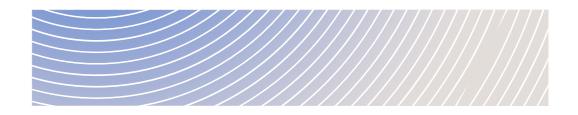
What We Heard



A SUMMARY OF INDIGENOUS AND STAKEHOLDER ENGAGEMENT ON THE POTENTIAL REGIONAL ASSESSMENT OF THE ST. LAWRENCE RIVER AREA, QUEBEC

July 19, 2021



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WHAT WE HEARD

IMPACT ASSESSMENT AGENCY OF CANADA

WHAT WE HEARD

Purpose

This report has been prepared by the Impact Assessment Agency of Canada (the Agency) to summarize the conduct and findings of its recent engagement with Indigenous peoples, federal and provincial authorities, non-governmental organizations, and the public regarding a potential regional assessment of the St. Lawrence River area in Québec under the Impact Assessment Act (IAA).

Further information on the potential regional assessment, including the regional assessment request submitted by the Mohawk Council of Kahnawà:ke, associated letters of support and other materials, the Minister of Environment and Climate Change's (the Minister's) response, and information pertaining to the engagement program described herein are available on the Canadian Impact Assessment Registry site¹.

Regional Assessment Request

On July 29, 2020, the Mohawk Council of Kahnawà:ke submitted a Request for a Regional Assessment to the Minister under subsection 97(1) of *the Impact Assessment Act* (IAA). The geographic focus of that request is a portion of the St. Lawrence River in Québec, in an area ranging generally from Montreal to Québec City. In its request, the Mohawk Council of Kahnawà:ke describes how the expansion of shipping activity within the river and associated large-scale infrastructure development in the area has affected the region's environment, including their ability to exercise their rights to hunt, fish and gather plants, and their stewardship responsibilities. They submit that this increased industrialization has limited access to portions of the river, degraded habitat and water quality, and introduced invasive species. The Mohawk Council of Kahnawà:ke has requested a regional assessment to understand the current state of the river, as well as to address the cumulative effects of past, current and future projects in a regional context. They have proposed that the regional assessment focused on Lake Sturgeon as a keystone species, with the objective of setting thresholds and standard mitigation for future projects. The Grand Council of Waban-Aki, the Huron-Wendat Nation and the Montreal Port Authority provided letters of support to this request.

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¹ https://iaac-aeic.gc.ca/050/evaluations/proj/80913?&culture=en-CA

Minister's Response

Upon receipt of the request, the Agency initiated a review, taking into consideration the factors laid out in the *Operational Guide: Requesting a Regional or Strategic Assessment under the Impact Assessment Act.*² The Minister issued his response to the request on October 27, 2020, pursuant to subsection 97(1) of the IAA and the associated *Information and Management of Time Limits Regulations*. The Minister determined there were potential merits of conducting such a regional assessment, and that further analysis and engagement was required before making a decision to move forward with it.

The Minister directed the Agency to initiate an engagement process with federal and provincial government agencies, the Mohawk Council of Kahnawà:ke and other Indigenous peoples, and non-governmental organizations to discuss the possible nature, scope, objectives and outcomes of a potential regional assessment. The Minister directed the Agency to provide him with the results of these discussions by Spring 2021.

Indigenous and Stakeholder Engagement Process

The Agency undertook an engagement process from November 2020 to April 2021, which included initial information sessions and various engagement sessions focussed on specific topics and questions. The Agency shared a monthly summary of engagement activities on the Canadian Impact Assessment Registry (the Registry).³

The Agency provided over \$100,000 in grants and contribution agreements to 10 First Nations and 10 non-governmental organizations in January 2021, under its Participant Funding Program, to support their participation in the engagement process.

Participant identification and notification

Using the assessment area the Mohawk Council of Kahnawà:ke proposed in their request (Figure 1) as an initial basis, the Agency identified First Nations whose rights may be adversely impacted by activities in this region, and stakeholder organizations that may be interested in participating in the engagement process.

² Operational Guide: Requesting a Regional or Strategic Assessment under the *Impact Assessment Act*: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/requesting-regional-strategic-assessment-iaa.html

³ Monthly summary of engagement activities: https://iaac-aeic.gc.ca/050/documents/p80913/138504E.pdf

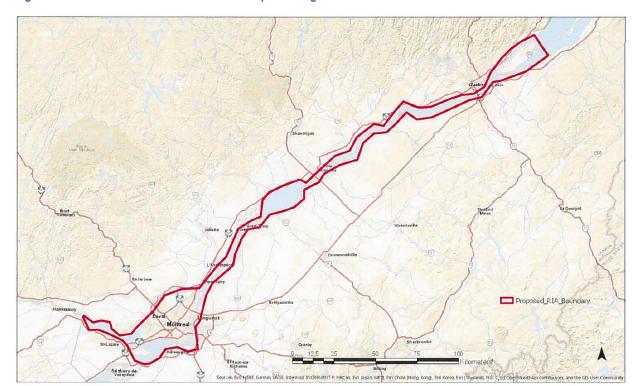


Figure 1: Mohawk Council of Kahnawà:ke's Proposed Regional Assessment Area

In November 2020, the Agency contacted 10 First Nations to confirm their interest in participating in the engagement process and to hear how they wanted to be involved, so that their preferences could be considered in the planning and design of the engagement process. The Agency then maintained ongoing contact with these First Nations regarding engagement opportunities and other information.

The Agency also developed and maintained a distribution list of stakeholders to in order to provide notifications regarding upcoming engagement opportunities and other information. This distribution list included stakeholder organizations in the defined geographic area referenced above, as well as those who participated in Transport Canada's Cumulative Effects of Marine Shipping initiative (see Appendix 1), and in recent federal assessment processes for port projects in the St. Lawrence River area. Participants were encouraged to circulate these notifications within their networks, and additional organizations and individuals contacted the Agency to request their addition to the distribution list. The Agency regularly updated the distribution list as the engagement process progressed. From January to March 2021, the Agency advertised engagement opportunities on the Registry, via its email distribution lists, in print and online newspapers, and on radio stations in Montreal, Trois-Rivières, Quebec City and surrounding areas. Advertisements appeared in both French and English media, and in the community newsletters and radio stations of First Nations in the region. The Agency also invited Twitter users to stay updated on this engagement process by following the Agency on Twitter @IAAC_AEIC with the hashtag #StLawrenceRiver.

Initial information sessions

The purpose of these initial information sessions was to provide an overview of the regional assessment process, the request received from the Mohawk Council of Kahnawà:ke, the Minister's response planned engagement activities, and to seek any early input or perspectives on the potential regional assessment. The Agency held information sessions virtually from November 2020 to January 2021, with the requestor, organizations who provided letters of support, identified First Nations and stakeholders, and the broader public (Table 1). These sessions were offered in French and in English, with the same information provided at each session. The material that the Agency shared at these sessions was posted to the Registry.⁴

Table 1: Summary of Introductory Sessions

Date	No. Participants*	No. and Types of Organizations
November 10, 2020	2	1 Marine Industry
November 18, 2020	5	1 First Nation
November 25, 2020	4	1 First Nation
December 4, 2020	6	3 First Nations
December 8, 2020	13	6 First Nations
December 9, 2020	4	1 Academic / Research Institution2 Environmental Organizations1 Marine Industry
December 9, 2020	6	3 Environmental Organizations 2 Marine Industry
January 12, 2021	17	7 First Nations
January 13, 2021	11	1 Citizens' Group1 Economic Development Organization5 Environmental Organization3 Marine Industry

⁴ Information Session Presentation by the Agency: https://iaac-aeic.gc.ca/050/documents/p80913/138028E.pdf

Table 1: Summary of Introductory Sessions

Date	No. Participants*	No. and Types of Organizations
January 15, 2021	7	1 First Nation
		3 Academic / Research Institutions
		7 Environmental Organizations
		3 Federal Agencies
January 20, 2021	29	6 Members of the public
		2 Municipalities
		1 Provincial Agency
		1 Land Development
January 20, 2021 4		2 Environmental Organizations
	4	1 Provincial Agency (outside Québec)
		1 Utility Company
		1 Federal Agency
January 25, 2021		1 Marine Industry
	5	2 Members of the public
		1 Utility Company
January 28, 2021 16		1 Citizens' Group 2 Environmental Organizations
	16	6 Federal Agencies
	10	2 Marine Industry
		1 Members of the public

^{*}External participants only (i.e., does not include Agency staff)

Engagement sessions

The Minister directed the Agency to gather input on the need and rationale for the regional assessment, and its potential nature, scope, objectives and outcomes. The Agency organized a series of engagement sessions to discuss three specific topics (Table 2), taking into account preliminary discussions held during the information sessions. The Agency also gathered information on rights of Indigenous peoples during these sessions.

Table 2: Topics for Engagement Sessions

Topic	Objectives
Potential Assessment Area / Issues and Concerns	 To gather input on the issues and concerns that the regional assessment should address. To hear views on why this regional assessment is needed (the rationale). To identify the potential assessment area (study area) for the regional assessment.
Existing Initiatives – Strengths and Opportunities	 To identify existing programs and initiatives in the region, and to evaluate their relevance to the key issues that a potential regional assessment would address.
Potential Objectives and Outcomes	 To gather input on possible objectives and outcomes for this potential regional assessment.

The Agency held these sessions virtually throughout February and March 2021. Two sessions were held per topic, with one for First Nations only and the second session open to all participants (Table 3). In advance of each session, the Agency provided participants with an overview document and a background document. The overview document summarized the regional assessment process, the request received from the Mohawk Council of Kahnawà:ke, the Minister's response, and the planned engagement activities.⁵ The background document outlined the objective of the session, context for the topic to be discussed, and questions to help guide the discussion.⁶ The overview and background documents for these sessions were posted to the Registry. During the engagement sessions, there was simultaneous translation in French and English, an independent facilitator was retained to help guide the discussions, and Agency staff participated and took notes. Draft versions of the notes were sent to all participants for their review and verification after each session.

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⁵ Overview document: https://iaac-aeic.gc.ca/050/documents/p80913/138028E.pdf

⁶ Session 1 Background Document: https://iaac-aeic.gc.ca/050/documents/p80913/138448E.pdf Session 2: Background Document: https://iaac-aeic.gc.ca/050/documents/p80913/138448E.pdf Session 3: Background Document: https://iaac-aeic.gc.ca/050/documents/p80913/138448E.pdf

Table 3: Summary of Engagement Sessions

Date	No. Participants*	No. and Types of Organizations	
Potential Assessment Area / Issues and Concerns			
February 10, 2021	23	8 First Nations	
		6 Academic / Research Institutions	
		1 Citizens' Group	
		12 Environmental Organizations	
		2 First Nations	
February 11, 2021	55	10 Federal Agencies	
February 11, 2021	55	3 Marine Industry	
		2 Members of the public	
		1 Municipality	
		2 Provincial Agencies	
		1 Tourism / Hospitality Organization	
February 16, 2021	1	1 First Nation	
Existing Initiatives -	Strengths and Opportuniti	ies	
February 24, 2021	19	8 First Nations	
	46	3 Academic / Research Institutions	
		2 Citizens' Group	
February 25, 2021		1 Economic Development	
		10 Environmental Organizations	
		9 Federal Agencies	
		3 Marine Industry	
		1 Municipality	
		1 Provincial Agency	
		1 Tourism / Hospitality Company	

Table 3: Summary of Engagement Sessions

Date	No. Participants*	No. and Types of Organizations
Potential Objectives	and Outcomes	
March 17, 2021	16	8 First Nations
		3 Academic / Research Institution
		6 Federal Agency
		7 Environmental Organization
March 18, 2021	54	1 Provincial Agency
		2 Citizens' Group
		1 Land Development
		1 Economic Development

^{*}External participants only (i.e., does not include Agency staff)

Written submissions

On January 6, 2021, the Agency launched the public comment period and invited written comments on the potential regional assessment. The deadline for submissions was April 6, 2021. The Agency received 22 submissions from First Nations, environmental organizations, and members of the public. As per Agency policy, all written comments received from public stakeholders were published on the Registry, and the Agency verified with First Nations if their comments could be shared publicly prior to posting on the Registry. The Agency also received letters from federal authorities, which were also posted on the Registry.

Summary of Comments and Observations

The following sections provide a summary of comments and observations gathered by the Agency during the above-described information and engagement sessions, and from the written submissions received.

Rights of Indigenous Peoples

Specific comments regarding the rights of Indigenous peoples were provided by both Indigenous and non-Indigenous participants in sessions with the Agency and in written submissions. Some comments focused on a preference that the regional assessment be conducted by a committee inclusive of First Nations representatives. Other comments referenced the need to include the assessment of the impacts of individual projects on the rights of Indigenous peoples within the scope of the regional assessment, including the right to economic development, governance, and land stewardship, as well as the importance of incorporating Indigenous knowledge, and the need to provide specific funding to First Nations for their participation in the regional assessment.

It was stated that current and future customary activities are Indigenous rights that are subject to constitutional protection, including the duty to consult and accommodate Indigenous peoples. First Nations shared that the following activities are practiced in the St. Lawrence River region: fishing, trapping, hunting and gathering of various species and resources for food, ritual, or social purposes; hunting of ducks and migratory birds; commercial fishing of crab, green sea urchin, and halibut; seal hunting and shellfish gathering; healing-related activities on the territory, and recreational and tourism activities related to the marine environment (whale watching cruises; sea kayaking excursions; riverside resorts, swimming, and campgrounds). One First Nation shared that the St. Lawrence River is inseparable from the practice of their ancestral rights and the commercial exchanges that were maintained with other Nations, and that the river is as important as Nitassinan, the land of their ancestors. However, although the link with the river is still present today, the current levels of pollution has forced them to change their way of interacting with the river. They hope solutions to this environmental damage can be found. More specifically, First Nations reported on the cumulative impacts of the various projects that have taken place in the St. Lawrence over the last century. In particular, the construction of the seaway in the 1950s, industrialization, port development, and shipping have eliminated or limited their access to the river to exercise their rights and practice activities such as hunting, fishing, trapping, and plant gathering. In addition, declining populations of important species for fishing have had a cumulative impact on the peoples' ability to exercise their fishing rights. First Nations indicated that the practice of activities on their territory is subject to many increasing and cumulative pressures. It was also pointed out that these cumulative impacts, particularly those associated with the region's industrialization over its history, occurred at a time when environmental concerns and the rights of Indigenous peoples were not given consideration. Taken together, these changes threaten the sustainability of the ability to exercise their rights and the practice of activities within the territory. One First Nation also reported that changes to the land due to such cumulative impacts are affecting its governance capacity and the exercise of its stewardship, namely its ability to consistently carry out its responsibility with regards to the land in a reciprocal relationship. Furthermore, without a proper understanding of the regional environmental context, it is difficult for First Nations to assess the contribution of each new project to the cumulative impacts on their rights and interests.

One First Nation also emphasized the feelings of tranquility, healing, well-being, and cultural continuity that are directly associated with the exercise of rights and the practice of activities on the territory. Most of these are family and intergenerational activities, which play an important role in cultural transmission, identity building, and the strengthening of intergenerational, social, and community ties. In addition, there is community distribution of the products of these activities (especially large and small game, fish, fruits, and plants). These activities are supported by a set of knowledge and a particular ethic transmitted mainly through these family and intergenerational activities on the territory. In relation to these factors, this First Nation expressed that the right to fish is an Indigenous right that is associated with a set of knowledge and meanings that must also be protected, such as the right to cultural transmission and continuity, collective well-being, social cohesion, and the right to self-determination. The ability to exercise all these rights depends on the maintenance of a range of environmental and socio-economic conditions and are affected cumulatively by multiple impacts. The First Nations stressed the fact that connection to the resource is essential.

The Mohawks of Kahnawà:ke indicated in their regional assessment request that they have constitutionally established and protected Indigenous fishing rights under Section 35(1) of the *Constitution Act, 1982*. They claim other rights including, but not limited to, Indigenous title, governance rights (including environmental stewardship), harvesting rights, and trading rights on the St. Lawrence River. These are inherent rights and rights conferred under subsection 35(1) of the *Constitution Act, 1982*. The Huron-Wendat Nation noted that it and the Crown are treaty partners under the Huron-British Treaty of September 5, 1760. The territorial validity, effectiveness, and application of this treaty were unanimously upheld by the Supreme Court of Canada in *R. v. Sioui*. The ancestral and territorial rights covered by this treaty therefore enjoy constitutional protection.

The First Nations proposed that one objective of the regional assessment should be to evaluate the cumulative impacts of development projects on First Nation rights, activities, and interests, including the impacts of past projects, which lack historical data. To do this, the temporal scope of the regional assessment should extend to at least the last 50 years. The regional assessment should also establish a baseline of First Nations rights impacts, which currently does not exist, to facilitate the assessment of future projects and their repercussions on rights. It was also recommended that the report of a regional assessment should include a specific section to identify the First Nations involved and describe their rights, territorial scope, and respective interests. Particular attention should be paid to the collection of data from each of the First Nations, in order to consider their respective approaches, when conducting the regional assessment.

The Need for a Regional Assessment

All the comments received during the engagement sessions and in the written submissions were supportive of a regional assessment of the St. Lawrence Area. Participants spoke of the extensive development along, and activity within, the river over the past century, resulting in increased ecological damage. These activities and effects include: dams, construction of the St. Lawrence Seaway, modification of the river's flow pattern, degradation of water quality, denaturalization and erosion of the river banks, excavation and modification of the shoreline to facilitate navigation, erosion control, industrial development, military blasting operations conducted by the Department of National Defence in Saint-Pierre Lake until the 2000s, impacts related to the construction of Highway 40, and others. According to the participants, a regional assessment would make it possible to better evaluate the cumulative impacts related to past, present, and future development. It was also noted that a regional assessment is needed to understand the current state of the river, establish biological and chemical thresholds for future development, and identify the most sensitive locations and/or resources so that project development can be planned and assessed more effectively. Participants believe a well-executed and thorough regional assessment is needed to inform future project-specific impact assessment decisions. For example,

proponents could save time and money by avoiding proposals that do not fit into the vision of protecting the river (e.g., in any sensitive areas identified in the regional assessment). Several participants wondered whether the river has already reached its capacity to support additional development, and if a regional assessment would validate this concern

It was suggested that a regional assessment is needed to fill the gaps in the current impact assessment system, mainly since project-based impact assessments and other completed or ongoing initiatives have several limitations that do not allow for a comprehensive view of the situation. Participants criticized the fact that, at present, proponents generally only assess the effects caused in the area of influence of their respective project and that each project is assessed in isolation. This single-project approach does not provide a broader understanding of all current and potential future projects and associated activities in the region, nor of the cumulative effects resulting from them. The baseline conditions are also changing constantly as many projects are carried out individually and are continuously modifying the territory. First Nations also highlighted that, in addition to large-scale development projects, there are many minor projects, many of which are not subject to any consultations and for which no information is available. For all of these projects, the assessment of cumulative effects is very limited. For example, it was stated that the effects of shipping on marine mammals have not been part of the scope of recent assessments of port projects. In addition, the increase in marine traffic is not always included in the assessment of the projects that generate it, such as port projects. Participants were therefore critical of the fact that each proponent downplays the shipping impact associated with its project, but when these projects are added together, the cumulative impact is considerable. As a result, projects are in the same region but are subject to separate assessments, and therefore do not consider the other projects in the area. It was felt that a regional assessment would make it possible to better analyze the cumulative impact of the various projects by taking into consideration all their associated parameters.

Several First Nations have indicated that there is a need to develop monitoring and follow-up programs for collaborative projects that would provide a comprehensive view of the St. Lawrence River, and that a regional assessment could contribute to this.

Some participants indicated that a regional assessment would be valuable to identify marine and freshwater areas that should be protected, environments that should be restored, and areas where development should be prohibited and protection targets established.

One First Nation suggested that a regional assessment is needed to identify valued components and stressors in the region (including how they interact), and to engage all regional stakeholders to identify opportunities to work collaboratively. This could ensure that future projects in the region consider not only their local impacts, but also begin to reverse some of the unacceptable cumulative impacts that are ongoing.

Some participants felt that a regional assessment could also help to address questions related to competition issues between different port development projects to ensure that competition between Canadian ports does not cause undue strain on the river.

One First Nation commented that in the current context of development and growth of marine activities on the river, it is increasingly important to develop more comprehensive mechanisms to address cumulative impacts on the ancestral rights of Indigenous peoples in all their complexity and from a systemic perspective. It was also argued that proponents generally claim that they have limited responsibility for cumulative impacts, and that a significant portion of the management of cumulative impacts falls to the Crown. Given the limitations of current mechanisms that do not allow for a sufficiently informed understanding of cumulative impacts on rights, First Nations suggested that this gap directly undermines the Crown's constitutional duty to consult and accommodate Indigenous peoples.

Assessment Area, Issues, and Concerns

Through the engagement program, the Agency sought to gather input on the issues and concerns that any such regional assessment of the St. Lawrence River should address, and the geographic area that it might focus on.

Potential Assessment Area

Most participants provided views on the potential assessment area, some of which were conflicting. However, if a regional assessment were to take place, participants consistently stressed the importance of establishing its geographic boundaries in a rigorous manner.

Several factors were proposed for consideration in the delineation of the assessment area, such as: the proportion of water coming from the Great Lakes and the proportion of water coming from the tributaries; the proportion of freshwater, brackish water and salt water; the location of current and planned activities and development projects; access to the river; availability of natural resources, and other considerations. Participants also discussed different areas of the river requiring an assessment, including the Fluvial Section, the Upper Estuary and Saguenay, and the Lower Estuary and Gulf.

Some participants noted that the proposed assessment area included in the Mohawk Council of Kahnawà:ke's regional assessment request was adequate. In this regard, they indicated that the regional assessment may be too complex and difficult to carry out if the geographic scope is not well defined and becomes too large. Limiting the assessment area to the Fluvial Section of the St. Lawrence River would maximize the use of available human and financial resources and allow the assessment to be carried out within a reasonable timeframe. This section of the river is the most developed stretch, with a relatively high concentration of industries, dams, and agricultural activities. It was also suggested that the area should be focused on the Fluvial Section since it has a large amount of data (historical and current) already available.

Conversely, some participants felt that the assessment area proposed in the Mohawk Council of Kahnawà:ke's request should be expanded upstream and/or downstream. More specifically, some proposed adding the Lower Estuary and the Saguenay Fjord to the assessment area. Several major projects have been approved or are under study in the Saguenay River, which would add to the cumulative impacts of the entire St. Lawrence River. A beluga whale nursery is also located near Cacouna. Port developments and navigation upstream of the Lower Estuary and the Saguenay Fjord also affect these areas.

According to one First Nation, the assessment area should include the Fluvial Estuary (from Trois-Rivières), the Upper Estuary (to account for marine traffic downstream of the Saguenay Fjord), and the Saguenay Fjord. This is an important area for anchoring and transferring pilots from vessels bound for upstream or downstream destinations.

According to some participants, the assessment area should be determined in a way that would provide an overall view of the current state of the St. Lawrence, including the effects of tributaries that have contributed to the degradation of the river over the years. For example, development and other activities occurring on tributaries can affect various aspects of water quality, quantity, and flow that ultimately affect the St. Lawrence River. For this reason, some participants felt that the assessment area should include the tributaries located in Montérégie (particularly affected by pollution from agricultural activities) and the Saguenay River.

For the western boundary of the assessment area, it was suggested by some that it should include the segment of the St. Lawrence River from the outlet of Lake Ontario to the Moses-Saunders Dam between

Cornwall, Ontario and Massena, New York. This would allow for a clear understanding of the changes in river flow and discharge, and for an effective assessment of the impacts on water quality and habitat conditions on St. Lawrence lake sturgeon. Other participants believed that the assessment area should include the entire river watershed, from its origin at the outlet of Lake Ontario to its mouth in the Gulf of St. Lawrence. This broad scope would allow for analysis and understanding of the impacts of potential projects on the overall river ecosystem and to consider the cumulative effects of past, present and future projects and activities both upstream and downstream. Some First Nations also proposed that important shoreline sites, portions of land, and river mouths be included.

One First Nation suggested that areas outside the chosen assessment area could be negatively affected. There is a concern that if the regional assessment eventually imposes restrictions in a particular area, proponents would propose and develop projects in areas outside that particular area where there are fewer restrictions. It was suggested that this possibility be considered in the determination of the assessment area to avoid this situation.

First Nations noted that each zone of the river has its own environmental characteristics and features, and that each zone would benefit from a regional assessment. It was also proposed that a regional assessment be conducted for the entire St. Lawrence River in different phases to allow taking into account the priorities and considerations applicable to each zone. Each phase could also inform subsequent phases.

Main Activities Currently Affecting the Region or That Could Affect the Region in the Future

Most participants indicated that several navigation-related projects and activities currently affect the region or may affect it in the future, including the operation and expansion of the ports of Québec, Montréal, Trois-Rivières, Salaberry-de-Valleyfield, Sainte-Catherine and Bécancour; repair of the Sainte-Anne-de-Beaupré wharf; dredging required for port developments and maintenance; cruises and ferries; and the increase in marine traffic on the river.

Participants identified various other activities that may affect the St. Lawrence River, such as small wharf projects, recreational uses, shoreline development projects, anchorage zones, industrial activities, agricultural activities, pesticide use, urban development and deforestation along the river, regulation of flows from dams and hydroelectric facilities, bridge construction and repair, and municipal wastewater discharge. Specific projects were mentioned, such as the shoreline stabilization project on Jacques-Cartier beach in Québec, the third link project between Québec and Lévis, the construction of the Île d'Orléans bridge, the demolition of the Portneuf wharf and the Énergie Saguenay project.

In the opinion of one First Nation, an assessment encompassing all these activities would not allow for realistic measures and potential action plans to be developed. They felt that marine infrastructure (wharves, landings, ports, etc.) and marine activities, including shipping, should be the focus of the regional assessment.

One participant, referring to the federal Major Works Order, stated that all major works constructed or installed in the waterways which may affect the river should be considered in the regional assessment. These include breast-ropes or telecommunication cables burial, or pipeline burial, shoreline alteration works related to erosion protection, water control works, and aquaculture projects.

Another participant noted that industrial air emissions (including those from aluminum smelters, cement plants, refineries, and chemical plants) can affect the river and its tributaries and should also be considered in the regional assessment, with particular attention to atmospheric deposition. In this respect, it was suggested that an accurate assessment of greenhouse gas, toxic substance, and particulate matter

emissions associated with various activities in the St. Lawrence River basin is essential since these can affect the river environment.

Key Issues and Concerns

Most participants expressed concern about cumulative impacts on the entire St. Lawrence and Saguenay Rivers, including those resulting from the effects of increased freight shipping, ferry traffic, commercial tours, recreational boating, and cruises.

Several participants also commented on the impacts of shipping (including the resulting noise pollution) on marine mammals over and above other threats (e.g., environmental pollution and prey availability). Project development on various scales may also affect the recovery or maintenance of current populations of species at risk that use the waters and shores of the St. Lawrence River (such as the beluga whale, lake and Atlantic sturgeon, copper redhorse, and striped bass). The presence of dams also impedes the movement of migratory fish, such as sturgeon, shad and eel.

Participants expressed concerns about the impacts of climate change on the river, including decreased dissolved oxygen due to rising temperatures, effects on fish populations, more severe low-flow or flooding periods, rising and fluctuating temperatures, winter breakup that makes ice fishing increasingly difficult and dangerous, and the proliferation of invasive alien species. First Nations members noted that they have observed new exotic and invasive fish species that are affecting their practices and that the increase in invasive plant species is reducing accessibility in some bays.

Some First Nations also shared concerns related to fish habitat-offsetting projects. In the Montréal area, for example, it is increasingly difficult to find suitable locations for fish habitat offsetting for development projects. Therefore, these offset projects must be carried out in locations further and further away from the affected site. Depending on the location selected, the offsetting project may not address the adverse impacts to the rights of the local Indigenous peoples.

Participants also raised concerns regarding: impacts on the river as a source of drinking water; the effects of stormwater and wastewater discharges by municipalities; the decrease in populations of fish species important to fishing; the closure of shellfish harvesting areas due to poor water quality; the preservation of biodiversity and habitats; changes to the water regime; the protection and enhancement of cultural and archaeological heritage; the preservation of landscapes; the development of recreational and tourism activities; spills; contaminants; urban sprawl; shoreline artificialization; the effects of erosion and wave action on shorelines and archaeological sites; and wetland degradation and loss.

Several participants felt that it would be necessary to restrict or regulate commercial shipping to mitigate adverse impacts (e.g., by limiting vessel speeds to prevent shoreline erosion). One participant expressed concern regarding the lack of protection of the Beauport flats and other sites in the Québec region that could be affected by future port developments. The importance of preserving the Saint-Pierre Lake region, which has the largest area of marshes and swamps in the entire St. Lawrence basin, was also stressed.

Participants voiced other concerns, including: the loss of their use of and access to the river, including through shoreline privatization; the fees charged at boat launch sites; the impacts of projects along the St. Lawrence on human health (including mental health); and emerging issues such as the adverse effects of microplastics and pharmaceutical waste.

There were also shared concerns that many past projects were approved at a time when environmental standards and regulations were not the same as they are today. These projects, which have not gone through an impact assessment process and some of which would likely not be considered today, create adverse, cumulative effects that have never been subject to mitigation or management measures.

First Nations raised issues of governance and accountability. For example, priorities vary by administrative region and by division of the St. Lawrence (freshwater, brackish water, or salt water). Other concerns were related to the maintenance of traditional practices in the marine environment, such as:

- access to sites;
- the protection and quality (wholesomeness) of species harvested for food, ritual or social purposes;
- the protection of important habitats for valued species (shelter, feeding, reproduction, etc.);
- the protection of shoreline sites of cultural importance;
- the protection and sustainability of threatened and vulnerable species:
- the protection of species and habitats in which First Nations have an economic interest;
- the maintenance of the quality of landscapes and various recreational and tourism activities related to the marine environment (whale watching cruises, sea kayaking excursions, shoreline resorts and campsites, swimming, healing retreats);
- the harmonious coexistence of the various types of marine transportation; and
- the repercussions on the rights and interests of First Nations.

The river is linked to the way of life of First Nations and plays an important role in the intergenerational transmission of knowledge, techniques, and practices.

Valued Components

Participants noted several valued components in the region, such as Indigenous practices and rights; special status species (such as lake sturgeon, beluga whale and striped bass); archaeological and heritage sites; marine mammals, birds, and their habitats; fish (including invertebrates) and their habitats; protected areas; intact forest landscapes; wetlands; water quality; drinking water quality and quantity; air quality; health; and the economy.

Participants identified several protected areas, including the Saguenay-St. Lawrence Marine Park and other national parks, locations under consideration for protected area status (such as the proposed Manicouagan Aquatic Reserve), migratory bird sanctuaries, and designated areas for sponges and corals in the Lower Estuary.

Some First Nations expressed concern that if the regional assessment includes consideration of and focus on too many valued components, it will not be focused enough on key issues and its results may be too generic to be valid or effective (for example, from a statistical perspective).

Current and Planned Initiatives – Strengths and Opportunities

The Agency was interested in gathering feedback on other existing and planned initiatives related to the St. Lawrence to determine their relevance to the key issues that the regional assessment could address.

Opportunities

While many current or planned initiatives related to the St. Lawrence do exist (see Appendix 1 for a list of initiatives mentioned during the engagement process), there was almost unanimous agreement among participants, both during the sessions with the Agency and in written submissions to the Agency, that these initiatives cannot address the issues raised in the request for the regional assessment.

For example, it was noted that these initiatives typically have a limited spatial and temporal scope and a narrow mandate, and may focus solely on knowledge acquisition or habitat restoration rather than on the identification of mitigation measures or the development of long-term decision-making, planning, or monitoring processes. In addition, they generally do not include studies of historical disturbances to the St. Lawrence River, do not address the cumulative impacts of past, present, or future development projects, including both upstream and downstream impacts, and do not allow for a holistic assessment of the St. Lawrence.

From the perspective of First Nations, these initiatives are also sometimes focused on species (including species at risk) that are not necessarily species of interest to them, and it can be difficult for First Nations to obtain recognition of other species or environmental components that are important to them. Furthermore, these initiatives do not always provide stable and adequate funding to support the continued involvement of First Nations, particularly for recurring activities such as monitoring programs.

According to one participant, these other initiatives cannot replace the structured approach and clear objectives of a regional assessment under the IAA. According to First Nations, other initiatives can potentially help inform and feed into a regional assessment (for example, by proposing different approaches and tools that could be used in the assessment) or be improved by the results of an upcoming regional assessment. However, the existence of these initiatives does not negate the need for a regional assessment.

Several participants spoke about existing initiatives under the Oceans Protection Plan, such as Transport Canada's Cumulative Effects of Marine Shipping initiative in the St. Lawrence River and Saguenay River Fjord, and Fisheries and Oceans Canada's Coastal Restoration Fund. For many participants, including First Nations, Transport Canada's Cumulative Effects of Marine Shipping initiative is not sufficient to address their concerns because: it focuses on a single activity; it does not consider impacts resulting from port expansion projects and associated activities (such as urban and industrial development, dredging of the seaway, and any other environmental effects); it considers changes observed only over the last five years) which is too narrow of a temporal scope; does not include new data collection; and does not attempt to establish development thresholds for the St. Lawrence River. According to several First Nations, this initiative also does not sufficiently address the cumulative impacts of past, present or future development projects on the exercise of their rights and will not provide a true and comprehensive picture of the situation. As for the Coastal Restoration Fund, it also does not consider the cumulative impacts and historical disturbances that the St. Lawrence has undergone.

According to participants, a regional assessment would allow for the involvement of all citizens and users who have concerns about the St. Lawrence and whose participation is usually limited to their immediate geographic locations. Those who may have ceased to participate in some initiatives in recent years (due to lack of funding, for example) could also participate in the regional assessment. For example, community organizations and members of communities located along the St. Lawrence River and its tributaries could be involved in the regional assessment by collecting relevant data. A regional assessment could also facilitate concerted action to advance the protection of the St. Lawrence. Participants said it could also support better collaboration between industry and other stakeholders since the federal government could act as a facilitator between the various parties.

According to First Nations, some initiatives (including those under provincial jurisdiction) do not consistently include First Nations and do not always consider their concerns because they do not have the obligation or mandate to do so. For example, several First Nations indicated that they were not consulted in connection with the Government of Québec's Stratégie Maritime [Maritime Strategy], and they felt that their rights and interests should have been considered during the development of the Strategy, especially due to its scope, impact on development, and the increased pressure on their traditional territories. When First Nations are involved, they are sometimes only considered as "stakeholders" along with the other participants, which in their view, diminishes their involvement. Some initiatives are also subject to the changing priorities of different governments, which does not help facilitate planning or achievement of goals over a longer-term

Furthermore, not all current or planned initiatives are equally accessible to First Nations, as they are often time-limited and sometimes not very accommodating for English-speaking members. First Nations also noted that some regional county municipalities that are responsible for implementing actions arising from these initiatives do not always work together to develop a common implementation plan that incorporates First Nations concerns and interests.

Strengths

Participants did identify some aspects of current or planned initiatives that could be applied to a future regional assessment of the St. Lawrence. For example, participants indicated that these initiatives could generate useful baseline data on the St. Lawrence and its tributaries, as well as a methodological framework that could be used in the regional assessment. First Nations noted that Transport Canada's research initiatives on underwater vessel noise and hull anti-fouling coatings could be interesting sources of information. Taken together, these data could help provide a picture of the current state of knowledge on the river and the issues it faces.

These other initiatives could also inform the design of the regional assessment, including the choice of valued components to be prioritized, the choice of issues that should be addressed, and the expected outcomes. One participant mentioned that the integrated, cross-sectoral, and interdisciplinary approach applied to some of these initiatives (e.g., the research initiatives conducted by the Laboratoire interdisciplinaire de simulation socio-écologique of the Department of Natural Sciences at the Université du Québec en Outaouais) should also be applied to the regional assessment.

First Nations pointed to the collaborative approach of Transport Canada's Cumulative Effects of Marine Shipping initiative. They also commented that Transport Canada's Enhanced Maritime Situational Awareness Initiative represents a best practice of First Nations involvement in a federal government-led initiative. The governance for the pilot project under the initiative was led by First Nations, in collaboration with Transport Canada, and First Nations were involved in the selection, development, and implementation of many elements of the pilot project. First Nations also identified the frequency of meetings between the various participants, the consideration of the needs of each community, and the

fact that decisions were made in a concerted manner as positive points. First Nations have expressed their satisfaction with the support that Transport Canada has provided to them.

Finally, one participant recommended that the Agency reach out to all interested parties and relevant government agencies to develop a list of current or planned initiatives that could potentially be relevant to the regional assessment. Among these, the regional assessment should consider any initiative in which the federal government has partnered with Québec, Ontario, and the United States (including Great Lakes initiatives), or an international organization (such as the International Joint Commission).

Potential objectives, approaches and outcomes

The Agency also sought to gather input on possible objectives and outcomes for this potential regional assessment. The background document for the engagement session on this topic included examples of the range of possible objectives and outcomes for a regional assessment under the IAA.⁷

Key Considerations Raised

Many participants felt that regional assessment should not lead to the elimination or reduction of project-specific impact assessments, as was the case following the Regional Assessment of Offshore Oil and Gas Exploratory Drilling East of Newfoundland and Labrador (through regulation).

Most participants underscored the fact that the St. Lawrence is a complex ecosystem with multiple regional characteristics and that the regional assessment should not lead to generalizations about valued components to be applied throughout the entire region. For example, even if the status of a given species is stable in a section of the St. Lawrence, it should not be presumed that this is the case for the entire St. Lawrence and conservation measures may still be necessary. The regional assessment should be conducted on an appropriate scale and must account for the unique characteristics of the St. Lawrence, depending on the assessment area selected.

One First Nations expressed concern that assessment exercises and scientific research are not moving fast enough to help decision-making, which is often subject to specific and regulated timeframes. It would be beneficial if the results of the regional assessment, as well as the resulting decision-making, could consider the findings of scientific research.

General Objectives

Participants shared a number of views on the objectives and outcomes that the regional assessment should achieve. While a regional assessment cannot meet all possible objectives, accomplish all possible outcomes or address all concerns and issues raised, participants would like to see it produce actionable and tangible results. For example, many participants felt that the regional assessment should assess the cumulative impacts of past, present, and future projects to protect the integrity of the St. Lawrence. These

⁷ Session 3: Background Document: https://iaac-aeic.gc.ca/050/documents/p80913/138451E.pdf

participants also wanted specific objectives to be established and tailored to the selected assessment area.

According to First Nations, the regional assessment should help determine the maximum pressure that can be exerted upon the St. Lawrence River without affecting its integrity, and ensure the maintenance and restoration of First Nations' rights, including the right to access the river. For most participants, the purpose of the regional assessment should be to establish an initial point of reference from which all future projects and their effects should be considered, to provide tools to better understand and assess the impacts of these projects, and to identify the best mitigation and compensation measures.

Some participants emphasized that the regional assessment should promote a holistic approach and should be based on the principles of integrated water management, namely an approach that promotes transparent and ethical governance and is based on representative First Nations and public participation.

Specific Objectives and Key Desired Outcomes

For many participants, the regional assessment should begin by combining existing information related to the St. Lawrence, including information drawn from Indigenous knowledge, local community knowledge, current or planned scientific and other initiatives, and both current and historical economic data on issues raised by participants during the engagement process. This compilation of existing information would help identify gaps in currently available data and provide an overall picture of existing environmental, social, and economic conditions, both upstream and downstream of the eventual assessment area.

Some participants proposed that the regional assessment should lead to the implementation of a followup program to ensure that the information generated during the assessment is kept up to date and remains available and applicable over the long term.

Several participants also suggested that the regional assessment should analyze the environmental, health, social, and economic effects of various ongoing and proposed projects, both individually and cumulatively. Some participants suggested that this analysis should include worst-case scenarios. One participant went on to suggest that the regional assessment should consider the environmental impacts and costs of any activities required to maintain the seaway (including capital dredging activities) should they be necessary to support the projected increase in shipping due to the proposed port projects.

One First Nation also suggested that a regional assessment should provide a better understanding of the cumulative changes in the territory, such as the general decline in meat quality and the increasing presence of parasites in several species of fish that are caught, the sharp decline in the stocks of certain species (including panfish and muskellunge), the disappearance of bullfrog in certain areas, and other issues.

To identify the extent of adverse effects due to anthropogenic disturbances, many participants want the regional assessment to establish thresholds (including chemical, biological, and ecological thresholds) that should not be exceeded in any future development, and to define specific quantifiable targets in relation to the carrying capacity of the environment. Participants expressed the need to assess contaminated sediments in the river.

The following are some examples of proposed tolerance thresholds for the St. Lawrence River that a regional assessment might help establish

 thresholds related to environmental variables that have deteriorated over time (including water quantity and quality, development of an action plan for exotic invasive species, floodplain mapping, wetlands, feeding and spawning habitats, species at risk, biodiversity and access to the St. Lawrence). The influence of climate change on these variables should be taken into account in establishing these thresholds;

- concentration limits for emerging contaminants and pollution from wastewater discharges; and
- restrictions on marine navigation and underwater noise emission.

Participants proposed various objectives to be considered and addressed in the regional assessment, including conservation targets for marine mammals, recovery of aquatic species at risk (including beluga whales), and identification of priority marine protected areas, sensitive areas, and natural resources for conservation and protection. According to some participants, these targets should aim to restore the integrity and health of the river, and the plant and animal species that depend on it, to their highest levels over the past century. Furthermore, other participants added that proponents should be required to demonstrate that their future activities would not interfere with the attainment of these targets. Otherwise, their activities should be rejected, or subject to strict conditions.

Some participants also suggested that the regional assessment should synthesize the standard mitigation and monitoring measures included in the various ongoing projects so that specific, standardized mitigation measures could be identified for possible regulation and inclusion in future projects.

Finally, participants recommended that the regional assessment establish a regional context for environmental, social, and economic issues on which impact assessments of future projects could be based.

Some participants suggested that the regional assessment should lead to the generation of cumulative impact information, which must be mandatorily considered in all project-specific impact assessments in the future. One First Nation wants the cumulative effects that would be documented to be included and considered in all future projects in the region, regardless of whether or not those projects are subject to environmental legislation. According to one First Nation, the regional assessment should also lead to the identification of standardized criteria to compare similar projects and thus make the decision-making process more transparent. Another First Nation expressed the view that at the end of the regional assessment, it should be possible to make a quick and informed determination as to whether a new project could be considered and what the actual effects would be. In this sense, the results of the regional assessment should be accessible and usable by First Nations.

In addition, some participants indicated that the regional assessment should be able to provide certainty to proponents by identifying areas that should be protected, areas where compensation and restoration activities should be carried out, and areas that may be suitable for development. The assessment should also enable them to evaluate the suitability of their project upstream, in terms of cumulative impact, and to design it accordingly. Some First Nations would like the regional assessment to lead to better collaboration among existing industries so that opportunities can be developed to restore or mitigate current impacts.

Finally, participants recommended that the regional assessment be an opportunity to debate the granting of specific legal status to the St. Lawrence in order to give it legal rights, as has been done for the Magpie River by the Innu Council of Ekuanitshit and the Minganie Regional County Municipality. Granting legal status would require proponents and decision-makers to consider whether future projects would infringe on the river's inherent rights and would cause adverse effects on the aquatic ecosystems.

Ultimately, the desired outcome for all participants in the regional assessment would be to maintain the long-term health of the St. Lawrence and all the species it supports, including its users.

Additional Perspectives

In addition to the discussion topics put forward by the Agency, other points were raised by several participants regarding regional assessments, both during the sessions with the Agency and in the written submissions. The comments focused on factors to be taken into account in such a regional assessment.

Conduct of a Regional Assessment

Several participants said that they expected to be involved in the next steps of the decision to conduct a regional assessment, such as having the opportunity to review the report prepared by the Agency prior to its submission to the Minister, or being given the chance to have discussions with the Minister's office once the report has been submitted but prior to the Minister's decision. Some participants indicated that they would like to be actively involved in the next steps of a potential regional assessment but that their level of participation will depend on the scope or final assessment area selected, specifically if the St. Lawrence Estuary and the Saguenay Fjord are included. First Nations stressed the importance of being fully included at the outset of a regional assessment, in setting objectives jointly, and in incorporating Indigenous knowledge.

One participant expressed interest in participating in the development of the agreement if the regional assessment were to be conducted by a committee, and in the development of the committee's or Agency's terms of reference, including the manner in which the Minister should consider the recommendations from the regional assessment in future decisions.

Most participants recommended that the regional assessment be undertaken by a committee rather than by the Agency. Should the Minister decide to establish a committee to conduct the assessment, participants suggested that the committee should be established jointly with First Nations and should include representatives from the federal and provincial governments (Québec and Ontario).

One First Nation specified that to achieve tangible results, an optimal alignment between federal and provincial authorities will be required since the governments of Québec and Canada possess a great deal of knowledge, data, and expertise. Without the active participation of both levels of government, it may be impossible to conduct a comprehensive regional assessment. It was also pointed out that both levels of government have a constitutional responsibility to consult and accommodate Indigenous peoples within their respective jurisdictions.

Participants also recommended that various organizations be involved in the process, including: environmental and governmental organizations; representatives of the marine, chemical, petrochemical, mining, and agri-food sectors; riverside communities; academia and private research organizations; First Nations; and citizen groups and individuals. The following stakeholders were specifically mentioned:

- the International Joint Commission
- the International Lake Ontario-St. Lawrence River Board
- the New York State Government
- regional roundtables
- priority Intervention Zone (ZIP) committees
- watershed organizations
- the Great Lakes Water Quality Board

However, several participants indicated that it would be more appropriate for the regional assessment to be conducted by an entity with no potential conflict of interest and with the logistical and financial means

and expertise to conduct the assessment, such as the Agency. A federal entity such as the Agency could also facilitate the participation of First Nations in the regional assessment. Many river-related issues are also under federal jurisdiction.

Several participants recommended that the process for appointing committee members be based on preestablished selection criteria, including required expertise and no real or perceived conflict of interest, and that the roles and responsibilities of each member in the regional assessment process be clarified and made public at the outset of the process.

Timelines

One participant suggested that the timeframe for conducting the regional assessment should be longer than the one normally allotted for conducting impact assessments of individual projects. Several participants agreed that the duration of the assessment should reflect the level of effort that will be required to coordinate and engage meaningfully with a wide range of stakeholders, including members of First Nations, environmental organizations, the public, and all levels of government. The various activities required to conduct the regional assessment should also be scheduled to maximize everyone's participation (e.g., avoiding engagement activities during the summer season). Some participants also stressed the importance of choosing a methodology that is achievable within the allotted timeframe. Finally, several participants emphasized the importance of ensuring timely and adequate funding to support the meaningful participation of First Nations, public and non-profit organizations in all stages of the regional assessment.

Acknowledgement

The Agency thanks all those who participated in this engagement process. The perspectives shared during the engagement sessions and in written submissions has provided the Agency with valuable information regarding this potential regional assessment.

Appendix 1. Initiatives Involving the St. Lawrence River

The following is a list of government and non-government initiatives that participants referred to during the engagement sessions and/or in written submissions. These initiatives are in addition to those previously identified by the Agency in preparation for the engagement process.⁸

Défi Saint-Laurent

Geographic scope: fluvial and marine zones of the St. Lawrence

Objective: to highlight the actions of businesses and recreational tourism establishments that are working

to preserve the biodiversity of the St. Lawrence by reducing their use of microplastics

Collaborators: Stratégies Saint-Laurent and the St. Lawrence Action Plan

Information: Défi Saint-Laurent

Cumulative Effects of Marine Shipping

Geographic scope: Northern Shelf and Southern Shelf Bioregions (British Columbia), Cambridge Bay, St. Lawrence River, Bay of Fundy, and Placentia Bay

Objective: to study the potential effects of marine shipping on the environment and coastal communities, and to establish a national framework for assessing these effects

Collaborators: Transport Canada (lead), Indigenous groups, coastal communities, port authorities, environmental non-governmental organizations, marine science organizations, academics, industry representatives, and other federal departments

Information: Cumulative Effects of Marine Shipping

Coastal Restoration Fund

Geographic scope: Coastal regions of Canada

Objective: to support projects that help restore coastal aquatic habitats

Collaborators: Fisheries and Oceans Canada (lead), Indigenous and community groups, academia, and

not-for-profit organizations

Information: Coastal Restoration Fund

The Great River Rapport

Geographic scope: upper St. Lawrence River ecosystem

Objective: provide information from scientific studies about the ecosystem, its past and present condition, and how it relates to the health of the river, introduce people who are connected to the river and the natural environment in their daily lives, and connect their knowledge and observations to the scientific work through stories

Collaborators: River Institute, Mohawk Council of Akwesasne, federal and provincial government agencies, academic partners, environmental non-governmental organizations, community groups and citizens

Information: The Great River Rapport

Enhanced Maritime Situational Awareness Initiative

Geographic scope: West Coast, South Shore of the St. Lawrence River, North Shore of the St. Lawrence Estuary, and East Coast

⁸ The Agency included a list of initiatives in the background document for Session 2: https://iaac-aeic.gc.ca/050/documents/p80913/138449E.pdf

Objective: to provide Indigenous peoples and coastal communities with near-real time information on marine traffic in local waters through a web-based platform to assist in local and collaborative planning, analysis, and decision making related to navigation

Collaborators: Transport Canada (lead), Canadian Coast Guard, Indigenous organizations and communities, provincial governments, non-governmental scientific organizations and industry stakeholders

Information: Enhanced Maritime Situational Awareness Initiative

<u>Living Lab – Québec</u>

Geographic scope: Lac Saint-Pierre watershed

Objective: to adopt sustainable agricultural solutions adapted to the ecosystem of the Lac Saint-Pierre

watersheds

Collaborators: Agriculture and Agri-Food Canada, Confédération de l'Union des producteurs du Québec,

provincial and federal departments, and agricultural partners

Information: Living Lab - Québec

St. Lawrence Action Plan

Geographic scope: St. Lawrence River

Objective: to conserve, restore, protect, and showcase the St. Lawrence

Collaborators: the Governments of Canada and Québec (co-leads), municipalities, Indigenous

communities, users of the St. Lawrence, and civil society

Information: St. Lawrence Action Plan

Pôle d'expertise multidisciplinaire en gestion durable du littoral du Lac St-Pierre [Multidisciplinary Pole of Expertise in the Sustainable Management of the Lac Saint-Pierre Shoreline] [available in French only]

Geographic scope: Lac Saint-Pierre and its shoreline

Objective: to propose an intervention strategy in the coastal zone that promotes the implementation of sustainable agriculture that is adapted to and respectful of the Lac Saint-Pierre ecosystem, and that supports the restoration of priority environments

Collaborators: Ministère de l'Agriculture, des Pêcheries et de l'Alimentation, Ministère des Forêts, de la Faune et des Parcs, Ministère de l'Environnement et de la Lutte contre les changements climatiques, university partners, federal departments, agricultural partners, and environmental groups

Information: Pôle d'expertise multidisciplinaire en gestion durable du littoral du Lac St-Pierre

Programme de recherche sur l'évaluation et la réduction de l'exposition des bélugas du Saint-Laurent au bruit sous-marin de la navigation [Research program on the assessment and reduction of the exposure of St. Lawrence belugas to underwater noise from shipping] [available in French only]

Geographic scope: St. Lawrence Estuary and Saguenay River

Objective: to assess the cumulative exposure of beluga whales to underwater noise from shipping and the cumulative impacts and effects on this population, and to inform the process of harmonizing shipping activities with the beluga population

Collaborators: Laboratoire interdisciplinaire de simulation socio-écologique du département des Sciences naturelles de l'Université du Québec en Outaouais, Ministère des Forêts, de la Faune et des Parcs du Québec, and Secrétariat à la Stratégie maritime

Information: Programme de recherche sur l'évaluation et la réduction de l'exposition des bélugas du Saint-Laurent au bruit sous-marin de la navigation

<u>Projets d'acquisition de connaissances sur les eaux souterraines [Groundwater knowledge acquisition projects] [available in French only]</u>

Geographic scope: throughout Québec

Objective: To draw up a realistic and concrete portrait of the groundwater resources of the municipalized territories of southern Québec through data collection, field work, data analysis and interpretation, and conceptual and numerical modelling in an effort to protect them and ensure their sustainability

Collaborators: Ministère de l'Environnement et de la Lutte contre les changements climatiques,

provincial and federal ministries, university partners

Information: Projets d'acquisition de connaissances sur les eaux souterraines

Projet de recherche pour caractériser la mosaïque biogéochimique du Saint-Laurent pour les générations futures [Research project to characterize the biogeochemical heterogeneity of the St. Lawrence for future generations] [available in French only]

Geographic scope: St. Lawrence River

Objective: to understand the sources and sinks of pollution in the St. Lawrence River for the purpose of developing educational and water governance strategies to preserve its health for future generations **Collaborators**: Réseau Québec maritime, university partners, Institut national de recherche scientifique, and Environment and Climate Change Canada

Information: Projet de recherche pour caractériser la mosaïque biogéochimique du Saint-Laurent pour les générations futures

Rendez-Vous St. Lawrence

Geographic scope: St. Lawrence River

Objective: to report on the state of the St. Lawrence and its evolution at regular intervals **Collaborators**: Environment and Climate Change Canada; Fisheries and Oceans Canada; Parks Canada; Ministère de l'Environnement et de la Lutte contre les changements climatiques; Ministère des Forêts, de la Faune et des Parcs; Stratégies Saint-Laurent; and non-governmental organizations from the industrial, university, and community sectors

Information: Rendez-Vous St. Lawrence 2021 and Overview of the State of the St. Lawrence

Review of the Lake Ontario-St. Lawrence River Studies

Geographic scope: Lake Ontario-St. Lawrence River basin

Objective: to review selected Lake Ontario-St. Lawrence River studies for the International Joint

Commission

Collaborators: National Research Council and Royal Society of Canada **Information**: Review of the Lake Ontario-St. Lawrence River Studies

Rêvons le Littoral Est

Geographic scope: Québec City (Vieux-Limoilou, Maizerets and Beauport districts)

Objective: to redefine the relationship between the St. Lawrence River and the inhabited areas of

Québec City with a view to ecological, social, and economic resilience

Collaborators: Table citoyenne Littoral Est, Association des étudiantes et étudiants de l'École d'architecture de l'Université Laval, and Regroupement des étudiants(e)s en aménagement du territoire et développement régional de l'Université Laval

Information: Rêvons le Littoral Est

Stratégie maritime du Québec [Maritime Strategy of Québec]

Geographic scope: St. Lawrence River

Objective: to provide the St. Lawrence with modern and competitive port infrastructures, to ensure efficient and ecosystem-friendly navigation on the St. Lawrence, and to offer maritime communities promising and sustainable development opportunities

Collaborators: Government of Québec Information: Stratégie maritime du Québec