

INFORMATION ABOUT THE PROJECT

Preserving our marine mammals

The St. Lawrence Estuary is internationally recognized as a critical area for many marine mammal species that live within it year-round or visit it on a seasonal basis. Each year, many whales, including large fin whales, migrate there to feed and build up energy reserves in preparation for the breeding season. The Estuary is also a critical habitat for the beluga whale and harbour seal, both of which live there year-round. The marine mammals that live in the Estuary are faced with a multitude of threats resulting from the high level of human activity in the area. Several of these species are on the Canadian species at risk list. This marine protected area (MPA) project represents an important initiative aimed to improve the protection of marine mammals of this area, in particular by supporting the new Canadian Species at Risk Act (SARA) and by complementing the Saguenay–St. Lawrence Marine Park.

The St. Lawrence Estuary site was selected in 1998 to establish an MPA to protect and preserve marine mammals. A scientific workshop gathered experts to identify and evaluate the threats posed to marine mammals. Working groups comprised of officials from federal departments, scientists from the Canadian and provincial governments and non-governmental organisations worked to develop management measures to counter these threats.

Fisheries and Oceans Canada (DFO) Responsibilities

DFO has significant national and international responsibilities with regards to the marine environment, its living resources and their use, including the protection and conservation of marine mammals.

What is the *Oceans Act*?

The *Oceans Act* came into effect in 1997. It provides tools to develop a new approach to the integrated management of oceans based on partnerships, prevention and sustainable development. One of these tools is the creation of marine protected areas, or MPAs. MPAs are established by regulations under this law.

What is a Marine Protected Area (MPA)?

The aim of an MPA is to increase the protection of marine species and habitats while respecting existing jurisdictions. They are flexible management tools that are adapted to specific requirements in terms of targeted objectives, MPA size, duration of implementation, type of measures applied, etc. In Quebec, two MPAs (Manicouagan and the St. Lawrence Estuary) are currently being developed.

Objective of the Proposed St. Lawrence Estuary MPA

To ensure the conservation and long-term protection of marine mammals that live year-round in the St. Lawrence Estuary or only at certain times of the year and of their habitats and food resources.

This document presents the main management measures that are considered to reach the proposed protection objectives of this marine protected area project and will be used as a basis for consultation. This consultation enables one to express their point of view on

the management measures put forth for the eventual implementation of this MPA. Your comments and suggestions will make it possible to improve the project for the benefit of the marine mammals of the St. Lawrence Estuary.

Consultation Objectives

- To inform and raise awareness of the public regarding the importance of increasing marine mammal protection in the St. Lawrence Estuary through the establishment of an MPA and the necessary management measures.
- To gather concerns, perceptions, information, and any other comment.



The territory covered by the proposed MPA project includes the beluga's summer distribution range and most of the areas where the St. Lawrence Estuary harbour seal population is found, as well as significant feeding areas for the blue whale. Considering the Estuary and the Gulf of St. Lawrence, the area selected corresponds to the region where pressure on marine mammals is greatest. The MPA is adjacent to the Saguenay–St. Lawrence Marine Park. It does not include the marine park territory, but is complementary to it.

Importance of the St. Lawrence Estuary for Marine Mammals

The St. Lawrence Estuary is internationally recognized as an area of critical importance for many marine mammal species that live there year-round (the beluga and harbour seal), or that visit it on a seasonal basis (blue whale, fin whale, harbour porpoise, etc.). In fact, the Estuary is a vital feeding ground for many marine mammals because of the large concentrations of prey, such as krill and capelin, that are found there. Each year, many whales, including large fin whales, migrate there to feed and to build up energy reserves to prepare for the breeding season. Some species come from as far away as the Caribbean Sea. The Estuary is regarded by experts as being one of the main feeding grounds for certain North Atlantic whale populations. Furthermore, the Estuary is also a critical habitat for the beluga and the harbour seal, both of which spend their entire life there.

A dozen marine mammal species are found in the Estuary either regularly or occasionally, usually on a seasonal basis. Nearly half of them are considered to be endangered species according to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Marine Mammals that are Present or Occasionally Observed in the St. Lawrence Estuary

SPECIES	SPECIES STATUS (COSEWIC)	MIGRATORY OR RESIDENT SPECIES
St. Lawrence beluga	Threatened	Resident
Right whale	Endangered	Migratory
Blue whale	Endangered	Migratory
Harbour porpoise	Special concern	Migratory
Fin whale	Special concern	Migratory
Harbour seal ¹	Insufficient data	Resident
Humpback whale	Not at risk	Migratory
Mink whale	Not at risk	Migratory
Atlantic white-sided dolphin	Not at risk	Migratory
Sperm whale	Not at risk	Migratory
Grey seal ²	Not at risk	Migratory
Harp seal ²	Not at risk	Migratory

¹No status currently; however, the Estuary population would be at risk according to preliminary data

²The MPA does not aim at protected this species

Pressures and Threats to the Whales and Harbour Seals of the St. Lawrence Estuary

In Canada, pressures on marine mammals are greatest in the St. Lawrence Estuary. In fact, a large amount of human activity occurs either upstream or within it. Some of these activities represent threats that could generate significant negative cumulative impacts on these animals.

Some examples of these impacts include:

- Risks of colliding with boats and ships
- Disruption of their necessary activities (such as feeding)
- Exposure to noise
- Deterioration of their habitats and those of their food resources
- Risks of oil and chemical spills
- Exposure to infectious and parasitic diseases
- Presence of persistent toxic substances in the food chain
- Entanglement in fishing gear
- Potential commercial exploitation of their essential food resources
- Death of harbour seals due to poaching
- Accidental death of harbour seals by sport-hunting of other seal species
- Isolation of young seals by well-intentioned shoreline residents or vacationers

Principles for the Establishment and Management of the MPA

- Integrating the precautionary principle with regards to planning, decision-making, and management

- Respecting federal and provincial authorities and jurisdictions, as well as aboriginal rights
- Involving other legal stakeholders
- Harmonizing marine mammal protection efforts with those of the Saguenay–St. Lawrence Marine Park
- Adaptive management (a management system whereby actions are subjected to follow-up, assessment, and adjustments on a periodical basis as new knowledge becomes available)

Rationale for this MPA?

As is the case for some of the greatest existing marine mammal sanctuaries or refuges in the world, this MPA would prove to be an important tool for the conservation and protection of the St. Lawrence Estuary, a jewel within the crown of our global natural heritage.

The establishment of this MPA is of the utmost importance because of:

- the abundance of marine mammals
- the presence of many species at risk
- the importance of the Estuary as a food reserve for many North Atlantic migratory species
- the considerable pressure of human activities on animals in the Estuary
- the inadequacy of current protection measures (including laws and regulations), as well as of efforts and manpower in place to adequately protect marine mammals in the Estuary

The Proposed MPA's Added Value

The establishment of the MPA, together with the other protected areas already in place, would allow for the level of protection of marine mammals in the St. Lawrence Estuary to be raised substantially. In fact, this concerted effort would allow:

- the coherence and effectiveness of the efforts to protect marine mammals, several species of which appear on the Canadian list of species at risk
- the protection of species without status but which are believed to be in a precarious situation
- the development of tools to raise awareness
- to encourage scientific research
- the continuation of sustainable economic activity in the Estuary
- the just recognition and particular status to the area
- the national and international visibility of the area

Differences and Similarities Between the St. Lawrence Estuary MPA and the Saguenay–St. Lawrence Marine Park (SSLMP)

Specific harmonisation efforts will be undertaken in order to ensure complementarity and coherence of measures that have common objectives in the MPA and Marine Park.

Item	Estuary MPA <i>(Fisheries and Oceans Canada)</i>	SSLMP <i>(Parks Canada and Parcs Québec)</i>
Objectives	<ul style="list-style-type: none"> • To protect marine mammals, their food resources and 	<ul style="list-style-type: none"> • To increase, for the benefit of the present and future

	<p>habitats</p> <ul style="list-style-type: none"> To support sustainable use of the Estuary and its resources 	<p>generations, the level of protection of the ecosystems of a representative portion of the Saguenay River and the St. Lawrence Estuary for conservation purposes, while encouraging its use for educational, recreational and scientific uses</p>
Determining size and limits	<ul style="list-style-type: none"> Chosen according to the spatial distribution of targeted marine mammal species 	<ul style="list-style-type: none"> According to the importance of the natural resources and biodiversity of the sector
Infrastructure	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Significant terrestrial infrastructure to encourage appreciation of the area and to provide access to it
Establishment	<ul style="list-style-type: none"> By regulations under the terms of Canada's <i>Oceans Act</i> 	<ul style="list-style-type: none"> By two voted acts, one by the government of Canada and the other by the government of Quebec
Management	<ul style="list-style-type: none"> Management tools: Canada's <i>Oceans Act</i>, regulatory measures, program harmonization, public awareness and information, other non-regulatory measures (e.g.: guidelines, policies) Required management plan No or very few new jobs created Management committee Possible zoning 	<ul style="list-style-type: none"> Management tools: federal and provincial laws, regulations regarding activities at sea Varied public awareness and information activities concerning various features of the park Management plan submitted to and approved by the Parliament of Canada and the Québec National Assembly Management team and specialists on a permanent basis Zoning plan

Recommended Management Measures to Counter or Mitigate the Threats to Marine Mammals in the Proposed MPA

This section presents the various measures that are considered to counter or mitigate the threats/pressures to marine mammals in the St. Lawrence Estuary. These measures were developed by working groups with experts from different fields and are focused on three main protection objectives:

A. TO PROTECT MARINE MAMMALS

Associated threats:

- A1. Collisions*
- A2. Entanglement*
- A3. Disturbance*
- A4. Disturbance by noise*
- A5. Mortality by hunting*

B. TO PROTECT MARINE MAMMAL HABITATS

Associated threats:

- B1. Pollution*
- B2. Exposure to diseases*

C. TO PROTECT MARINE MAMMAL FOOD RESOURCES

Associated threats:

- C1. Deterioration of habitat*
- C2. Exploitation*

D. MEASURES ASSOCIATED WITH SEVERAL THREATS

CATEGORIES OF MEASURES

These management measures can be organized into the following categories:

REGULATORY-TYPE MEASURES

Measures include both the creation of new regulations and the modification of existing ones to allow a direct or indirect control over human activities affecting the marine mammals of the MPA.

MANAGEMENT PLAN

A guide to regulations within the MPA that defines them and their scope. It will also contain various elements such as measures aimed at harmonizing the various programs and other non-regulatory measures:

Program harmonization

Harmonization of objectives, contents or management of existing governmental programs concerning the protection of marine mammals in the MPA.

Non-regulatory type measures

Non-regulatory measures, such as guidelines and policies. Also, protection measures for marine mammals, their food resources and habitats, as well as measures to mitigate the impacts of human activities.

PUBLIC AWARENESS AND INFORMATION

Public awareness and information activities aimed at attaining conservation and protection objectives for marine mammals in the St. Lawrence Estuary. These activities would target the general public, users of the territory (industries, proponents, boaters), territory managers, as well as members of governmental and municipal organizations.

OTHER DESIRABLE MEASURES THAT ARE NOT UNDER DFO JURISDICTION

A position taken by the Department on a given issue but on which it is not able to act. This type of measure goes beyond DFO's mandates and responsibilities. It could concern other federal departments, the Québec government or other organizations. In this case, DFO's role would be limited to providing advice and to working together with the responsible authorities.

Potentially Concerned Users and Stakeholders

Each of the measures presented in the following pages are associated to different stakeholders. It is, however, possible that certain stakeholders be concerned with other measures. Certain stakeholders are concerned in a more general fashion and thus are not associated to one or more particular measures.

Note: The stakeholders targeted by this consultation are not members of federal, provincial or aboriginal organizations, which either have been or will be consulted through other means.

OBJECTIVE

A. TO PROTECT MARINE MAMMALS

General principle: *To avoid disturbing, damaging, destroying, or capturing marine mammals alive (The following measures specify the scope of this principle.)*

THREAT

A1. COLLISIONS WITH BOATS OR SHIPS RESULTING IN DEATH OR INJURY

The great number of boats and ships of all kinds that circulate within the Estuary at relatively high speeds and their tendency concentrating in certain areas are potential sources of collisions which could cause the death or injury of marine mammals.

To counter or mitigate this threat, two measures are proposed:

REGULATORY-TYPE MEASURE

Measure A1.1 : *To adopt a regulation to control the speed of the boats*

Why : The objective of this measure is to control the speed of boats and large ships that are capable of navigating at high speed, for which risks of collision with whales and the injuries due to impacts are greatest. At this time, no speed limit has been proposed. Discussions with stakeholders and responsible authorities will be necessary in order to define such a measure.

Potentially concerned stakeholders and users : Whale watching activities at sea, recreational boaters, commercial shipping, ENGOs

MANAGEMENT PLAN

Non-Regulatory Type Measure

Measure A1.2 : *To support the implementation of the Quebec Marine Mammals Emergency Network, in particular in the event of collision with a marine mammal*

Why : A new network to help marine mammals that are victims of accidents in the St. Lawrence has been created through a partnership between governmental institutions and private Quebecer groups. This network aims to reduce accidental mortalities of marine mammals, help animals in difficulty, and intervene with dead (stranded or drifting) animals. Furthermore, it should improve the quality and quantities of information linked to collisions (species of marine mammals, type of injury, localization, speed of the boat, etc.) and increase the effectiveness of interventions that are likely to be made in the MPA to decrease the number of collisions.

Starting now, users and shoreline residents of the St. Lawrence are encouraged to alert the Network via this toll-free number: 1-877-7baleine (1-877-722-5346) in the following cases:

- accidental capture in fishing gear
- stranding
- collision with a boat
- drifting carcass
- marine mammal far from its usual distribution area

Potentially concerned stakeholders and users: Commercial shipping, whale watching activities at sea, recreational boaters, research organizations, ENGOs

THREAT

A2. ENTANGLEMENT IN FISHING GEAR

The presence of certain types of fishing gear in the area may represent a threat to marine mammals. The more coastal species, like the harbour seal, the harbour porpoise, the right whale, the minke whale, and the humpback whale, are particularly vulnerable to getting tangled up in ropes and nets. This can cause serious injuries, which can weaken the animal, develop into a fatal infection, and even end up drowning the animal.

To counter or mitigate this threat, four measures are proposed:

MANAGEMENT PLAN

Non-Regulatory Type Measures

Measure A2.1 : *To re-examine the deployment strategy for cod fishing gear, reduce the use of gillnets, and encourage the use of longlines for catching this species*

Why : Cod gillnets are responsible for the majority of accidental harbour porpoise - a species at risk - catches. Although fishing with this type of gear is currently quite uncommon in the proposed MPA because of the moratorium on cod fishing, we can predict that unused permits that are presently not active could become so in the medium- or long-term. In the event that cod stocks increase, the use of longlines appears to be an extremely interesting alternative for cod fishing, because it does not, a priori, present any risk of marine mammal by-catches.

Potentially concerned stakeholders and users : Commercial fishermen, research organizations, ENGOs

Measure A2.2 : *To implement management or installation measures for fishing gear that is considered to be risky in order to reduce marine mammal by-catches*

Why : There are known cases of marine mammal by-catches by fishing gear that is currently used in the proposed MPA, such as gillnets, trap lines, etc. It does not appear necessary to prohibit fishing gear already in use in the area, but rather to adopt, in cooperation with the fishing industry, management measures aimed at reducing the number of by-catches.

Potentially concerned stakeholders and users : Commercial fishermen, ENGOs

Measure A2.3 : *To support the implementation of the Quebec Marine Mammals Emergency Network, particularly to help marine mammals entangled in fishing gear*

Why : A new network to help marine mammals that are victims of accidents in the St. Lawrence has been created through a partnership between governmental institutions and private Quebecer groups. This network aims to reduce accidental mortalities of marine mammals, help animals in difficulty, and intervene with dead (stranded or drifting) animals. Furthermore, it should improve the quality and quantities of information linked to entanglement (species of marine mammals, type of injury, localization, type of fishing gear, etc.) and increase the effectiveness of interventions that are likely to be made in the MPA to decrease the number of entanglements.

Starting now, users and shoreline residents of the St. Lawrence are encouraged to alert the Network via this toll-free number: 1-877-7baleine (1-877-722-5346) in the following cases :

- accidental catch in fishing gear
- stranding
- collision with a boat
- drifting carcass
- marine mammal far from its usual distribution area

Potentially concerned stakeholders and users : Commercial fishermen, research organizations, ENGOs, territory managers

Measure A2.4 : *To encourage fishermen to systematically report any marine mammal by-catches*

Why : This information is necessary to fill in the gaps in scientific knowledge.

Potentially concerned stakeholders and users : Commercial fishermen, research organizations, ENGOs

THREAT

A3. MARINE MAMMAL DISTURBANCE CAUSED BY HUMAN ACTIVITIES

The intensity of maritime traffic in the Estuary brings about perturbations of marine mammal's important activities; e.g., resting, feeding, calving, rearing. These disturbances are mostly linked to recreational boating and commercial marine mammal-watching activities. Recreational activities in the littoral area can also generate the same type of disturbances when they occur near harbour seal haul-out sites. These disturbances can produce various negative impacts, in particular an inability for an animal to store sufficient energy reserves to ensure its successful reproduction and even its long-term survival. This represents a particular concern since notable increases in recreational boating have been observed and the marine mammal-watching industry may be expected to grow.

To counter or mitigate this threat, eight measures are proposed:

REGULATORY-TYPE MEASURES

Measure A3.1 : *To implement a regulation concerning distances and approach speeds to whales*

Why : A regulation concerning distances and approach speeds is considered to be critical to limit whale disturbances in the MPA. This is especially so for the blue whale, an "endangered species" and one of the main species targeted by the marine mammal-watching industry outside the SSLMP. These measures should be developed with consideration to the existing ones currently implemented in the SSLMP in order to make them easier to understand and enforce.

Potentially concerned stakeholders and users : Whale watching activities at sea, recreational boaters, territory managers, ENGOs, cruise ships, commercial fishing

Measure A3.2 : *To explore the possibility of setting-up a licensing system for commercial marine mammal-watching activities at sea*

Why : The presence of humans can potentially disrupt important marine mammal activities. This measure could decrease the risk of disturbing whales and harbour seals by controlling the number of commercial boats around marine mammals. At this time, no licensing system has been suggested. Discussions with stakeholders and responsible authorities will be necessary in order to define such a measure.

Potentially concerned stakeholders and users : Whale watching activities at sea, territory managers, tourism industry, ENGOs

Measure A3.3 : *To establish a protection perimeter around harbour seal haul-out sites (keeping at a distance of 200 m at all times and a distance of 400 m during the critical period, i.e., between the last week of May and the first week of July) and ensure an increased protection during the critical period*

Why : The state of the harbour seal population living in the Estuary is worrying. Haul-out sites are a critical habitat for this species and the number of these sites in the Estuary is limited and not protected in any way at this time. Whelping and moulting are done in the haul-out sites from the end of May to the beginning of July. This period is thus critical for the harbour seal because of the births, restricted mobility of the young, high and constant energy requirements of the developing young, and the strong possibility of mother-newborn separation. Moreover, seals have particularly sensitive hearing and react to the sound of personal watercrafts, even at a distance of 5 to 6 kilometres from the haul-out sites. It is well known that personal watercraft produce an intense noise that can be accentuated when certain manoeuvres (e.g., jumps out of water or tight turns) are done. It would thus be appropriate to add an additional restriction for this type of watercraft.

Potentially concerned stakeholders and users : All

Measure A3.4 : *To use the suitable legislative tool to establish a land protection perimeter around harbour seal haul-out sites which include the terrestrial environment*

Why : The state of the harbour seal population living in the Estuary is worrisome. Haul-out sites are a critical habitat for this species and the number of these sites in the Estuary is limited and not protected in any way within the limits of the proposed MPA at this time. Whelping and moulting are done in the haul-out sites from the end of May to the beginning of July. This period is thus critical for the harbour seal because of the births, restricted mobility of the young, high and constant energy requirements of the developing young, and the strong possibility of mother-newborn separation. It is unknown whether the Fisheries Act, which protects marine mammals and their habitats, would be applicable to the terrestrial area surrounding the haul-out sites that are in close proximity to the shore in the MPAs. In this case, it would be necessary to explore the possibility of using a more suitable legislative tool to ensure this protection.

Potentially concerned stakeholders and users : General public, territory managers, ENGOs, tourism industry, sport hunters, soft-shell clam harvesters

Measure A3.5 : *To prohibit approaching within 400 m of a resident marine mammal species that has an endangered or threatened status*

Why : The St. Lawrence beluga whale is a resident and a threatened species. The disturbance caused by human activities could represent a significant threat for its recovery. This is all the more true as this species lives in the Estuary on a year-round basis, where other significant threats jeopardize its recovery. For this reason, this species must be excluded from the species subjected to whale-watching activities at sea. This measure allows us to harmonize the manner of protecting beluga whale in regard of what is established in SSLMP.

Potentially concerned stakeholders and users : Whale watching activities at sea, territory managers, tourism industry, ENGOs

MANAGEMENT PLAN

Program Harmonization

Measure A3.6 : *To ensure that information regarding the location of harbour seal haul-out sites and the relevant protection measures are transmitted to the municipalities and MRCs, so that they may be integrated into development plans and zoning by-laws for coastal areas*

Why : It is important that protection measures adopted for haul-out sites in the MPA also apply to shore-based harbour seal watching and other coastal activities. MRCs are required to include minimal shoreline protective standards in their development plans. Municipalities must adopt a by-law that is consistent with these standards to allow them to govern or prohibit all land uses to enforce the shoreline protection measures.

Potentially concerned stakeholders and users : Territory managers, ENGOs

PUBLIC AWARENESS AND INFORMATION

Measure A3.7 : *To develop, in partnership with relevant groups, awareness and training activities and programs for the public, cruise companies (commercial whalewatching activities at sea), and recreational boaters about the MPA measures and other regulations and measures associated with marine mammals*

Why : Users must be informed of the main concerns associated with marine mammals in the Estuary, as well as of the measures put in place to protect them and the codes of conduct to adopt when watching them, in particular possible measures of the MPA. It is important to inform the public on how to observe marine mammals in a sustainable way so that the observers have realistic expectations, and to improve the knowledge of cruise companies and recreational boaters about the ecology of marine mammals.

Potentially concerned stakeholders and users : General public, ENGOs, tourism industry, Whale watching activities at sea, recreational boaters

Measure A3.8 : *To develop, in partnership with relevant groups, public awareness activities for shoreline residents and vacationers where young seals are often found washed up on the banks, and to inform them of the procedures to follow in such cases*

Why : Some shoreline residents or well-intentioned vacationers can increase the rate of separation of young, nursing, harbour seals from their mothers by taking young animals that appear abandoned on the shore. These people wrongfully believe that these animals are wounded, lost, or sick, and that they will die if they are not looked after immediately. They thus separate them from their mother, which can be fatal. Nobody should touch or move a seal found on the shore considering the risks involved with handling the animal, for both the person (bites and diseases) as well as for the animal (breach of the mother/young bond, diseases). It is thus necessary to change this way of thinking and to inform shoreline residents and vacationers of the procedures to be followed.

Potentially concerned stakeholders and users : General public (shoreline residents and vacationers), ENGOs, research organizations, tourism industry, public aquariums

FURTHER DESIRED MEASURE THAT IS NOT UNDER DFO JURISDICTION

To create a terrestrial whale-watching site near Îlets Boisés (Upper North Shore) in order to reduce the number of boats visiting the area to watch blue whales

THREAT

A4. DISTURBANCES BY MAN-MADE NOISE

The level of ambient man-made noise, mainly caused by intense maritime traffic, is high in some areas of the Estuary. Marine mammals depend on sound to orientate themselves, locate their prey, reproduce, recognize their environment and socialize. Man-made noise can disrupt these vital activities, in addition to causing significant trauma (temporary or permanent) to marine mammals, and even mass mortalities following particularly noisy events.

To counter or mitigate this threat, one measure is proposed:

REGULATORY-TYPE MEASURE

Measure A4.1 : *To establish regulations regarding the noise caused by seismic surveys and Low Frequency Active Sonars*

Why : The air guns used for seismic surveys produce sounds that can be heard dozens of kilometres away. Sounds of this magnitude can cause behavioural changes that can alter the survival and reproductive success of marine mammals, or can cause hearing loss, injury or death in extreme cases. In addition, the Low Frequency Active Sonars used by the navy to detect submarines produces very powerful sounds that may propagate across several hundred kilometres. It has been shown that the use of this type of sonar may cause severe internal injuries and even death in marine mammals.

Potentially concerned stakeholders and users : Energy (oil and gas) and mining industries, ENGOs, territory managers, research organizations

FURTHER DESIRED MEASURE THAT IS NOT UNDER DFO JURISDICTION

To take steps to make national and international commercial shipping organizations more aware of the problems associated with noise in the water

THREAT

A5. UNINTENTIONAL KILLING OF HARBOUR SEALS BY HUNTING

Harbour seals, a species whose hunting is prohibited, may be killed unintentionally during non-commercial hunting for grey and harp seals. The extent of this phenomenon is difficult to evaluate but may be significant.

To counter or mitigate this threat, one measure is proposed:

PUBLIC AWARENESS AND INFORMATION

Measure A5.1 : *To raise awareness and inform seal sport hunters of the proper identification and precarious status of the harbour seal, a species whose hunting is prohibited*

Why : Grey seal and harp seal sport hunting presents a threat to the harbour seal population of the Estuary, whose hunting is prohibited. Misidentification of the species by hunter raises significantly the risks of mortality for the harbour seal.

Potentially concerned stakeholders and users : Seal sport hunters, ENGOS

OBJECTIVE

B. TO PROTECT MARINE MAMMAL HABITAT

General principle : *to avoid disturbing, damaging, destroying or removing any part of marine mammal habitat that is in the MPA (the following measures specify the scope of this principle)*

THREAT

B1. POLLUTION

Many toxic substances, such as heavy metals and organochlorinated compounds, are found in high concentrations in organisms in the St. Lawrence Estuary. The St. Lawrence harbour seal and beluga whale are particularly affected, and several health problems in these animals may be associated with this pollution.

The chance of an oil spill or a spill of other products occurring is considered to be very high in the Estuary because of the nature and intensity of local marine traffic and physical characteristics of the Estuary. Although the negative impacts of an oil spill on marine mammals are not well known and seem less significant than what is known for seabirds, experts agree that they are real and that they must be considered.

To counter or mitigate these threats, six measures are proposed:

REGULATORY-TYPE MEASURE

Measure B1.1 : *To prohibit the dumping, release or immersion of substances that can disturb, damage or destroy marine mammals or their habitat*

See "Clarifications" for further details on this prohibition

Why : Cleaning and wastewaters from boats may contain potentially harmful pollutants for marine mammals. Moreover, oil, gas and mining exploitation involve risks of contamination of the marine environment related to on-going operations and accidental events as well as a likely increase in maritime traffic and associated threats.

Potentially concerned stakeholders and users : Commercial shipping, ENGOs

CLARIFICATIONS CONCERNING MEASURE B1.1 : The management plan will define deposits, releases and immersions that will be prohibited within the MPA. Cleaning waters and wastewaters of all boats is covered by this prohibition as well as the contamination associated with the current activities of oil, gas and mine exploitation in the marine environment. The development of measures associated with this orientation will be done based on the on-going reform of the Prevention of Pollution from Vessels Regulations.

MANAGEMENT PLAN

Program Harmonization

Measure B1.2 : *To prepare an emergency environmental plan that is specific to marine mammals in the event of toxic substances spills*

Why : No intervention plan currently exists for the Estuary and Gulf of St. Lawrence marine mammals. Such a plan would be a vital reference tool to guide experts following oil and other toxic substance spills.

Potentially concerned stakeholders and users : Commercial shipping, territory managers, ENGOs, research organizations

Measure B1.3 : *To develop management measures for commercial ships waiting in the two anchorage areas of the proposed MPA (Bic and Saint-Fabien)*

Why : The presence of large ships remaining several days in these anchorage areas present a potential source of TBT, a product whose toxicity is well known and that can be found in antifouling paint for ships. These anchorage areas are, or are close to, feeding areas for certain marine mammal species. Since paints containing TBT should be prohibited on a global scale in the medium-term, the need to develop such measures should decrease by the time this ban is implemented. However, a better monitoring of ship operations at anchor should be implemented to limit any other sorts of contamination caused by ships in the MPA.

Potentially concerned stakeholders and users : Commercial shipping, territory managers, ENGOs

Non-Regulatory Type Measures

Measure B1.4 : *To complete the information on areas of sediment accumulation within the limits of the proposed MPA where contamination levels are of concern and to establish suitable management measures*

Why : It is important to know the MPA "hot spots" where levels of sediment chemical contamination is likely to present a risk to marine mammals by the release of these substances through various human activities (e.g., dredging, anchoring, and ship movements, as well as mobile fishing gear).

Potentially concerned stakeholders and users : Commercial fishermen, commercial shipping, territory managers, research organizations, ENGOs

PUBLIC AWARENESS AND INFORMATION

Measure B1.5 : *To develop, in partnership with the relevant parties, activities to raise public awareness on the contamination of marine mammals and their habitats, particularly for the two resident species (the beluga whale and harbour seal)*

Why : The population must be kept informed of the main concerns regarding the protection of marine mammals in the MPA, particularly chemical pollution and its effects on marine mammals.

Potentially concerned stakeholders and users : General public, research organizations, ENGOs

Measure B1.6 : *To inform key stakeholders, such as territory managers, river watershed committees, agro-environmental "club-conseil" (advisory clubs), ZIP (Area of prime concern) committees, and coastal area management committees, of concerns regarding the input of pollutants linked to agricultural and aquacultural activities and municipal wastewaters*

Why : Several programs initiated by the Québec government and by certain non-governmental groups already have the objective of reducing the input of pollutants into waterways that flow into the St. Lawrence. MPA managers should encourage such initiatives.

Potentially concerned stakeholders and users : Territory managers, agricultural sector, fish farmers, ENGOs, general public

OTHER DESIRED MEASURES THAT ARE NOT UNDER DFO JURISDICTION

- To add organotins, particularly TBT, a toxic substance for marine animals, to the list of substances for which temporary criteria (concentration limits) have been established in the context of the management of dredging operations
- To ensure that regulations concerning the ban on the use of antifouling TBT (organotins)-based paint on ships is respected as TBT is a toxic substance for marine animals, and to ensure that these products are not used on aquacultural infrastructures
- To promote the establishment of collection and recycling systems of used petroleum products, wastewaters and domestic wastes produced by recreational and fishing boats and commercial ships in ports and marinas within the territory included in the proposed MPA

THREAT

B2. EXPOSURE TO VARIOUS INFECTIOUS AND PARASITIC DISEASES

The relatively small size of the St. Lawrence Estuary increases the risk of exposure of marine mammals to all kinds of infectious and parasitic diseases originating from local human sources (municipal discharges, non-point source agricultural pollution, marine mammals reintroduced into the area, ballast water discharged from certain ships, etc.). In the worst cases, some pathogenic agents can lead to mass mortality of marine mammals called epizooty.

To counter or mitigate this threat, two measures are proposed:

REGULATORY-TYPE MEASURES

Measure B2.1 : *To prohibit the dumping, release, or immersion of substances that can disturb, damage or destroy marine mammals or their habitat*

See "Clarifications" for further details on this prohibition

Why : Ballast waters can contain significant amounts of pathogenic agents and it is likely that some of this water is currently being discharged into the St. Lawrence Estuary. For this measure to be effective, it will have to be applied in conjunction with similar measures outside of the MPA, and considering the regulations for ballast water management that are currently being developed. The dumping of fish wastes at sea represents a potential source of disease and parasites for marine mammals. These wastes can alter disease and parasite transmission dynamics in the environment when large amounts are introduced at times of the year when these organisms are not normally abundant.

Potentially concerned stakeholders and users : Commercial shipping, seafood processing plants, territory managers, ENGOS

CLARIFICATIONS CONCERNING MEASURE : The management plan will define dumping, releases and immersions that will be prohibited within the MPA. Cleaning- and wastewaters of all boats are covered by this prohibition. This measure would also apply to the release in the MPA of seal- and fish-transformation wastes by processing plants and factory ships.

Measure B2.2 : *To prohibit the rehabilitation and reintroduction of sick or wounded marine mammals into the natural environment as well as any other non-natural introduction of marine mammals*

Why : Sick or wounded marine mammals recovered from a natural environment and maintained in captivity for rehabilitation purposes can contract very serious diseases. Their reintroduction into the environment represents a risk for the introduction of pathogenic agents and an increase in the occurrence of disease in marine mammals, and may even lead to mass mortalities.

Potentially concerned stakeholders and users : Public aquariums, rehabilitation centres for marine mammals, ENGOS, research organizations

OBJECTIVE

C. TO PROTECT MARINE MAMMAL FOOD RESOURCES

General principle : *To avoid disturbing, damaging, destroying or removing, in part or in whole, essential marine mammal food resources or a part of the habitat of these resources (The following measures specify the scope of this principle.)*

THREAT

C1. DETERIORATION OF FOOD RESOURCE HABITAT

Strong human pressure on the marine environment, particularly on the coastal environment (dredging, construction, etc), can cause a deterioration of the habitats of marine mammal food resources.

To counter or mitigate this threat, one measure is proposed :

REGULATORY-TYPE MEASURE

Measure C1.1 : *To prohibit fishing on known herring spawning grounds using fishing gear that may disrupt the physical habitat*

Why : Herring is a significant food resource for several species of marine mammals (e.g., harbour seal, harbour porpoise, fin whale, and possibly beluga whale). Certain types of fishing gear may damage significant herring spawning sites. It is therefore important to avoid such disturbances in order to maintain the reproductive potential of this species.

Potentially concerned stakeholders and users : Commercial fishermen, research organizations, ENGOs

FURTHER DESIRED MEASURE THAT IS NOT UNDER DFO JURISDICTION

To support the efforts of various stakeholders for the protection and restoration of rainbow smelt (a prey for certain marine mammals) spawning sites in tributaries in the MPA

THREAT

C2. EXPLOITATION OF CERTAIN VITAL FOOD RESOURCES FOR MARINE MAMMALS

Capelin and krill, and probably copepods and sand lance, are all vital marine mammal food resources. Herring is also an important prey for several marine mammal species. Although this is not currently the case, overexploitation of these species through fishing could have disastrous impacts on several marine mammal species in the Estuary, notably on large whales. It should be noted that some whale species require a daily intake of up to 3 tons of krill. Furthermore, the potential exploitation of some of these food resources using mobile fishing gear would represent a source of disturbance for marine mammals on their feeding grounds.

To counter or mitigate this threat, two measures are proposed:

REGULATORY-TYPE MEASURES

Measure C2.1 : *To prohibit the exploitation of krill and copepods*

Why : This measure is proposed on a purely preventive basis since a moratorium is currently in force concerning the commercial exploitation of forage species such as krill and copepods. These species are significant food resources for several marine mammal species and fish, particularly fin whales, herring and capelin, the last two being important prey for marine mammals. Blue whales, which are an endangered species, depend entirely on krill as their food resource. Exploitation of these resources could therefore have serious effects on these species, both in terms of disturbing the marine mammals on their feeding grounds and in terms of reducing the abundance of their prey.

Potentially concerned stakeholders and users : Commercial fishermen, research and development organizations, biomedical industries, food industries, other industries, ENGOs

Measure C2.2 : *To prohibit the fishing of capelin using mobile fishing gear*

Why : This measure is proposed on a preventive basis since such gear is not used in the Estuary. Capelin is a significant food resource for several marine mammal species (e.g., fin whale, minke whale, and harbour seal). The eventual presence of a fleet of fishing boats equipped with mobile fishing gear in capelin concentration areas could cause significant disturbance to marine mammals in their feeding grounds. Moreover, the use of this gear could have a severe negative impact on the distribution and abundance of this fish species.

Potentially concerned stakeholders and users : Commercial fishermen, research organizations, ENGOs

OBJECTIVE

D. MEASURES ASSOCIATED WITH SEVERAL THREATS

The following measures are aimed at countering more than one threat at a time or are general in scope.

To counter or mitigate these threats, five measures are proposed:

MANAGEMENT PLAN

Non-Regulatory Type Measures

Measure D1.1 : *To identify sensitive or unique sites and those that are important for marine mammals within the proposed MPA and to assess the level of protection they require*

Why : Some sites contain sensitive and crucial habitats for marine mammals. These include harbour seal haul-out sites, those frequented by beluga whales, and blue whale feeding grounds. These deserve particular protection as they have no official status or are protected by measures that are considered to be insufficient. Better identification of these sites would make it possible to increase the level of protection they are afforded.

Associated threats : All

Potentially concerned stakeholders and users : All

MANAGEMENT PLAN

Program Harmonization

Measure D1.2 : *To pay particular attention to the harmonization and complementarity of management measures taken within the MPA with those of the Saguenay–St. Lawrence Marine Park*

Why : Since these two areas are neighbours, it is necessary to inform the public of their differences and similarities. In order to be consistent, it is also important that management committees for both areas consult each other to harmonize management measures that have common objectives.

Associated threats : All

Potentially concerned stakeholders and users : All

Measure D1.3 : *To initiate round table discussions with various stakeholders to identify measures to minimize the consequences of commercial shipping on marine mammals and the risk of maritime accidents*

Why : A series of round table discussions with stakeholders is the ideal tool to reduce the consequences of commercial shipping on marine mammals while maintaining a high level of safety for navigation.

Associated threats : Disturbance, disturbance by man-made noises, infectious and parasitic disease, collision, habitat deterioration, pollution

Potentially concerned stakeholders and users : Commercial shipping, ENGOs

PUBLIC AWARENESS AND INFORMATION

Measure D1.4 : *To organize awareness campaigns in partnership with relevant groups, to promote the protection of marine mammals by ship officers and pilots who pass through the MPA*

Why : The objective is to inform commercial mariners that they are sailing within a unique and extremely rich marine environment where several species of marine mammals come to feed.

Associated threats : Collisions, disturbances, disturbances due to noise, pollution, exposure to diseases

Potentially concerned stakeholders and users : Commercial shipping, ENGOs

Measure D1.5 : *To inform organizations likely to conduct research activities in the MPA of the need to obtain authorization from DFO*

Why : Certain research activities can cause negative impacts on marine mammals. Research in the MPA must be authorized, in the same way as marine mammal-watching activities. It is important to provide these organisations with the procedure to obtain an authorization and information on the types of activities that are considered unacceptable in the MPA.

Associated threats : All

Potentially concerned stakeholders and users : Research organizations, ENGOs, consultants

LIST OF ACRONYMS	
ENGO	Environmental nongovernmental organizations
DFO	Fisheries and Oceans Canada
MRC	“Municipalité régionale de comté” which is municipal regional council
SSLMP	Saguenay–St. Lawrence Marine Park
MPA	Marine protected area

GLOSSARY :

Haul-out Site : an emerged habitat (reef, outcrop, or beach) that is vital for harbour seals where several animals can gather at the same time to whelp, feed their young, moult and rest.

Organochlorines : organic chemicals used as insecticide, fungicides, etc., that contain one or more chlorine atoms.

Organotin : tin-based organic chemicals. TBT (tributyltin) is the best-known organotin. It is used in antifouling paint.

Antifouling paint : paint used to prevent marine growth (e.g., algae) on certain immersed objects such as a ship’s hull.

COMPLETED STEPS

Selection of the St. Lawrence Estuary area for the MPA project
Completion of two studies regarding the biophysical and socio-economic profile of the area
Identification and assessment of the threats to marine mammals
Development of management measures to counter or attenuate these threats
Consultation with the federal departments and organizations interested in the project
Meetings with Québec government ministries and organizations (in progress)
Information sessions with Aboriginal authorities
Information sessions with territory managers (MCRs)

YOUR PARTICIPATION IS IMPORTANT FOR FISHERIES AND OCEANS CANADA

Your opinions, comments, and advice on this important initiative will be used to bring to completion the management measures, to work out the regulation draft that will lead to the designation of the MPA, and to prepare the management plan. It matters that DFO understands what impact this project will have on you and if it meets your expectations for the protection of marine mammals in Canada. We invite you to share your views by completing the workbook that is available from the addresses and phone numbers below. The regulation draft will be published in the Canada Gazette for final public comment before being adopted.

Amending regulations is a lengthy process because of the complexity of consultations and the thoroughness of the review.

DFO thanks you for your interest that you have expressed with regard to this important initiative and for devoting your time and energy.

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