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REPORT OF THE WHALE WATCHING WORKING GROUP

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Presented by Marina Sequeira, Chair of the Whale Watching Working Group

Issue: activities carried out by the Whale Watching Working Group since SC13 Meeting

1. Action requested

The Scientific Committee is invited to:

a. **note** the progress made by the WWWG;
b. **advise** on future actions to be undertaken.

2. Background

The Whale Watching Working Group was reactivated after the 13th Meeting of the Scientific Committee to support the implementation of some activities foreseen in the 2020-2022 ACCOBAMS Program of Work.

This report was prepared by the Chair of the WWWG with contributions from some WWWG members, and presents the activities undertaken by the WWWG during 2020-2021.

REPORT OF THE WHALING WHATCHING WORKING GROUP (WWWG) ACTIVITIES: 2020-2021

Background information

A Working Group for the assessment, monitoring and data collection of cetacean watching activities in the ACCOBAMS area was established in 2014 during the ninth meeting of the Scientific Committee.[1]

Considering the Programme of Work for the triennium 2020-2022 adopted by the 7th MoP to ACCOBAMS (Resolution 7.6), in particular the activities planned regarding cetacean watching, the WWWG was reactivated. The terms of reference (ToR), adopted by the 13th meeting of the Scientific Committee are as follows:

- Support the update of the inventory of operators currently conducting whale watching activities in the ACCOBAMS area and identify experts within the ACCOBAMS Parties or active in the Agreement area who could provide valuable information on cetacean watching activities in the Area;
- Support the work of the expert that will be tasked to prepare a regional study on the hotspots of whale watching activities in the ACCOBAMS Area (advising on the methodology to be applied, gathering information on cetacean watching activities, identifying potential issues and formulating recommendations) – the report of the study will be presented at SC14;
- Coordinate the test of the proposed common procedure (data collection system developed in 2015) for whale watching vessels in pilot areas and a variety of operation types (e.g. the Liguro-Provençal Basin, Gibraltar Strait, and southern Portugal) and report back to SC14 in 2021;
- Revise the Guidelines for commercial cetacean-watching in the ACCOBAMS Area, in view of their presentation at SC14 in 2021.

Methodology

1) Testing the data collection form

During the period 2020-2021 the WWWG worked on-line and identified some discrepancies between the objective of the 2020-2022 Program of Work related to whale watching and the planned activities listed on the ToR and thus decided to revise the table CA2d extracted from the ACCOBAMS program of work (see Annex 1). The modifications introduced concern the activities aimed at testing the data collection system and at assessing the impacts of whale watching activities in the ACCOBAMS area (identification of hotspots and review of the guidelines to include impact assessment).

The WWWG also discussed and updated the proposal for data collection from commercial whale watching vessels that was submitted to the ScC in 2014 (Annex 4 of Resolution 6.20) as well as the list of species that was reviewed according to the geographical area considered. (see Annex 2 - Table 1).

Unfortunately and with the exception of a small number of French and Italian companies, the COVID-19 pandemic did not allow for the data collection form to be tested across a wider area as planned.

In France, three companies certified “High Quality Whale-Watching®”, were asked to test the data collection form during the 2020 whale-watching season.

[1] WWWG membership: Marina Sequeira (Chair), Léa David, Costanza Favili, Caterina Fortuna, Pauline Gauffier, Tilen Genov, Hélène Labach, Aurélie Moulins

In order to facilitate the handling of the forms by the whale-watching companies, both the data collection and the metadata forms were formatted and translated into French by MIRACETI NGO. A total of 4 documents complete and ready to print were sent to the companies in pdf format. Two companies have finally tested the form during whale-watching trips (Table1).

Table 1. Synthesis of feedback on the test of the data collection system from the French companies

Operator	Location	Month	Number of recorded sightings	Format of completed forms	Boat based whale-watching trip information (by sighting)	Sighting information
1	Alpes Maritimes (06)	Sept.	10	pdf	Fully completed	Fully completed
2	Var (83)	Aug.	3	pdf	Partially completed	Fully completed

In Italy, a first test was conducted in 2020 with one of the main companies certified with "High Quality Whale-Watching®" (totalizing more than 30 surveys / year, in a pre-Covid year). The data collection was performed using *IlogWhales* app (in a test version, see ACCOBAMS-SC14/2021/Inf16 for details) developed within the framework of EcoSTRIM project (funded by the Interreg Italy-France Maritime 2014-2020) and based on the "Proposed guidelines for data collection protocol and data sheet for whale watching vessels" (Annex 4 of Res 6.20.). After a training session the company staff was able to start collecting data which was regularly extracted from the smartphones and sent by email. A total of 33 trips were monitored (from mid-July to the end of October): 10 from Loano and 23 from Genoa. The track was recorded regularly by the app from the departure to the arrival (at least every minute). A total of 133 cetacean sightings were collected, plus 111 sightings of associated species (including *C. caretta, M. mola, M. mobular* and many marine bird species).

Table 2. Synthesis of feedback on the test of the data collection system from the Italian company (2020)

Species	Nr of sightings	Nr of individuals
Stenella coeruleoalba	83	1252
Ziphius cavirostris	18	39
Physeter macrocephalus	14	26
Balaenoptera physalus	8	16
Tursiops truncatus	6	50
Grampus griseus	2	5
Megaptera novaeangliae	1	2

In May 2021, another company also certified with "High Quality Whale-Watching®" (totalizing more than 100 surveys / year, in a pre-Covid year) was contacted as well as the one that collected data in 2020. Due to COVID-19 restrictions, it was not possible to present the updated protocol and train the new company to use the app. As a consequence, in 2021 only one company collected data using the same app version used in 2020. A total of 45 trips were monitored from June to October: 10 from

Loano and 35 from Genoa. A total of 117 cetacean sightings were collected, plus 303 sightings of associated species (including *C. caretta, M. mola, M. mobular* and many marine bird species).

Table 3. Synthesis of feedback on the test of the data collection system from the Italian company (2021)

Species	**Nr of sightings**	**Nr of individuals**
Stenella coeruleoalba	85	1840
Ziphius cavirostris	24	60
Physeter macrocephalus	2	2
Balaenoptera physalus	2	2
Delphinus delphis	1	2
Grampus griseus	1	3
Not identified	2	-

The *IlogWhales* app will be updated in order to be in line with the new version of the form that was updated by the WWWG in May 2021.

Conclusions:

The tests run in Italy showed that trained and dedicated crew members can be a good choice for regular data collection by the whale watching companies. The quality of the track was excellent and globally the percentage of success is very good. Recorded data included geographical coordinates, species, total number of individuals and comments. Weather data, effort and staff were collected for almost all trips. Additional data (behavior and photo-id) were rarely recorded. Information about other vessels was never collected.

Recommendations:

Following the tests in France and Italy, the WWWG will:

- Review the format and the presentation of the form - paper is not the most suitable format for collecting data during whale-watching trips. Having the form in a digital format (dedicated program, app) would very much facilitate the collection of data at sea. MIRACETI NGO plans to develop a whale-watching data collection application for the French HQWW operators
- Translate the form into different languages to allow a wider implementation of the test.
- Work in order for a larger number of whale watching companies to be contacted in 2022 in order to fully test the data collection form in all the previous selected areas (Liguro-Provençal Basin, Gibraltar Strait, and southern Portugal).

2) <u>Cooperation with the Consultant</u>

Based on the revision of the PoW, the WWWG with the support of the Secretariat prepared the Terms of Reference for the Consultant (Gianna Minton) to be recruited to support some of the activities identified in the ToR of the WWWG listed above. According to the ToR the Consultant shall work in close cooperation with the WWWG and is expected to conduct:

- a study aimed at identifying hotspots of WW activities in the ACCOBAMS area. This study could be based on questionnaires circulated to ACCOBAMS Focal Points, experts, partners organizations and selected whale watching operators;
- a full revision of the *Guidelines for monitoring programs aimed at maximizing the chance of detecting potential adverse impacts of whale watching activities on individual cetaceans and on populations*. This revision will include possible changes to the title, body of the text and, more importantly the preparation of a technical annex on how impact studies are conducted, including a list of indicators that can be used.

The Consultant is expected to provide the ACCOBAMS Secretariat with the following documents:

- A proposal for the study aimed at identifying hotspots of whale watching activities in the ACCOBAMS Area (a two-pages document describing the methodology to be used)
- Questionnaire templates to be shared with Focal Points, experts, partners organizations and whale watching operators (draft and final templates) – *if the questionnaire approach is used* – or any other document supporting the methodology proposed by the Consultant
- A report on the hotspots of whale watching activities in the ACCOBAMS Area compiling/analysing the information collected, including conclusions and recommendations (draft and final)
- A fully revised version of the "*Guidelines for monitoring programs aimed at maximizing the chance of detecting potential adverse impacts of whale watching activities on individual cetaceans and on populations"* (draft and final).

The WWWG reviewed the methodology and the questionnaire prepared by Gianna Minton and based on this review it was decided to have a 2-step approach: 1) elaboration of a country-level questionnaire to assess the rough number of WW operators, the locations from which WW takes place, and what kinds of guidelines or regulations are in place for WW in each country; and 2) a detailed questionnaire that allows a more detailed assessment of the level of pressure from whale watching vessels on cetacean populations in each region.

ANNEX I – Revised work program- Cetacean watching

CA 2 d	Cetacean watching

Expected outcomes	Cetacean watching activities are properly conducted in the ACCOBAMS Area

Proposed Action(s)	Priority	**Action lead by** and in cooperation with	Means of implementation	Expected from the SC by SC14	SC Member in charge
Status of WW activities in the ACCOBAMS area	High	**Scientific Committee through the WWWG** Secretariat, **Parties** Non-Party Range States, Partners, SRCUs	• Gathering information on cetacean watching activities and identifying potential issues in order to identify the hotspots of WW activities in the ACCOBAMS area • Revising the Guidelines for commercial cetacean-watching in the ACCOBAMS Area (in accordance, if relevant, with the guidance document to be prepared on the development of ecotourism activities as an alternative income to fishermen)	1. Progress report of the WWWG to be presented at SC14 2. Study on the identification of WW activities in the ACCOBAMS Area to be presented at SC14 3. Updated Guidelines for commercial cetacean-watching in the ACCOBAMS Area for SC14	1. WWWG Chair 2. Secretariat and consultant under the supervision of the WWWG 3. WWWG
WW operators as platforms of opportunity			• Testing the proposed common procedure for whale watching vessels in pilot areas and a variety of operation types (e.g. the Liguro-Provençal Basin, Gibraltar Strait, and south Portugal), in collaboration with relevant projects such as EcoStrim: data collection system from platforms of opportunity, as per Annex 4 in Resolution 6.20.	• Results of the test of the common procedure to be presented at SC14	• Selected members of WWWG in focusing on specific areas
Maximize the chance of detecting potential adverse impacts of whale watching activities on individual cetaceans and on populations			• Revising the Guidelines for monitoring programs aimed at maximizing the chance of detecting potential adverse impacts of whale watching activities on individual cetaceans and on populations (Annex 3 of Resolution 6.20), working in close cooperation with IWC and other relevant International Organizations	• Present the updated Guidelines on monitoring programs aimed at maximizing the chance of detecting potential adverse impacts of whale watching activities on individual cetaceans and on populations, including technical annexes on how conduct impact studies.	• Consultant under WWWG supervision
Support the implementation of the HQWW certificate in the ACCOBAMS area	High	**Parties** **Partners** **Secretariat**, Non-Party Range States, Scientific Committee SRCUs	• Promoting the implementation of the HQWW certificate by Parties and in areas -based management measures in collaboration with relevant projects such as EcoStrim • Organizing Trainings on HQWW (CB Parties) • Liaising with relevant tourism Organisations	• Contribute promoting the implementation of the HQWW certificate	• All SC members

ANNEX 2 - COMMON PROCEDURE (DATA COLLECTION SYSTEM) FOR WHALE WATCHING VESSELS TO BE IMPLEMENTED IN THE ACCOBAMS AREA

Annex 4 of Resolution 6.20 amended in 2020 under the coordination of the ACCOBAMS Whale Watching Working Group. Endorsed by the ACCOBAMS Scientific Committee in 2020.

Introduction

In 2014, the sub-committee on whale watching of the IWC scientific committee discussed a proposal for data collection from commercial whale watching vessels (Vinding *et al.* 2014). A series of guiding principles for data collection from platforms of opportunity were proposed, which would help ensuring a higher standard of data collection from whale watching vessels. This work has been used as a basis for the ACCOBAMS Whale Watching Group to draft a proposed ACCOBAMS data collection system to be implemented by whale watching operators. It is important to highlight that data collected by non-scientists may have serious limits and it does not guarantee robustness of results. Data collected from whale watching should be taken with caution when analysed as they are subject to several types of bias. For example:

1. The purpose of whale watching vessels is to find cetaceans and focus on fulfilling the clients' expectations to encounter these animals. Collecting systematic scientific data is not their primary purpose. The behaviour of whale watching vessels influences the search effort, which is often restricted to localised high abundance areas, sometimes seasonally dependent and species specific. Therefore, in order to correct for the spatial and seasonal effort of the whale watching vessels, it is crucial that spatial and sighting effort data are collected as well.

2. Because guides and skippers have to perform many tasks on board, data recording and photographs for species recognition or photo-identification are often their lowest priority. Therefore, the lack of systematic data collection procedure leads to potential low quality of acquired data. The use of qualified guides has great potential for improving collection of valuable but relatively inexpensive data, particularly in areas where funding is scarce.

3. The whale watching vessels will only spend time with a limited number of animals and not always approach and identify all individuals and groups in the area. There may also be a tendency to approach calm and easily approachable animals, which will lead to non-representative sampling.

However, especially in data deficient areas and in developing countries, whale watching vessels constitute a precious resource for collection of data on cetaceans.

Despite it being compulsory in many countries for whale watching vessels to register and report information to a central authority on the activity of vessels, observations and opportunistic sightings, such information is not collected according to international agreed standards and it may be difficult to assess the significance of all potential biases. In order to enable the collection of minimum reliable standardised of scientific data, the ACCOBAMS Whale Watching Group have been developing a basic data collection protocol and data sheets, ideally applicable in the whole ACCOBAMS area.

Operators that receive the High Quality Whale Watching certificate fully commit to the use of these guidelines.

Guidelines for data collection protocol and data sheet for whale watching vessels

From a research point of view, the data collected must be valid and consistent to be useful. Since the focus of whale watching vessels is on the passengers and not always on the data, it is important to simplify the data sheets as well as prioritize the required information.

Table 1 presents a proposal for a basic data collection sheet. Mandatory information is indicated in bold and above with *.

Content of the data sheet

The data sheet should, at a minimum, include the following parameters (see Table 1):

- Trip information (with or without sightings):
    - **Operator***
    - **Date***
    - *Trip number*
    - **Vessel name***
    - **Vessel type***
    - **Data collector***
    - *Contact of the data collector*
    - *Vessel capacity*
    - **Departure time and harbour (last harbour)***
    - **Return time and harbour (first harbour)***
    - **Wind***
    - **Were cetaceans sighted on this trip?***
    - **Did you record the GPS track on this trip?***
- Sighting information:
    - **Starting time of encounter***
    - **GPS coordinates: Latitude and Longitude***
    - **Species*** *(list of options to be adapted regionally)*

- **Estimated Nr of animals***
- **Presence of calves***
- *Initial main behaviour*
- *Particular surface behaviour*
- **Number of boats around (500 m)***
- **Boat approach***
- **Interactions***
- **Ending time***
- **Photo***
- *Comments*

Data sheet annotations

The protocol explains why the different data parameters are included in the data sheet.

Trip information (with or without sightings)

- **Operator***

  Mandatory field.

- **Date***

  Mandatory field.

- *Trip number*

  Voluntary field.

  Some operators have more than one trip per day and trips must have consecutive numbers reflecting the date and time they were conducted. For analytical purposes, it is important to distinguish different trips from each other. Therefore, each trip needs to have an ID-number. For example, IDs can be created by simple numbers from the first to the last trip of a year (0-999) or use YEAR_MONTH_DAY_TIME (e.g. 2020_07_01_1200).

- **Vessel name***

  Mandatory field.

- **Vessel type*** *(select among: sailing boat / semi rigid motor boat / motor vessel / other)*

  Mandatory field.

  This information is useful to obtain an indirect indication of the range of distance that can be covered, the transit speed of the vessel and the passenger capacity.

- **Data collector*** *(select among: skipper, guide, researcher, dedicated observer, other – multiple choice possible)*

  Mandatory field.

  Since guides and skippers have to perform many tasks on board, the quality of data collected by people with different roles and backgrounds is different. Therefore, sheets need to specify the role of the data collector. Selection list includes.

- *Contact of the data collector (name of the person responsible for data collection)*

  Voluntary field.

  This information would give the opportunity to the person in charge of the data quality control, data analysis or the ACCOBAMS data handler to have a feedback about navigation of a particular trip when necessary. However, the company can decide to hide this field according to its privacy policy.

- *Vessel capacity (select among: 12< / 13-25 / >25)*

Voluntary field.

This information is fundamental to estimate a rough global economic return of the whale watching activity in the ACCOBAMS area.

- **Departure time and harbour (last harbour) * / Return time and harbour (first harbour) ***

Four mandatory fields.

The total time spent at sea is a useful information to calculate sighting effort. For tours gathering tourists over multiple harbours, this should be the departure time from the last harbour where the last group of tourists embarked the tour and the arrival time to the first harbour where the first group of tourists disembarked.

- **Wind*** (Select among: always < 3B / most of time < 3B / most of time >= 3B)

Mandatory field.

Sighting probability is reduced as weather becomes increasingly rough. To be able to adjust for this in data analysis, it is important for weather conditions to be noted.

- **Were cetaceans sighted on this trip?*** (yes/no)

Mandatory field.

- **Did you record the GPS track on this trip?*** (yes/no)

Mandatory field.

It is crucial to be able to account for the effort spend at sea searching for cetaceans. Time and spatial effort is important reference data when calculating the spatial distribution of a species. The optimal way to determine effort is to collect GPS tracks on real-time with a GPS recorder, which will give precise data of the actual route. It is of crucial importance to collect this information on search effort for all trips, including those where cetaceans were not sighted.

Sighting information

- **Starting time of encounter***

Mandatory field.

It corresponds to the first time the animals are sighted (to be filled for each sighting).

- **Coordinates: Latitude and Longitude***

Mandatory fields.

It is crucial to obtain location positions of the animals sighted when the vessel is close to them. It helps to determine preferred habitat. Precise coordinates are fundamental and it's important to indicate correctly the unit system used: Degree Minute Second: DD°MM'SS"" or decimal degrees DD.DDD.

- **Species***

  Mandatory field.

  Simple codes should be used for relevant species (Table 1 to be adapted for each region). When a species absent from the list is seen, the information should be noted in the Comment field.

- **Estimated number of animals***

  Mandatory field.

  It corresponds to the estimated total number of animals (including young and calves) seen with naked eyes during the encounter.

- **Presence of calves (yes/no)***

  Mandatory field.

  Calves correspond to very young animals less than half the size of adults and always closely associated with an adult.

- *Initial main behaviour (list of options)*

  Voluntary field.

  It corresponds to the behaviour of the group of animals sighted at the start of the sighting. To enable an efficient and consistent analysis of behavioural data, the data sheet should show check boxes with 4 main behavioural categories (i.e. travelling, resting/logging, socializing and feeding – cf Table 2). Further details can be added in the comment box.

- *Particular surface behaviour (list of options)*

  Voluntary field.

  It corresponds to specific behaviour of the animals during the encounter (possible multiple choice – cf Table 2).

- **Number of boats around animals (500 m)***

  Mandatory field.

  This field indicates how many boats of different type (not only WW boats) can be considered within a "zone of interaction" with cetaceans. It should give an indication of the potential pressure made by human activity.

- **Boat approach* (yes/no)**

  Mandatory field.

  Did the boat approach the animal(s) to sight them?

- **Animal reaction* (list of options)**

  Mandatory field.

  Animal reaction to the boat presence and/or approach, i.e animal approaches (the boat) / animal avoids / animal has no reaction

- **Ending time***

Mandatory field.

Record the time of the end of the sighting, when the boat moves away from the animal(s) or when the animal(s) move(s) away from the boat or disappear and are not followed by the boat.

- **Photo* (yes/no)**

Mandatory field.

In order to be useful, photographic material should be catalogued the same day. Photos of different sightings should be separated by "blanks" (i.e. photo portraying anything but cetaceans or water). Moreover, setting date and time stamps on the camera is crucial, in order to easily match photographs with correct sightings. If available, geotagging photos can also be a great help during later analysis.

- *Comments*

Voluntary field.

Comments should be minimised. Subjective comments can be very difficult to categorise and analyse.

If using paper sheet, the data sheet must be filled in at sea (*in situ*) and should ideally be digitalized the same day by the observer (jpeg or pdf format). All collected data (photographs, GPS tracks, app exports, data sheets filled,…) should be sorted by day in the same folder.

Relevant bibliography

Vinding, K.; Christiansen, M.; Rose, N. 2014 – Data collection from commercial whale watching vessels: the need for international guidelines and systematic quality control. Paper presented at the IWC 2014 sub-committee meeting on Whale Watching (SC/65b/WW07): 6 pp

Table 1 – Proposed WW data sheet

Boat Based Whale Watching Trip Information																						
Operator*:			*Vessel capacity:*	Select among 12< / 13-25 / >25																		
Date*:																						
Trip number:			**Departure time and harbour (last harbour)***	Time	Harbour																	
Vessel name*:			**Return time and harbour (first harbour)***	Time	Harbour																	
Vessel type*:	Select among Sailing boat / Semi-rigid motor boat / Motor vessel / Other																					
			Wind* (circle one):	always <3B	most of time < 3B		most of time >= 3B															
Data collector*:	Select among Skipper / Guide / Researcher / Dedicated observer / Other – multiple choice possible																					
Contact of the data collector																						
Were cetaceans sighted on this trip?*			YES/NO																			
Did you record the GPS track on this trip?*			YES/NO																			

SIGHTINGS																						
Starting time of encounter*	**GPS Coord**		**Species***	**Estimated Nr of animals***	**Presence of calves (Y/N)***	*Initial main behavior (T, R, S, F)*	*Particular surface behaviour (SPY / BOW / BR / PS / TS)*	**Nr boats around (500 m)***	**Approach**		**Ending time***	**Photos (Y/N)***	**Comments**								
	LAT*	**LONG***							**Boat approach (Y/N)***	**Interactions* (animal approachs / animal avoids / animal has no reaction)**												

Table 2 – List of Species

Most common species according to the region		
Common names	**Scientific name**	**Code**
(in national languages)	*Balaenoptera acutorostrata*	BAC
	Balaenoptera physalus	BPH
	Delphinus delphis	DDE
	Globicephala melas	GME
	Grampus griseus	GGR
	Orcinus orca	OOR
	Phocoena phocoena	PPH
	Physeter macrocephalus	PMA
	Stenella coeruleoalba	SCO
	Steno bredanensis	SBR
	Tursiops truncatus	TTR
	Ziphius cavirostris	ZCV

Small-size unidentifed dolphin	SNI
Medium-size unidentified species	MNI
Large unidentified species	LNI
Unidentified Ziphiidae	ZNI

Table 3 - Other potential species

Common names	Scientific name	Code
(in national languages)	Balaenoptera borealis	BBO
	Balaenoptera musculus	BMU
	Eubalaena glacialis	EGL
	Globicephala macrorhynchus	GMA
	Kogia breviceps	KBR
	Kogia simus	KSI
	Megaptera novaeangliae	MNO
	Mesoplodon bidens	MBI
	Mesoplodon densirostris	MDE
	Mesoplodon europaeus	MEU
	Mesoplodon mirus	MMI

Table 4 – Behavioural categories

Behaviour	Description	Code
Travelling	Swimming in one direction for an extended period of time. Moving faster than idle speed of the vessel.	**T**
Resting / Logging	Motionless in the same spot (except when breathing). When moving, the speed is lower than the idle speed of the vessel.	**R**
Socializing	Diverse interactive behaviour (e.g. body contact, flipper caressing, tail swipes, genital inspections). Diving intervals may vary.	**S**
Feeding	In some baleen whales feeding may occur at the surface (mouth open, baleen rattle). In other cetacean species feeding is indicated by long-term group synchronous diving. Arched backs may indicate deep dives.	**F**

Surface actions	Description	Code
Spyhopping	Spy hopping behaviour consist of the cetacean holding itself vertically in the water and kicking with its tail fluke in order to hold its head above the water line.	**SPY**
Bowriding	Bow-riding consists of dolphins, porpoises, and other smaller toothed whales positioning themselves in such a manner as to be lifted up and pushed forward by the circulating water generated to form a bow pressure wave of an advancing vessel.	**BOW**
Breaching	Action of jumping high out of the water and then slapping the water when coming back down.	**BR**
Pectoral slapping	Action of repeatedly raising a pectoral fin into the air and slamming it back to the surface with a loud splash.	**PS**
Tail slapping	Also known as “lobtailing” is the act of a whale or dolphin lifting its tail flukes out of the water and forcefully slapping them onto the surface of the water, often repetitively, resulting in a loud slap.	**TS**