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MARINE MAMMAL DATA COLLECTION PROTOCOL



FOR THE MARITIME INDUSTRY

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This project is produced by:



The maritime industry data collection program was developed in collaboration with



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**Fisheries and Oceans
Canada**

**Pêches et Océans
Canada**



1. INTRODUCTION

By becoming a collector and reporting sightings of marine mammals, your company contributes to the protection of ecosystems and the conservation of marine resources. To help the recovery of certain species of marine mammals and promote their conservation, it is necessary to know their distribution

and to take into consideration certain essential variables: the time of year, weather conditions and changes in the environment. As maritime carriers sail year-round, they can collect whale sightings on a regular basis be used by both the scientific community and resource managers.



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2. OBJECTIVES

Maritime carriers navigate in all seasons and all places, which offers the possibility of gathering data in remote or poorly monitored regions such as the Arctic, Newfoundland and Labrador, the Cabot Strait and the northern Gulf of St. Lawrence. These data, particularly those collected outside the summer season, between October 1 and April 30, can provide a better understanding of the distribution and abundance of marine mammals.

The data collected helps to supplement existing databases used in informing efficient conservation measures. They are also used to develop certain educational materials or to support more research efforts when species are sighted several times in unusual locations.

3. METHODOLOGY

1

Complete a training in whale identification is essential before you start collecting data.

2

Collect data when the observation conditions are good and does not compromise the safety of navigation. Your reporting of marine mammals should be done systematically and rigorously each time a whale is sighted.

3

Complete the observation chart according to the protocol. We encourage you to use an electronic format directly on your computer or by using the online application available here observation.navigatingwhales.ca. If using paper, write neatly, legibly, and dark enough.

4

Send the data at least once a month by e-mail to the responsible person within your company or to info@romm.ca for international mariners.

5

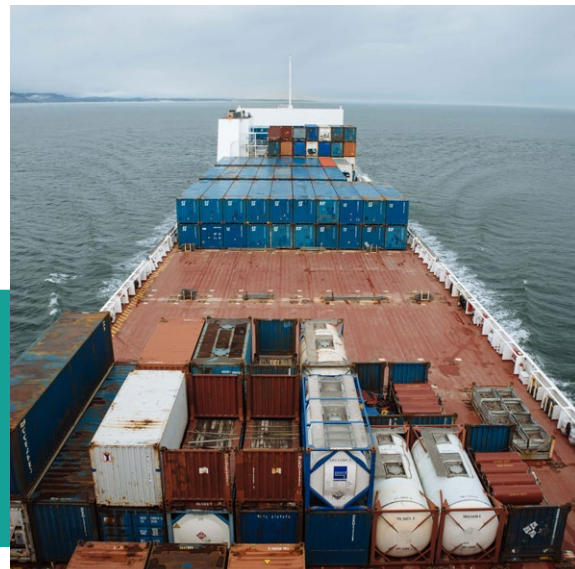
Keep the completed observation charts in a safe place, sheltered from the elements. Lost or damaged data is unrecoverable.

6

Send your questions or comments for improving the protocol or the program to MMON at info@romm.ca.

7

Promptly report any sightings of any dead, seriously injured or in distress marine mammals or any exceptional sightings such as the presence of North Atlantic right whales or leatherback sea turtles to the appropriate network for the region (see contact details in Annex 4).



4. HOW TO COMPLETE THE OBSERVATION CHART

For each species observed, the following data must be entered in the observation chart:

DAY

(DD/MM/YYYY)

TIME OF SIGHTING

(HH:MM)

WIND

The wind speed makes it possible to assess the height of the waves and improve the validity of the data collected. Use the Beaufort scale:

Code	Descriptif	Speed in km/h	Speed in knots	Ocean observations
0	Calm	Less than 1	Less than 1	Sea surface like a mirror, but not necessarily flat.
1	Light air	1 - 5	1 - 3	Ripples with the appearance of scales are formed, but without foam crests.
2	Light breeze	6 - 11	4 - 6	Small wavelets, still short but more pronounced. Crests do not break. When visibility good, horizon line always very clear.
3	Gentle breeze	12 - 19	7 - 10	Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered whitecaps.
4	Moderate breeze	20 - 28	11 - 16	Small waves, becoming longer. Fairly frequent whitecaps.
5	Fresh breeze	29 - 38	17 - 21	Moderate waves, taking a more pronounced long form. Many whitecaps are formed. Chance of some spray.
6	Strong breeze	39 - 49	22 - 27	Large waves begin to form. White foam crests are more extensive everywhere. Probably some spray.
7	Near gale	50 - 61	28 - 33	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.
8	Gale	62 - 74	34 - 40	Moderately high waves of greater length. Edges of crests begin to break into the spindrift. The foam is blown in well-marked streaks along the direction of the wind.
9	Strong gale	75 - 88	41 - 47	High waves. Dense streaks of foam along the direction of the wind. Wave crests begin to topple, tumble and roll over. Spray may affect visibility.
10	Storm	89 - 102	48 - 55	Very high waves with long overhanging crests. Dense white streaks of foam. Sea surface takes on a white appearance. Tumbling of the sea becomes heavy and shock-like. Visibility affected.
11	Violent storm	103 - 117	56 - 63	Exceptionally high waves. Sea completely covered with long white patches of foam. Visibility affected.
12	Hurricane	118 - 133	64 - 71	Air filled with foam and spray. Sea entirely white with foam. Visibility seriously impaired.

VISIBILITY

1	Very low	< 100 meters
2	Limited	100 metres – 2 nautical miles
3	Good	> 2 nautical miles

SPECIES

Write the full name of the species observed or its **corresponding code** (see the abbreviation of scientific names provided in Appendix).

If you recognize that it is a whale or dolphin but cannot identify the specific species, write "**whale sp.**" or "**dolphin sp.**". Indicate "**cetacean sp.**" if you have observed a cetacean without being able to identify the genus or species and add a photo when sending the data chart. If you cannot take a photo, write down as many details as possible (color, breath, particular behavior, etc.) in the remarks section.

CERTAINTY

This information is essential to give a level of certainty to the data collected.

- 1** = Absolute certainty (must be 100% sure, without any possible doubt regarding the species).
- 2** = Uncertainty. If you have any doubt whatsoever regarding the identification of the observed species, you must enter "2".

NUMBER OF ANIMALS OBSERVED

Indicate the number of animals observed. Make a rough estimate if there are too many to count individually.



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GPS POSITIONING

Indicate the GPS coordinates of **your vessel**.

LOCATION

Whenever it is possible, include information about the location such as specific landmarks (e.g.: an island or buoy).

DISTANCE

Estimate the distance between the animal and your vessel.

- 1 < 100 meters
- 2 100 - 200 meters
- 3 200 - 400 meters
- 4 400 - 1 000 meters
- 5 > 1 000 meters (0.5 nautical mile)

POSITION

Position of the animal in relation to the boat.

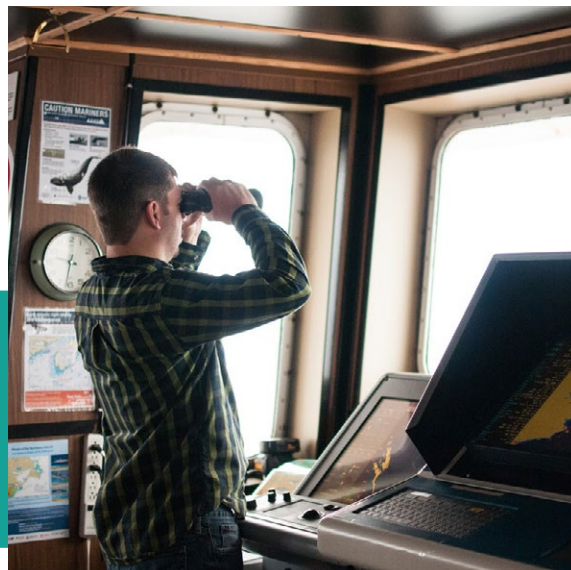
- 1 Straight ahead
- 2 Port (left)
- 3 Starboard (right)

COMMENTS

In this section, record any information you deem relevant such as a description of the behaviour (e.g. breaching), the presence of juveniles or visible marks, the direction where the whale was travelling to, or the presence of feeding birds in the area where the whale was seen.

OBSERVER

Indicate the full name or initials of the person who made the observation.

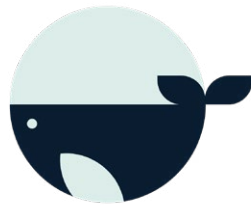


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5. TOOLS AVAILABLE

The website “**Navigating Whale Habitat**” provides information and training to assist in marine mammals data collection those navigating the waters of the Canadian east coast, including the Estuary and Gulf of St. Lawrence.

Visit www.navigationbaleines.ca/en/home to have access to all the tools for the maritime industry by visiting the "shipowners" portal.

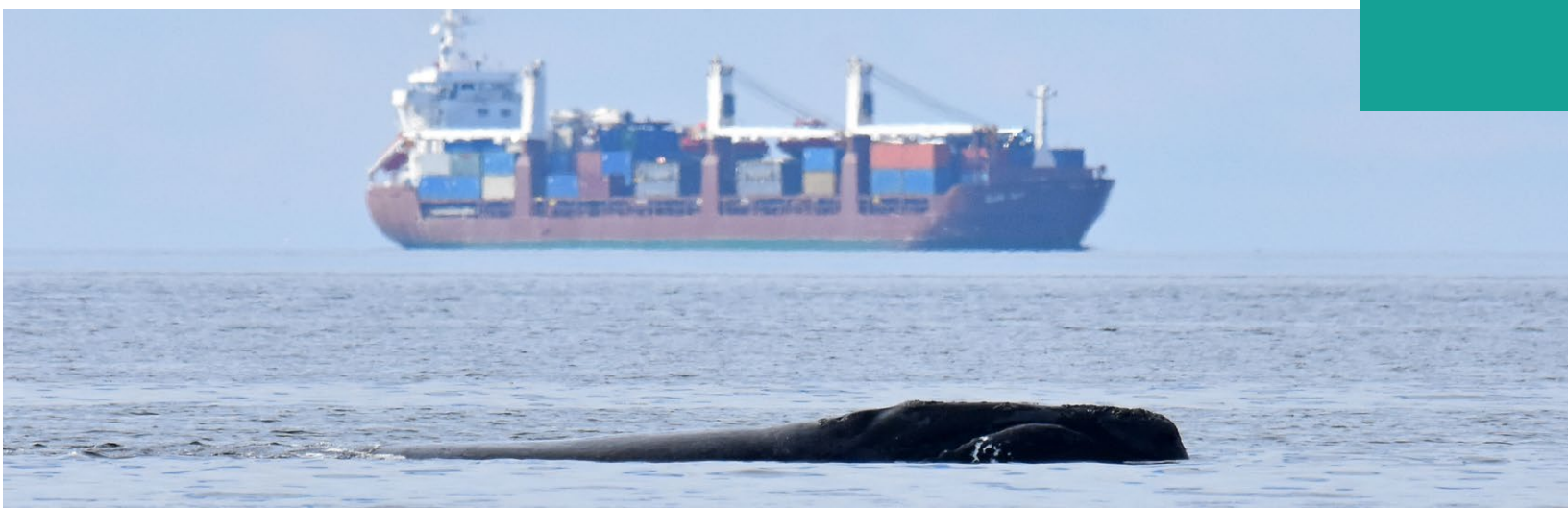


Navigating Whale Habitat

■ **Complete the training online** which will allow you to identify better the different species of whales and learn about the data collection protocol. Contact MMON at info@romm.ca to obtain the version compatible with your existing onboard training system. To access the training online, visit observers.navigatingwhales.ca.

■ **Enter your sighting records online** using the data entry tool available at: observation.navigatingwhales.ca

■ **Consult the Mariner's Guide to Whales in the Northwest Atlantic** to learn best practices to reduce ship strikes and consult species maps showing areas where more vigilance is desirable. It can be downloaded at: <https://www.navigationbaleines.ca/en/mariners-guide/>



APPENDIX 1 • LIST OF WHALE SPECIES

Name	Code	Protection status
BALEEN WHALES		
Blue whale <i>Balaenoptera musculus</i>	BM	Endangered
Fin whale <i>Balaenoptera physalus</i>	BP	Special concern
Humpback whale <i>Megaptera novaeangliae</i>	MN	Not at risk
Sei whale <i>Balaenoptera borealis</i>	BB	Endangered
Minke whale <i>Balaenoptera acutorostrata</i>	BA	Not at risk
North Atlantic right whale <i>Eubalaena glacialis</i>	EG	Endangered
Bowhead whale <i>Balaena mysticetus</i>	BMV	Special concern
TOOTH WHALES		
Sperm whale <i>Physeter macrocephalus</i>	PM	Not at risk
Orca <i>Orcinus orca</i>	OO	Special concern
Beluga whale <i>Delphinapterus leucas</i>	DL	Endangered
Harbour porpoise <i>Phocoena phocoena</i>	PP	Special concern
Long-finned pilot whale <i>Globicephala melaena</i>	GM	Not at risk
Northern bottlenose whale <i>Hyperoodon ampullatus</i>	HA	Endangered
Narwhal <i>Monodon monoceros</i>	MM	Special concern
White-sided dolphin <i>Lagenorhynchus acutus</i>	LA	Not at risk
Dauphin à nez blanc <i>Lagenorhynchus albirostris</i>	LAL	Not at risk
Short-beaked common dolphin <i>Delphinus delphis</i>	DD	Not at risk
Dolphin sp.	DSP	-
Whale sp.	RSP	-
Cetacean sp.	CSP	-

APPENDIX 2 • LIST OF SEAL SPECIES

Name	Code	Protection status
Grey seal <i>Halichoerus grypus</i>	HG	Not at risk
Harbour seal <i>Phoca vitulina</i>	PV	Not at risk
Harp seal <i>Pagophilus groenlandicus</i>	PG	Not at risk
Hooded seal <i>Cystophora cristata</i>	CC	Not at risk
Bearded seal <i>Erignathus barbatus</i>	EB	Not at risk
Ringed seal <i>Pusa hispida</i>	PH	Not at risk
Seal sp.	PSP	-

APPENDIX 3 • LIST OF OTHER SPECIES OF INTEREST

Name	Code	Protection status
Polar bear <i>Thalarctos maritimus</i>	TM	Special concern
Atlantic walrus <i>Odobenus rosmarus</i>	OR	Special concern
Leatherback turtle <i>Dermochelys coriacea</i>	DECO	Endangered
Basking shark <i>Cetorhinus maximus</i>	CM	Not at risk
Ocean sunfish <i>Mola mola</i>	MOLA	Not at risk
Atlantic bluefin tuna <i>Thunnus thynnus</i>	TT	Endangered

APPENDIX 4 • EMERGENCY NETWORKS AND REPORTING NUMBERS

TO REPORT A DEAD, SERIOUSLY INJURED OR IN DISTRESS MARINE MAMMAL

QUEBEC: QUEBEC MARINE MAMMAL EMERGENCY RESPONSE NETWORK

1-877-722-5346

NEWFOUNDLAND AND LABRADOR: Whale Release and Strandings

1-888-895-3003

NOVA SCOTIA, NEW BRUNSWICK, PRINCE EDWARD ISLAND:

Marine Animal Response Society

1-866-567-6277 ou VHF 16

TO REPORT AN EXCEPTIONAL OBSERVATION

QUEBEC: Quebec marine mammal emergency response network

1-877-722-5346

NEWFOUNDLAND AND LABRADOR:

Marine mammals: whalesighting@dfo-mpo.gc.ca

NOVA SCOTIA, NEW BRUNSWICK, PRINCE EDWARD ISLAND:

Marine mammals: 1-844-800-8568

XMARWhaleSightings@dfo-mpo.gc.ca

CANADIAN SEA TURTLE NETWORK :

Leatherback turtles: 1-888-729-4667

info@seaturtle.ca

Observation Chart

Year : _____ Month _____ Vessel : _____

Day	Time hh:mm	Wind	Visibility	Species	Cert.		# ind.	Ship GPS	Location	Distance animal vs ship	Position animal vs ship	Comments	Obser.
					1	2							