



Saguenay–St. Lawrence
MARINE PARK



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Saguenay–St. Lawrence Marine Park Management Plan



Canada 

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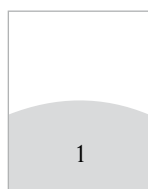


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Management Plan



Saguenay-St. Lawrence
MARINE PARK



Saguenay-St. Lawrence Marine Park

February 2010

Ministers' Remarks

It is with pleasure that we present the revised Management Plan for the Saguenay–St. Lawrence Marine Park. This new Management Plan is the result of exceptional cooperation between the governments of Quebec and Canada, with the Marine Park Coordinating Committee representing the interests of local and regional communities.

This plan follows from the original Management Plan approved in 1995. The original Plan presented, for the first time in Quebec, the shared efforts of two governments towards establishing a marine park and an innovative approach to the participation of regional communities in its management through the creation of a Coordinating Committee.

The cooperation between the two governments in managing the Marine Park continued over the past ten years through the creation of facilities and services, in collaboration with government departments, municipalities, organizations and private companies. In this way the network of discovery areas was developed, research projects were implemented, and certain aspects of the legal framework were established, including the Marine Activities Regulations.

In light of the knowledge and experience acquired over the last ten years, the revised Management Plan presents the principles, guidelines and key actions that will be implemented over the next seven years. The Marine Park is ready to face the challenges associated with the protection and enhancement of a marine protected area of this size.

We wish to extend our thanks and encouragement to local, regional and national partners, and to the staff in pursuit of the Marine Park vision.

Jim Prentice

Minister of the Environment
Government of Canada

Line Beauchamp

Minister of Sustainable Development,
Environment and Parks
Government of Quebec

Saguenay–St. Lawrence Marine Park

MANAGEMENT PLAN

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Foreword

The Saguenay-St. Lawrence Marine Park was created pursuant to an agreement signed on April 6, 1990, by the governments of Quebec and Canada. In order to initiate its implementation, two series of public consultations took place, one aiming to determine the boundaries of the Marine Park (December 1990) and the other devoted to its presentation (April 1993). The original Management Plan was drafted in 1995, and in 1998 the two Acts officially creating the Marine Park took effect.

In the years that followed, operational teams were established and contributed to the development of a number of management tools, such as incorporating acts and several plans, including those regarding public safety, resource conservation and environmental emergencies. Additionally, the Coordinating Committee was created, numerous partnerships were established, the Marine Activities Regulations were instituted, the network of discovery areas was developed, interpretation and awareness activities were set up, partners were trained and supported, etc.

Furthermore, the review of the Management Plan required a number of steps. First there was the planning and drafting of the zoning plan as well as the State of the Saguenay-St. Lawrence Marine Park Report, establishing a portrait of its current condition. These two elements along with an analysis of current issues made it possible to prepare a public consultation document. In the course of this public consultation, we heard the participants' concerns and recommendations, many of which were taken into consideration.

This document describes the issues and sets out the objectives, indicators and actions to be implemented in all focal areas of the Marine Park, i.e., participatory management, the ecosystems and biodiversity of the Park, the environmentally sustainable use of resources, the visitor experience, public education and awareness and, lastly, the Marine Park's administration.

1 Introduction



Photo: Nelson Boisset, Parks Canada

Tadoussac Marina

The purpose of the Saguenay-St. Lawrence Marine Park is to increase, for the benefit of the present and future 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 purposes.

The Marine Park was created after many years of local community interest. The local community's desire to protect

the beluga and its habitat was a determining factor in its creation. The Acts officially creating the Marine Park and governing its management took effect in 1998¹.

The Saguenay–St. Lawrence Marine Park was an innovative creation in several respects. It was the first time the governments of Canada and Quebec united in creating a marine protected area with each government acting within the scope of its jurisdiction.

Purpose of the federal legislation

4. The purpose of this Act is to increase, for the benefit of the present and future 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 purposes.

Preamble of the Quebec Act:

WHEREAS the Governments of Quebec and of Canada recognize the necessity, both for the present and future generations, of protecting the environment, the flora and fauna and the exceptional natural resources of a representative portion of the Saguenay River and the St. Lawrence Estuary, while encouraging its use for educational, recreational and scientific purposes.

It is the first park in Quebec and Canada dedicated to protecting a marine environment. It is part of a region flourishing in several respects, particularly in tourism. Accordingly, the governments chose to establish close ties with regional partners to achieve the Marine Park's objectives. The municipalities adjacent to the Marine Park and the Essipit Innu First Nation were chosen to actively participate in conservation, education

¹ R.S.Q., chapter P-8.1, Saguenay-St. Lawrence Marine Park Act and S-1.3, ch. 37, Saguenay-St. Lawrence Marine Park Act

and discovery activities, and thus form the coordination zone (see map 1).

The establishment of protected areas such as the Saguenay-St. Lawrence Marine Park contributes to respecting the international commitments of the United Nations Convention on Biological Diversity, of which Canada is a party.

The Marine Park includes the Saguenay Fjord, located downstream from Cap à l'Est, and the northern section of the St. Lawrence Estuary between Gros Cap à l'Aigle upstream to Pointe-Rouge (Les Escoumins) downstream. The Marine Park covers approximately 1,245 km², includes the water column and seabed, and extends to the normal high-tide line (see map 1).

Excluded from this territory are:

- All lands not owned by the government of Quebec;
- All marine facilities, in particular wharves, recreational harbours, the Prince Shoal Lighthouse and a 25-metre strip around marine facilities without a waterlot and in deep water, i.e., a lot located on the Saguenay and St. Lawrence riverbeds;
- All islands and all islets.

Following a brief overview of the area's history, the Management Plan presents the vision developed for the Marine Park, major recommendations and actions to be carried out over the next few years. The areas covered are the participatory management, ecosystems and biodiversity, the environmentally sustainable use of resources, the experience offered to residents and visitors, and the education and awareness of the value and benefits of resource conservation. It also sets out the criteria on which the Marine Park and its partners will rely to ensure its protection, the environmentally sustainable use of resources and its presentation.

Management Plan development process

This Management Plan is the result of the work of a multidisciplinary team composed of employees from Parks Canada, Quebec's Ministère du Développement durable, de l'Environnement et des Parcs, the Société des établissements de plein air du Québec (Sépaq), and the members of the Coordinating Committee and its advisory boards.

The development of the Management Plan is an opportunity to take stock of what has been achieved. Its drafting began with the State of the Marine Park Report which assessed the health of the ecosystems, the quality of the visitor experience and the effectiveness of management measures. The current situation was subsequently reviewed and issues identified. The latter were thoroughly analyzed based on the legislative provisions, government policies and anticipated impacts on the local community and Marine Park ecosystems in view of formulating proposals to be submitted for public consultation.

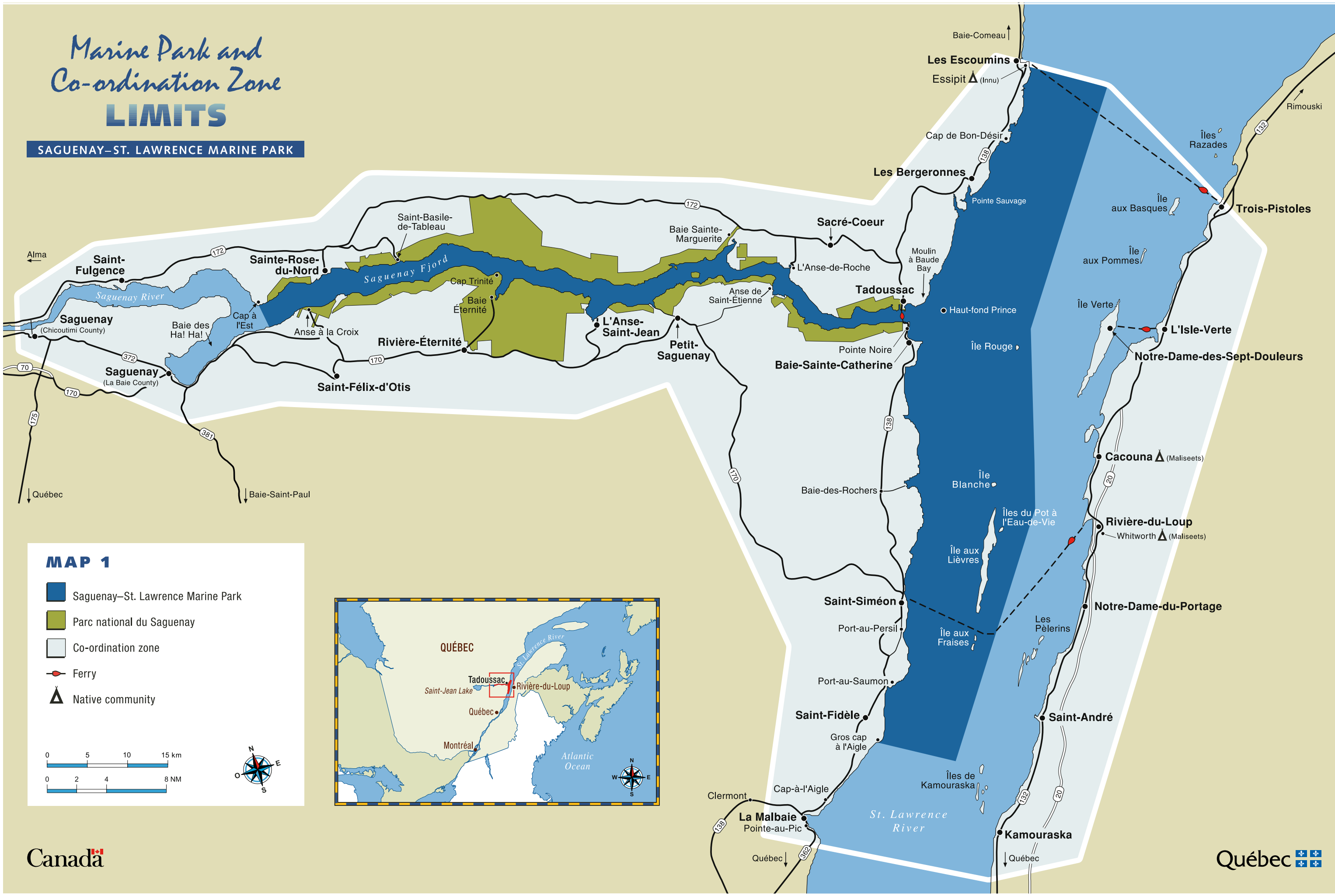
In December 2007, a public consultation document was released. It described the planning process and management options intended to lead to solutions to the issues identified. Public consultations were held in early 2008. The Essipit Innu First Nation was involved from the outset and throughout the planning process. An official meeting took place with this community in January 2008. The First Nations Malecite of Viger, Betsiamites and Mashteuiatsh were also informed of the process. Eight public sessions subsequently took place in the Marine Park coordination zone, in La Malbaie, Rivière-du-Loup, Saguenay and Les Escoumins. More than 230 persons took part in these briefing and exchange sessions, which testifies to the communities' interest.

In all, 52 position papers were tabled. The most recurrent themes were the discovery areas; the sense of ownership of the Marine Park; the zoning plan; observation activities at sea; the expansion of the boundaries of the Marine Park; recreational boating, including anchoring and wastewater; partnerships; commercial and recreational fishing; methane port projects; migratory bird hunting; jet skis; and commercial navigation. A report of the public consultation was published.

The comments expressed both orally and in writing, were taken into account in the drafting of the Management Plan. The provisional version of this plan was submitted to an environmental assessment in accordance with a Parks Canada directive aimed at ensuring that the actions proposed would not have any negative impacts.

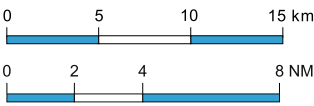
Marine Park and Co-ordination Zone LIMITS

SAGUENAY-ST. LAWRENCE MARINE PARK



MAP 1

- Saguenay-St. Lawrence Marine Park
- Parc national du Saguenay
- Co-ordination zone
- Ferry
- Native community



Following the public consultation, the Management Plan is approved by the Canadian Minister of the Environment and the Quebec Minister of Sustainable Development, Environment and Parks. As stipulated in legislation regarding the Saguenay–St. Lawrence Marine Park (section 9. (2) of the Canadian Act and section 8 of the Quebec Act), the governments of Canada

and Quebec are responsible for reviewing the Management Plan at least every seven years. Once the required approvals have been received, the document is tabled in the House of Commons of Canada and in the National Assembly of Quebec.



Public Consultations 2008
Photos: Marc Pagé, Parks Canada



2 *The importance of the Saguenay–St. Lawrence Marine Park*



Photo: Robert Michaud, Parks Canada

Belugas in the St. Lawrence Estuary

The Marine Park is dedicated to protecting and enhancing the marine environment of a representative section of the St. Lawrence Estuary and Saguenay Fjord. It is part of the Canadian network of national marine conservation areas, and the Quebec network of parks. As the only marine protected area in Quebec and the first one created by an Act of Parliament in Canada, the Marine Park is a place where unique expertise in conservation, presentation and participatory management is being developed.

The Marine Park is located midway between the Great Lakes and the Atlantic Ocean. The confluence of the St. Lawrence Estuary and the Saguenay River, where the waters from the Great Lakes, the Saguenay basin and the Atlantic Ocean meet, is recognized as an ecologically exceptional region. The particular oceanographic conditions of the confluence area, the unique character of the Saguenay Fjord, the beauty of the landscapes, the great biodiversity of the area and the presence of belugas are the Marine Park's unique characteristics. Additionally, the extent of human occupation in the surrounding area makes it a place of importance in North American history.

Because of its participatory management approach, the Marine Park is a model of partnership. Dynamic process, in constant evolution, and leader are all terms that describe it well. It is a crossroads of life, a source of exchanges and wealth.

Several Canadian and Quebec government departments with jurisdiction on the Marine Park territory contribute to the achievement of its objectives through law and regulation enforcement. These are a few examples:

Government of Canada

Species at Risk Act
Canada Wildlife Act
Migratory Birds Convention Act, 1994
Canada Oceans Act
Fisheries Act
Canada Shipping Act (under review)
Navigable Waters Protection Act
Canadian Environmental Protection Act

Government of Quebec

Environment Quality Act

Petroleum Products Act

An Act respecting the conservation and development of wildlife

An Act respecting threatened or vulnerable species

Cultural Property Act

Quebec Sustainable Development Act



Photo: Marc Papié, Parks Canada

Anse-de-Roche Marina

3 *Historic elements*



Photo: William James Topley, Library and Archives Canada

Price sawmill at anse de Saint-Étienne around 1900

Age-old history

In the area of the mouth of the Saguenay River, human occupation prior to European contact extends over eight thousand years. Many archaeological sites testify to Palaeolithic hunter-fishers' interest in marine wildlife, particularly seals. In the centuries preceding Jacques Cartier's arrival, some groups fished belugas, sometimes intensively, as an analysis of the vestiges of precontact historic sites on Verte Island has shown.

The archaeological data indicates that hunter-fishers in the region were part of a network of interactions extending upstream of the St. Lawrence and the Great Lakes, towards the Atlantic coast and in the hinterland (James Bay, Abitibi). The fur trade developed in this age-old Native network starting near the end of the 16th century.

Marine wildlife, source of life and wealth

From the 17th to the 19th century, Amerindians relied heavily on marine wildlife for subsistence. From spring to fall, they

caught salmon, seabirds and seals. They traded their furs at the trading post in Tadoussac. Oils from sea mammals, used for lamps and in tanneries, were also traded. In the early 18th century, many Innu families started spending their winters on the coast in the area of Les Escoumins, where they hunted seal in canoes.

The Amerindians never hunted big whales but started meeting Basque fishermen as early as 1580. The latter were the first Europeans to work the St. Lawrence Estuary directly, but the oil industry gave rise to a number of other initiatives. Entrepreneurs and residents established beluga fisheries starting in 1701. The porpoise fishery continued until 1927 on Île aux Coudres and until 1940 in Rivière-Ouelle. Nearby dwellers also hunted belugas in canoes, an activity that lost significance after 1950 and which was banned in 1979. Now regulated, seal hunting is still part of the traditions of a few communities on the North Shore.

In the 19th century, a rise in the demand for fish (salted, canned, then fresh) led to the frantic development of commercial salmon fishing operations. It was with regard to this type of fishery that the first conflicts between the various users of the marine environment—and subsequently the first concerns for its preservation—arose.

New communities and new uses

After 1838, the human occupation was in the process of a radical transformation. The French-Canadian population increased as more and more sawmills opened their doors. The expansion of sedentary villages transformed the landscape. The forest industry, which drove this expansion, had an undeniable impact on nature and on those who for centuries had been living off the latter.

Starting in 1847, the Innus decried the decline of their hunting and fishing grounds. The idea of setting aside lands for their use was already on the agenda, and found concrete expression in the creation of the Betsiamite (1851), Mashteuiatsh (1856) and Essipit (1892) reserves. In the wake of colonization efforts, sports fishermen landed for adventure and salmon. They were wealthy and belonged to the English elite. They were the first to note the industry's impact on the wildlife and denounce the abuses of the commercial fishery. Their complaints led to legislative measures that, around 1860, marked the start of the first true preservation system for salmon habitats.

Around 1850, progress made in steam navigation and the notoriety of the Saguenay landscapes propelled the region into the era of resort tourism. Over the course of the century, thousands of summer visitors migrated every year to the estuary's tourist centres (La Malbaie, Rivière-du-Loup, Tadoussac, Cacouna). The luxurious "white boats" that brought them will forever mark the memory of riverside residents. While urbanization progressed upstream, the Saguenay region and the St. Lawrence Estuary, with their invigorating waters and air, established themselves as a place for city dwellers to unwind.

In the industrial era

In the 20th century, the Saguenay entered the industrial era. The implementation of a network of pulp and paper plants (1896-1926) and the development of the aluminum (Arvida, 1926) and hydroelectricity industry gradually led to the urbanization of the Haut-Saguenay and Lac-Saint-Jean. This development, here and in the St. Lawrence River Valley, worked its way upstream. For the estuary, it resulted in the intensification of marine trade and the modernization of the network of navigational aids.

Marine traffic and the densification of industry and populations had an impact on marine wildlife. It was presumed that this affected the St. Lawrence beluga in particular, which appeared particularly vulnerable due to its reduced population. The Committee on the Status of Endangered Wildlife in Canada designated it an "endangered species" (1983 and 1997), and eventually a "threatened species" (2004).

Along with the expansion of major industry, communities in the Marine Park coordination zone started relying increasingly on tourism for their development. Initiatives in the last few years testify to the efforts made to present the region's natural and cultural heritage.

The rise in environmental concern in the last quarter of the 20th century contributed to the revival of a tourism industry focused on nature. As a result, observation activities at sea experienced an explosive growth in the region which would become the Marine Park in the mid-1980s. Today, local and regional populations are aware that ecotourism generates significant economic benefits and that its development goes hand in hand with the protection of nature in general and marine ecosystems in particular.

4 *Current situation*



4.1 Regional context

The area of the Marine Park is bordered by seven regional county municipalities (RCM): Charlevoix-Est, Fjord-du-Saguenay, Ville de Saguenay, Haute-Côte-Nord, Kamouraska, Rivière-du-Loup and Des Basques. The social, economic and environmental dynamic of the regions surrounding the Park is founded in part on the tourism industry and the practice of outdoor activities within the framework of a quality natural environment. Logging and commercial fishing are still part of the economic landscape, although to a lesser degree than in previous times due to the decline in resources.

The Marine Park coordination zone extends from Ville de Saguenay, upstream from the Saguenay River, to Tadoussac, including all of the municipalities along the fjord. Along the north shore of the St. Lawrence River, it extends from La Malbaie, downstream, to Les Escoumins, including the land

claimed by the Essipit Innu First Nation. On the south shore, the municipalities running alongside the estuary between Kamouraska and Trois-Pistoles form part of the coordination zone, including the land claimed by the Malecite First Nation in Viger. Over the past decade, the tourism offer was extensively developed in this area in terms of both activities and services. In this way, a structured offer capable of serving the various clientele of the Marine Park was formed.

Residents of the coordination zone are the first affected by this Park because they live nearby, they work there, they benefit from it every day, and their day-to-day activities may have an impact on the quality of this environment. They practise a variety of activities such as fishing, hunting, recreational boating, wildlife observation, clamming, etc. It is important to maintain a climate of cooperation with the nearby communities so as to develop their sense of ownership of the Marine Park.

Table 1: Population of regional county municipalities and Essipit Innu First Nation

Population in 2007 ²	
Des Basques RCM	9,427
Rivière-du-Loup RCM	33,588
Kamouraska RCM	22,186
Charlevoix-Est RCM	16,385
Haute-Côte-Nord RCM	12,301
Fjord-du-Saguenay RCM	21,049
Ville de Saguenay	142,700
Essipit (in 2001) ³	255
Total	257,891

Today, the Essipit Innu First Nation takes active part in the region's social, cultural and economic life. Its members practise a number of activities, some of them considered traditional. The area of the Marine Park is included in the Essipit Innu First Nation's comprehensive Native land claim. The settlement of their claim is the subject of negotiations between the governments of Canada and Quebec and the Essipit Innu First Nation. The resulting treaty could have an impact on some of the activities practised within the borders of the Saguenay-St. Lawrence Marine Park. Once the treaty has been finalized, in the event of incompatibility or conflict between the *Marine Park Act* and the treaty, the treaty will take precedence as regards the incompatibility or conflict. Nothing in the Management Plan must be interpreted as recognition of rights under section 35 of the *Constitution Act, 1982*.

4.2 Visitors and tourist attraction

In addition to the residents of the coordination zone, numerous visitors come to the Marine Park to discover its natural and cultural resources and practise recreational activities. In 2005, overall attendance at the Marine Park and all sites within the coordination zone was 1,062,178 person-visits, including 460,070 visits within the Marine Park's maritime circuit (SOM, 2006). These data indicate that the Marine Park, the activities and the services offered in the coordination zone represent a major attraction for residents and visitors. In 2005, tourists spent 204 million dollars in the area of the co-ordination zone. The number of jobs maintained or created attributable

to tourist spending was 2,316 full-time equivalents or 4,000 seasonal jobs.

Sixty-two percent (62%) of visitors come from Quebec, 6% live elsewhere in Canada, 3% come from the United States and 29% come from other countries, mainly France. Less than half of the visitors (40%) were on their first visit to the region, indicating a significant return effect. The beauty of the landscapes and the observation of marine mammals are the main motivation of visitors.

4.3 Management structure

The Marine Park's management is governed by a Harmonization Committee created pursuant to the acts respecting the Marine Park to ensure governmental co-management. This committee is joined by a Coordinating Committee composed of representatives from various areas of activity within the coordination zone.

The participation of the public and its representatives, including that of First Nations, as well as consensus building, are essential to the Marine Park's success. Federal and provincial laws and regulations of general application contribute to the management of the activities taking place within the Park. The challenge consists in combining the efforts of the various government departments and organizations while coordinating their actions with a view to attaining the objectives of the Marine Park. Its managers play a rallying role to bring stakeholders to work jointly and optimize their conservation, education, discovery and scientific research efforts.

4.4 State of health of the Marine Park

The State of the Marine Park Report was drafted in 2007. It tells us that the state of the ecosystems of the lower estuary and Saguenay Fjord is cause for concern. As regards the lower estuary, the main reasons for this state is the input of contaminants coming from upstream, the decline in oxygen in deep waters in certain sectors and the variations observed in the abundance of marine mammals over the years. As regards the fjord, the reasons are the presence of persistent contaminants and the precariousness of demersal fish populations. Less is known about the state of the upper estuary, making it difficult

² Institut de la statistique, 2008

³ First Nations Profile, Department of Indian Affairs and Northern Development

to assess. The state of the biodiversity, coastal environment and watershed is also cause for concern.

4.5 Management principle: the environmentally sustainable use

The Marine Park is managed based on its environmentally sustainable use, which means that ecosystems must be used according to their limits in providing services and resources. The ecosystem-based approach advocates taking into account the marine resources' capacity for renewal and to protect endangered species and their habitats and reduce the impacts of human activities on the structure and function of the ecosystems.

The Marine Park has the potential to become a model for the maintenance of biodiversity and the sound management of marine resources and human activities. In order to achieve this goal, the solid commitment of all stakeholders to work together is crucial.



Photo: Parks Canada

Visitor at the Baie-Sainte-Catherine wharf



Photo: Parks Canada

Sand sculpture in Tadoussac

5 *Achievements*



Photo: Denis Dufour, Parks Canada

Petit-Saguenay Discovery Area

The governments and their regional partners have joined together in collegial support to enhance tangible protection of marine ecosystems while promoting environmentally sustainable use, respectful of the traditions and customs of local and regional communities. For ten years, considerable efforts have been made by the Canadian and Quebec governments to establish competent management teams and real-time support for local and regional communities and organizations regarding the enhancement of the Marine Park. Without the definite support of the various regional stakeholders and the enthusiasm and commitment of the staff, the Park would not be what we know it to be today: a place devoted to the protection of the marine environment, where man and nature coexist in increasing harmony.

The main achievements with regard to the various focal areas are as follows:

Legal framework

- Adoption of legislation creating the Marine Park and adoption of the first Management Plan.

- Adoption of the Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations (first regulations of its kind in Canada and Quebec), the fruit of exceptional joint action with regional authorities and the players concerned (boat operators, kayak outfitters, etc.).

Participatory management

- Creation of the Harmonization Committee.
- Creation of the Coordinating Committee and its advisory boards. Remarkably, the Coordinating Committee has met more than 60 times since its creation.
- Establishment of consensus-building committees and memorandums of agreement between the Marine Park and various government departments involved in the Marine Park (e.g., linking committee with the Department of Fisheries and Oceans (DFO), memorandums of agreement with DFO and Transport Canada, etc.).

Ecosystem management and research

- Development and adoption of the ecosystem conservation plan and gradual implementation of recommendations.

- Development of the preliminary zoning proposal, in consultation with the territory's main users.
- Monitoring of the ice fishing practised in the fjord, in partnership with DFO and local ice fishing stakeholders (fishing associations, Alcan, Société touristique du fjord, outfitters, etc.).
- Conducting natural science and social science studies (history and archaeology) in collaboration with regional establishments.
- Monitoring programs for activities and resources (e.g., sports fishing, marine observation activities, necropsy of beluga carcasses, inventory of the harbour seal, etc.).
- Inventory of submerged cultural resources (wrecks, etc.).
- Production of the first State of the Marine Park Report assessing its condition in various key areas.
- Drafting of an environmental emergency plan.

Visitor experience

- Opening of five visitor reception and orientation centres in Les Escoumins, Rivière-du-Loup, Trois-Pistoles, the borough of La Baie (Ville de Saguenay), and Saint-Fidèle (La Malbaie).
- Developments carried out on 17 discovery areas operated by partners and significant investments in sites run by Parks Canada and Parcs Québec.
- Improvement of the network of water access points through appropriate developments on sites managed by partner organizations or by Parks Canada and Parcs Québec.
- Implementation by the Marine Park and local partners of interpretation tools and discovery activities ("Le Saint-Laurent en direct" activity, panels, talks, guided hikes, etc.).
- Design and installation of various exhibits in several interpretation centres within the coordination zone.
- Publication of information brochures and annual discovery guides in collaboration with regional tourist associations.
- Training of naturalists and captains working in relation with the Marine Park.
- Establishment of the ice rescue network.
- Implementation of the public safety plan.

⁴ First president of the Marine Park coordinating committee, from the local area

Education and awareness

- Establishment of a school program in elementary schools within the coordination zone, in collaboration with local organizations.
- Creation of the Marine Park website: www.marinepark.qc.ca.
- Creation of the Rosaire-Corbin⁴ award recognizing the exceptional contributions of individuals and organizations in the areas of education, awareness and interpretation of the natural and cultural themes of the Marine Park.
- Interpretation on ferries: Trans-Saint-Laurent (Saint-Siméon—Rivière-du-Loup) and Baie-Sainte-Catherine—Tadoussac, in collaboration with the Clarke Company and the Société des traversiers du Québec.



Bird watching in Tadoussac

Photo: Parks Canada

6 *A vision for the Marine Park, an environment protected for the benefit of nearby communities and the public*



Photo: Parks Canada

Aerial view of Tadoussac

Below is an outline of the desired state of the Marine Park in 15 years. It projects the expectations of the citizens and governments of Canada and Quebec with regard to the protection and presentation of the ecosystems of this marine area. This vision will give direction to the Management Plan and support the management of the Marine Park by setting realistic and measurable objectives.

We hope that in fifteen years and with the support of surrounding populations, the Saguenay–St. Lawrence Marine Park will:

- Protect the unique marine ecosystems, fauna and flora of a section of the St. Lawrence Estuary and Saguenay Fjord;
- Use scientific research for the improved management, protection and presentation of the area's resources;
- Resort, in the absence of scientific certitude, to the precautionary principle in the management of activities

capable of modifying the biological diversity and marine environment of the estuary and fjord;

- Serve as a model of the environmentally sustainable use of renewable natural resources generating positive effects on the environment, the economy and regional jobs;
- Respect the principles of sustainable development, where conservation interventions and the use of resources are environmentally viable, socially acceptable and economically profitable;
- Significantly contribute to the preservation of the estuary and fjord, in particular by taking action to protect habitats to promote the restoration of endangered species, including the St. Lawrence beluga;
- Remain one of the best places in Canada to see marine mammals and a place of residence for the St. Lawrence beluga;

- Perpetuate a harmonious relationship between man and sea and the contribution of local and First Nations communities;
- Be recognized as a model of cooperation and participation with local and regional communities while exerting an influence extending well beyond its territorial boundaries;
- Be a place for exchanges of knowledge and experiences giving rise to the discovery, understanding, appreciation and protection of the natural and cultural heritage of the marine environment;
- Provide the framework for the safe practice of discovery and recreational activities in line with ecosystem conservation objectives;
- Still comprise striking marine and coastal landscapes;
- Become a potential candidate for designation as a UNESCO world heritage site.



Photo: François Tremblay, Sépaq

Winter activity at baie Trinité



Photo: Parks Canada

Picnic at baie Éternité

7 *The Marine Park, a model of participatory management*



Photo: Marc Pagé, Parks Canada

Marine Park co-ordinating committee

Dynamic management fostering the participation of citizens

The Marine Park is co-managed by the governments of Quebec and Canada. This co-management is exercised by the Harmonization Committee, an authoritative body created pursuant to the two Acts establishing the Marine Park (see box⁵). Also, participatory management is ensured by the Coordinating Committee composed of representatives for the nearby regions in various areas of activity.

The Coordinating Committee was mandated to monitor the Management Plan and recommend to the ministers responsible for the Saguenay-St. Lawrence Marine Park the strategies and means needed to achieve the general and specific objectives defined in this plan. It allows for consensus-building and fosters the complementarity of the actions taken by the numerous stakeholders.

In particular, the committee acts in the following areas:

- Resource and marine ecosystem protection;
- Education and interpretation;
- Visitor reception and orientation;
- Presentation of the Park and its resources;
- Marketing and promotion of the Marine Park;
- Integration in the regional environment;
- Studies and research projects associated with the Park's management;
- Park management orientations and strategies;
- Protection of Amerindian cultural resources and sites.

To ensure the representation of the municipalities, First Nations and many partners of the coordination zone, the committee is composed as follows:

- One representative from each of the three RCMs situated next to the Marine Park on the north shore, i.e., Charlevoix-Est, Fjord-du-Saguenay and Haute-Côte-Nord, and only one representative for the south shore

⁵ Equivalent provisions were made in the federal legislation.

Excerpt from the Quebec Act on the Marine Park, sections 15, 16 and 17, regarding the participatory management and more specifically the harmonization committee and the coordinating committee.

DIVISION IV HARMONIZATION COMMITTEE

Establishment, objects

15. A harmonization committee, made up of representatives of the Minister and of the federal Minister, is hereby established for the purposes of ensuring harmonization and implementing the activities and programs of the Gouvernement du Québec and the Government of Canada respecting the park, in particular with respect to the protection of ecosystems, planning, management, issuance of permits and other authorizing instruments, consultation, the programming of activities, communications and the ways in which infrastructures, installations and equipment are to be shared.

Draft regulations

The harmonization committee also is to harmonize draft regulations to be made under this Act and draft regulations to be made under the federal statute respecting the Saguenay-St. Lawrence Marine Park.

1997, c. 16, s. 15.

DIVISION V COORDINATING COMMITTEE

Establishment, object

16. A coordinating committee is hereby established to make recommendations to the Minister and to the federal Minister on the measures to be taken in order to carry out the objectives of the management plan.

1997, c. 16, s. 16.

Composition

17. The Minister, in cooperation with the federal Minister, shall determine the composition of the coordinating committee and shall ensure that the persons principally concerned are involved.

1997, c. 16, s. 17.

designated by the three RCMs concerned (Rivière-du-Loup, Les Basques and Kamouraska);

- One representative for the Essipit Innu First Nation;
- One representative for the scientific community;
- One representative for the interpretation and education aspect;
- One representative for Parks Canada;
- One representative for the Government of Quebec.

Moreover, in accordance with the constituent mirror legislation, the concerned ministers can modify the composition of the committee.

It is understood that the Coordinating Committee establishes its own terms of operation. Members work in collegiality as regards all activities and all topics of interest for the Marine Park including planning, promotion, and the schedule of activities. All recommendations from the Committee are subject to the consensus of all members present. In the event of disagreement within the committee, the issue is submitted to the ministers. An executive secretary assumes the responsibility of carrying out all secretarial work and tasks associated with the Committee's operation.

The Coordinating Committee receives various proposals regarding the conservation and enhancement of the Marine Park and recommends the latter provided they correspond to the objectives of the Management Plan. Subsequently, the Marine Park's co-managers must make a decision and follow up on the latter based on the human and financial resources available and the objectives and priorities of their organization.

Furthermore, prior to their implementation, the projects considered by the committee that have or may have an impact on First Nations will be the subject of a notice drafted by representatives of the Native community concerned.

The Coordinating Committee has set up six advisory boards (ecosystem management and research; reception, marketing and signage; developments and fixed assets; themes, education and interpretation; marine observation activities; revenue generation) bringing together close to one hundred people from the municipal, environmental, governmental and private environments, among others. These advisory boards were established to clearly define the issues associated with the Coordinating Committee's intervention framework and to assist the latter as required in the review of the various issues submitted to it or placed under its responsibility.

The harmonious integration of the Marine Park in the regional environment

Regional integration is of great importance and the Marine Park must be a part of the various local and regional land-use planning efforts. For example, the protection of coastal landscapes and waterfront lands requires the collaboration and commitment of the municipalities and local organizations, since the Marine Park is not responsible for the management of the lands surrounding it. These landscapes are intrinsic elements of the Marine Park that are important to protect.

Relations with First Nations

The Essipit Innu Band Council takes part in the Park's development, the management of activities and in the work of the Coordinating Committee and advisory boards. This community contributes significantly to the presentation of the Marine Park by testifying to the 8,000-year-old presence of Amerindians in this area.

The Essipit Innu take active part in the region's social, cultural and economic life. It is understood that the concept for the presentation of the Marine Park and its implementation must acknowledge the essential role played by this community for visitors to promote its ancestral and contemporary culture.

7.1 Co-management and citizen participation related issues

1. Consensus-building between government departments and other regional planning bodies

It is essential that government departments and agencies take active part in the development and management of the Marine Park. The latter act within the boundaries of the Marine Park and in the coordination zone and must coordinate their interventions even more effectively. Improved consensus-building will make it possible to optimize reliance on mechanisms contributing to the attainment of the Marine Park's objectives.

2. Sense of ownership of the Marine Park and participation of citizens in the coordination zone

Citizens' sense of ownership with respect to the Marine Park must be further developed. This situation was highlighted during the public consultation. Some of the participants expressed a desire to be better informed and consulted with respect to the Marine Park's management. As well, a few participants raised the issue of the fact that the Marine Park generates little in terms of economic benefits in their area but restricts their practice of certain activities.

3. Funding and the generation of revenues

In order to meet requirements regarding the conservation and presentation of this protected area, new financing methods must be established. Various options are being examined, namely access fees, business partnerships, concessions, leases, etc. The needs and concerns of regional partners in this regard are an important aspect that must be taken into account. This funding, additional to the base budget, will make up for part of the Marine Park's needs and make it possible to invest in projects developed with the participation of regional players.

4. Technical adjustment of the boundaries of the coordination zone

Since the adoption of the Management Plan in 1998, the reorganization of municipalities led to modifications in the territory of the municipalities of Saguenay and La Malbaie. The boundaries of the Marine Park's coordination zone were adjusted accordingly. As well, the coordination zone will include the municipality of Les Escoumins in its entirety.

5. The sustainability, representativeness and autonomy of the Coordinating Committee

The Coordinating Committee has been in existence since 1996 and is the core of the Marine Park's participatory management. It seeks increased involvement, independence in the management of its activities and greater representation of the areas of activity present within the area. Furthermore, it also seeks to establish means of ensuring the sustainability of its operation. Participation by its members in national and international events and the establishment of relations with other networks of marine areas allow it to extend its sphere of influence and share expertise.

6. Relations with First Nations within the coordination zone

The Marine Park's managers want to maintain the support and participation of First Nations in the participatory management process.

7.2 Objectives

- Increase the level of consensus with the government departments and agencies acting within the boundaries of the Marine Park and coordination zone.
- Foster the understanding and support of residents of the coordination zone with regard to the Marine Park's mandate to increase their sense of ownership.
- Ensure the participation of local and regional communities in conservation activities and in the Marine Park's service offer.
- Favour organizations, local communities and private businesses within the coordination zone when awarding contracts or signing research agreements.

7.3 Indicators

- Presence and degree of effectiveness of decision-making and management organizations associated with the objectives of the Marine Park and exercising recognized authority.
- Existence of a scientific research program adapted to the needs of the Marine Park, including socioeconomic aspects, among other things the needs of the visitors.
- Comprehension of the objectives of the Marine Park by the residents of the coordination zone and existence of a sense of ownership.
- Degree of involvement of local and regional organizations in the fulfilment of the Marine Park's mandate.
- Degree of involvement of the Marine Park in regional committees.

7.4 Actions

Actions to be carried out in relation to regular management (ongoing actions):

- Improve or create consensus-building and coordination mechanisms with federal and provincial government departments by signing formal agreements setting out common objectives and intervention strategies, for example the creation of interdepartmental issue tables.
- Add members from areas of activity not represented to the Coordinating Committee or to its advisory boards, as required⁶.
- Increase the financial, professional and technical assistance granted to the Coordinating Committee.
- Produce and disseminate an annual action plan regarding the monitoring of the Management Plan.
- Maintain the participation and commitment of First Nations.
- Ensure the active presence of the Marine Park in the various regional bodies responsible for planning (e.g., RCMs, regional tourist associations, etc.) and with the residents of the coordination zone through targeted communications actions.
- Raise the awareness of regional authoritative bodies regarding the importance of protecting ecosystems, landscapes and waterfront lands.
- Develop communication tools to better promote the Coordinating Committee, its mandate and its achievements and facilitate its outreach efforts.

Priority action:

- Develop and implement a strategy to generate revenues and establish business partnerships with local partners.

⁶ The Coordinating Committee may propose the addition of new members. The recommendation will be submitted to the Harmonization Committee for approval. The addition of members to advisory boards is the responsibility of the Coordinating Committee.

8 *Conservation of ecosystems and preservation of biodiversity*

St. Lawrence beluga

Photo: Robert Michaud, Parks Canada

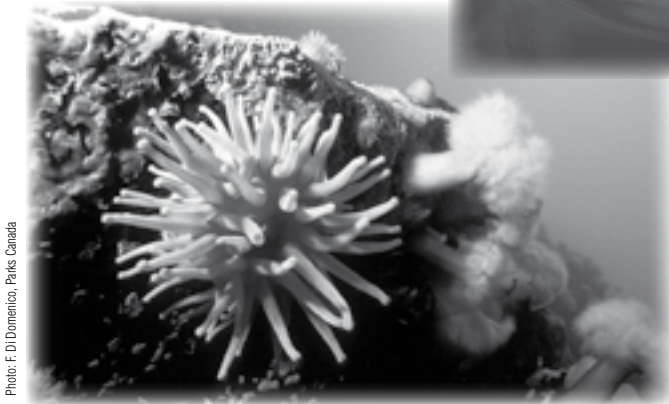
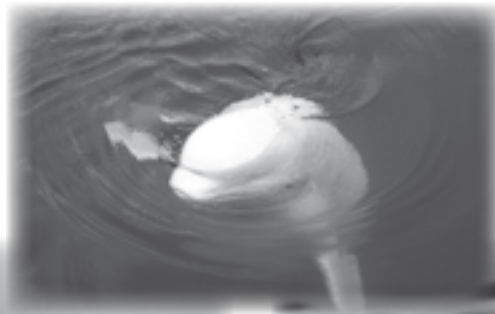


Photo: F. Di Domenico, Parks Canada

Northern Red Anemone



Photo: Denis Faucher, Parks Canada

Barrow's goldeneye

One of the major objectives of the creation of the Marine Park is the conservation of species and ecosystems. This environment is an open and shifting system in which fish, birds and marine mammals freely move about. The integrity of the ecosystems must be preserved and we have to assure the management of species and populations continues. These actions must be carried out jointly with the governments departments and regional partners concerned.

Description of the greater park ecosystem

The confluence of the St. Lawrence Estuary and the Saguenay River, where the waters of the Great Lakes, the Saguenay basin and the Atlantic Ocean meet, is recognized as an ecologically exceptional region. The oceanographic conditions that occur at the confluence of the Saguenay encourage the emergence of life and the concentration of species at the bottom of the food chain. The uneven underwater topography, the estuarine circulation and the regular upwelling of cold water make it a very distinctive region. The upwelling of cold water at the head of the Laurentian channel is the most important oceanographic process of the Marine Park. This phenomenon brings nutrients

and zooplankton to the surface and encourages the water's oxygenization. The upwellings of cold water following the rhythm of the tides somewhat act as the heart and lungs of the Marine Park.

The abundance of food in the Marine Park's ecosystems attracts many species of birds, whales and seals. As well, numerous types of algae, benthic animals and fish have been observed in the Marine Park. Together, these species form a complex food chain supporting the significant biodiversity present in the Marine Park.

Because of the hydrographic and oceanographic divisions, three ecosystems mark the boundaries of the Marine Park: the upper estuary, the lower estuary, and the Saguenay Fjord. Their physical and biological characteristics differ greatly and their boundaries are less well defined than on land due to the fluid nature of the marine environment. A mosaic of habitats nevertheless exists, marked by variations in temperature, salinity, sea floor and depth. The ecosystems are closely linked, since the water and species move from one place to another.

The Marine Park includes the shores of Charlevoix, Haute-Côte-Nord and Saguenay extending over more than 365 km. The state of health of the marine environment is intimately linked to the actions of the nearby populations and those of the watersheds.

The protected areas surrounding the Marine Park, such as the Parc national du Saguenay, wildlife habitats and the Îles de l'estuaire National Wildlife Area, also contribute to the health of the Marine Park's ecosystems. Swamps, algal banks and fish spawning grounds, all highly sensitive riparian habitats, require special protection because they contribute to the maintenance of biodiversity, one of the elements for which the Marine Park is known.

An environment subject to great stresses

Processes taking place at the local, regional or greater park ecosystem level can have a decisive impact on the Marine Park's health. Their impact can be positive, such as by causing the import of zooplankton, or negative, such as by bringing in toxic pollutants from upstream. An analysis of the state of the Marine Park was conducted in 2007, ten years after its creation, to assess these impacts.

Overall, the state of the Marine Park's ecosystems is cause for concern, but measures aiming to gradually eliminate the sources of contamination in the Great Lakes and St. Lawrence watershed have had beneficial effects. The human activity taking place in and around the Marine Park has profoundly modified and continues to modify the state of the ecosystems. Current challenges include improving the management of wastewater disposal. Human activities, such as the harvesting of resources, marine traffic and agricultural releases, represent other sources of stress on species and ecosystems.

Furthermore, when large-scale developments are anticipated in the coordination zone (e.g., methane port construction project), the Marine Park presents its concerns through the environmental assessment processes conducted by the government departments responsible.

The upper estuary

The upper estuary occupies 53% of the surface area of the Marine Park. It is characterized by strong tides, relatively well-mixed waters, wide flats and islands. The state of health of the upper estuary is undetermined at the moment. Ecologically, it is the least-known region, making it difficult to assess its status.

However, according to the data available, it is an important area for the reproduction of various animal species, including herrings, capelins, seabirds and belugas, making it—as far as these species are concerned—the Marine Park's "nursery."

The lower estuary

The lower estuary occupies 30% of the surface area of the Marine Park. Its underwater topography is profoundly marked by the Laurentian channel running alongside the north shore. It is through this channel that saltwater from the Atlantic Ocean enters the lower estuary. The head of the Laurentian channel, characterized by the upwelling of cold water, is located within the boundaries of the Marine Park. The latter encourages biological productivity and explains the abundance of marine life. The state of health of the lower estuary, considered stable, is deemed to be cause for concern, particularly due to the contaminants being brought in from upstream, the declining level of oxygen in deep waters in certain sectors, and the fluctuations observed over the years in the abundance of marine mammals migrating to the Marine Park to feed.

The Saguenay Fjord

Classified among the longest fjords in the world, the Saguenay Fjord is over 105 km long. It covers 17% of the surface area of the Marine Park. It is made up of three basins defined by sills, including one shallow (20 m) sill 7 km from the mouth of the river. When the tide comes in, the Saguenay receives a wealth of nutrients from the lower estuary, carried by the cold salty oxygen-rich water carrying plankton that breathes life into the deepest depths of the fjord. The state of health of the fjord is deemed to be of concern and deteriorating, particularly due to the presence of persistent contaminants and the precarity of demersal fish populations.

The coastal environment and watersheds

The status of the coastal environment and watershed is also cause for concern. Contaminants carried by rivers and streams accumulate in the Marine Park. Coastal erosion is also a growing problem in certain sections of the Park. Increased development along the coast may adversely affect the quality of sensitive habitats, such as marshes and spawning grounds.

Biodiversity, one of the main characteristics of the Marine Park

The diversity of the species surveyed in the Marine Park along the St. Lawrence is remarkable. The number of known species in the Marine Park seems stable, but the state of the populations of endangered species and the rising number of threats to their restoration in the Marine Park are sources of concern.

It is estimated that over 1,000 animal and plant species live in the Marine Park. This biological diversity can be explained by the presence of various ecosystems and habitats, the abundance of food, the fact that certain species are on the edge of their distribution area and the presence of species usually found in the Arctic. The biodiversity extends beyond what is immediately apparent: birds, seals, whales, etc. Several hundred species of algae, benthic and pelagic animals have been identified in the Marine Park and form the basis of a complex food chain governed by very distinctive oceanographic conditions.

Two species of marine mammals live year-round in the Marine Park: the St. Lawrence beluga (see map 2), designated a threatened species under the *Species at Risk Act* and the *Act respecting threatened or vulnerable species*, and the harbour seal. Many other species are attracted, at different times of the year, by the wealth of food available in the ecosystems, including the blue whale (see map 3), designated an endangered species under the *Species at Risk Act*, the minke whale, the fin whale, the humpback whale, the harbour porpoise, the harp seal and the grey seal.

The Marine Park offers excellent habitats for food, rest and wintering to several species of bird, including the Barrow's goldeneye (see map 3), designated a species of special concern under the *Species at Risk Act*. The estuary's islands are recognized as important reproduction areas for several species of birds, which depend directly on the waters and flats for food.

The protection of marine biodiversity is a global issue. The Marine Park is home to 13 species at risk designated by

the Committee on the Status of Endangered Wildlife in Canada or by the Ministère du Développement durable, de l'Environnement et des Parcs. In 2007, the governments of Canada and Quebec signed an agreement for the protection and restoration of species at risk. The Marine Park is of great importance for the survival of the St. Lawrence beluga and Barrow's goldeneye, since a high proportion of these populations live in the Marine Park. Over the next few years, restoration plans will be implemented for some species at risk (obligation under the *Species at Risk Act*), and these could modify the zoning or the way the Marine Park is managed.

The Marine Park is thus the meeting place for several phenomena, both ecological and oceanographical, making it a living environment for a number of species and an attraction for the humans who live and play there.

8.1 Issues regarding ecosystems and biodiversity

1. The maintenance of marine biodiversity

Maintenance of the biodiversity is of concern because any loss of species is irreversible and can lead to changes in the way the ecosystems work. There are 13 species in the Marine Park with various risk statuses. Maintenance of the biodiversity concerns five elements in particular:

- The restoration of species at risk and the protection of their habitat, including the St. Lawrence beluga, the blue whale, the Atlantic sturgeon and the Barrow's goldeneye;
- The maintenance of the biodiversity and the state of health of fish in the fjord;
- The protection of foraging species and their spawning areas and other species with key roles in the ecosystem;
- The protection of sensitive habitats, including swamps and wetlands;
- Harvesting activities (habitat modifications, hunting and fishing for species at risk, etc.).

⁷ The obligations contained in the *Species at Risk Act* are shared by three government departments, as explained in the Act: (a) the Minister responsible for the Parks Canada Agency with respect to individuals in or on federal lands administered by that Agency; (b) the Minister of Fisheries and Oceans with respect to aquatic species, other than individuals mentioned in paragraph (a); (c) the Minister of the Environment with respect to all other individuals.

2. Water pollution through wastewater discharges

Wastewater discharges are a direct form of pollution of the marine environment contributing to the degradation of the living environments of various animal and plant species. They come from the sewers of certain nearby municipalities and various types of ships and pleasure crafts. This issue concerns the municipalities and commercial and recreational navigation stakeholders as well as the federal and provincial government departments with responsibilities in these areas.

3. Protection of habitats in the Marine Park

It is essential that the Marine Park preserve the diversity of habitats and learn more about the essential habitats, particularly those of species at risk. There are a variety of habitats that contribute to maintaining the diversity of the species; they allow for the renewal of fish, bird and marine mammal populations.

4. Research and monitoring requirements

An integrated research program that meets the needs of the Marine Park must be developed with the partners concerned so as to gain a greater understanding of the ecosystems and species that make up the Marine Park, so that they can be better protected. Increasing knowledge regarding biodiversity, contamination and the various sources of stress will make it possible to establish adequate management measures.

5. Expanding the boundaries of the Marine Park

There are several ecological, biological and sociological reasons that would justify expanding the Marine Park. Many participants requested its expansion during the public consultation. This issue will accordingly need to be examined in the next few years.

8.2 Objectives

- Ensure the protection of key components of the ecosystems and of other fragile, unique or highly representative elements.
- Protect rare species and populations that in decline, threatened or vulnerable and, in particular, ensure the protection, restoration or improvement of habitats essential to the survival of species.
- Foster the development of a culture of conservation in residents of the coordination zone.

- Implement environmental monitoring mechanisms so as to learn more about and measure the evolution of the ecosystems in the Marine Park and the effectiveness of the management terms.
- Encourage the work done by research centres and arouse the interest of academia to produce theses and conduct research in areas relating to the natural and cultural heritage.

8.3 Indicators

- State of health of ecosystems in the Marine Park (upper estuary, lower estuary and Saguenay Fjord)
- State of the biodiversity
- State of the coastal environment and watersheds

8.4 Actions

Actions to be carried out in relation to routine management (ongoing actions):

- Fulfill the obligations allocated to the Marine Park under the *Species at Risk Act* and the *Act respecting threatened or vulnerable species*, including restoration plans for the beluga and the blue whale, and the identification, definition and protection of essential habitats.
- Maintain and develop monitoring programs for ecosystems and activities (e.g., monitoring of food species, oxygen levels in deep waters, marine observation activities, and recreational ice fishing), particularly in collaboration with the Group for research and education on marine mammals (GREMM).
- Set up a research program adapted to the needs of the Marine Park and implement it in partnership with the organizations concerned.
- Conduct awareness campaigns with the marine industry and businesses that offer tours in the Marine Park and working in pleasure boating to institute environmentally friendly practices.
- Pursue the implementation of the conservation plan and identify priorities for action.
- Raise the awareness of residents of the coordination zone and great watershed as well as of municipal authorities in regard to the importance of protecting coastal environments and how such action is linked to the health of the Marine Park.

- Define protection and restoration needs in the Marine Park (swamps, spawning grounds, etc.) other than those set out in the zoning plan, and implement appropriate measures.

Priority actions:

- Develop a support strategy for stakeholders to improve wastewater management by municipalities.
- Develop a strategy with the region and government departments involved so that at least one pumping-out station is installed for boats navigating within the Marine Park.
- Create a working group on the expansion of the Marine Park's boundaries to evaluate the proposals submitted during the public consultations.

Photo: Daniel Russek, Parks Canada

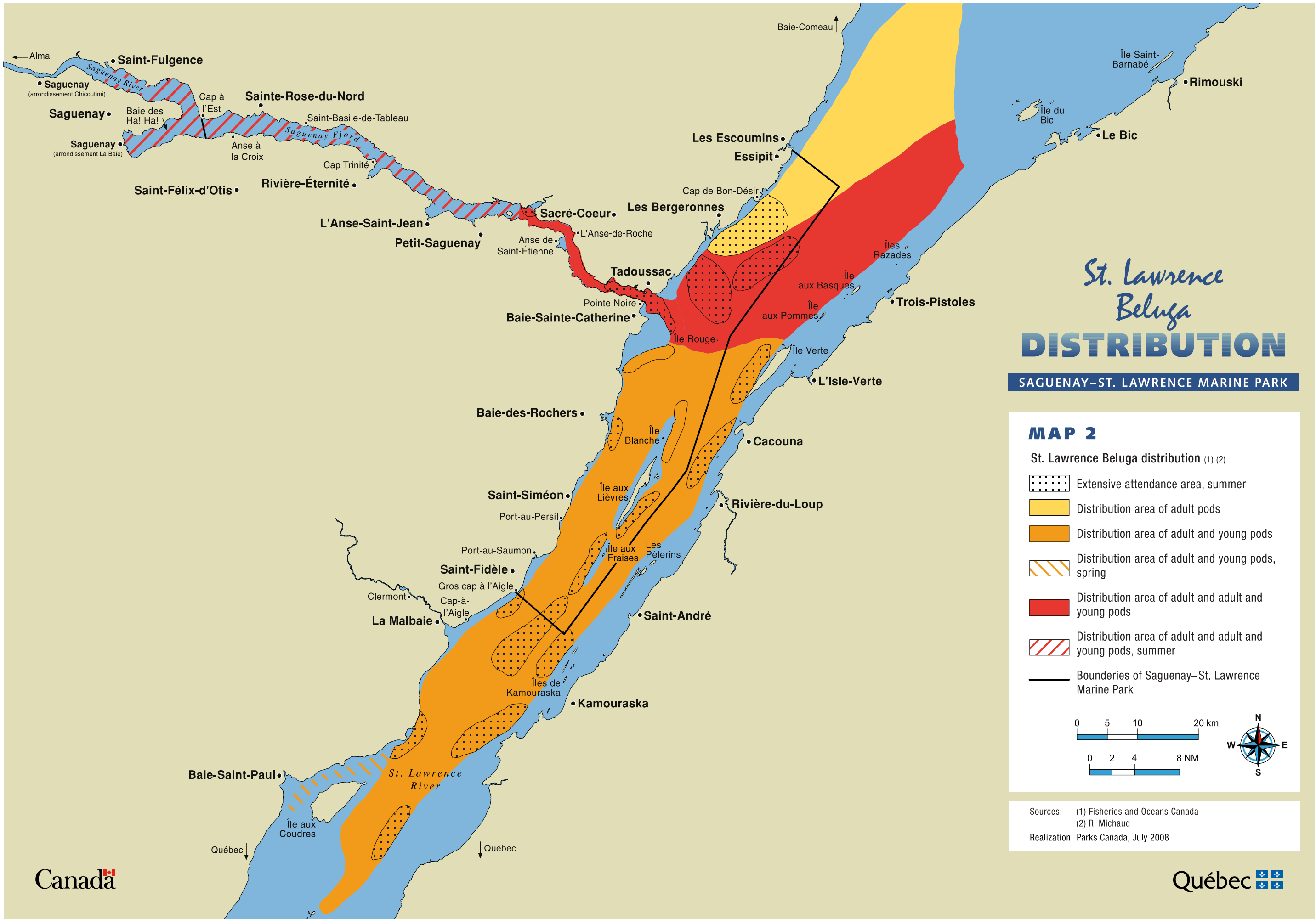


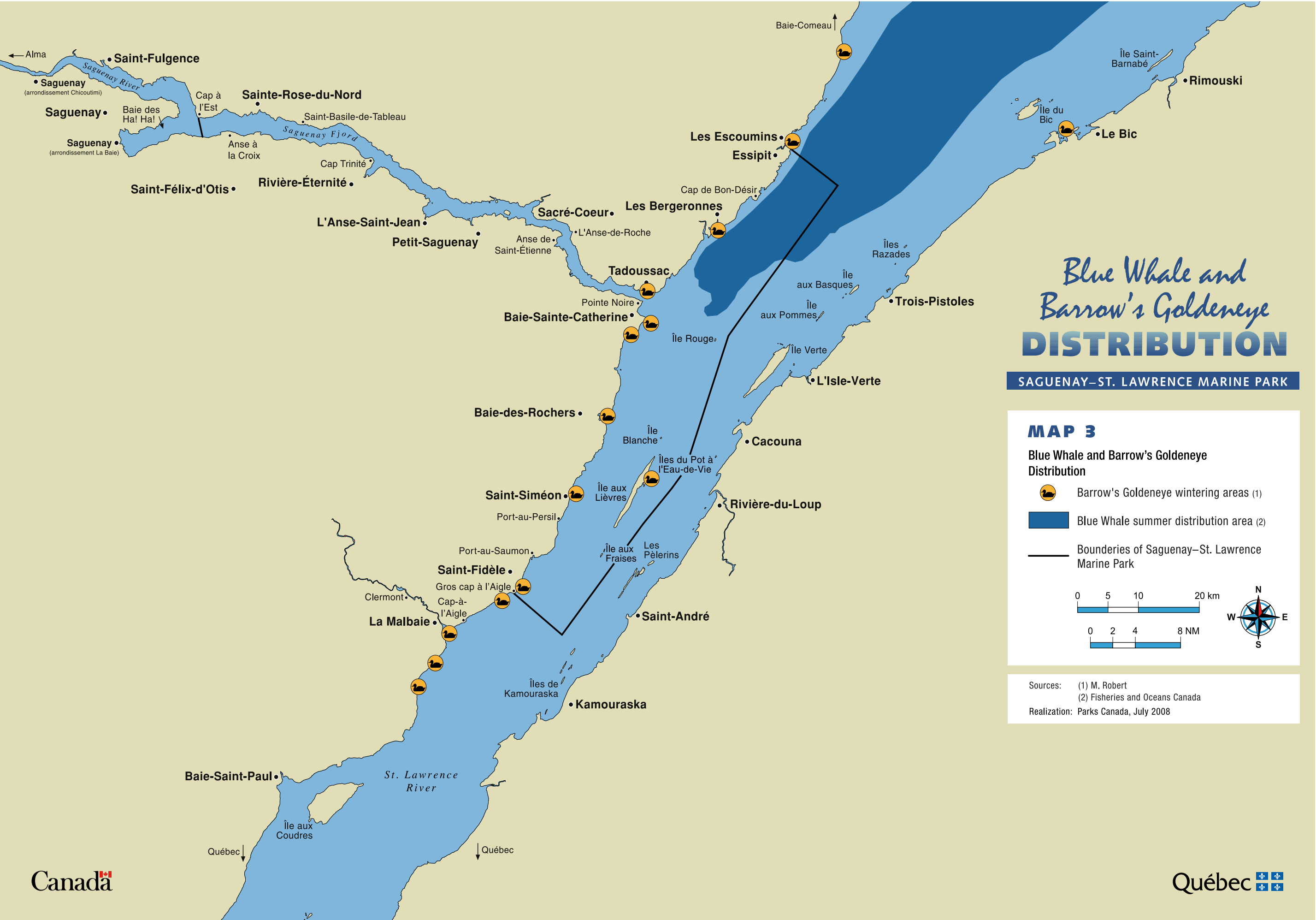
Fin Whales blows

Photo: F. Di Domenico, Parks Canada



Scuba diving at Les Escoumins





9 *Towards an environmentally sustainable use of resources*



Photo: Marc Piché

Fishing boats in Tadoussac

The Marine Park's greatest challenge is increasing the protection of marine ecosystems for conservation purposes while encouraging their environmentally sustainable use, thus leading to positive effects on the environment, the economy, and the social environment. This means that the ecosystems must be used taking into account their limits in providing services and resources, while protecting the biological diversity and maintaining the structures and functions of the ecosystems. The managers of the Marine Park must accordingly set the framework for the activities they manage so as to promote the attainment of this objective. They have the support of other government departments and agencies of Canada and Quebec acting within the scope of their jurisdictions. By serving as project managers, the managers of the Marine Park promote consensus-building with all the players involved.

Of all the activities that take place in the Marine Park, marine tours, and particularly whale watching and viewing the surrounding landscapes, are the most popular. Commercial

and pleasure boating, sea kayaking, scuba diving, hiking, land-based whale watching, fishing and hunting are other activities that take place in the Park.

Marine traffic and activities

Marine traffic includes all crossings by ships of various categories through the Marine Park: ferries, large ships, cruise ships, tour boats and pleasurecrafts. According to statistics from various sources, motorized marine traffic represents approximately 91,000 crossings or outings per year in the Marine Park, of which 42,000 are attributable to ferries (see table 2). Sea tours for whale watching and viewing the surrounding landscapes are very popular. Indeed, 274,036 people took part in such tours in the Marine Park in 2005, in addition to 132,194 cruise ship passengers. In addition to this are pleasure boating and sea kayaking, popular recreational activities in the Marine Park. They allow for a more individual appreciation and discovery of the marine environment. Accordingly, in 2005 there were 24,300 visit-days by pleasure boaters.

Table 2. Main activities not involving harvesting practised in the Marine Park and order of magnitude of inflow per year⁸

Type of activity	Inflow (number of outings or crossings per year)	Number of persons or visits
Tadoussac—Baie-Sainte-Catherine ferry	40,700 crossings (a)	1,504,584 persons (a)
Saint-Siméon—Rivière-du-Loup ferry	1,700 crossings (a)	175,841 persons (a)
Carriage of goods by sea ⁹	5,500 (b) to 6,500 (c) crossing	N/A
Cruise ships	148 crossings (d)	132,194 visits (f)
Sea tours	19,112 outings (e)	283,836 visits (h)
Pleasure boating	24,300 visit-days (f)	13,200 visits (f)
Sea kayaking	41,150 person-visit (g)	35,650 persons (g)
Scuba diving	2,600 dive-days (g)	1,301 persons (g)
Land-based observation	N/A	760,853 visits (f)

Marine traffic is more intense in the summer, the period in which most wildlife species converge on the Marine Park to feed and reproduce. The most highly frequented sector is where the Saguenay and St. Lawrence meet.

Marine traffic generates various environmental impacts, including contamination by petroleum hydrocarbons and antifouling paint, underwater noise, and collisions with marine mammals. The effects of marine traffic on the number of whales in the St. Lawrence and Saguenay are not known, in particular because several sources of stresses act simultaneously on populations. However, elsewhere around the world, the effects of marine traffic on dolphin (Bejder, 2006), killer whale (Williams *et al.*, 2006) and right whale (Kraus *et al.*, 2005) populations have been shown.

The use of the St. Lawrence Seaway and Saguenay by large ships for commercial navigation requires the coordination of all players to reduce potential risks to public safety and the environment. Accordingly, shipowners and port authorities have implemented terms of operation in order to reduce collisions and accident risks.

Hunting and fishing activities

Many activities involving the harvesting of biological resources take place in the Marine Park, including commercial fishing, recreational ice fishing, recreational summer fishing and shellfish harvesting. Seal and migratory bird hunting complete the list.

9.1 Issues of environmentally sustainable use

1. Respecting the environment and regulations in the conduct of marine activities

The protection of marine mammals and the environment during marine activities is an important issue. The implementation of the Marine Activities Regulations in 2002 was one initiative taken by the authorities responsible for the Marine Park in view of this objective. We must make sure that marine activities are carried out in consideration of the environment while providing visitors with a quality experience. Monitoring and awareness activities must also be stepped up to make sure the Regulations are respected and to enhance the quality of the visitor experience. In public consultations, several interventions dealt with subjects associated with the Regulations and their enforcement, namely licence classes, the concentration of observation activities at the mouth of the Saguenay, home ports, licence transfers, etc. These elements have been under examination since the start of the review of the Regulations launched in 2007, in collaboration with the persons and organizations concerned.

⁸ Sources: a) STQ, 2007, b) CCG, 2006, c) Corporation des pilotes du Bas-Saint-Laurent, d) adapted from Port de Québec, e) Tecsalt, 2000, f) SOM, 2007, g) Parks Canada, h) SOM, 2006

⁹ Large ships with pilot

2. Adoption and implementation of the zoning plan

The adoption and implementation of the zoning plan also constitutes a very important aspect of this Management Plan. Zoning is an important management tool, aiming to ensure the protection of ecosystems, habitats and species associated with the Marine Park and to broaden the quality of the visitor experience and the environmentally sustainable use of this protected area (see section 12 regarding this theme specifically).

3. Commercial fishing

Commercial fishing activities in the estuarial portion of the Marine Park are cause for concern given the lack of knowledge regarding the degree of harvesting, the role played by each species in the ecosystem and the renewal of the species exploited. A prudent approach must accordingly be adopted in the management of commercial fishing. The establishment of management measures specific to the Marine Park would make it possible to ensure the sustainability of the resources and the maintenance of biological diversity. In collaboration with DFO, management principles for the model fishery taking place in the Marine Park are currently being developed. No commercial harvesting is allowed in the Saguenay Fjord.

4. Recreational fishing

Recreational fishing activities are also cause for concern, as harvest rates do not necessarily take into account the capacity of the ecosystems to sustain these activities. For example, in the Saguenay Fjord, where ice fishing is very popular, it has been observed that the renewal signs of the demersal fish stocks are not very encouraging. In fact, a significant decline in demersal fish populations has been noted since 1999 in the Saguenay. A drop in ice fishing catches has been observed. Accordingly, the authorities responsible for the Marine Park and its partners need to continue to monitor the situation to learn more about the particular characteristics of these fish populations. Furthermore, appropriate management measures will have to be applied. Several research projects have been launched to gain an understanding of the situation.

5. Marine traffic

The risks caused by marine traffic and its increase are a concern for the Marine Park with regard to public safety, the environment, and Park use conflicts. The greater the increase in traffic, the greater the risk of collision between ships and marine mammals. Sectors at risk are located in particular on the seaway and in the intense traffic area at the mouth of the Saguenay. Marine traffic is also a source of pollution and disturbance for marine mammals. The Marine Park's managers want government departments, the authorities responsible, industry, and regional players to coordinate their actions to minimize risks and implement appropriate measures. This issue is already the subject of a particular focus given the socioeconomic impacts and impacts on conservation and the visitor experience.

9.2 Objectives

- Manage activities involving the harvesting of resources following the principle of environmentally sustainable use and in consideration of the ecosystems.
- Foster consensus-building through agreements that will contribute to the attainment of the Marine Park's protection and presentation objectives, particularly in the area of fishing and marine traffic.
- Acquire the knowledge needed to assess the repercussions of the conduct of activities on resources and ecosystems, as well as of the conduct of other recreational and tourist activities carried out in the Marine Park.
- Raise the awareness of residents and visitors of the various activities and their impacts on ecosystems and species.

9.3 Indicators

- Monitoring of activities not involving the harvesting of resources
- Monitoring of activities involving the harvesting of resources

9.4 Actions

Actions to be performed in relation to routine management (ongoing actions):

- Pursue and improve the monitoring of ice fishing in the Saguenay Fjord so as to determine the state of fish populations, in collaboration with the various groups and government departments concerned by this activity.

Priority actions:

- Establish a plan for marine activities so as to consolidate the actions of the Marine Park managers and their partners. This plan also deals with the issue of the management of the area where the Saguenay and St. Lawrence meet.
- Establish a working group and create a commercial fishing sub-area specific to the Marine Park in collaboration with the government departments responsible, including DFO.

- Implement, with DFO, model fishery management principles (see box).
- Create a standing issue table with the authorities responsible for managing marine traffic in the Marine Park.

Other actions:

- Work in collaboration with First Nations in the coordination zone to achieve the sustainable fishing objectives.
- Implement an integrated recreational fishing management system.
- Coordinate planning for the Marine Park with the development plans of regional county municipalities, regarding for example the protection of swamps, spawning grounds, landscapes and watersheds.

Management principles for the model fishery in the Marine Park

1. The application of an ecosystem-based approach to management aims to ensure that management decisions regarding the use of resources and the protection of habitats and species within the Marine Park take into account the dynamic and interactive nature of marine ecosystems, human interactions with the latter and their limited capacity to recover following man-caused disturbances.
2. The precautionary principle advocates prudence in all interventions that could modify the natural environment. It is particularly important to proceed in this manner when only a portion of the facts regarding ecosystems, habitats and species are known.
3. The Marine Park is part of a network of national marine conservation areas as well as of Quebec's network of parks and considers, within its Management Plan, a zoning plan defining the degree of conservation and level of use of this area. Fishing activities must respect this plan, established based on the scientific information available on the ecosystems, habitats and species. The social and economic impacts of each activity carried out in the Marine Park have also been taken into account.
4. The development of plans and the application of fishery management measures affecting the activities carried out within the boundaries of the Marine Park must take the latter's conservation objectives into account and will remain the responsibility of DFO. They will be established in consultation with the clientele exploiting marine resources, the provincial government, and Parks Canada.
5. Native communities will be able to continue their fishing activities in the Marine Park based on the agreements established and in consideration of conservation objectives for the targeted ecosystems, habitats and species.
6. Fishing activities must not target species designated under the *Canada Species at Risk Act* or listed by the Committee on the Status of Endangered Wildlife in Canada, or species designated or registered on the threatened or vulnerable species list under the Quebec *Act respecting threatened or vulnerable species*, as well as unique populations.

10 Heritage presentation: a memorable experience for residents and visitors



Photo: Parcs Canada

Presentation at Cap de Bon-Désir

The Marine Park can be discovered using a marine and land-based itinerary presenting themes established based on the natural and cultural resources present in the various places of interest. The themes link together the area's multiple potentials, thus creating a network of discovery areas for which managers must work in collaboration and in complementarity.

Throughout the year, the Marine Park offers residents and visitors a range of memorable discovery experiences that encourage them to develop a personal connection to the places, ecosystems and nearby communities. Experiences at the Marine Park also encourage the development of a culture of conservation. A visitor experience at the Marine Park includes preparation, a tour of the Park, impressions and memories that remain after the trip is over. Furthermore, during the public consultation, several participants expressed a strong interest in collaborating in the establishment of activities and services.

The Marine Park's coordination zone disposes of accommodation and service infrastructures ready to serve the various clienteles visiting the region. Access to the water is ensured through a total of 18 wharves, 9 marinas, 16 landing stages for boarding and disembarking passengers and 15 launching ramps.

Furthermore, the heritage presentation rests on the following principles:

- Consideration for the activities, experience, particularities and interests of the various communities within the coordination zone, including Native communities.
- The distribution of the themes, their relevance, their uniqueness and their complementarity.
- The take-over, by third parties, of sites, equipment and activities contributing to the presentation of the Marine Park.
- A limitation of the impacts of attendance on the marine resources, shore environments and communities within the coordination zone.

- The use and extension of the results of scientific research projects.

A well-developed and inviting network of discovery areas

In this Management Plan, the notions of Major Activity Area and Theme Site will no longer be used. Now, the concept revolves around the notion of discovery areas. The network includes 25 discovery areas and 5 visitor reception and orientation centres spread out around the Marine Park.

Discovery areas (see map 4) allow visitors to carry out educational and recreational activities and connect with the marine environment. Most of these sites have facilities and services designed for the enjoyment of residents and visitors in the surrounding area. These include, namely, museums, observation sites and interpretation centres run by Parks Canada, Parcs Québec and private and municipal organizations.

The visitor reception and orientation centres are located near the boundaries of the Marine Park. They provide visitors with information on the many Park-related activities, events, regulations and services and the different ways to have a quality visitor experience.

Close collaboration between regional, institutional and private partners and the governments makes it possible to coordinate the numerous conservation and presentation interventions carried out in the Marine Park.

Proposals for new discovery areas were formulated as part of the public consultation. These requests will be documented, based on in situ potentials and their relevance, the complementarity of their themes with existing discovery areas and the level of regional commitment. The priority will, however, be granted to the completion of existing sites.

Cultural resources and landscape

The Marine Park and its coordination zone form a living, inhabited environment with a rich cultural heritage. The richness of the marine environment explains the presence of Amerindians from the prehistoric era and the interest of the first Europeans. Numerous archaeological sites have been identified, in particular at Cap de Bon-Désir, where 8,000-year-

old artefacts have been discovered. In fact, the long history of human occupation in the territory surrounding the Marine Park and the decisive impact of the clash of the Amerindian and European civilizations make it a place of importance in North American history.

Given the strategic importance of the area, many ships have sailed its waterways. The difficult sailing conditions caused a number of shipwrecks, which explains the presence of the lighthouses that are now part of the coastal and marine landscape.

Studies conducted in the last few years uncovered a series of cultural components submerged within the boundaries of the Marine Park and representative of the activities that have taken place in this sector over the years. Among them are shipwrecks mainly dating back to the 19th century, logging sites of which certain elements (wharves, locks, support structures) are now submerged, and old wharves associated with navigation on the various bodies of water.

Summary description of the discovery areas

This section provides a brief description of the discovery areas and the presentation focus areas and themes to date associated with the latter. Detailed information on these strategic areas and themes will be presented in the future interpretation and education plan.

Saguenay Fjord Sector

1. Saint-Fulgence: A unique spit and marsh in the fjord

The Saint-Fulgence spit is a unique fluvial feature in the upper reaches of the Saguenay Fjord. This sector includes a brackish marsh where numerous bird species have found a hospitable habitat. The observation trails give visitors the opportunity to watch the birds and discover the site, which is now protected thanks to the Centre d'interprétation des battures et de réhabilitation des oiseaux (CIBRO).

2. Saguenay: A city and fjord where harmony is possible

The borough of La Baie is known as the tourist and marine centre of the City of Saguenay. The municipal wharf is where the Marine Park visitor reception and orientation centre for this upstream area of the Marine Park will be located. It is also where the terminal for international cruises will be built.

Land and Water DISCOVERY NETWORK

SAGUENAY-ST. LAWRENCE MARINE PARK



The facilities at Parc Mars and Musée du Fjord enhance the visitors' understanding of the present-day relationship between urban populations and the marine environment, a theme that is addressed at the museum. The La Baie marina is an important location for the region's marine activities and for the Marine Park's maritime network.

3. *L'Anse-à-la-Croix:* *Changes in a riverside settlement over the centuries*

During a guided tour of the Site de la Nouvelle-France, visitors discover recreations of a Huron village, the Ferme des Cent Associés, the upper and lower town of 17th century Québec City and the beginnings of colonization. The settlement at Anse-à-la-Croix over the centuries and the importance of the fjord for the people who lived and worked there are themes that will be added to the present tour. The presentation of various activities that took place on the site (Amerindian settlement, sawmills, wharves, etc.) will enhance the present service offer. A landing stage provides access for boats.

4. *Sainte-Rose-du-Nord:* *A picturesque town on the Saguenay Fjord*

This town's reputation as a picturesque site extends well beyond the region. The tranquillity and beauty of its valley landscape over the Saguenay makes it a popular location and short hikes can be taken to spectacular lookouts around the area. Its wharf and facilities contribute to the Marine Park's service offer, especially for cruises on the fjord and kayaking.

5. *Baie Éternité:* *At the heart of the Saguenay Fjord*

The Baie-Éternité sector is a spectacular natural setting surrounded by breathtaking cliffs over 400 metres high. Parc national du Saguenay offers services and facilities for public enjoyment. Through the exhibit at the discovery and service centre and the various trails, visitors can learn more about the fjord's geological and biological features. In the winter, Baie-Éternité offers ice fishing in a protected environment. A landing stage and mooring buoys are also provided for visitor use.

6. *L'Anse-Saint-Jean:* *A marine stop-over in the middle of the fjord*

This town is a popular tourist destination because of the quality of its environment and the diversity of services it offers.

Long hiking trails from Parc national du Saguenay crisscross the area. A coastal trail linking the marina and the municipal campground is planned for the future. A road leads to Anse de Tabatière where a lookout offers a magnificent view over the fjord. Ice fishing is a popular winter activity. Located at the mid-point of the fjord, the town attracts boating and kayaking enthusiasts and visitors going on marine tours who use the facilities at the marine complex.

7. *Baie Sainte-Marguerite:* *A critical habitat for the beluga*

An important sector of Parc national du Saguenay, the delta of the Sainte-Marguerite River is in a constant state of renewal because of the rising and ebbing tides. The mouth of Baie Sainte-Marguerite is a regular gathering place for belugas in the summer. There is a discovery and service centre devoted to the beluga, a campground, a picnic area, a lookout, hiking trails and a footbridge linking the two sides of the Sainte-Marguerite River. Interpretation panels recall the existence of a sawmill operated by the Price Brothers company from 1885 to 1920.

8. *Petit-Saguenay:* *Extending far into the fjord*

From the long wharf at Petit-Saguenay, visitors can see far down the fjord in both directions. The themes presented here are the history of the town and the resources found in the region of the fjord, including salmon fishing and logging. Visitors can walk along a trail that links the town to L'Anse-Saint-Jean, enjoying numerous vistas over the fjord along the way. A landing stage provides access to small boats.

9. *L'Anse-de-Roche:* *A fjord that "goes with the flow"*

Here visitors get the chance to enjoy a distinctive panorama over the Saguenay Fjord and experience the powerful elements of nature at work. On the L'Anse-de-Roche wharf, interpretation panels present certain features of the fjord's marine environment and hazardous navigation corridor. A marina and boat launch ramp are available for pleasure boaters and kayakers.

10. *L'Anse-Saint-Étienne:* *A town, a sawmill*

Built on the site of a former town where a Price Company sawmill was built in 1900, L'Anse-Saint-Étienne has interesting geomorphological and historical features. Hiking trails provide access to viewpoints over the fjord.

Confluence sector, strategic site of the Marine Park

Located at the confluence of the Saguenay and the St. Lawrence Estuary, Tadoussac and Baie-Sainte-Catherine are closely connected by the natural environment and a common history. Their wharves are the departure points for most of the Marine Park's boat tours.

11. Tadoussac: *A crossroads*

Once a meeting place for Amerindian nations and an important crossroads for European and Amerindian civilizations, Tadoussac has become an international tourist destination. Its bay is a member of The Most Beautiful Bays in the World. Tourist facilities at Tadoussac give visitors the chance to discover the various facets of the town, including the marine mammal interpretation centre, trails, Maison des Dunes, the Pierre-Chauvin trading post and a heritage tour. The area around the wharf offers all the services and facilities to meet the needs of the boating clientele.

12. Baie-Sainte-Catherine: *A spectacular view over the confluence*

The Baie-Sainte-Catherine coastline offers a multitude of opportunities for visitors to observe the oceanographic features and marine birds typical of the confluence. Several sites offer spectacular views from various viewpoints: the Pointe-Noire Interpretation and Observation Centre, the wharf where marine tours depart, the beach, the tourist rest area and Pointe-aux-Alouettes. This point, where the French-Amerindian Alliance took place in 1603, is an interesting historical site. Place de l'Alliance, in the heart of the village, commemorates this event. An addition to the present service offer could be a heritage tour featuring the cultural and biophysical characteristics that have shaped the use and history of the region.

Upper estuary sector

13. La Malbaie: *Western gateway to the Park*

At Cap-à-l'Aigle, the marine gateway upriver from the Marine Park, the marina is one of the few safe havens for pleasure boaters between Québec City and Tadoussac. The wharf offers a viewpoint over Gros Cap à l'Aigle, at the Marine Park's southwestern boundary.

It is via highway 138 at Saint-Fidèle that the majority of visitors arrive and get their first glimpse of the Marine Park. Its visitor reception and orientation centre directs them to the Marine Park's attractions and points of interest.

14. Port-au-Saumon: *The upper estuary of the St. Lawrence: a world to discover*

The Centre écologique de Port-au-Saumon has been working in the field of environmental education and awareness for nearly 50 years. Interpretation of the upper estuary is presented there through programs adapted to the various clienteles that come to visit or stay. Port-au-Saumon is located in an important area of the Charlevoix World Biosphere Reserve.

15, 16 et 17. Saint-Siméon: *Linking land and sea*

Located at the intersection of highway 170, highway 138 and the ferry crossing to Rivière-du-Loup, Saint-Siméon has a range of reception, accommodation and restaurant facilities. The beach and campgrounds are very popular with tourists visiting the Charlevoix coast. The ferry and marine terminal have good potential for highlighting certain features peculiar to the Marine Park. Marine tours are available in the area around the wharf.

Baie-des-Rochers, a beautiful natural setting and sole access to the coast in this area, is one of the few places in the estuary where you can see a complete receding of the waters at low tide. It is a wintering ground for Barrow's goldeneye, a species designated as of concern under the Species at Risk Act. A veritable window over the upper estuary for the local population and nature lovers, the site is a municipal park with hiking, picnic and lookout facilities.

Port-au-Persil, a haven of tranquility, is a picturesque town that has inspired many an artist. The cachet of Port-au-Persil is a source of pride for local residents. The nature of the town and the tranquility it radiates make it important to protect the integrity of its architecture and landscape. Facilities of a simple and discreet design will be built in partnership with the municipality to welcome visitors driving along the scenic route.

Lower estuary sector

18 et 19. Les Bergeronnes: *An age-old relationship between man and the sea*

Les Bergeronnes has numerous prehistoric sites where archaeological excavations have shown the presence of humans dating back 8,000 years. At the Centre Archéo-Topo, mandated to present the archaeological value of the North Shore, visitors discover the age-old relationship between humans and the sea. The municipality also provides lodging, picnic, camping and sea kayaking facilities. The mouth of the Grandes and Petites Bergeronnes rivers features marshes. Numerous marine tours leave from the Les Bergeronnes marina.

At the Cap-de-Bon-Désir Interpretation and Observation Centre run by Parks Canada, visitor reception and interpretation services are provided in collaboration with partners in the community. At the centre, visitors will discover the history of navigation on the St. Lawrence and observe marine mammals from the shore. Guided hikes along the shoreline focus on the interaction between the land and the sea. A request was made to the Historic Sites and Monuments Board of Canada to grant this place national historic site status due to its cultural resources demonstrating the site's importance to understanding the livelihood of the Amerindian populations that lived there, and more specifically the importance of seals for their subsistence.

The Sentier polyvalent du club Morillon is a trail that runs along the shoreline between Les Bergeronnes and Essipit, with interpretation panels featuring endangered species in the Marine Park.

20. Les Escoumins et Essipit: *It's all about the lower estuary*

The towns of Les Escoumins and Essipit face the lower estuary, the region in the Marine Park where the most distinctive oceanographic conditions are found. The Marine Environment Discovery Centre operated in partnership with Parks Canada and local organizations, features the different faces of the estuary, both under and above water. This area is well known for scuba diving, providing quality underwater landscapes and full diving services, as well as the observation of marine mammals from the shore.

The Innu people of Essipit take part in the Marine Park's service offer by presenting the various aspects of their past

and present-day culture. Les Escoumins is the gateway to the Marine Park for visitors coming from the North Shore tourist region and a visitor reception and orientation centre is located in the offices of the Corporation de développement touristique des Escoumins.

Other marine services provided are a wharf for the ferry to Trois-Pistoles and a wharf for the St. Lawrence pilots that is also used as a landing stage for marine tour boats.

South shore sector

21. Rivière-du-Loup: *An archipelago, a living and historical environment*

Rivière-du-Loup is the main access point to the Marine Park from the south shore. The La Pointe sector is the proposed site for a major project to consolidate and modernize the port facilities serving the ferry between Rivière-du-Loup and Saint-Siméon. Various activities take place in the area around the wharf, including cruises to islands in the estuary and the observation of marine mammals. A Marine Park visitor reception and orientation centre is located in Rivière-du-Loup. The marina provides services for pleasure boaters and is one of the stops along the Route bleue, a marine discovery trail for smaller watercraft.

22. L'île aux Lièvres et les îles du Pot à l'Eau-de-Vie:

Protected islands

Located within the boundaries of the Marine Park, Île aux Lièvres and Îles du Pot à l'Eau-de-Vie offer an exceptional experience for discovering an island setting in the upper estuary. Owned by the Société Duvetnor, wildlife habitats are protected on the islands and its lighthouse, proud symbol of Quebec's marine heritage, has been restored.

23. La baie de L'Isle-Verte: *Salt marshes*

This bay is home to one of the last great *Spartina* marshes of the St. Lawrence Estuary. A National Wildlife Reserve managed by Environment Canada protects this natural area featuring diverse plant and bird life. In addition, the Ramsar Convention has designated the marsh a wetland of international importance. Visitors have access to an interpretation centre and can explore the marsh and intertidal zone. They can complete their visit to the area with a trip to Île Verte where the oldest lighthouse (1809) on the St. Lawrence, designated a national historic site of Canada, stands.

24. Trois-Pistoles: *The Basque adventure in North America*

At Trois-Pistoles, the Parc de l'aventure basque en Amérique presents the history and culture of the Basques who came to hunt whales in the St. Lawrence in the 16th century. The town, another south shore gateway to the Marine Park, has a visitor reception and orientation centre that directs visitors to the attractions of the Marine Park found in this area. Trois-Pistoles has a ferry service to Les Escoumins and a marina.

25. L'Île aux Basques: *A national historic site in the St. Lawrence Estuary*

Île-aux-Basques National Historic Site of Canada commemorates the presence of Basques who came to hunt whales in the early 17th century. On the site are the remains of ovens used to melt whale blubber. The island is home to colonies of great blue herons and numerous species of birds. The Société Provancher d'histoire naturelle du Canada owns the island and packages are offered to visitors.

10.1 Issues regarding visitor experiences**1. Improvement of the Marine Park's visibility at discovery areas and water access points**

Signposting for facilities in the coordination zone is not sufficient to allow visitors and users to be aware that they are at a discovery area providing access to the Marine Park.

2. Completion of the network of discovery areas and accreditation of partners

The issue consists in completing existing discovery areas as a priority. The network's completion will also require the establishment of partnerships with the authorities responsible for the sites. Since the Marine Park's creation, facilities have been built at 17 discovery areas. The establishment of a functional network associating the partner organizations responsible for running these sites is the cornerstone for ensuring the Marine Park's presentation. Completion of the network will also require that agreements be established (accreditation of partners) outlining common objectives and reciprocal commitments for each site.

3. Improvements to and diversification of the experiences offered to residents and visitors

The Marine Park would like to enhance the experiences available to visitors and residents by diversifying activities and offering high-quality services. For example, the themes presented during marine tours should better reflect the richness and diversity of the marine environment. As well, greater knowledge of the expectations and needs of visitors and Park users will make it easier to improve the service offer.

4. The protection of cultural resources and landscapes

The issue consists in protecting cultural resources and landscapes while encouraging their discovery and understanding by residents and visitors. The protection of marine and underwater landscapes also constitutes a concern whose solution will require the participation of a number of stakeholders. For example, the islands and lighthouses are important elements contributing to the visual quality of the marine landscape, making their protection essential.

10.2 Objectives

- Increase awareness and understanding of the Marine Park's natural processes and phenomena to give rise to a culture of conservation and participation in the protection of the environment.
- Integrate the results of scientific research projects in interpretation programs.
- Describe and explain the nature of the ancient links between man and the marine environment to increase understanding of man's use of the area.
- Foster partnerships through agreements that will contribute to the attainment of the Marine Park's protection and presentation objectives.
- Foster a sense of security in visitors.
- Foster the ecotourism approach with regard to the activities and services available in the Marine Park.

10.3 Indicators

- Resident and visitor motivators
- Range of experiences offered to residents and visitors
- Safe, quality services that meet the needs of residents and visitors
- Sense of ownership of residents and visitors with respect to the Marine Park

10.4 Actions

Actions to be performed in relation to routine management (ongoing actions):

- Encourage marine activities respectful of the environment, ecosystems and regulations.
- Finalize the land and marine signposting plan in collaboration with the Ministère des Transports du Québec, among others.
- Improve the educational programs.
- Encourage the training of regional tourism partners: reception officers, captains, naturalists, international cruise managers, etc.
- Collaborate with regional authorities for the protection of marine and underwater landscapes.
- Regularly update the public safety plan.
- Update and implement the communications plan.

- Implement a theme presenting the culture and contribution of the Native communities.
- Conduct socioeconomic studies to learn more about the perceptions, needs and expectations of residents and visitors.
- Complete, as a priority and jointly with local partners, existing discovery areas.
- Protect and present the Marine Park's cultural components.

Priority actions:

- Produce and implement an interpretation and education plan¹⁰.
- Produce a Marine Park partner accreditation policy and proceed with the signing of designation agreements.

Other actions:

- Improve the network of existing water access points in collaboration with regional players, in particular with the addition of signs indicating the presence of the Marine Park.
- Document and analyze proposals for new discovery areas.

¹⁰ The interpretation and education plan will target the Marine Park's visitors and external clientele.



Photo: Parc Canada

Signage

11 *Public education and awareness*



Photo: Lise Gagnon, GREMM

Centre d'interprétation des mammifères marins

Developing the public's knowledge and appreciation of the Marine Park requires effective communications with local and regional communities, and with outside people who do not visit the Marine Park. The goal is to incite public support and participation in the protection and presentation of the Marine Park and marine protected areas in general.

Education and awareness involves outreach actions intended for people not visiting the Marine Park. These people can discover the Marine Park through educational and awareness programs, such as school programs, outreach programs (exhibits, conferences, etc.) and websites.

It is important to increase interaction with the general population to gain its support for the Marine Park's mission. In fact, during the public consultation, participants expressed their interest in collaborating in education and awareness efforts.

11.1 Issues regarding education and awareness

1. Increasing education and awareness efforts

External clientele's knowledge and appreciation of the Marine Park are currently deficient in certain respects. The implementation of educational and awareness programs will encourage the emergence of support networks for the Marine Park and its conservation objectives at the regional, national and international levels.

2. The notoriety and positioning of the Marine Park

The Marine Park must increase its notoriety and make itself known by the residents of the coordination zone and the general population. The notoriety of the Marine Park has increased since its creation; however, additional communications and promotional efforts are required to raise awareness of the Park and its objectives on a larger scale.

11.2 Objectives

- Increase the awareness of the Marine Park.
- Foster understanding of the Marine Park's objectives and develop a culture of conservation in residents of the coordination zone and external clientele.
- Target a higher number of young people through school and other programs.
- Provide up-to-date information on the Marine Park through the website or other means to local and regional communities, students, and everyone interested in the Marine Park.

11.3 Indicators

- Scope of educational and awareness actions
- Sense of ownership and culture of conservation in residents of the coordination zone and general public
- Number of students taking part in school programs

11.4 Actions

Actions to be performed in relation to routine management (ongoing actions):

- Implement school programs with partners.
- Implement the educational strategy for species at risk.
- Implement, in partnership, Marine Park showcases in the municipalities in the coordination zone and in metropolitan areas.
- Conduct or use socioeconomic studies to gain a better understanding of the needs, expectations and perceptions of the various external clientele.

Priority actions:

- Update and implement the communications plan (website, newsletters, relations with the regional community and the media, etc.).
- Produce and implement an interpretation and education plan targeting external clientele.



Photo: Jean-Louis Provencher, Parks Canada

Saint-Joseph school students cleaning Tadoussac beach

12 Zoning plan



Photo: Jean-François Bergeron, Parks Canada

Kayaking on the fjord

Zoning is a management tool designed to protect the ecosystems, habitats and species associated with the Marine Park, and to promote the visitor experience and security and the ecologically sustainable use of this protected area¹¹.

Marine Park legislation stipulates four types of zones:

- Zone I : Comprehensive preservation zone
- Zone II : Specific protection zone
- Zone III : General protection zone
- Zone IV : General use zone

For each of these zones, the degree of protection required is determined taking into account conservation priorities, the environment's support capacity and its use.

Method

Zoning of the Marine Park was subject to a consultation process that included targeted groups and the government departments involved. This consultation took place in two stages. A first

zoning proposal was presented and was the subject of discussions in the form of multisectoral workshops in June 2005. From this consultation, a new proposal was developed, presented and discussed in special meetings with representatives of the government departments involved and targeted groups. Finally, this proposal was presented at the Management Plan Review public consultation and adjustments were made as a result of the comments received.

This zoning was established taking into account legislation and regulations governing the Marine Park, the scientific data available and the activities practised within the Park by residents of the coordination zone and visitors.

Ecological classification and geographical subdivisions of the Marine Park area

To establish a zoning that is easily identifiable by users, the natural division of the three major ecosystems was used: the upper estuary, the lower estuary and the Saguenay Fjord.

¹¹ For full details regarding the zoning plan, see the complete document titled Saguenay–St. Lawrence Marine Park Zoning Plan.

The Marine Park was also subdivided into 16 geographical sectors sometimes made up of a number of subsectors, based on the location of particular ecosystems or habitats and taking into account the main areas of activity. The boundaries of each of the sectors and subsectors were established based on reference points.

The six types of activities

An analysis of the activities practised in the area of the Marine Park identified 6 types of activities:

1. Activities not in compliance with the Marine Park's mandate
2. Scientific research activities
3. Educational, recreational and commercial activities not involving the harvesting of natural resources
4. Educational or recreational activities involving the harvesting of natural resources
5. Commercial activities involving the harvesting of renewable natural resources
6. Essential public services

All activities can have a more or less significant impact on the composition, structure and functions of the marine ecosystems. However, various types of activities and their management entail a different risk regarding their potential impact on the marine environment due to their intensity and socioeconomic aspects. The identification of these types of activities plays an important role in the definition of protection, education and use objectives for each zone.

Activities not in compliance with the Marine Park's mandate and eventual bans

All forms of prospecting, any utilization, harnessing or harvesting of resources for mining or energy production purposes and the laying of oil or gas pipelines or power lines are prohibited within the confines of the Park¹².

As well, table 3 presents the activities not in compliance with the Marine Park's mandate. These activities will be banned through the adoption of regulations.

Table 3. Activities in the Saguenay–St. Lawrence Marine Park that will eventually be banned

Building of artificial reefs
Jetskiing* and hovercraft
Towing sports: waterskiing, lifting parachutes and other related sports
Commercial services relating to migratory bird hunting (guides, outfitters, etc.)
Dredging operations other than periodic maintenance dredging and any other activity that could lead to the re-suspension of contaminated sediments
Installation of new wharves
Immersion of solid wastes in the ocean
Rip rap stabilization work unrelated to essential public infrastructures
Activities that lead to the destruction and alteration of marshes and green intertidal zones
Motorized vehicles within the intertidal zones
Aquaculture

* A water-jet driven vessel with an enclosed hull and no cockpit that is designed to be used by one or more persons who are straddling, sitting, standing or kneeling (vessel operation restriction regulations of Canada Shipping Act 2001).

12.1 Objectives of each zone

Protection, education and use objectives were established for each type of zone. A Zone I designation ensures that an area is to be completely preserved with a minimum of activity. Zones II, III and IV gradually allow activities that are compatible with the degree of protection designated for the Park's ecosystems and habitats while excluding activities banned by Marine Park legislation and those that are not in compliance with its mandate.

ZONE I: COMPREHENSIVE PRESERVATION

Protection objective

The aim of this zone is to ensure the strict protection of rare, sensitive or vulnerable ecosystems, habitats, communities or species, and cultural resources deemed significant.

¹² Saguenay-St. Lawrence Marine Park Act, R.S.Q. chapter P-8.1, s.21

Education objective

The aim of this zone is to educate Park users and the public as to the importance of protecting exceptional ecosystems, habitats, communities and species through outreach and various off-site means of interpretation.

Park use objective

The aim of this zone is to promote an experience using virtual tools and interpretation activities offered outside of the comprehensive preservation zone and off-site. Only well-supervised scientific research activities can be authorized. This zone may also be used to resolve Park use conflicts through strict protection of a section of the marine environment located off land observation sites to ensure that the sites remain undisturbed and offer a quality visitor experience.

ZONE II: SPECIFIC PROTECTION

Protection objective

The aim of this zone is to ensure the protection of the representative marine ecosystems of the Saguenay Fjord and St. Lawrence Estuary, as well as the highly representative, rare or vulnerable habitats and species so as to maintain biodiversity. This zone can also serve as a buffer zone on the periphery of Zone I areas to increase their protection.

Education objective

This zone provides Park users and visitors with opportunities to enjoy and discover ecosystems, habitats, communities or representative, rare or vulnerable species by emphasizing their importance for the ecosystem through educational activities and outreach.

Park use objective

This zone promotes opportunities for Park users and visitors to enjoy and discover a relatively undisturbed marine environment. Pleasure boating, marine tours, cruises, scuba diving and commercial navigation by large ships are permitted. However, no harvesting of natural resources is permitted, except in specific cases. Scientific research is fostered and overseen in this zone.

ZONE III: GENERAL PROTECTION

Protection objective

This zone ensures the general protection of marine ecosystems, their structure and their functions as well as of habitats and species that tolerate harvesting.

Education objective

This zone promotes opportunities for Park users and visitors to learn about biodiversity, environmentally sustainable uses of the Park, and means of protecting ecosystems, habitats, and species through a wide range of interpretation activities.

Park use objective

This zone promotes a range of educational and recreational activities that may or may not involve the harvesting of natural resources. Pleasure boating, marine tours, cruises, scuba diving and commercial navigation by large ships are permitted. Recreational hunting and fishing activities are also permitted. Scientific research is fostered and overseen in this zone.

ZONE IV: GENERAL USE

Protection objective

This zone ensures that the structures and functions of marine ecosystems are maintained. It ensures the protection of species, habitats and ecosystems of less concern capable of tolerating harvesting.

Education objective

This zone encourages the acquisition of knowledge and the development of sound management practices aimed at the environmentally sustainable use of marine ecosystems. It educates Park users and the general public as to the importance of ensuring that marine ecosystems are used in an environmentally sustainable way in the recreational and commercial use of natural resources.

Park use objective

This zone promotes access, discovery and the practice of activities within the context of environmentally sustainable use contributing to the social, cultural and economic wellbeing of local and regional communities. Pleasure boating, marine tours, cruises, scuba diving and commercial navigation by large ships are permitted. It also promotes recreational hunting and fishing activities. This zone allows for commercial hunting

and fishing activities in compliance with the management principles and terms for the model fishery taking place in the Marine Park. Scientific research is fostered and overseen in this zone.

12.2 General description of the zoning

(see map 5 and 6)

Zone I – comprehensive protection

Zone I areas cover 34 km² (3%) of the total Park area. The latter are located at Cap de la Tête au Chien, around the National Wildlife Area islands of Îles-de-l'estuaire, at the western end of Île aux Lièvres, on the banks of Île Rouge, in front of the Cap de Bon-Désir, at Pointe Noire, at Pointe de l'Islet, along the submarine cliff of Îlet aux Alouettes, at the mouth of Bay Sainte-Marguerite, at the haul-outs of Cap Fraternité and Cap Éternité.

Zone II – specific protection

Zone II areas cover 524 km² (42%) of the total Park area. They correspond to representative portions of each of the Marine Park's three ecosystems. In the upper estuary, there are zone II areas in the sectors of Gros Cap-à-l'Aigle, from Pointe aux Quilles to Cap-aux-Corbeaux, around the Aux Alouettes strand and around the islands of the upper estuary. In the lower estuary, zone II areas are located in the sector of the head of the Laurentian channel. In the fjord, zone II areas are located in the sectors of the mouth of the Saguenay, in a section facing Baie Sainte-Marguerite and in the section across from the two seal haul-outs at Cap Fraternité and Cap Éternité.

Zone III – general protection

Zone III areas cover 243 km² (19%) of the total Park area. They protect part of the riparian environment of the upper estuary ecosystems, and most of the riparian environment of the lower estuary and Saguenay Fjord.

Zone IV – general use

Zone IV areas cover 445 km² (36%) of the total Park area and are concentrated in the ecosystems of the upper and lower estuaries.

Submerged cultural resources

For the most part, the most sensitive wreck sites requiring increased protection are located in zone I and II areas, while

submerged vestiges of logging sites or old wharves are mainly located in zone II and III areas. A basic protection is accordingly ensured for these submerged cultural resources.

Activities permitted based on zoning

Table 4 presents the list of activities permitted in the Marine Park. All activities not appearing in this list or in the list of exceptions (see Table 5) are prohibited. All new activities must be evaluated by Marine Park management. If the evaluation is positive, the activity will be temporarily added to this list, and then definitively integrated in the review of the zoning by-law.

Spatial application of zoning

The zoning applies uniformly to three components of the Marine Park area: the surface of seawaters, the water column and the sea floor. One exception to this rule is used in sector 10 to allow seal hunting in winter.

The Marine Activities Regulations protect the Marine Park's air space by prohibiting all take-offs and water landings and by limiting aircraft altitude to a minimum of 607 metres (2,000 feet).

Temporal application of zoning

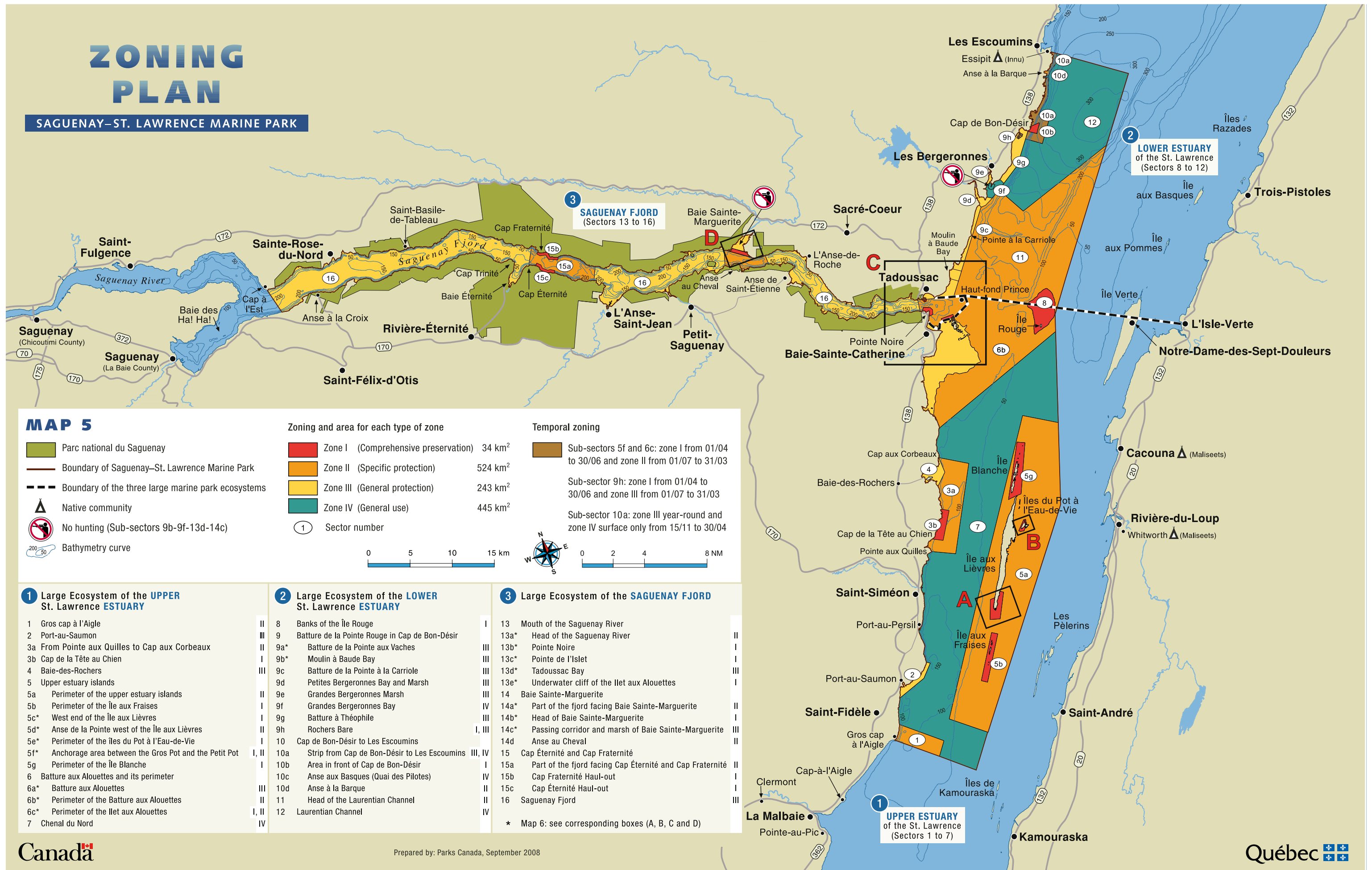
Zoning can be applied temporally. This provision meets the specific needs of certain ecosystems, habitats and species during a set period of time (see table 6). Temporal zoning makes it possible to enhance the degree of protection of a particular sector by setting a more restrictive zoning type for a period of the year. It is mainly used around islands and islets to ensure the increased protection of migratory birds during the breeding and rearing periods.

Exceptions and exemptions

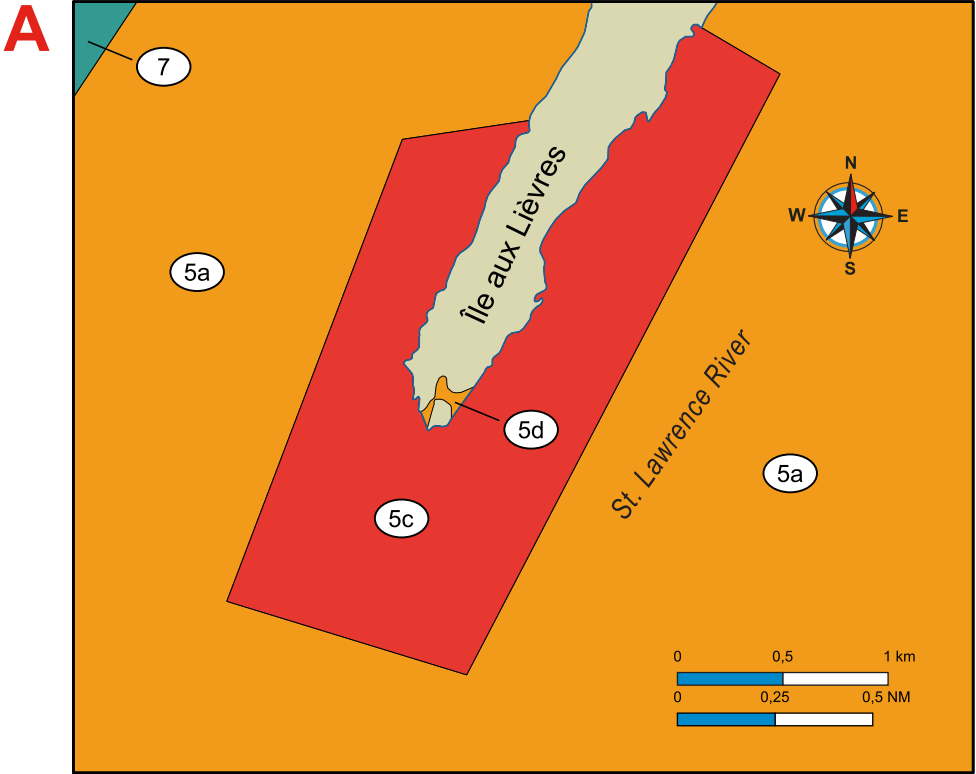
Zoning makes it possible to resolve potentially conflicting needs regarding the Marine Park's conservation and use or in the event of Park use conflicts. However, some issues require particular solutions to be resolved. These are grouped together as exceptions (see Table 5) and exemptions and take into account the current realities of the Park's use.

ZONING PLAN

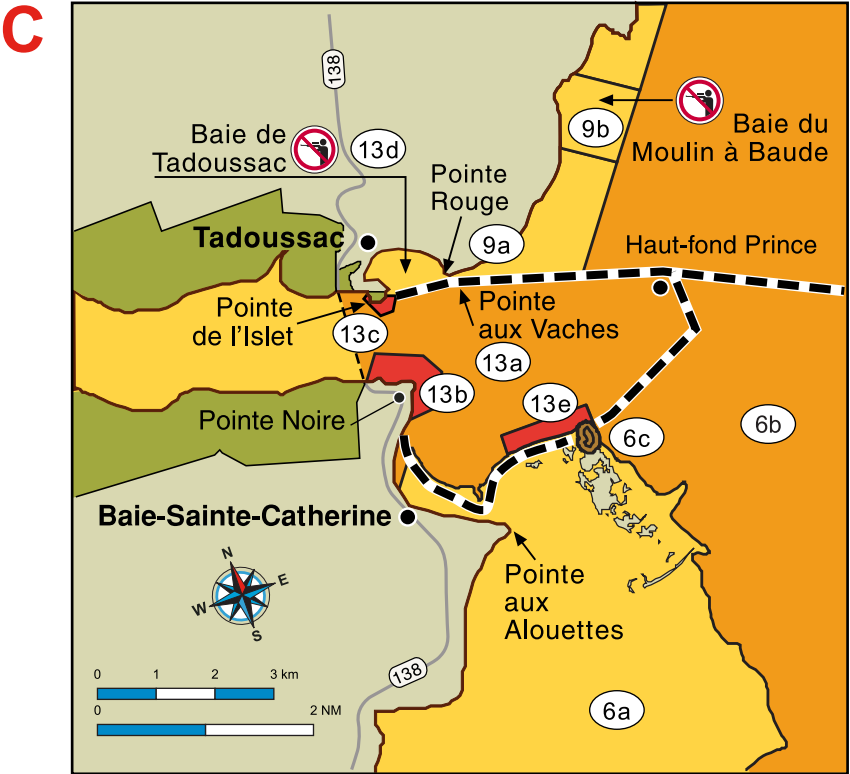
SAGUENAY-ST. LAWRENCE MARINE PARK



Upper Estuary Islands (Sector 5): **A** and **B**

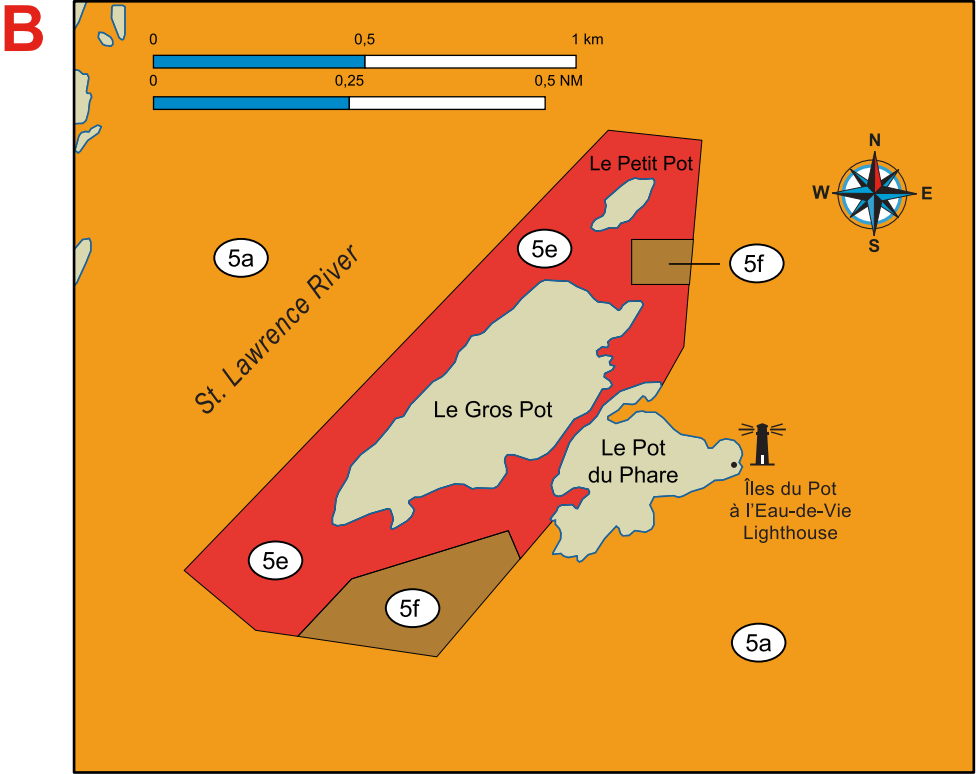


Confluence Area

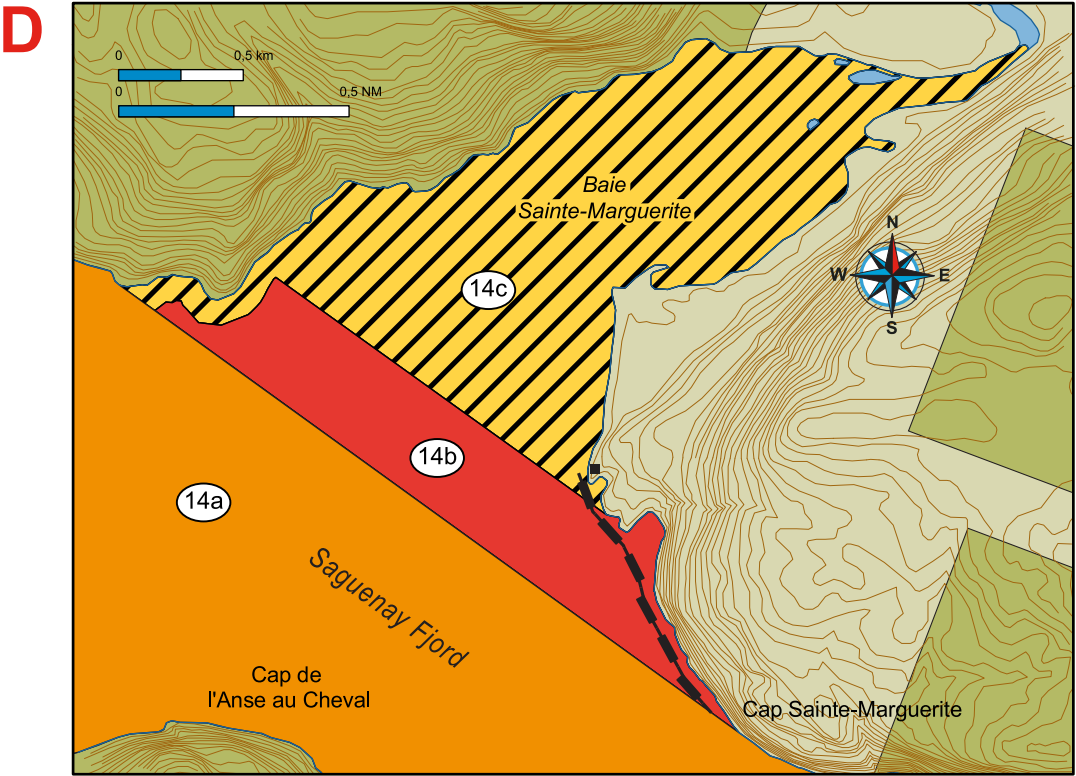


ZONING PLAN

SAGUENAY-ST. LAWRENCE MARINE PARK
(Sector enlargement)



Baie Sainte-Marguerite (Sector 14)



MAP 6

- Lighthouse
 - Belvedere
 - In-transit passage for human powered watercraft
 - Contour line
 - Boundary of the three large marine park ecosystems
 - Terrestrial environment (off park)
 - Parc national du Saguenay
 - Sector number
- Zoning**
- Zone I (Comprehensive preservation)
 - Zone II (Specific protection)
 - Zone III (General protection)
 - Zone IV (General use)
 - Zone II from 01/07 to 31/03 and zone I from 01/04 to 30/06
 - No hunting

Table 4

According to Zoning

ACTIVITIES PERMITTED

SAGUENAY–ST. LAWRENCE MARINE PARK

December 2008

	Zone I Comprehensive preservation	Zone II Specific protection	Zone III General protection	Zone IV General use
	Sectors Sub-sectors 3b, 5b, 5c, 5e, 5f, 5g, 6c, 8, 9h, 10b, 13b, 13c, 13e, 14b, 15b, 15c	Sectors Sub-sectors 1, 3a, 5a, 5d, 5f, 6b, 6c, 10d, 11, 13a, 14a, 15a	Sectors Sub-sectors 2, 4, 6a, 9a, 9b, 9c, 9d, 9e, 9g, 9h, 10a, 13d, 14c, 14d, 16	Sectors Sub-sectors 7, 9f, 10c, 12 10a (surface)
1) Scientific research activities				
Scientific research				
2) Activities that don't involve harvesting natural resources				
a) Non commercial educational or recreational activities				
Beach and swimming activities				
Interpretation and education activities				
Special activities	Note 4			
Sea kayaking	Note 1			
Snowmobiling				
Boating				
Anchoring				
Mooring – Personal				
Underwater diving				
Horseback riding in intertidal areas				
Hiking in intertidal areas				
Film shooting and photography				
Flight over the park at less than 2000 feet				
b) Commercial educational or recreational activities				
Interpretation and education activities				
Special activities	Note 4			
Cruise or observation activities at sea				
Mooring – Public				
Sea kayaking	Note 1			
Underwater diving				
Horseback riding in intertidal areas				
Shuttle service				
Film shooting and photography				
Flight over the park at less than 2000 feet				
3) Non commercial activities that involve harvesting natural resources				
Interpretation and education activities				
Seal hunting				
Migratory bird hunting	Note 2			
Line fishing	Note 5			
Shellfish harvesting				
4) Commercial activities that involve harvesting natural resources				
Seal hunting	Note 3			
Fishing (whelk, halibut, clam, etc.)	Note 3			
Line fishing (ice fishing)				
5) Essential public utilities				
Periodic maintenance dredging for access to the wharfs, to the seaway, etc.				
Maintenance of marinas, wharfs, buoys, lighthouses, etc.				
Navigation (shipping)				
New boat launching ramp facilities				
Floating pontoon facilities				

Legend

Zone I

Comprehensive preservation

Zone II

Specific protection

Zone III

General protection

Zone IV

General use

Authorized activities that don't require a permit

Authorized activities that require a Saguenay–St. Lawrence Marine Park permit

Authorized activities that require a permit from other departments

Prohibited activities

- Note 1

Safe travel corridor for users: Human-powered boats (kayaks, canoes, etc.) will be authorized to travel along the shores in some sub-sectors of Zone I (10b, 13b, 13c, 14b, 15b, 15c) and under certain conditions to ensure the safety of users.
- Note 2

Usage conflict regarding public safety: Hunting activity near some areas that are frequented by visitors could pose a public safety problem. Migratory bird hunting will be prohibited in sub-sectors 9b, 13d, 14c of Zone III and in sub-sector 9f of Zone IV.
- Note 3

Exceptional commercial activity that involves harvesting renewable natural resources and that contradicts the protection level of a zone: The current practice of some commercial fishing or seal hunting activity in zones II and III may be authorized under certain conditions, but will be considered an exception. The Marine Park, Fisheries and Oceans Canada, *Agriculture, Pêcheries et Alimentation du Québec* and *Ressources naturelles et Faune du Québec* authorities, in partnership with the users involved, will consider measures aimed at eliminating harvesting activity in time to protect ecosystems, habitats, biotic communities, and species in question. Some other restrictions concerning commercial fishing activity exist and should be respected by fishers, in accordance with their fishing permits.
- Note 4

Special activity: A temporary planned activity or event that takes place in the Marine Park, in particular a parade, a regatta, a show, a cinematic production or promotion, or a sporting event. (Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations, 2002).
- Note 5

Line fishing: A permit is necessary for Atlantic Salmon fishing.

Table 5. Zoning Exceptions for the Saguenay–St. Lawrence Marine Park

Sector or Subsector	Exceptions	Conditions (Regulatory processes to be determined)
All sectors	Emergency Operations	Emergency Operations: Marine emergency operations for public safety or for pollution control are authorized throughout the park, planning in emergency plans the means and methods that will have the least impact on the marine environment.
Cap de la Tête au Chien Subsector 3b	Safe transportation of park users	In-transit passage for watercraft crossing Zone I, in compliance with rules set for the protection of marine mammals.
Baie des Rochers Sector 4	Specific need to access private property	Use of motor vehicle to access private properties.
Île aux Fraises Subsector 5b	Specific management or maintenance needs Research and development work on behalf of the Îles de l'Estuaire National Wildlife Area.	Have a permit from the Canadian Wildlife Service of Environment Canada. Access for watercraft in transit to anchorage on the south side and to anchorage on the southeast side, off the western tip of the island.
Île aux Lièvres Subsector 5c	Specific management or maintenance needs Bringing supplies to and upkeep of the campground on the western tip of the island, facing the "camp des scientifiques".	Access for watercraft in transit to anchorage located at the western tip of the island and to anchorage located on the southwest side of the island, facing the "camp des scientifiques".
Perimeter of the Îles du Pot à l'Eau-de-Vie Subsector 5e	Specific management or maintenance needs and access to a private property	In-transit passage for watercraft crossing Zone I, in compliance with rules set for protection of marine mammals.
Île Blanche Subsector 5g	Specific management or maintenance needs Research and development work on behalf of the Îles de l'Estuaire National Wildlife Area.	Have a permit from the Canadian Wildlife Service of Environment Canada. Access for watercraft in transit to anchorage on the southeast side of the island.
Batture aux Alouettes and its perimeter Sector 6	Non-conforming commercial harvesting of renewable natural resources* Exploratory commercial sea urchin fishing is non-conforming in subsectors 6a – Batture aux Alouettes and 6b – the perimeter of Batture aux Alouettes. The commercial fishing of soft shell clams is non-conforming in Subsector 5a – Batture aux Alouettes.	A solution aimed at phasing out these non-conforming commercial fishing activities will have to be put into place with the help of fishermen and Fisheries and Oceans Canada.
Perimeter of the Îlet aux Alouettes Subsector 6c	Specific need to access private property Navigational aid and research work.	In-transit passage for watercraft crossing Zone I, in compliance with rules set for the protection of marine mammals. Have a permit from the Canadian Wildlife Service of Environment Canada for collecting down.
Banks of Île Rouge Sector 8	Specific management or maintenance needs Navigational aids and research work.	In-transit passage for watercraft crossing Zone I, in compliance with rules set for the protection of marine mammals.
Baie du Moulin à Baude Subsector 9b	Water use conflict between the visitor experience and public safety Overlooking the sector there is a trail and observation site that provides a panoramic view over the marine park; it is particularly used for the observation of birds of prey.	Hunting prohibited throughout the year.
Batture de la Pointe à la Carriole Subsector 9c	Specific need to access private property	Use of motor vehicle to access private properties.
Baie des Grandes Bergeronnes Subsector 9f	Water use conflict between the visitor experience and public safety Baie des Grandes Bergeronnes is a point of access to the marine park and is used by residents and visitors.	Hunting prohibited throughout the year within a 200-metre radius of the wharf.
Area located off cap de Bon-Désir Subsector 10b	Safe transportation of park users and educational activity Cap de Bon-Désir is an important land-based observation site for marine park visitors and the Zone I area off the site must remain undisturbed. However, for safety reasons, sea kayakers must be allowed to paddle along the coast. An educational activity is presented. For the activity, marine organism are collected to be presented and put back into the ecosystem.	In-transit passage for human powered watercraft along the coast in order to cross Zone I, in compliance with rules set for the protection of marine mammals. A two year exemption is given to the "30 pieds chez Neptune" activity. An environmental Impact Assessment will be done to decide what should be done with this activity.
Head of the Laurentian Channel Sector 11	Non-conforming commercial harvesting of renewable natural resources Commercial fishing of scallops, whelks and halibut and seal hunting are non-conforming activities in Sector 11.	A solution aimed at phasing out these non-conforming commercial fishing activities will have to be put into place with the help of fishermen and Fisheries and Oceans Canada.

* All non-conforming activities involving the commercial harvesting of natural resources are not necessarily indicated in the table above. We do not have information on all commercial fishing activities that are taking place within the marine park. However, we have to assume that all commercial fishing presently taking place in Zones I, II and III is non-conforming with respect to the proposed zoning plan for the marine park.

Management Plan

Pointe Noire is an important land-based observation site for marine park visitors and the Zone I area off the site must remain undisturbed.

However, for safety reasons, sea kayakers must be allowed to paddle along the coast.

Table 5: suite

Sector or Subsector	Exceptions	Conditions (Regulatory processes to be determined)
Pointe Noire Subsector 13b	Safe transportation of park users Pointe Noire is an important land-based observation site for marine park visitors and the Zone I area off the site must remain undisturbed. However, for safety reasons, sea kayakers must be allowed to paddle along the coast.	In-transit passage for human powered watercraft along the coast in the 400-metre wide Zone I strip, in compliance with rules set for the protection of marine mammals.
Pointe de l'Islet Subsector 13c	Safe transportation of park users Pointe de l'Islet is an important land-based observation site for marine park visitors and the Zone I area off the site must remain undisturbed. However, for safety reasons, sea kayakers must be allowed to paddle along the coast.	In-transit passage for human powered watercraft along the coast in the 100-metre wide Zone I strip, in compliance with rules set for the protection of marine mammals.
Baie de Tadoussac Subsector 13d	Water use conflict between the visitor experience and public safety Baie de Tadoussac is an important point of access for the marine park, with its marina, the departure of marine tours, etc. It is used by residents and visitors. The area must remain undisturbed and public safety must be ensured.	Hunting prohibited throughout the year.
Mouth of baie Sainte-Marguerite Subsector 14b	Safe transportation of park users The mouth of Baie Sainte-Marguerite is an important habitat for the St. Lawrence beluga, an endangered species, and that is why this area has been designated Zone I. However, kayakers must be able to paddle safely down the Saguenay River.	In-transit passage for human powered watercraft along the coast, downstream from the mouth of the bay, in compliance with rules set for the protection of marine mammals.
Passage corridor and marshes in baie Sainte-Marguerite Subsector 14c	Water use conflict between the visitor experience and public safety Baie Sainte-Marguerite is a site that is used by residents and visitors. The area must remain undisturbed and public safety must be ensured.	Hunting prohibited throughout the year.
Cap Fraternité Subsector 15b	Safe transportation of park users There is a 300-metre Zone I strip aimed at protecting a harbour seal haul-out. However, kayakers must be able to paddle safely down the Saguenay River.	In-transit passage for human powered watercraft along the coast in the 300-metre wide Zone I strip, in compliance with rules set for the protection of marine mammals.
Cap Éternité Subsector 15c	Safe transportation of park users There is a 300-metre Zone I strip aimed at protecting a harbour seal haul-out. However, kayakers must be able to paddle safely down the Saguenay River.	In-transit passage for human powered watercraft along the coast in the 300-metre wide Zone I strip, in compliance with rules set for the protection of marine mammals.

Table 6. Temporal Zoning in the Saguenay–St. Lawrence Marine Park

Sector or Subsector	Period	Type of Zoning	Justification for the Change in Zoning
Anchorage Le Petit Pot and Le Gros Pot islets Subsector 5f	April 1 to June 30	Zone I	Comprehensive protection required during the seabird nesting season
	July 1 to March 31	Zone II	
Perimeter of l'Îlet aux Alouettes Subsector 6c	April 1 to June 30	Zone I	Comprehensive protection required during the seabird nesting season
	July 1 to March 31	Zone II	
Rochers Bare Subsector 9h	April 1 to June 30	Zone I	Comprehensive protection required during the seabird nesting season
	July 1 to March 31	Zone III	
Strip from cap de Bon-Désir to Escoumins Subsector 10a	May 1 to November 14	Zone III Surface	
	November 15 to April 30	Zone IV Surface	Allow for safe seal hunting

Exceptions

- 1) Emergency operations: marine emergency operations for public safety, marine mammal rescue or for pollution control are authorized throughout the Park using the means and methods that will have the least impact on the marine environment.
- 2) Specific management or maintenance needs: essential management activities and maintenance activities for marine infrastructures and land facilities accessible only from the water are authorized under certain conditions in the comprehensive preservation zones by planning the time, methods and means that will have the least impact on the marine environment.
- 3) Specific need to access landlocked private property: access to landlocked private properties requiring the use of a motor vehicle in an otherwise inaccessible intertidal zone is authorized under certain conditions by planning the time, methods, itineraries and means that will have the least impact on the marine environment.
- 4) Safe transportation of Park users: the transit passage of human-powered boats (kayaks, canoes, etc.) along the shoreline is authorized in certain zones designated for the comprehensive preservation of the Marine Park and under certain conditions to ensure user safety.
- 5) Park use conflicts associated with public safety: hunting within proximity of certain places frequented by visitors may pose a problem for public safety for a set period of time, and it is essential to reduce the risks associated with this type of Park use conflicts.
- 6) Park use conflicts associated with the visitor experience: disturbances caused by the passage of boats off or near land-based observation sites for the marine environment must be avoided so as not to take away from the experience of visitors to these land sites. Hunting will accordingly be banned in certain zone III and IV areas.

Exemptions

Derogatory commercial renewable natural resource harvesting activities in contradiction with a zone's degree of protection: the practice of certain existing commercial fishing or commercial seal hunting activities in zone II and III areas may be authorized under certain conditions, but is considered derogatory. As regards these derogatory activities, Marine Park authorities and those of the government departments concerned will, in collaboration with the users involved, consider measures to eliminate them. In the meantime, these derogatory activities must respect the principles and terms for the management of the model fishery in the Marine Park.

12.3 Implementation of the zoning plan

Several important steps still need to be taken before the zoning plan can be implemented. It must be made official by regulation, in accordance with Marine Park legislation and other existing acts. An information campaign will be conducted to promote understanding of the zoning plan and thus cultivate the support of the residents of the coordination zone and visitors to the Marine Park.

The search for solutions to the exemptions granted for certain commercial fishing activities and for their eventual termination in zone II and III areas will have to be initiated quickly with the government departments and fish harvesters involved.

The acquisition of new scientific information on the ecosystems, the impact of activities on habitats, species and the evolution of natural processes should continue, in particular to increase the accuracy of the zoning plan. The zoning plan could also be amended in other circumstances, for example in response to recommendations made in species at risk restoration plans or in the plan for the confluence sector, etc.

13 *Marine Park Administration and Management*



Photo: Jean-Louis Provencier, Parks Canada

Soft-shell clam inventory

The day-to-day management of the Marine Park requires the presence of operational teams located in Tadoussac (Parks Canada) and Rivière-Éternité (Parcs Québec). These teams intervene and collaborate in the following areas: administration and management, resource conservation, presentation of the natural and cultural heritage, public safety, environmental emergencies, law and regulation enforcement, site and equipment management, and partner relations.

Several major facilities and equipment owned by the governments of Canada and Quebec are used to carry out the various mandates entrusted to the managers of the Marine Park:

Parks Canada: the observation and interpretation sites at Cap-de-Bon-Désir and Pointe-Noire, the Marine Environment Discovery Centre in Les Escoumins, the Baie-Sainte-Catherine wharf;

Parcs Québec: the property and equipment of the Saguenay National Park contributing to the presentation of the marine environment, the interpretation centres at Baie Éternité, Baie Sainte-Marguerite and Tadoussac.

13.1 Environmental risks and emergencies

It must be considered that the St. Lawrence River and the Saguenay Fjord are important seaways to major industrial centres. The ships that use these seaways carry large quantities of goods, including hydrocarbons and toxic substances. The ecological consequences of a major accident would be very harmful to the Marine Park's ecosystems. It has been noted that accidental spills mostly consist of hydrocarbon spills. The environmental risks associated with the marine transportation of various petroleum products and chemicals are accentuated by difficult sailing conditions at certain times of the year.

An environmental emergency plan established in 2001 sets the framework for emergency operations in the Marine Park. This plan is updated as needed.

Issue

Ecological risks and impacts of major accidents

The presence of a Marine Park at the confluence of two important seaways provides for a particular protection issue. Its boundaries are extensive and various sources of pollution could have major impacts on the resources and ecosystems. These potential threats to the integrity of the marine environment require the implementation of a marine pollution control strategy involving the numerous partners including the Canadian Coast Guard, Transport Canada, Environnement Québec, Environment Canada, and the Eastern Canada Response Corporation.

Objective

- Minimize the ecological risks and impacts of marine accidents in the Marine Park.

Action

- Keep the Marine Park environmental emergency plan up-to-date.

13.2 Environmental management and climate change

Environmental management is a responsibility dictated by government directives. The 11 fields of application include polychlorinated biphenyls, ozone-depleting substances, petroleum product tanks, greenhouse gas emissions, integrated pest management, contaminated sites and materials, other hazardous products, green procurement, energy conservation in buildings, vehicle fleet management, wastewater management, water consumption and solid waste management.

In marine protected areas, climate change could have a major impact on sea currents influencing the upwelling of cold water and may cause greater coastal erosion. Other direct and indirect impacts could include in particular a rise in water level and temperatures, the modification of lifecycle stages, and the expansion of invasive exotic species. Furthermore, there could be major repercussions on the experience, satisfaction and safety of Marine Park visitors.

Issue

The environmental management must meet the highest standards

The Marine Park's environmental management must meet the highest standards in this field. The Marine Park seeks the collaboration of communities, businesses, institutions and visitors to adopt sound environmental management practices.

Objectives

- Improve the environmental management of the Marine Park operations.
- Ensure new development projects in the Marine Park are submitted to the environmental assessment process.
- Ensure that the real and potential effects of climate change are taken into account in the management of the Marine Park.

Indicators

- Actions contained in the environmental management plan implemented.
- Number of environmental assessments performed compared to the number of projects carried out.

Actions

- Update the Marine Park's environmental management plan.
- Submit the projects carried out by the Marine Park's managers or in collaboration with the latter to an environmental impact assessment.
- Assess the vulnerability of the components of the Marine Park to climate change.

Photo: Frédéric Deland, Parks Canada



Ice rescue training

13.3 Public safety

The extensive sailing activities of large ships, ocean liners, numerous marine tour boats, sailboats and kayaks generates a high level of traffic entailing accident risks, in particular in the confluence sector. Furthermore, thousands of visitors use the infrastructures and equipment of the various land sites and service points located along the coast.

The Marine Park's public safety plan aims to reduce the risks for residents and visitors associated with the practice of recreational activities in the Marine Park area and limit the vulnerability of site owners to civil liability. It sets out the mandates, responsibilities and intervention methods, and is reviewed as needed.

In the area of public safety, responsibilities are shared between several federal, provincial and municipal government departments and agencies present in and around the Marine Park area. The Marine Park authorities intend to promote collaboration between the various partners and integrate the Marine Park in emergency plans that are already in place to enhance the level of service in sectors that require it and fulfill their public safety obligations.

Issue

The safe use of the marine territory and government infrastructures by residents and visitors

The safe use of the marine territory and government infrastructures by residents and visitors is a priority. The managers of the Marine Park also recognize that the latter have a certain level of responsibility regarding their own safety and that risk management must become an integral part of their experience.

Objectives

- Ensure the implementation of preventive measures aiming to limit the number and gravity of accidents and provide a safe environment for Marine Park users.
- Ensure an adequate level of service regarding interventions, adapted to the risks identified in the Marine Park area.
- Document incidents as well as keep databanks and risk analysis up-to-date, and ensure the capacity to provide documentary evidence of manager diligence in regard to public safety in the Marine Park.

Action

- Regularly update the public safety plan.



Marine Park employees
Photos: Parks Canada

14 *Summary of the environmental assessment*



Tadoussac Bay in winter

Within the Government of Canada, environmental assessments are an essential tool for the achievement of government objectives of sustainable development. The Saguenay-St. Lawrence Marine Park Management Plan was submitted to a strategic environmental assessment. The aim of this environmental assessment was to determine and assess, from a strategic standpoint, the main environmental issues inherent to the Saguenay-St. Lawrence Marine Park Management Plan. We should specify that the Government of Quebec does not have this obligation as part of the review of its management plans.

The objectives of this environmental assessment were as follows:

- Verify that the strategic directions, objectives and particular proposals put forward in the plan respect and support the goals and objectives set with regard to environmentally sustainable use, while taking into account the need to maintain the structure and function of marine ecosystems;

- Assess the repercussions of the proposals made in the plan to make sure they add to the positive impacts on the environment and that they counter or mitigate eventual negative impacts;
- Assess the cumulative effects of the actions proposed in the Management Plan on the Park's ecosystems.

This assessment rests on the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (2004). It respects the orientations of Parks Canada Guiding Principles and Operational Policies (1994) and the Parks Canada Management Directive 2.4.2: Impact Assessment (1998).

Compliance of objectives

The objectives proposed in the Management Plan were reviewed to make sure they are in compliance and support Parks Canada and Government of Canada policy. As a whole, the objectives proposed in the Management Plan respect the Marine Park's mandate and support the environmentally

sustainable use of the resources, taking into account the need to maintain the structure and function of marine ecosystems.

Scope of the assessment

The scope of the assessment ensures that the assessment focuses on the main elements of the Management Plan. It indicates what is included in the environmental assessment, and what is not. The latter was established based on the main elements of the Management Plan, valued components of the ecosystem, spatial and time boundaries and data limitations. In this case, the spatial boundaries applied for this assessment are the boundaries of the Saguenay-St. Lawrence Marine Park and administered sites. The time limits are the same as those set for the Management Plan, i.e., seven years.

Assessment of the potential impacts

An analysis of the sources of stress in relation to environmentally sustainable use and the mandate makes it possible to determine the effects on the natural and cultural resources.

All of the actions will have positive but not extensive effects. They in fact constitute harmonization, coordination and awareness measures that will have a long-term positive effect. The awareness of local populations and the establishment of a committee for the Marine Park's expansion are the positive elements to be remembered. When creating new activities, consideration of the Marine Park's mandate will have to be validated and, to a greater extent, the precautionary principle applied.

Certain management measures are likely to have an effect on the environment, and as such require special attention. These measures are the following:

- Improving the existing network of water access points in collaboration with regional players;
- Developing and implementing a strategy to generate revenues and establish business partnerships with local partners;
- Completing, as a priority and jointly with local partners, existing discovery areas;
- Fostering a sense of security in visitors;
- Coordinating the planning for the Marine Park with the development plans of regional county municipalities, as regards for example the protection of swamps, spawning grounds, landscapes and watersheds.

Mitigation measures

The Management Plan contains certain measures to minimize the impacts of the proposed actions. The mitigation measures proposed make it possible to minimize certain negative effects on environmentally sustainable use and the protection of resources. As in the Management Plan, the mitigation of effects will take place at a strategic level. The aim of these mitigation strategies are to:

- Apply the precautionary principle and adaptive management to the Saguenay-St. Lawrence Marine Park and administered sites with regard to the environmentally sustainable use and protection of natural resources, particularly to actions that could disturb marine mammals;
- Raise the awareness of communities regarding the Marine Park ecosystems state of health Report;
- Establish mitigation strategies to minimize the impacts on cultural and natural resources as part of the planning of projects and activities following from the implementation of the Management Plan. Strategies will be established through the environmental assessment process;
- Establish a preventive strategy of adaptation to climate change to protect natural resources, site infrastructures and the visitor experience;
- Take into account the issues raised in the State of the Marine Park Report when implementing the management measures contained in the Management Plan. Inform the local population of the findings of the State of the Marine Park Report.

Residual effects

A verification of the Management Plan with respect to its residual effects found that there should be few lingering effects and that the latter should be slight following the application of the mitigation strategies.

Assessment of the potential cumulative effects

The cumulative effects are the negative residual effects of the Management Plan associated with the negative effects of projects and activities located in the Park's coordination zone that have affected, affect or will affect environmental components or cultural resources. Furthermore, the assessment of the cumulative effects rests on the principle that the combined effects of the projects and activities can give rise to different or more significant impacts than those individually

generated by these projects and activities. Accordingly, several projects external to the Marine Park have been or will be implemented within the coordination zone. These projects may potentially provoke an increase in marine traffic, bring about a contamination and reduce coastal habitats.

Although most of the plan's actions interact little with climate changes, the latter represent a variable that is difficult to determine. However, we can state that the marine and coastal ecosystems may well quickly and extensively suffer the harmful effects of climate change. From this viewpoint, it is conceivable that any management measure associated with marine and coastal ecosystems could entail residual effects in certain cases, and hence cumulative effects to the coastal or marine area. Furthermore, these changes encourage modifications that could have significant, long-term impacts on the Park's ecosystems.

The measures regarding the visitor experience are many and deal with several aspects such as the service offer, partnerships, and agreements with local and Native communities. Parks Canada proposes actions regarding the visitor experience that cultivate an increase in number and duration of visits. In this way, the cumulative effects of the plan relate to actions that could affect the disrupted ecosystems (both marine and coastal).

Assessment of overall consequences

The overall consequences of the application of the Management Plan as regards the environment and environmentally sustainable use are measured in cumulative impacts. The slight residual effects of the Management Plan have little impact on the cumulative effects already present in the Park's management area. The application of the new Saguenay–St. Lawrence Marine Park Management Plan will increase understanding of its mandate and the population's support through the harmonization, awareness and coordination actions proposed in the plan. However, the precautionary principle should apply given the fragility of the environment, the natural and cultural resources present and the dynamics of the natural processes faced by this environment.

Conclusion

The assessment was carried out prior to the final draft of the Management Plan so that the mitigation measures proposed could be incorporated. The results of this strategic environmental assessment led us to conclude that, based on the available information the Marine Park's Management Plan is acceptable. Overall, the strategic measures it presents support the Marine Park's mandate and management policies. The implementation of the management measures should have positive impacts, in particular on communication of the value of the resources. As well, the implementation of the mitigation measures proposed in this strategic environmental assessment should make it possible to minimize potential negative impacts. The impacts of greatest concern can be mitigated with the application of known technical measures or other means that have proved effective. Project environmental assessments will have to be carried out at a later stage of the planning, when sufficient details regarding their implementation are known.

15 Implementation and follow-up of the Management Plan

The Management Plan will guide the Marine Park's management for the next seven years. The Marine Park's annual business plan will specify the actions required to carry out the objectives of the Management Plan. Over the next few years, the authorities responsible for the Marine Park will strive to implement the advocated management measures using the budgets available, the additional spot credits they may receive, and through partnership agreements with communities.

This Management Plan's implementation will be assessed every year as part of the business planning process. An annual report compiling the actions carried out will be presented to partners and the public. In seven years, in accordance with Marine Park

legislation, the Management Plan will be reviewed, starting with an update to the State of the Marine Park Report.

The following table presents a summary of the actions to be carried out. These are divided into three categories: actions regarding the Marine Park's routine management (ongoing actions); priority actions to be undertaken or completed in the first three years of the Management Plan; and other actions to be carried out. Some priority actions will be initiated in the short term, given their importance, but their final implementation could take place in the longer term, given their complexity or consultation or consensus-building processes inherent to these actions.

Table 7: Summary of the actions to be carried out

Action	Ongoing action	Priority action	Other action
Co-management and public participation			
Enhance or create consensus-building and coordination mechanisms with federal and provincial government departments.	√		
Develop and implement a strategy to generate revenues and establish business partnerships with local partners.		√	
Add to the Coordinating Committee or to its advisory boards, as required, members from areas of activity not represented.	√		
Increase the financial, professional and technical assistance granted to the Coordinating Committee.	√		
Produce and disseminate an annual action plan regarding the monitoring of the Management Plan.	√		
Maintain the active participation and involvement of First Nations.	√		
Enhance the Marine Park's presence with various regional planning authorities and residents of the coordination zone through targeted communications actions.	√		
Raise the awareness of regional authoritative bodies regarding the importance of protecting ecosystems, landscapes and waterfront lands.	√		
Develop communication tools so as to better promote the Coordinating Committee, its mandate and its achievements and facilitate its outreach efforts.	√		
Establish a working group on the expansion of the Marine Park's boundaries.		√	
Ecosystems and biodiversity			
Fulfill the obligations devolved to the Marine Park under the <i>Species at Risk Act</i> .	√		
Maintain and develop monitoring programs for ecosystems and activities.	√		

Action	Ongoing action	Priority action	Other action
Implement a research program adapted to the needs of the Marine Park and carried out in partnership.	√		
Develop a support strategy for stakeholders to improve wastewater management by municipalities.		√	
Develop a strategy with the region and government departments involved so that at least one pumping-out station is installed for boats navigating within the Marine Park.		√	
Conduct awareness campaigns with the marine industry, businesses that offer tours in the Marine Park and working in pleasure boating to institute environmentally friendly practices.	√		
Pursue the implementation of the conservation plan and identify priorities for action.	√		
Raise the awareness of residents and municipal bodies regarding the importance of protecting coastal environments and how such action is linked to the health of the Marine Park.	√		
Define protection and restoration needs in the Marine Park and implement appropriate measures.	√		
Environmentally sustainable use			
Establish a plan for marine activities so as to consolidate the actions of the Marine Park and its partners.		√	
Establish a working group and create a specific commercial fishing sub-zone for the Marine Park by the lead government departments.		√	
Implement, with DFO, Marine Park model fishery management principles.		√	
Create a standing issue table with the authorities responsible for managing marine traffic in the Marine Park.		√	
Work in collaboration with First Nations in the coordination zone to achieve the sustainable fishing objectives.			√
Continue and improve the monitoring of ice fishing activities in the Saguenay Fjord.	√		
Implement an integrated recreational fishing management system.			√
Coordinate the planning for the Marine Park with the development plans of regional county municipalities.			√
Marine Park zoning plan			
Make the zoning plan official by regulation	√		
Conduct an information campaign to promote understanding of the zoning plan and encourage the support of the residents of the coordination zone and Marine Park visitors.		√	
Seek solutions to the exemptions granted for certain commercial fishing activities	√		
Increase the accuracy of the zoning through the acquisition of new scientific information on ecosystems, habitats, species and the evolution of natural processes.	√		
Modify the zoning plan based on specific circumstances, the needs of recovery plans for species at risk, the Management Plan for the confluence sector, etc.	√		
Resident and visitor experience			
Produce and implement an interpretation and education plan.		√	
Produce a Marine Park partner accreditation policy and proceed with the signing of designation agreements.		√	

Action	Ongoing action	Priority action	Other action
Encourage marine activities respectful of the environment, ecosystems and regulations.	√		
Finalize the land and marine signposting plan.	√		
Improve educational programs.	√		
Foster the training of regional tourism partners: reception officers, captains, naturalists, etc.	√		
Collaborate with regional authorities for the protection of marine and underwater landscapes.	√		
Regularly update the public safety plan.	√		
Update and implement the communications plan.		√	
Improve the existing network of water access points in collaboration with regional players.			√
Implement a theme presenting the culture and contribution of the Native communities.		√	
Conduct socioeconomic studies to learn more about the perceptions, needs and expectations of residents and visitors.	√		
Complete, as a priority and jointly with local partners, existing discovery areas.	√		
Document and analyze proposals for new discovery areas.			√
Protect and present the cultural components of the Marine Park.	√		
Public education and awareness			
Update and implement the communications plan (website, newsletters, relations with the local community and the media, etc.).		√	
Implement school programs with partners.	√		
Implement the educational strategy for species at risk.	√		
Produce and implement an interpretation and education plan targeting external clientele.		√	
Implement, in partnership, Marine Park showcases in the municipalities in the coordination zone and in metropolitan areas.	√		
Conduct or use socioeconomic studies to gain a better understanding of the needs, expectations and perceptions of the various external clientele.	√		
Administration			
Keep the Marine Park environmental emergency plan up-to-date.	√		
Update the Marine Park's environmental management plan.	√		
Submit projects carried out by the managers of the Marine Park or in collaboration with the latter to an environmental impact assessment.	√		
Assess the vulnerability of the components of the Marine Park to climate change.			√
Regularly update the public safety plan.	√		

Conclusion

The Marine Park has adopted a vision that will guide its actions with regard to conservation, environmentally sustainable use, visitor experience and education.

This Plan is the result of efforts undertaken since the Marine Park's creation. Despite its recent creation in 1998, the Marine Park has achieved a certain level of maturity and will continue the actions that have characterized its management since the very start, namely participative management, co-management, discovery of the environment through the discovery areas, the search for solutions aiming to resolve major sources of pressure, etc. This document recognizes the expertise of all those who contributed to the establishment of the Marine Park, without whom the adventure would not have been possible and whose merits warrant recognition.

A number of challenges remain: ensuring conservation within the context of the environmentally sustainable use of resources, implementing the zoning, pursuing awareness efforts to make sure that marine activities respect the Marine Activities Regulations, reducing the impact of commercial fishing activities, encouraging the accreditation of partners, guaranteeing adequate funding, optimizing consensus-building

with other government departments, increasing research, improving wastewater management, protecting species at risk, minimizing the impacts of the marine traffic, improving management of the confluence and communications with residents. Thanks to the efforts of all involved, we will be able to protect this exceptional environment, continue to live there and enjoy the most memorable of experiences.

In closing, remember that the aim of the Saguenay–St. Lawrence Marine Park is to increase, for the benefit of present and future generations, the degree of protection of ecosystems in a representative section of the Saguenay Fjord and St. Lawrence estuary for conservation purposes, while encouraging its use for educational, recreational and scientific purposes. This objective can only be achieved with the collaboration and participation of all stakeholders involved: citizens in general and the residents of the coordination zone; businesses active within the area; socioeconomic players; and the various levels of government. In order to give the Park even greater scope, all the players involved, either directly or indirectly, are called upon so that current and future visitors may discover this protected environment, bearing witness to an invaluable human and natural wealth and diversity.



Photo: Denis Dufour, Parcs Canada

Visitors at anse de Tabatière viewpoint

Glossary and acronyms

Glossary

Accreditation of partners: Accepting a candidacy, a project, an application, a solution, a sign of respect. Within the context of the Marine Park, this consists in an agreement between the partner and Marine Park authorities presenting a common vision and respective commitments.

Biodiversity: Term designating the diversity of the living world. Biodiversity can represent the diversity of the genes within a single species, the diversity of species, and the diversity of ecosystems.

Cruise: Within the context of the Marine Park, a cruise is a trip taken aboard a passenger liner following a set itinerary and including stops to allow passengers to visit a region or locality.

Ecotourism: Environmentally responsible travel to natural areas, in order to enjoy and appreciate nature (and accompanying cultural features, both past and present) that promote conservation, have a low visitor impact and provide for beneficially active socioeconomic involvement of local peoples.

Environmentally sustainable use of resources: Use of the natural environment that meets the needs of current generations without compromising the structures and functions of ecosystems for the needs of future generations. The environmentally sustainable use of coastal resources, the health, productivity and biodiversity of the marine environment and the wellbeing of coastal populations are all intimately linked.

Estuary: Mouth of a generally large river subject to tides and currents and forming the transition zone between the river water and seawater. In general, the freshwater on the surface flows into the sea while the saltwater, which is more dense, flows upstream of the estuary.

Fjord: Narrow, deep glacial valley with steep sides and flooded by the sea.

Indicator: Set of variables used to measure the state of a resource, ecosystem or area of intervention of the Marine Park.

Marine protected area: This term is used in general to designate protected areas in a marine environment and is defined by the International Union for Conservation of Nature (IUCN) as follows:

Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.

Participative management: Management method based on consultation where interested parties take part more or less extensively in decision-making.

Plankton: All animal (zooplankton) and plant (phytoplankton) organisms, generally of very small size, which live suspended in the water column; they drift in the sea and are the basic food source for many marine mammals and fish.

Species at risk: According to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), a species at risk is a wildlife species threatened at the national level with extinction from the country or the planet. This generic term includes several statuses granted based on the degree of risk of extinction of the species: extinct, extirpated, endangered, threatened, special concern, insufficient data.

Sustainable development: According to the definition proposed in 1987 by the World Commission on Environment and Development in the Brundtland report:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

According to the *Quebec Sustainable Development Act*:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development rests on a long-term vision that takes into account the indivisible nature

of the environmental, social and economic dimensions of development activities.

Threatened or vulnerable species: Under the Act respecting threatened or vulnerable species and as defined in the Quebec Policy on threatened and vulnerable species, a species is threatened when its extinction is feared and it is vulnerable when its survival is precarious, even if its extinction is not feared. This designation covers all species living in Quebec (microscopic or macroscopic, introduced or indigenous, wild, cultivated or domestic).

Tour: Single-day activity aiming to explore or visit a region.

Watershed: Land area defined by divides and over which surface water and groundwater are carried by the natural slope of the land to streams, rivers, bays, gulfs, seas, and oceans.

Acronyms

CIMM:	Centre d'interprétation des mammifères marins
CCG:	Canadian Coast Guard
GREMM:	Group of research and education on marine mammals
DFO:	Department of Fisheries and Oceans (Fisheries and Oceans Canada)
RCM:	Regional county municipality
Sépaq:	Société des établissements de plein air du Québec
STQ:	Société des traversiers du Québec

Appendix: Management principles and terms for model fisheries in the Saguenay–St. Lawrence Marine Park

Whereas the governments of Quebec and Canada recognize that the purpose of the Saguenay–St. Lawrence Marine Park (SSLMP), in reference to the mirror federal and provincial legislation, is “to increase, for the benefit of the present and future 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 purposes,” complemented by the Oceans Act, the Fisheries Act, the Species at Risk Act, and the Quebec Act respecting threatened or vulnerable species, we should make sure that the fishing activities taking place in the Park meet the protection and presentation objectives of this important marine heritage site. From this perspective, the ecosystem-based management approach and the precautionary principle are the foundations that allow us to carry out this objective.

A. SSLMP model fishery management principles

The purpose of the ecosystem-based approach to management is to ensure that management decisions regarding the use of the SSLMP take into account the dynamic and interactive nature of marine ecosystems, human interactions with the marine ecosystems and the limited capacity of marine ecosystems to recover following disturbances caused by man with a view to their conservation. This involves integrating the scientific data available on the species targeted by the fishery at issue, the species not targeted, the trophic level of the targeted species and its role in the food chain and in the ecosystem.

The precautionary principle advocates caution in any activity which could change the natural environment. It is particularly important to do so when only a portion of the facts regarding ecosystems, habitats and species are known.

The SSLMP constitutes a marine conservation area subject, under its management plan, to a zoning plan defining the degree of conservation and the degree of use of this territory.

Fishing activities must respect this zoning plan, which was established based on the scientific information available on the ecosystems, habitats and species and which takes into account the social and economic impacts of each activity currently practised in the Marine Park.

Plans or measures regarding fishing activities practised in the SSLMP must take into account the SSLMP’s conservation objectives and remain the responsibility of Fisheries and Oceans Canada. They will be established in consultation with the clientele exploiting marine resources, the provincial government, and Parks Canada.

Native communities will be able to continue their fishing activities in the Marine Park based on the agreements established and in consideration of conservation objectives for the targeted ecosystems, habitats and species.

Fishing activities must not target species designated under the Canada Species at Risk Act or listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), or species designated or registered on the threatened or vulnerable species list under the Quebec Act respecting threatened or vulnerable species, as well as unique populations.

Fishing activities carried out within the boundaries of the SSLMP must rest on exemplary management measures based on an appropriate level of scientific knowledge.

B. Good fishing practices in the SSLMP

Using fishing methods and gear that minimize the negative effects on the bottom, coast, breeding grounds and benthic communities.

Only select fishing gear may be used, i.e., fishing gear that allows non-targeted species to escape.

Fishing practices entailing a minimal risk of gear loss (Canadian Code of Conduct for Responsible Fishing Operations, 1998, guideline 17).

Retrieving, whenever possible, all lost fishing gear and reporting their loss (Canadian Code of Conduct for Responsible Fishing Operations, 1998, guideline 2.8).

Using materials that reduce the period of time during which lost gear continues to catch animals (e.g., cotton rather than nylon nets).

Reducing the power consumption associated with fishing activities (e.g., using motors that burn less fuel, using reclaimed oil that has no impact on the service life of the motor, preventive maintenance of motors) (Canadian Code of Conduct for Responsible Fishing Operations, 1998, guideline 1.3).

C. SSLMP model fishery management

The SSLMP will shortly be designated a special fishing area of the St. Lawrence Estuary by Fisheries and Oceans Canada, within which the SSLMP model fishery management principles will apply.

Authorized fishing activities in the SSLMP

All commercial fishing activities (including seal hunting) currently carried out in General Use Zones (Type IV) of the SSLMP are authorized in consideration of the management measures established by Fisheries and Oceans Canada, except for the fishing activities that will be banned in the SSLMP.

Commercial fishing activities (including commercial seal hunting) currently carried out in Specific Protection Zones (Type II) and General Protection Zones (Type III) of the SSLMP will be authorized but considered derogatory activities with regard to the degree of conservation of these zones. This means that they will be banned in the medium and long terms following negotiations between Parks Canada, Fisheries and Oceans Canada, and the fishers and hunters concerned. In the meantime, they must respect the SSLMP model fishery management principles and terms and the management measures established by Fisheries and Oceans Canada.

Bait fishing (capelin, smelt, herring) is authorized in the upper and lower portions of the St. Lawrence Estuary for commercial

fishers conducting their fishing activities in the SSLMP and who have a licence to this effect from Fisheries and Oceans Canada.

All recreational fishing, including ice fishing and seal hunting (with a licence for personal use), currently taking place in General Protection Zones (Type III) and General Use Zones (Type IV) of the SSLMP are authorized in consideration of the management measures established by Fisheries and Oceans Canada.

Fishing activities currently banned or not practised in the SSLMP

All commercial fishing activities are forbidden in the Saguenay Fjord.

Recreational shellfish harvesting is forbidden in the Saguenay Fjord.

All fishing activities using mobile gear are forbidden in the upper St. Lawrence Estuary.

Fishing activities that will be banned or not authorized in the SSLMP

No fishing activities (recreational or commercial) will be authorized in Comprehensive Protection Zones (Type I).

No fishing activities (recreational or commercial) will be authorized in Specific Protection Zones (Type II), except for the derogatory commercial fishing activities previously authorized.

No commercial fishing will be authorized in General Protection Zones (Type III), except for the derogatory commercial fishing activities previously authorized.

All fishing using gear that disrupts the habitat or is likely to destroy the sea floor (e.g., dredging) will be banned, except for the scallop harvesting currently practised in the SSLMP, which is considered a previously authorized derogatory commercial fishing activity.

Commercial fishing activities targeting the following species will be banned: capelin, smelt and herring, except for the previously authorized bait fishing activities.

Commercial fishing activities at the mouth of the fjord, between the sill and a line between Pointe-Rouge and Pointe-Noire will be banned to cover the entire ecosystem representative of the Saguenay Fjord.

Aquaculture will be banned.

No new commercial fishing licence authorizing fishing activities within the boundaries of the SSLMP will be issued by DFO so as to enhance the degree of protection of its ecosystems and habitats.



Photo: Charles Lessard, Parks Canada

Ice fishing at L'Anse-Saint-Jean

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