enter one of the values from the list. For detailed description of the different levels refers to " Status_Specimen" sheet.	Level 1 Level 2 Level 3 Level 4 Level 5
Bycatch_gear	If the animal has been found bycaught, specify among the proposed categories, the by-catch gear. Enter one of the values from the list. *Specify, if possible, in the column "Remarks" the distance from the coast and the duration of the deployment before the gear was brought aboard.*	L = Longline T = Trawler N = Nets F = Fishing rod NI =Non-identified O = Other (*please specify in the column "Remarks")*
Status Health	Note the health status from visual observation of plastron shape according to the level of body condition. Enter one of the values from the list.	P = Poor condition (Concave plastron) F = Fair condition (Flat plastron) G = Good condition (Convex plastron)
InjuriesBodyPart	In case of injuries (fracture, amputation, sectioning, abrasion 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".*	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 "Remarks")*
Ingestion	Litter ingestion detection. Enter one of the values from the list.	Y = Yes N = No
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>.zip	
Remarks	Notes	

2.1.1 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	
LEVEL 4	DEAD	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.	
LEVEL 5	DEAD	Mummified animal - For which individuals have usually lost the gastro-intestinal material, the analysis of litter ingestion is not possible.	

2.1.2 Status Health of the Specimen

Status Health	Description (EN)	Appearance
Poor	Concave plate	
Fair	Flat plate	
Good	Convex plate	

2.2 Data Standards and Data Dictionaries s for IMAP candidate indicator 24 (Ingestion)

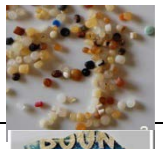
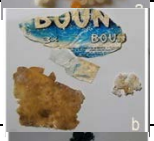
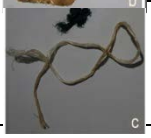
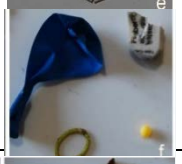
Field	Description	List of values
ID_Specimen	Specimen identification code expressed as follows: Country Code + Species + progressive number + year (e.g., ITCC012019 indicates the first turtle of the *Caretta caretta* species collected in Italy in 2019)	
OrganOrExcrement	In the case of a dead specimen, 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.	
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 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.	
Color	Specify the color of the detected rejection. If, for the single category of litter ('ID_Category') found in the	White = white, yellow, beige Black = black, violet, brown

	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.	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	

2.3 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 *Caretta caretta* 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) 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
Injuries	Major injuries. Specify "None" if there are no injuries or are not visible. Enter one of the values from the list	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
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	

3. Classification of ingested litter and other elements for sea turtles content analysis.

CATEGORIES			CODE	Examples of ingested litter	DESCRIPTION
LITTER	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**		Threadlike materials (e.g., pieces of nylon wire, net-fragments, woven clothing etc.)
		Use foam	**USE FOA**		All foamed plastics (e.g., polystyrene foam, foamed soft rubber (as in mattress filling) etc.)
		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.)
		Natural no food	**NFO**		Anything natural, but which cannot be considered as normal nutritious food for sea turtle (e.g., stone, wood, pumice, etc.)

Annex I
Glossary

Annex I: Glossary

Amputation (of a member): For a marine turtle, the loss of a flipper by being cut off, which may result from constriction or strangling.

Autolysis: Destruction of tissues by their enzymes.

Necropsy: Examination of a carcass to study the causes of death.

By-catch: The inadvertent catch of organisms that were not specifically targeted by a fishing operation (for example, non-target fish species, marine mammals, seabirds) that are either discarded or landed for commercial sale[2].

Cloaca: (Common) orifice of the urinary and genital passages in birds and reptiles.

Constriction: Action of squeezing, pressing around; when this happens at the level of the neck it can suffocate the turtle; when around a member, the blood supply is slowed or even cut off, causing, after a certain time, necrosis and loss of the member.

Dissection (of a carcass): Opening up a carcass according to a defined protocol to study its structure and take samples. When looking for the causes of death, the term used is 'necropsy'.

Entanglement: The process of being wrapped, trapped, or stuck in marine litter.

Fishing gear. Material intended for catching marketable aquatic species (e.g., trawls, seine nets, nets, lines and longlines. According to circumstance, the entangling is due to:

- **Abandoned gear** (derelict)**:** The gear is left where the fisherman has intentionally abandoned it;
- **Ghost gear** (e.g., ghost net)**:** Gear left on the seabed, and which continues to fish; referred to as 'ghost fishing';
- **Lost gear:** Gear unintentionally lost during fishing operations;
- **Wreck:** Object abandoned at sea, drifting or on the seabed;
- **Discarded gear or fishing material:** Old gear or material put aside and often thrown back into the sea; this gear must be collected in containers on land for recycling.

Impact: Effect of something.

Interaction: Reciprocal action that two or more systems exercise on each other.

Occlusion: Complete halt of the passing of matter and gases in one portion of the GI. The occlusion can have a mechanical cause (total obstruction by litter) and constitute a veterinary emergency.

Lesion: Modification of the structure of a living tissue under the influence of a disease, of a reason inducing a pathology.

Macro-litter or litter: artificial polymers (plastic) and "other litter" with a maximum size (or diameter) > 25 mm.

Meso-litter: artificial polymers (plastic) and 'other litter" with size between 5 and 25mm.

Micro-litter: artificial polymers (plastic) and "other litter" with size < 5 mm.

[2] Delgado, Christopher & Wada, N. & Rosegrant, M.W. & Meijer, S. & Ahmed, M.. (2003). Fish to 2020: Supply and demand in changing global markets.

Oculo-palpebral reflex: Reflex in which the eyelids spontaneously shut or blink if the lashes or the internal edge of the orbit are touched with a finger.

Plastron: The ventral part of a turtle's carapace.

Stranding (of a marine turtle)**:** Said of an animal, dead or alive, that has been washed up on the coast.

Trophic status: Nutritional state in which may be reflected by variable degrees of stoutness, presence of fats in the tissues.

Typology: Approach consisting of defining or studying a set of types; by extension, here it means the listing and describing of types of litter, lesion, etc. that allow the surveyor to classify observations in the correct category of data.