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Agenda item 5: Parallel CORMON Sessions (Pollution and Marine Litter, and Biodiversity and Fisheries).

Data Dictionaries and Data Standards for the Common Indicators 3, 4 and 5 related to Marine Mammals, Marine Turtles and Sea Birds (Draft)

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UNEP/MAP
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Note by the Secretariat

In the framework of the UNEP/MAP Programme of Work and Budget for 2020–2021 (COP 21, Decision IG.24/14), 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”*.

The **EU funded EcAp-MED II Project (2017-2019)** has supported this output 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 (Pilot) Info System laid down the basis for building a fully operational IMAP Info System as provided for by Decision IG.22/7.

At present, the 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 are: 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; c) availability of Common Indicators Guidance Factsheets and/or metadata templates.

The draft **IMAP (Pilot) 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 (Pilot) Info System is able to receive and process data according to the proposed Data Standards and Data Dictionaries (DSs and DDs) that set the basic information on data reporting within IMAP.

It should be noted that proposed DSs and DDs also build on the respective relevant experience of INFO/RAC, as well as the experience gained in building other relevant databases such as EMODnet Chemistry platform, SeaDataNet and WISE Data Dictionary maintained by EEA and available in EIONET. In such a way the IMAP (Pilot) Info System is interrelated with other regional marine databases (e.g. SeaDataNet, SeaDataCloud, EMODNET, etc.), essential to avoid duplication of data transmissions for the Contracting Parties.

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 provides information to guide the data provider. DSs & 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.

The proposal of DSs and DDs provides broader data sets and associated dictionaries than requested as mandatory by the related IMAP Guidance Factsheets and Metadata Templates. In the Data Standards 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 that already have monitoring systems collecting a wider set of data also to report them as the additional data. It is at the discretion of the Contracting Parties to decide on reporting on non-mandatory data sets.

Following the outcome of CORMONs, the finalized DSs and DDs related to the 11 Common Indicators have been uploaded in the IMAP (Pilot) Info System and the consequent changes to the data base structure have been provided. Therefore, once all the parameters and measurement units have been defined, the correspondent data flow have been activated. Following a testing phase of the IMAP (Pilot) Info System realized with the voluntary participation of interested countries, the phase I of the system implementation is concluded.

Starting from the middle of 2019, after the conclusion of the EcAp MED II Project, discussion about further modules has been started with the thematic MAP Components for each already selected Common Indicator and for the remaining ones in view of the completion of the IMAP 27 Common Indicator set, according to the available resources specifically allocated.

The aim of the current document is to present the “draft” DSs & DDs related to Common Indicators 3&4. By reviewing this document, the present meeting is expected to provide **guidance, inputs and further reflections** on the proposed “draft” DSs & DDs for the selected Common Indicators. On this basis, a continuous process of harmonization with IMAP guidance factsheets and common indicators monitoring protocols will be assured for next Phase II. Consequently, also the structure of the Data Standards and Data Dictionaries could be revised and harmonized based on the final result of the IMAP developing process. Interactive work will be needed to refine these Data Standards and Data Dictionaries gradually.

As stated by the **CORMON Biodiversity and Fisheries (Marseille 12-13 February 2019)** monitoring protocols should guide data standards development that is carried out in parallel with discussions on the agreed common methodologies. Information systems are a major tool to collect and transfer data. Given that the development of indicators, monitoring methods and data standards are progressing in parallel, close and continuous dialogue and collaboration are needed among the bodies responsible for these developments to ensure their proper alignment and coherence.

The appointment of on-line network of designate qualified experts, supporting INFO/RAC on finalization of DSs and DDs for the cluster Biodiversity and Fisheries, as requested during the CORMON of Marseille (12-13 February 2019) and Rome (21 May 2019), could usefully ensure this coherence.

1. Data Standards and Data Dictionaries for IMAP Biodiversity (EO1): Common Indicators 3&4

1. Among five common indicators related to biodiversity (EO1) fixed by IMAP, three are about marine mammals including the Mediterranean monk seal, reptiles and marine birds:

- Common indicator 3: Species distributional range;
- Common indicator 4: Population abundance of selected species;
- Common indicator 5: Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates)

2. The present document aims to present DSs & DDs related to a part of the available methods for monitoring cetacean and turtle species as expressly reported in the IMAP guidance factsheets. Remaining Data Standards and Data dictionaries (DSs & DDs) for monk seal and marine birds will be object of future development.

3. The reference documents for the species to be monitored (WG.461/21) are:

- IMAP Guidelines for monitoring Cetaceans in the Mediterranean Sea
- IMAP Guidelines for monitoring marine turtles in the Mediterranean

1.1 Cetaceans

4. There are several methods for the study of cetaceans and bottlenose dolphins; the choice of methodologies is made in relation to the parameters to be studied as well as the logistical needs and characteristics of the study areas.

5. IMAP fixes a reference list of cetacean species to be monitored. All cetacean species occurring in the Mediterranean Sea are considered in the IMAP.

6. Particular attention is given to the eight resident cetacean species, divided into three different functional groups:

- Baleen whales: fin whale (*Balaenoptera physalus*)
- Deep-diving cetaceans: sperm whale (*Physeter macrocephalus*), Cuvier's beaked whale (*Ziphius cavirostris*), long-finned pilot whale (*Globicephala melas*) and Risso's dolphin (*Grampus griseus*).
- Other toothed species: short-beaked common dolphin (*Delphinus delphis*), striped dolphin (*Stenella coeruleoalba*), common bottlenose dolphin (*Tursiops truncatus*).

7. However, three other rare species of cetaceans occur also in the Mediterranean Sea: harbour porpoise (*Phocoena phocoena*), rough-toothed dolphin (*Steno bredanensis*), and killer whale (*Orcinus orca*). The monitoring of these species is proposed as not mandatory.

8. Estimation of the abundance and density of cetaceans can be provided through the line transect distance sampling method. The method consists in covering routes, by air or even by ship (specially designed by specific software in a defined study area).

1.1.1. Bottlenose dolphin (*Tursiops truncatus*)

9. Coastal populations of bottlenose dolphins reside in relatively small areas, close to shore. They have the potential to be exposed to a greater level of human activity due to their proximity to humans and due to the small size of the area they inhabit.

10. Bottlenose dolphins are long-lived top predators and are highly susceptible to change in their environment. Changes in abundance and distribution provide important information on the state of the population.

11. The study of the ecology and ethology of populations and information on the short and medium range movements of the specimens as well as a series of demographic elements, are usually obtained by photo-ID, a non-invasive technique that allows the identification of specimens through the distinctive and permanent signs present on the body.

12. Photo-ID allows estimates of numbers of animals in a population (either obtained by mark-recapture or in the case of small populations, by direct census), although in their absence, abundance estimates are derived from line-transect surveys.

13. Therefore, the purpose of the present document is to provide DSs and DDs for both monitoring available methods.

1.2 Sea turtles

14. Two species of sea turtles – the loggerhead turtle (*Caretta caretta*) and the green turtle (*Chelonia mydas*) – regularly occur and breed in the Mediterranean Sea. The breeding activities of both species are regularly monitored in the main nesting areas of ten countries; namely, Cyprus, Egypt, Greece, Israel, Italy, Lebanon, the Libyan Arab Jamahiriya, the Syrian Arab Republic, Turkey and Tunisia. The species' distributional range, population abundance and demographic characteristics are generally estimated according to nest counts in those above countries.

15. The monitoring of sea turtles is mostly performed using these techniques: (i) counting the number of nests during nesting period, (ii) collecting stranded turtles, (iii) in-water capture-mark-recapture studies, and (iv) boat and aerial surveys specifically taken into account in the development of DSs and DDs in the present document.

2. Methods

2.1. Line transect distance sampling

16. **Line transect distance sampling** is one of the methods of the distance sampling family that allows to define the abundance estimation and distribution of specimens in a given space and in a given period of time.

17. **In line transect sampling**, a survey area is defined and surveyed along a sampling design of pre-determined transects ensuring equal coverage of the area.

18. **Abundance** is then calculated by extrapolating estimated density in the sampled strips to the entire survey area. The calculated number is therefore an estimate of abundance in a defined area at a particular time with its uncertainty.

19. This method, either boat- or aerial-based, can provide estimates of abundance, distribution and density of large-scale species for all Mediterranean Sea. At the regional and local level, it appears useful to integrate aerial/boat surveys, to obtain local indications of the conservation status and quality of the habitats.

20. The choice of the monitoring approach will be made by the country on the basis of its national monitoring plan and nature of the monitored area.

2.2. Photo-Identification (or photo-ID)

21. Scientists use the photo-identification to distinguish cetaceans from each other and recognize them. The technique relies on being able to obtain good quality photos of animals' body parts that constitute unique recognizable markings during their whole life.

22. The animals are photographed and catalogued individually based on natural markings criteria (e.g., pigmentation on the body, shape of the dorsal fin) and personal markings (scores, notches and scars) that identify them.

23. A number of assumptions are made, particularly relating to recognizability, representativeness of sampling and capture probabilities that should be homogeneous. When an already identified individual is re-sighted, or photographically re-captured, this can provide a response to various issues, such as: population size, site fidelity, distribution, movements, social structure, etc. This means that there is a need for sorting, storing pictures and associated data within a catalogue which should be regularly updated.

24. Photo-identification is a good method to estimate population size (Common Indicator 4) through mark- recapture models, and for specific areas that populations or part of populations occupy during one or more seasons of the year. It is also one of the methods to provide population parameters e.g. survival and calving rate.

Table 1: Data Standards (Survey) for IMAP Common Indicators 3&4 - Cetaceans

Field	Description	List of value
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
AreaID	Identification code of the survey area	
Sub_Region	Sub-region according to the Mediterranean Sea subdivision	
AreaName	Survey Area Name	
AreaExtension	Survey Area extension (km ²)	
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the reference system WGS84 decimal degrees of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	

Table 2: Data Standards (Survey) for IMAP Common Indicators 3&4 - Cetaceans

Field	Description	List of value
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
AreaID	Identification code of the survey area	
Year	Year of sampling in YYYY format	
Month	Month of sampling in 1-12 format	
Day	Day of sampling in 1-31 format	
Time	Hour-minutes-seconds of sampling in HH:MM:SS format	
SamplingPlatform	Provide information on the used sampling platform. Enter one of the values in the list.	A = Aerial, B = Boat
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the reference system WGS84 decimal degrees of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	
Strata	Sub area in which the study area has been subdivided. Enter one of the values in the list.	A,B,C, D.....
TransectID	Transect code	
SIG_time	Sighting time HH:MM GMT	
Pos_N	Latitude in the WGS84 decimal degrees reference system of the animal location with at least 5 digits (xx.xxxxx).	
Pos_E	Longitude in the reference system WGS84 decimal degrees of the animal location with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	
Observer	Name of the observer (acronym)	
Species	Species name, enter one of the list values in the list: 'List_marine_mammals_sp'	
SeaState	Intensity of the wind according to Beaufort scale (from 0 to 12 degrees)	0-12
Glare	Glare effect according to a scale from 1 to 3. Enter one of the values in the list.	1=Absent, 2=medium, 3=strong

AreaFile	<p>Naming the GIS file that contains the polygon (s) of the survey area. In the attribute table of the GIS file, for each polygon (s) of the survey area, the survey area code in the AreaID field must be reported. The file must be returned in a georeferenced shapefile format (WGS84) and compressed in a single .zip file that includes .zip, .prj, .dbf, etc ... files. The filename must conform to the following Rule of composition: "ModuleMM1_GISfile_ <Sub-Region> _ <AreaName> _ <gg_mm_aaaa> .zip", eg. ModuleMM1_GISfile_Ionian_GulfofTaranto_05_2016.zip. If Region and / or AreaName contains spaces, replace these spaces with "_".</p>	
DistributionMap	<p>Naming the GIS file that contains the polygon (s) of the survey area including shighting of monitored species. In the attribute table of the GIS file, for each polygon (s) of the survey area, the survey area code in the AreaID field must be reported. The file must be returned in a georeferenced shapefile format (WGS84) and compressed in a single .zip file that includes .zip, .prj, .dbf, etc ... files. The filename must conform to the following Rule of composition: "ModuleMM1_GISfile_ <Sub-Region> _ <AreaName> _ Distribution_<gg_mm_aaaa> .zip", eg. ModuleMM1_GISfile_Ionian_GulfofTaranto_Distribution_05_2016.zip. If Region and / or AreaName contains spaces, replace these spaces with "_".</p>	
Remarks	<p>Every information considered useful</p>	

Table 3: Data Standards (Abundance) for IMAP Common Indicators 3&4 - **Cetaceans**

Field	Description	List of value
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
AreaID	Identification code of the survey area	
Year	Year of sampling in YYYY format	
Month	Month of sampling in 1-12 format	
SamplingPlatform	Provide information on the used sampling platform. Enter one of the values in the list.	A = Aerial, B = Boat
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the reference system WGS84 decimal degrees of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	
Abundance	Abundance value	
c.v.	Coefficient of variation (%)	
c.i	Confidence interval	
Species	Species name, enter one of the list values in the list: 'List_marine_mammals_sp'	
Remarks	Every information considered useful	

Table 4: Data Standards (SurveyArea) for IMAP Common Indicators 3&4 - **Sea Turtles**

Field	Description	List of value
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
AreaID	Identification code of the survey area	
Sub_Region	Sub-region according to the Mediterranean Sea subdivision	
AreaName	Survey Area Name	
AreaExtension	Survey Area extension (km ²)	
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the reference system WGS84 decimal degrees of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	

Table 5: Data Standards (Survey) for IMAP Common Indicators 3&4 - Sea Turtles

Field	Description	List of value
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
SubRegion	Sub-region according to Mediterranean Sea subdivision	
AreaID	Identification code of the survey area	
AreaName	Survey Area Name	
AreaExtension	Survey area extension (km2)	
Year	Year of sampling in YYYY format	
Month	Month of sampling in 1-12 format	
Day	Day of sampling in 1-31 format	
Time	Hour-minutes-seconds of sampling in HH:MM:SS format	
SamplingPlatform	Provide information on the used sampling platform. Enter one of the values in the list.	A = Aerial, B = Boat
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the reference system WGS84 decimal degrees of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	
Strata	Sub area in which the study area has been subdivided. Enter one of the values in the list.	A,B,C,D.....
TransectID	Transect code	
SIG_time	Sighting time HH:MM GMT	
Pos_N	Latitude in the WGS84 decimal degrees reference system of the animal location with at least 5 digits (xx.xxxxx).	
Pos_E	Longitude in the reference system WGS84 decimal degrees of the animal location with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	
Observer	Name of the observer (acronym)	
Species	Species name, enter one of the list values in the list: 'List_sea_turtles_sp'	
Seastate	Intensity of the wind according to Beaufort scale (from 0 to 12 degrees)	0-12
Glare	Glare effect according to a scale from 1 to 3. Enter one of the values in the list.	1=Absent, 2=medium, 3=strong
AreaFile	Naming the GIS file that contains the polygon (s) of the survey area. In the attribute table of the GIS file, for each polygon (s) of the survey area, the survey area code in the AreaID field must be reported. The file must be returned in a georeferenced shapefile format (WGS84) and compressed in a single .zip file that includes .zip, .prj, .dbf, etc ... files. The filename must conform to the following Rule of composition: "ModuleT1_GISfile_<Sub-Region>_<AreaName>_<gg_mm_aaaa>.zip", eg. ModuleT1_GISfile_Ionian_GulfofTaranto_05_2016.zip. If Region and / or AreaName contains spaces, replace these spaces with "_".	

DistributionMap	Naming the GIS file that contains the polygon (s) of the survey area including sighting of monitored species. In the attribute table of the GIS file, for each polygon (s) of the survey area, the survey area code in the AreaID field must be reported. The file must be returned in a georeferenced shapefile format (WGS84) and compressed in a single .zip file that includes .zip, .prj, .dbf, etc ... files. The filename must conform to the following Rule of composition: "ModuleT1_GISfile_<Sub-Region>_<AreaName>_Distribution_<gg_mm_aaaa>.zip", eg. ModuleT1_GISfile_Ionian_GulfofTaranto_Distribution_05_2016.zip. If Region and / or AreaName contains spaces, replace these spaces with "_".	
Remarks	Every information considered useful	

Table 6: Data Standards (Abundance) for IMAP Common Indicators 3&4 - Sea Turtles

Field	Description	List of value
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
AreaID	Identification code of the survey area	
Sub_Region	Sub-region according to the Mediterranean Sea subdivision	
AreaName	Survey Area Name	
AreaExtension	Survey Area extension (km2)	
Year	Year of sampling in YYYY format	
Month	Month of sampling in 1-12 format	
SamplingPlatform	Provide information on the used sampling platform. Enter one of the values in the list.	A = Aerial, B = Boat
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the reference system WGS84 decimal degrees of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx) Use negative values for coordinates west of the Greenwich Meridian (0°).	
Abundance	Abundance value	
c.v.	Coefficient of variation (%)	
c.i	Confidence interval	
Species	Species name, enter one of the list values in the list: 'List _sea_turtles_sp'	
Remarks	Every information considered useful	

Table 7: Data Standards (SurveyArea) for IMAP Common Indicators 3&4 - *Tursiops truncatus*

Field	Description	List of values
CountryCode	Enter member country code as ISO two digits, for example "IT" for Italy.	
Sub_Region	Sub-region according to Mediterranean Sea subdivision	
AreaID	Identification code of the survey area	
AreaName	Survey Area Name	
AreaExtension	Survey area extension (km2)	
Latitude	Latitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
Longitude	Longitude in the WGS84 decimal degrees reference system of centroid or reference point in sampling area with at least 5 digits (xx.xxxxx).	
AreaFile	Naming the GIS file that contains the polygon (s) of the survey area. In the attribute table of the GIS file, for each polygon (s) of the survey area, the survey area code in the AreaID field must be reported. The file must be returned in a georeferenced shapefile format (WGS84) and compressed in a single .zip file that includes .zip, .prj, .dbf, etc ... files. The filename must conform to the following Rule of composition: "ModuleTT1_GISfile_ <Sub-Region> _ <AreaName> _ <gg_mm_aaaa> .zip", eg. ModuleTT1_GISfile_Ionian_GulfofTaranto_05_2016.zip. If Region and / or AreaName contains spaces, replace these spaces with "_".	
DistributionMap	Naming the GIS file that contains the polygon (s) of the survey area including sighting of monitored species. In the attribute table of the GIS file, for each polygon (s) of the survey area, the survey area code in the AreaID field must be reported. The file must be returned in a georeferenced shapefile format (WGS84) and compressed in a single .zip file that includes .zip, .prj, .dbf, etc ... files. The filename must conform to the following Rule of composition: "ModuleTT1_GISfile_ <Sub-Region> _ <AreaName> _ Distribution_<gg_mm_aaaa> .zip", eg. ModuleTT1_GISfile_Ionian_GulfofTaranto_Distribution_05_2016.zip. If Region and / or AreaName contains spaces, replace these spaces with "_".	

Table 8: Data Standards (NavigationSheet) for IMAP Common Indicators 3&4 - *Tursiops truncatus*

Field	Description	List of values
AreaID	Identification code of the survey area	
Year	Sampling year in the format AAAA	
Month	Sampling month in the format 1-12	
Day	Sampling day in the format 1-31	
Time	Indicate time (in the format HH:MM:SS) for which it happens a changing in environmental conditions (sea state, cloud cover, general conditions), of the effort and/or route for every individuals sighting.	
SeaState	Refer to the Beaufort scale of the wind strength that has effect on the sea surface. Insert an entire number in the interval 0-12	
CloudCover	Estimation of cloud covering in octaves (0/8 = clouds absence; 8/8 = total covering)	

GeneralConditions	Subjective indication relative to how the observer feels the general conditions (poor, moderate or good) for the goal of the sighting. The effects of the sea state and the cloud covering together with other factors that could have an effect on the capacity of seeing the individuals (ship velocity, sun reflection on the sea) should be evaluated on the whole.	
Effort	It indicates the research activity (research effort), i.e. if during the navigation the observations have been made. The information occur for defining the frequencies (the number of times a phenomenon occurs in a time interval) of watching. Insert one of the List values	N = No Y = Yes
Sighting	Indicate if at least one sighting has been obtained. Insert one of the list values. In the case the value is 'N' leave empty the fields N_sighting, GroupDimension, N_adults, N_subadults .	N = No Y = Yes
N_sighting	Progressive number of the sighting	
GroupDimension	Indication of the total number of individuals present (for each sighting).	
N_adults	Indication of the number of adult individuals of the group (average dimensions of a tursiopes are comprised between 2 and 3 meters); distinction between adults and subadults is for confrontation among the dimensions of the individuals of the group.	
N_subadults	Indication of the number of individuals of dimensions smaller than those of the adult individuals of the group.	
Remarks	Every information considered useful to complete the indications on the sighting conditions or the sighting itself (i.e. behaviours, particular signs of the individuals, boundary conditions elements). In the case the text exceeds 255 characters, give indication of the report in which such informations are contained	

Table 9: Data Standards (PhotoIdentification) for IMAP Indicators 3&4 – *Tursiops truncatus*

Field	Description	List of values	Remarks
AreaID	Identification code of the survey area		
Year	Sampling year in the format AAAA		
Month	Sampling month in the format 1-12		
Day	Sampling day in the format 1-31		
Time	Indicate time (in the format HH:MM:SS) for which it happens a changing in environmental conditions (sea state, cloud cover, general conditions), of the effort and/or route for every individuals sighting.		
Sighting	Indicate if at least one sighting has been obtained. Enter one value of the list values. In the case the value is 'N' leave empty the fields N_sighting, GroupDimension, N_adults, N_subadults.	N = No Y = Yes	
N_Sighting	Number of sighting to which the photo sequence is referred. See the NavigationSheet.		

PhotoSequence	photo sequence (numeric interval relative to the photos i.e. 138-150) related to the sighted group.		It is also useful to separate different photo sequences introducing an empty photo between one sequence and the next (blank or an other element) .
CompositionGroup_N_tot	Total number of individuals for each sighting.		It is fundamental to define exactly the number of individuals in the group for the next valuation of the proportion between the photographed individuals and the total.
CompositionGroup_N_adults	Number of adults (the average dimensions of a Tursiops are between 2 e 3 meters)		the distinction between adults and subadults is made by comparison between individuals into the group
CompositionGroup_N_subadults	Number of subadults		
Remarks	Any further information on the photo sequence and/or the photographed individuals (indication on particular signs could be also eventually reported on the drawing of the dorsal fins). In the case the text exceeds 255 characters, give the indications of the report in which such information are contained.		