



ANNUAL REPORT

| Laurentian Channel
| Marine Protected Area

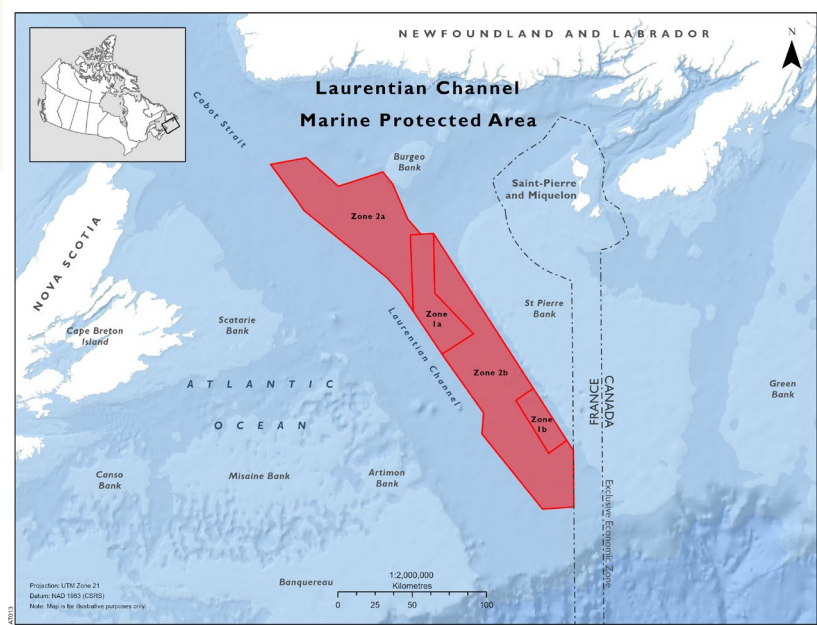
Photo credit: Nadine Templeman

2023



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At-a-glance

Date of designation:

2019

Size:

11,580 km²

Contribution towards the marine conservation targets:

0.20%

Location:

This MPA is located 50 km off the southwest coast of Newfoundland and Labrador, Newfoundland and Labrador Shelves Bioregion; Atlantic Ocean.

Managed by:

Fisheries and Oceans Canada (DFO)

Zones:

There are 2 management zones, including:

- Zone 1a (2,722 km²) and 1b (902 km²) are the core protection zones consisting of sensitive benthic areas where unique sea pen fields are located, and which offers the highest level of protection within the MPA.
- Zone 2a (3,941 km²) and 2b (4,343 km²) are the adaptive management zones which accommodate activities compatible with the conservation objectives.



Key highlights

In 2023, many aspects of Laurentian Channel MPA management and monitoring were ramping up from decreased engagement and operations in previous years stemming from the COVID-19 pandemic. Significant advances towards management and monitoring of the MPA occurred in this past year. For example:

- Completion of a Canadian Science Advisory Secretariat (CSAS) peer-review process on the: 'Identification of Reference Sites and a Scientific Monitoring Approach for the Laurentian Channel Marine Protected Area', which will guide future monitoring plans for the area.
- New strategic, dedicated, and non-invasive sampling approaches, specifically for monitoring benthic features, were incorporated into recent monitoring activity within the Laurentian Channel MPA. This new approach is supported by important academic partnerships to increase monitoring of all large offshore marine conservation areas in the NL Region.



Photo credit: CHONe-CSSF-DFO 2017



In the spotlight: benefits

Ecological

The Laurentian Channel MPA provides important habitat for a variety of marine species and is noted for its high biodiversity. The MPA has been described as having the highest sea-pen concentrations in the bioregion. It is also a unique area for Black dogfish and juvenile Smooth skate which are present in high numbers throughout. One of only 2 known porbeagle mating grounds occurs within the MPA boundaries. Two species at risk, the Northern wolffish and the Leatherback sea turtle, have been found in the area. At least 20 species of whales and dolphins have also been observed using the area for critical feeding and migration.

Socio-cultural

The Laurentian Channel MPA faces a unique challenge to engage the public on a community level due to its remote location. Although commercial fishing is not permitted within its boundaries, these activities are allowed:

- Indigenous food, social and ceremonial fisheries activities
- scientific research
- monitoring
- educational activities

Collaborations with academia foster ocean stewardship through the sharing of knowledge obtained from these activities. Students of all levels can participate in virtual classrooms via remote presentations by scientists or by attending the annual Oceans Day events in their communities to learn more about the MPA and its importance to conservation efforts in the NL Region.

Economic

This MPA exists in waters that historically have been extensively exploited by several commercial fisheries. The ecological importance of biodiversity that the Laurentian Channel MPA contains necessitates the closure of all fishing activities. Part of the function of this protected habitat is that of a nursery for several organisms and a refuge for endangered/at-risk species. Protecting marine areas of high biodiversity offers opportunity for future spill-over benefits in nearby commercial fisheries and tourism operations (i.e., marine mammal watching drawing tourists to coastal communities).



Education and outreach

Opportunities within and outside of DFO for information sharing and collaboration on the management and monitoring of Laurentian Channel have been ongoing. While no stakeholder meetings have been held since its formal establishment and announcement in 2019, largely due to the COVID-19 pandemic, DFO is collaborating with the Marine Institute of Memorial University to deliver the MPA monitoring program. This program supports students to learn hands-on about ocean sciences and obtain necessary field work to complete



Photo credit: Megan Lynch

their degrees and certifications. Education and outreach activities around marine conservation in Newfoundland and Labrador have included highlights of this MPA's management objectives. This information has been delivered at the World Oceans Day event held in St. John's, NL, which is open to members of the public. Educational and fun activities to promote ocean learning about conservation and the Laurentian Channel were presented.



Research and monitoring

A draft monitoring plan for the Laurentian Channel MPA is underway, with the intent to incorporate recent advice and decisions appropriately before engaging on and finalizing this first iteration. However, in practice, indicators, protocols and strategies for monitoring key components of the MPA are already being put into action. A monitoring trip for the Laurentian Channel MPA was completed from September 4 to 14, 2023.

The monitoring activities planned were part of Core Monitoring (minimally invasive and co-located monitoring activities) as proposed during a CSAS science review in June 2022 titled "Identification of reference sites and a scientific monitoring approach for the Laurentian Channel MPA" (DFO in prep).

The core monitoring protocols include baited cameras, drop cameras, eDNA, and CTDs (Conductivity, Temperature and Depth).

These protocols can potentially collect information on several of the Conservation Objective species including:

- sea pens
- Smooth Skate
- Northern Wolffish
- Black Dogfish
- Leatherback Sea Turtles
- Porbeagle Sharks

Complementary Monitoring (data from other sources e.g., DFO multispecies survey) and Targeted Research (more focused, short-term

studies) also provide valuable information on the ecosystem. In total, 14 stations in the MPA were visited, with:

- 47 eDNA samples
- 32 drop camera deployments
- 10 baited camera deployments
- 1 CTD cast at each station

There are still many remaining knowledge gaps as we are only in the early days of monitoring and assessing the feasibility of our scientific monitoring approach in this MPA.





Collaborations and partnerships

A contribution agreement with Marine Institute of Memorial University (MI) was signed in 2021, to support the monitoring of offshore marine conservation areas from 2021 to 2026, including the Laurentian Channel MPA. Through this agreement, MI is applying its research, training and technological capacities to advance methods for monitoring marine conservation areas in NL Region.

This is a collaborative process that builds on the expertise of both MI and DFO and contributes to the development of a long-term sustainable ecological monitoring program. Marine Planning and Conservation program co-chairs the monitoring steering committee with Marine Institute to consider project administration, priority monitoring sites, mutual opportunities for marine research and more. After the 2023 field season, several successes identified from this partnership to date are building capacity for networking; outreach and promoting ocean literacy through media engagement and public education (e.g., social media and blog); and coordinating and supporting monitoring activities and sharing monitoring equipment.

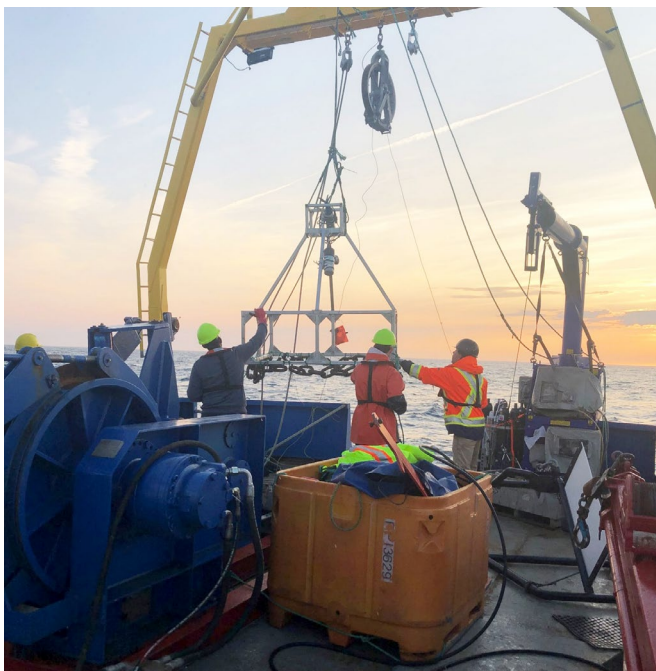


Photo credit: Cygnus



Surveillance and enforcement

DFO provides surveillance and enforcement in the 3 MPAs of the NL Region. Specific to the Laurentian Channel MPA, this includes compliance monitoring and surveillance activities that focus on summer and fall periods when research and peak fishing activity overlap with the occurrence of species of conservation focus.

To monitor compliance with Laurentian Channel MPA regulations, the Fisheries Monitoring Centre monitors activity within the MPA daily using Vessel Monitoring System data and automated alerts generated from Automatic Identification System data. In addition, surveillance of the MPA is carried out as concurrent activity during regular vessel and aerial surveillance patrols of Northwest Atlantic Fisheries Organization (NAFO) Div. 3Ps. In 2023, there were over 170 vessel patrol hours and 56 aerial surveillance hours of the MPA conducted. Two violations for unauthorized fishing for Groundfish using fixed and/or mobile gear were found and, although there were no convictions in 2023, these 2 files are still ongoing. Conservation and Protection in NL Region are concerned that vessels from other provinces are expanding their range into the area and appear not to be aware of the Laurentian Channel MPA and its regulations.



Management and governance

The on-going management of the Laurentian Channel MPA, since designation in 2019, largely includes the review and assessment of activity plans for scientific research and monitoring or educational activities in the MPA. In 2023, 3 activity plans were received and approved, after conditions and mitigations were agreed upon, though only 2 were carried out.

In addition, 2 previously approved multi-year activity plans carried through 2023 with work continuing until 2027. All of these scientific activities were carried out by DFO and, in some cases, DFO with an industry or academic partner.

The first management plan for the Laurentian Channel MPA is being drafted for a 5-year management cycle and will be a priority management item for 2024, along with an inaugural meeting of the advisory committee.

Looking to the year ahead

In 2024, the primary area of focus for the management of the Laurentian Channel MPA will be to finalize and publish the MPA's first management plan.

Also, there will be an inaugural meeting of the Laurentian Channel MPA Advisory Committee. Previous to the MPA's designation in 2019, there was a Steering Committee in place to guide the establishment process. This committee will be re-tasked to provide support to the overall management of the MPA going forward, including the draft management plan.



Photo credit: Nadine Templeman



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