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Canada

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EASTPORT

MARINE PROTECTED AREAS
MANAGEMENT PLAN
2023-2028







FOREWORD



The designation of the Eastport Marine Protected Areas (MPAs) in 2005 represented the successful culmination of several years work, initiated by the Eastport Peninsula Lobster Protection Committee (EPLPC) and supported by other interested groups in favor of conservation and stewardship. The development of the MPAs was a collaborative process in which all stakeholders, particularly those who served as advisory committee members, worked together to build a foundation of knowledge, understanding, trust, and agreement.

Since the designation of the Eastport MPAs, the Advisory Committee, Fisheries and Oceans Canada (DFO), and other stakeholders have been working together to ensure that the MPAs continue to deliver benefits to the local marine ecosystem and the fishery that depends on it. To guide this process, the first Management Plan was produced in 2007, followed by a second Management Plan in 2013. The Plans incorporate feedback from stakeholder groups, scientific advice and input, and the results of the monitoring programs.

DFO has developed an updated Management Plan to guide the MPAs from 2023 to 2028. The contents are based on the results of the monitoring programs, science advice, and input from the Advisory Committee. The Advisory Committee is satisfied that the goals and objectives of the Eastport Marine Protected Areas will be well served by this plan and fully endorse it. Much important work remains to be done in the area of public education and awareness, using the MPAs as an inspiration for future stewardship initiatives on the Eastport peninsula and beyond.

Oct 4/23

Date

John Penney

John Penney

Co-Chair, Eastport MPAs Advisory Committee
Local Harvester

ACKNOWLEDGEMENTS

This Management Plan was prepared by the Department of Fisheries and Oceans Canada (DFO), Newfoundland and Labrador Region, with the support of the Eastport Marine Protected Areas Advisory Committee. We would like to thank everyone who participated in the preparation and review of this plan, as well as those involved in the management, monitoring, and enforcement of the MPAs.

FEEDBACK

Readers are encouraged to provide feedback on any aspect of the Management Plan and can do so using the following contact information:

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St. John's, NL A1C 5X1

Cover photo:
American Lobster (Photo Credit Megan Lynch 2023)

Back cover photo:
Sunrise in Happy Adventure, NL (Photo Credit Tammy Elliott 2022)

Fs114-26/2023E-PDF
978-0-660-68071-2

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ACRONYMS

C&P	Conservation and Protection (Branch of DFO)
CPUE	Catch Per Unit Effort
DFO	Fisheries and Oceans Canada
EPLMA	Eastport Peninsula Lobster Management Area
EPLPC	Eastport Peninsula Lobster Protection Committee
FM	Fisheries Management (Branch of DFO)
FFAW	Fish, Food, and Allied Workers Union
LFA	Lobster Fishing Area
MI	Fisheries and Marine Institute of Memorial University of Newfoundland
MPAs	Marine Protected Areas
MUN	Memorial University of Newfoundland
SLA	Service Level Agreement

EXECUTIVE SUMMARY

The Eastport MPAs were designated in 2005 by regulations under Canada's *Oceans Act* at the request of local stakeholders to maintain a viable population of American lobster. The community-based Advisory Committee continues to be actively involved in monitoring and the evolution of management strategies to ensure that the goals and objectives of the MPAs are met and the interests of all users are considered.

Lobster harvesters began collecting data with scientists from Memorial University of Newfoundland (MUN) and Fisheries and Oceans Canada (DFO) in the Eastport Peninsula Lobster Management Area (EPLMA), the lobster management area surrounding the MPAs, in 1997. Monitoring is still ongoing, and results indicate that abundance of the Eastport area commercial-sized American lobster has increased from 1997 to 2022.

Results also demonstrate that the average size of males has increased from 1997 to 2022, that the average size of females has increased from 1997 to 2022, and that there is an increase in the relative abundance of large lobsters (male and female) from 1997 to 2022 inside the Eastport MPAs. The data shows that lobsters are attaining larger sizes; the proportions of berried (egg-bearing) females are larger inside the MPAs and there is some movement to the outside areas.

Within the MPAs fishing is prohibited, and any other activity may only occur if there are approved permits in place from the DFO MPA Management Team. Management measures for the adjacent EPLMA include: a fishing season (early May to early July) to prohibit harvesting during peak molting and mating periods, commercial lobster fishing within the inner zone of the EPLMA available only to harvesters from the Eastport Peninsula, harvester trap limits, mandatory trap tags to aid in enforcement, and voluntary v-notching of female lobsters.

The community-based Advisory Committee provides critical advice in the development and implementation of management strategies including conservation approaches, monitoring activities, research, enforcement, and public education and awareness of the MPAs and the broader EPLMA.

This 2023-2028 Management Plan outlines management strategies for American lobster inside the Eastport MPAs, as well as within the EPLMA. The plan incorporates advice from the Advisory Committee, the results of the monitoring programs, and advice from the Science and Fisheries Management (FM) branches of DFO and researchers from academic institutions. This is the third management plan developed for the Eastport MPAs. This new Plan builds on the many accomplishments of the MPAs to date and is an encouraging example of successful marine protected area design and community collaboration.

01

INTRODUCTION

The Eastport MPAs were officially designated under the Oceans Act in October 2005, at the request of local stakeholders. The motivation for the creation of an MPA was to warrant the protection and sustainable fishery of the local American Lobster population. The MPAs are a part of an overall; lobster conservation strategy for the Eastport Peninsula and are located within a 400 km² conservation area known as the Eastport Peninsula Lobster Management Area (EPLMA).

The regulatory conservation objectives for the Eastport MPAs are:

To maintain a viable population of lobster through the conservation, protection, and sustainable use of resources and habitats within the EPLMA; and

To ensure the conservation and protection of threatened or endangered species.

Management strategies for these objectives, as well as additional non-regulatory objectives for the Eastport MPAs, are described in this Plan in Section 3.2.



1.1 Governance Structure and Vision

Marine planning and marine conservation has evolved since the passing of the *Oceans Act* in 1997, and a broad suite of marine conservation tools have been deployed to help Canada meet international conservation targets. DFO retains the legislative responsibility to ensure that *Oceans Act* MPAs are managed appropriately, and the interests of all users are considered. DFO leads a focused, cooperative, and ecosystem-based approach to MPA management involving all levels of government, affected Indigenous organizations, coastal communities, and non-government stakeholders. Under this strategic partnership, management strategies and actions are identified to help ensure that the conservation objectives of protected areas are achieved. The regulatory conservation objectives are the primary responsibility of DFO, while the non-regulatory conservation objectives are pursued by community partnerships initiated by the Advisory Committee, with support from DFO.

1.2 The Advisory Committee

The Eastport MPAs Steering Committee was established in 2001 and was renamed the Eastport MPAs Advisory Committee as the MPAs progressed from the planning phase to the management phase. The Committee's commitment to stewardship and cooperation in the protection of the MPAs laid the groundwork for the regulations and on-going management initiatives. The Committee provides an excellent forum for issue identification, discussion, and resolution and is co-chaired by a member of the Eastport Peninsula Lobster Protection Committee (EPLPC) and a DFO representative. Other members include local fish harvesters, residents, government representatives, non-governmental organizations, and researchers. The role of the committee is to:

- Represent relevant key groups or stakeholders;
- Provide advice to DFO and other regulators regarding the ongoing management of the Eastport MPAs; and
- Promote awareness and community involvement in the Eastport MPAs.

The vision statement developed by the Committee reflects the overall goal of the MPAs and the plan:

To increase stakeholder involvement in the development, management, monitoring, evaluation, and surveillance of local fishery resources and supporting habitats so as to develop sustainable economic activities associated with the MPAs.

The mandate of the Eastport MPAs Advisory Committee as stated in the Terms of Reference is as follows:

- Revise and implement the Eastport MPAs Management Plan as needed;
- Monitor the effectiveness of the Eastport MPAs by encouraging scientific research in the areas and reviewing the results of this research;
- Monitor enforcement of the MPAs' regulations by working with DFO, the general public, and other affected stakeholders;
- Inform the public of the designation and status of the MPAs and solicit public comments, ideas, and feedback where appropriate;
- Promote the conservation, protection, and sustainable use of marine resources and their habitats; and
- Foster partnerships with other similar interest/stakeholder groups.

Committee members continue to be involved with the management of the Eastport MPAs as an advisory body. They aid with data collection, enforcement monitoring, public awareness programs, and any other project or activity which supports the conservation objectives. Committee members also explore ways in which the MPAs can assist in environmentally sustainable economic development within their region, and seek funding opportunities and partnerships to support conservation projects. The Advisory Committee convenes annually to discuss science, enforcement, and emerging issues. Public meetings are also held when required to allow members of the general public to bring forth concerns and to keep all stakeholders updated.

MPAs are managed through a continuous cycle (Figure 1) in which plans are developed, implemented, reviewed, and adapted to ensure management strategies remain relevant and effective (DFO 2021-b). Some of the many factors that are considered in each management plan review include the monitoring results, compliance with the regulations, any relevant changes in the ecology and socio-economic environment, and the effectiveness and level of support for any proposed changes to the management measures including the regulations. The Advisory Committee and other interested parties provide information and advice for each new Management Plan and are involved in each phase of the management cycle.

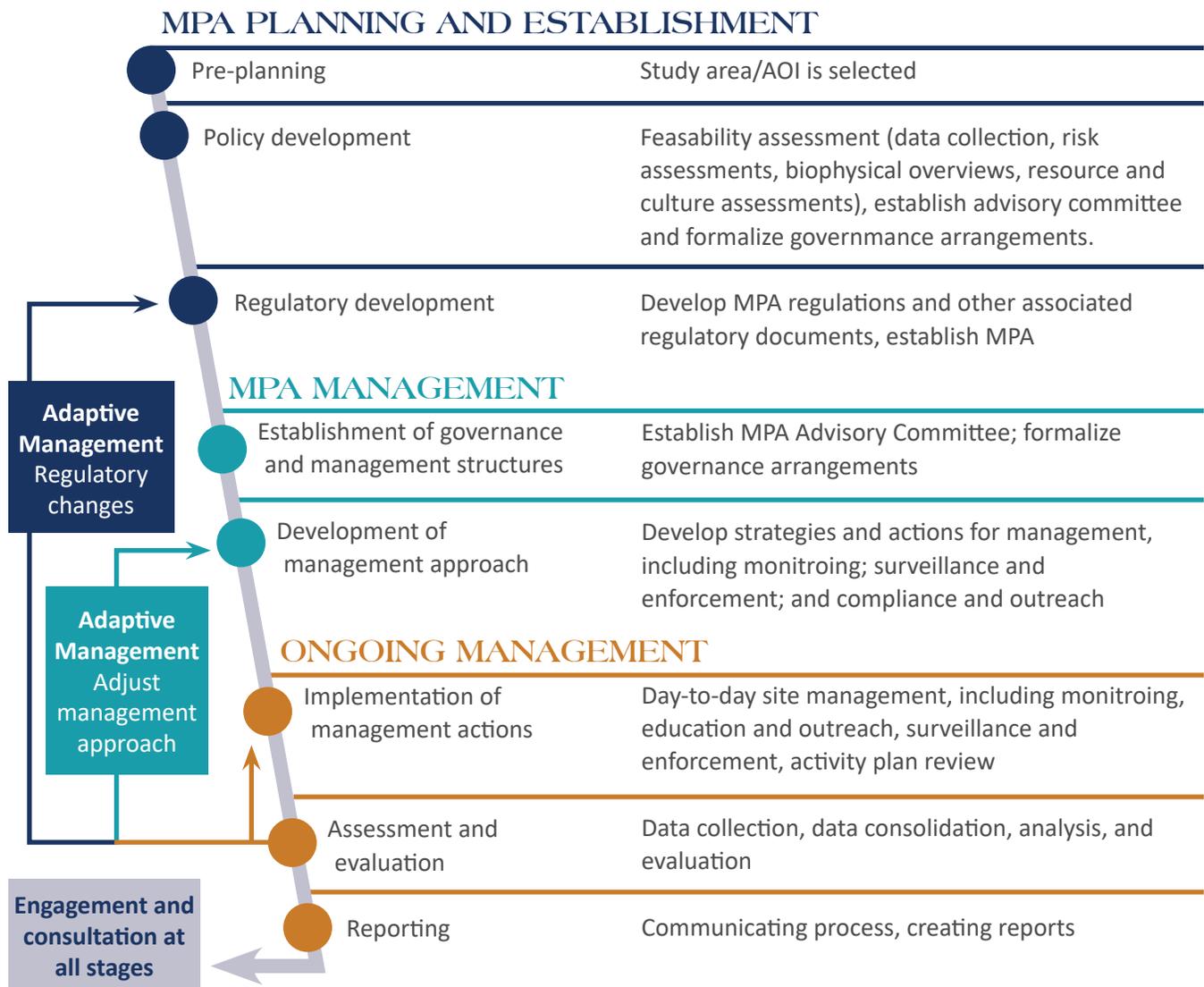


Photo Credit DFO 2004



Photo Credit Megan Lynch 2023

FIGURE 1. MPA Management Cycle



Management Plans are generally reviewed every 3-5 years depending on the results of the monitoring program and management strategies. Five year plans are appropriate when monitoring results and management strategies are relatively stable, while a two or three year plan allows more rapid response to changing conditions which require significant adaptation of the management strategies to ensure the objectives of the marine protected area are met. Due to the current stability of the population of American lobster in the Eastport MPAs, this plan will be reviewed in five years (2028).



Tagging equipment (Photo Credit Megan Lynch 2023)

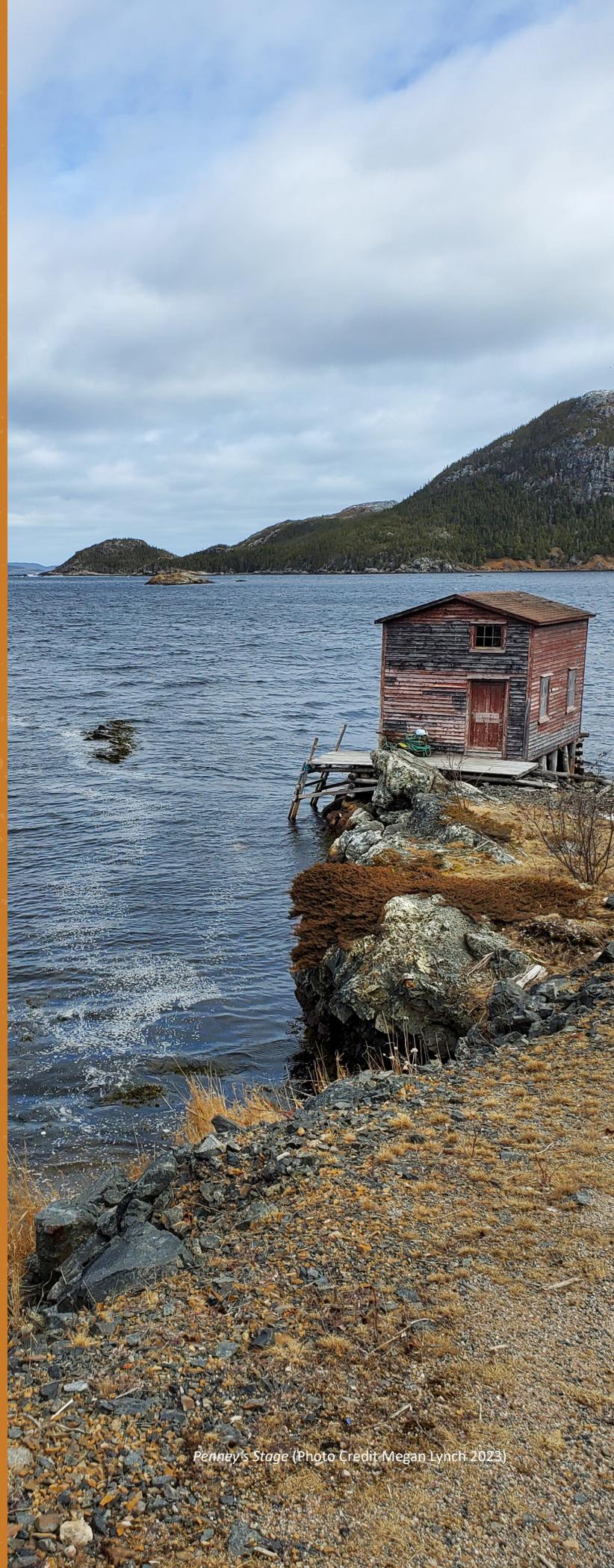
02

OVERVIEW OF THE EASTPORT MARINE PROTECTED AREAS

2.1 Location and Boundaries of the Eastport MPAs

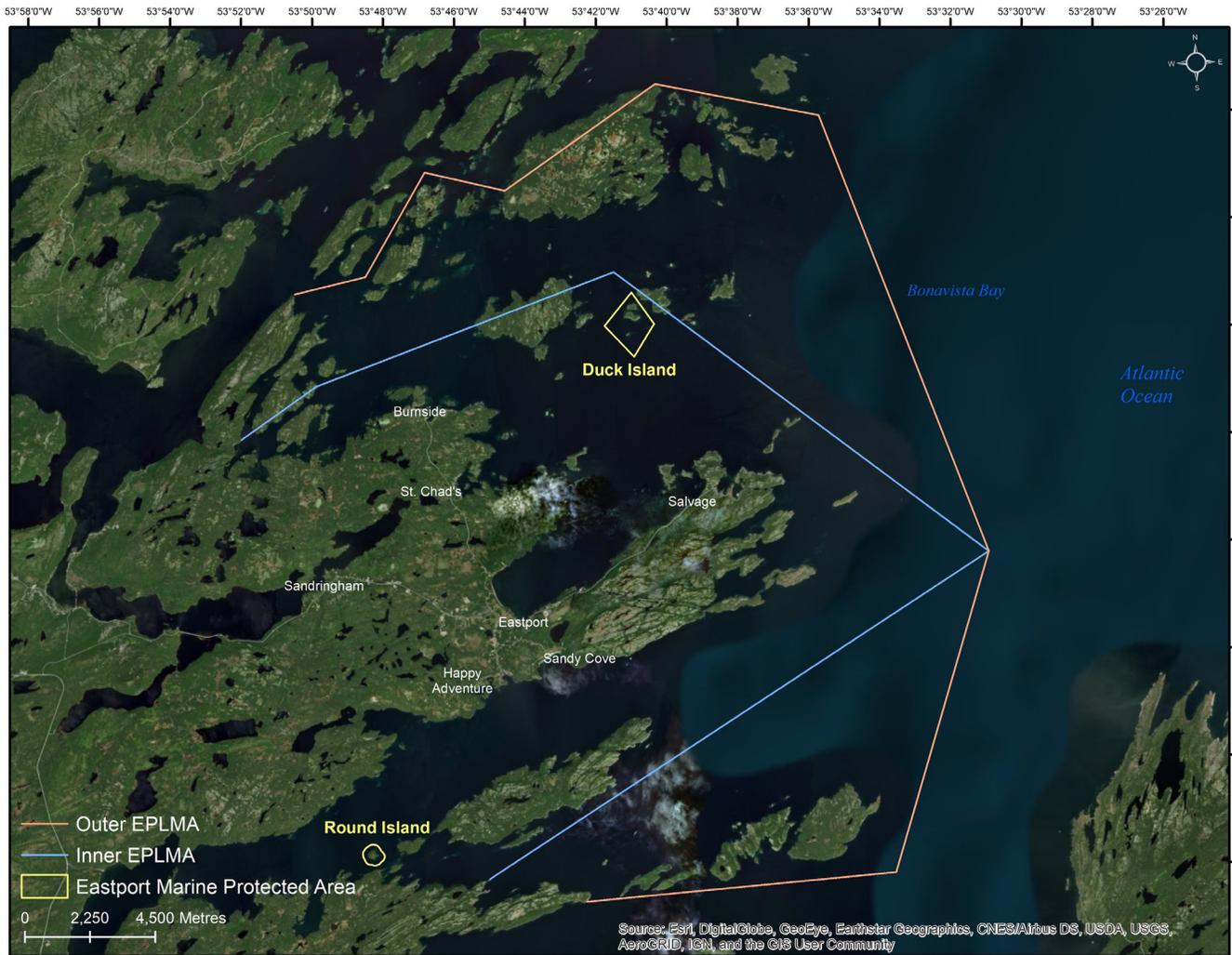
The Eastport Marine Protection Areas (MPAs) are located off the coast of Eastport Peninsula (NAFO Div. 3L) in Bonavista Bay, Newfoundland and Labrador, within the NL shelves bioregion. There are two small MPAs, one surrounding Round Island and the other surrounding Duck Islands. The MPAs cover a total area of 2.1km², and includes the water column, seabed, and subsoil to a depth of 5m.

The Eastport Peninsula Lobster Management Area (EPLMA), as shown in Figure 2, is the regular fishing area of harvesters from the Eastport Peninsula and provides a 400km² conservation area around the MPAs where research, science monitoring, and conservation measures such as V-notching and increased enforcement are carried out in association with the MPA. Commercial lobster fishing within the inner zone of the EPLMA is limited to members of the EPLPC originally through a Joint Project Agreement with DFO and now as a condition of license. The outer area is used by members of the EPLPC, but is also used by other lobster harvesters within Bonavista Bay. The EPLMA is critical to the management of the MPAs, and Advisory Committee members are looking for more permanent protection for this conservation area.



Penney's Stage (Photo Credit Megan Lynch 2023)

FIGURE 2. Eastport Marine Protected Areas (MPAs), Round Island and Duck Island, and the Eastport Peninsula Lobster Management Area (EPLMA).



2.2 Biological Environment

The waters of the Eastport Peninsula support a wide range of marine species. Commercial species include lobster, cod, capelin, herring, mackerel, crab, lumpfish, flounder, squid, sea urchin, and whelk. Scallops, mussels, and clams are harvested recreationally. Other invertebrates commonly found in the Eastport Peninsula waters include anemones, sea cucumbers, sea stars, jellyfish, and polychaetes. Wolffish may be found in deeper waters of the area and Atlantic salmon also occur in the area. Seals and several species of whales frequent waters in the spring and summer. Marine plants such as eelgrass, Irish moss, and various species of kelp and rockweed are common (LGL Ltd. 2001).





Salvage, NL (Photo Credit Megan Lynch 2023)

2.3 Human Environment

The Eastport Peninsula, surrounded by numerous islands, is a relatively small piece of land jutting out from the mouth of central Bonavista Bay. Scattered throughout the peninsula are seven core communities – the towns of Salvage, Eastport, Happy Adventure, Sandy Cove, Burnside, St. Chad’s, and Sandringham. St. Brendan’s, located on Cottel Island, is accessed by ferry from Burnside. The collective population for all seven communities on the Peninsula is 1,157 (Statistics Canada 2022). In recent years, out migration has become a major concern for most communities in the area.

For generations, the Eastport Peninsula has relied on fishing. Despite the decline in groundfish, fishing is still vitally important in the area, and of particular importance are the shellfish fisheries (e.g. the lobster fishery and snow crab fishery). Tourism and recreation is also an important industry on the Eastport Peninsula, with its beautiful white sandy beaches, camping, sea kayaking, boat tours, whale watching, hiking, and close proximity to Terra Nova National Park (Hewlin 2002).



Fall tagging program (Photo Credit Victoria Howse 2017)

2.4 Conservation Measures within the EPLMA

Throughout the Province, several measures are practiced by lobster fishers that serve to limit pressure on the resource and support the conservation of lobster. In NL, these mandatory measures include:

- Conducting the lobster fishing season from approximately mid-May to mid-July, which prohibits harvesting during peak molting and mating periods;
- Following trap limits, which are set within specific LFAs, (e.g. in 2022, each harvester in LFA5 had a 150 trap limit);
- Utilizing traps which must meet certain specifications, including trap dimensions and opening size limit, and traps must have biodegradable escape mechanisms to minimize ghost fishing if traps are lost;
- Utilizing mandatory trap tags, which aid in enforcement;
- Retaining lobster with minimum carapace size of 82.5mm, to allow a higher percentage of female lobsters to reproduce before they reach commercial age;
- Releasing egg-bearing females enhances the reproductive capacity of the population; and
- Releasing V-notched females, that further enhances the reproductive capacity of the population.

2.5 Overview of the Regulations

Section 35(3) of the *Oceans Act* enables the development of regulations that allow MPAs to be designated, zoned, and activities or classes of activities to be prohibited or permitted. The regulations for the Eastport MPAs are provided in Appendix A. Section 4 prohibits all harmful activities other than those excepted in Section 5, or for which a plan is approved in Section 6. Section 8 details the requirements for reporting of accidents. Activities within the MPAs that do not result in significant impact are exempted from the prohibitions.

The main goal of the Eastport Regulations is to ensure the conservation and protection of American lobster and its habitat in the local area.

To meet this goal:

- Commercial harvest of lobster is prohibited under the *Oceans Act* in all zones of the MPAs;
- All monitoring, scientific research, and educational activities within the MPA must be approved by DFO, and conducted under an approved activity plan; and
- Accidents must be reported to **Coast Guard (709-772-2083)**.

Adjacent to the MPAs, commercial lobster fishing within the inner zone of the EPLMA is limited to local harvesters as a condition of license.

In addition to the standard mandatory measures described above, enhanced protection within the MPAs and EPLMA is achieved by the following conservation measures:

- Commercial and recreational fishing inside the MPAs are prohibited by regulation under the *Oceans Act*; and
- Commercial lobster fishing within the inner zone of the EPLMA is limited to the lobster harvesters from the Eastport Peninsula communities as a condition of license, thus reducing the pressure on the local lobster population.



Sunrise in Happy Adventure, NL (Photo Credit Tammy Elliott 2022)

TABLE 1 below provides an overview of activities prohibited or permitted within the MPA under Section 5 of the Eastport MPA Regulations or subsequent management measures.

ACTIVITY	PERMITTED OR PROHIBITED		
	MPA	Inner EPLMA	Outer EPLMA
Recreational Fishing	Prohibited	Permitted	Permitted
Commercial Fishing	Prohibited	Permitted: Commercial lobster fishing within the inner zone based on appropriate license conditions.	Permitted: Commercial lobster fishing in the outer zone of the EPLMA can be carried out by any harvester with LFA5 license.
Coastal Infrastructure: These activities may require authorization under the <i>Fisheries Act</i> or <i>Navigable Waters Protection Act</i> and therefore subject to conditions of these authorizations.	Permitted: Maintenance, repair, or removal of a wharf.	Permitted: Construction, maintenance, repair, or removal of a wharf.	Permitted: Construction, maintenance, repair, or removal of a wharf, causeway or bridge.
Safety, Security and Enforcement Any activity carried out for the purposes of public safety, national security, law enforcement, or in response to an emergency, is permitted in all zones.	Permitted	Permitted	Permitted
Scientific Research, Monitoring, or Education	Permitted or Prohibited, as determined on a case-by-case basis. Following the <i>approval</i> of an Activity Plan submitted to DFO, scientific research, monitoring, or educational activities may be carried out within the MPAs. For further information, see: https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/eastport/index-eng.html	Permitted	Permitted

Although the *Oceans Act* regulations provide the primary tool for protecting the MPAs, activities within the MPAs may also be subject to provisions from other legislation, regulations and policies, including the Aboriginal Communal Fishing License Regulations, Marine Mammal Regulations, Atlantic Fishery Regulations, Newfoundland and Labrador Fishery Regulations, *Navigable Waters Protection Act*, *Fisheries Act*, *Environmental Protection Act*, *Water Resources Act*, *Waste Disposal Act*, and the *Pesticides Act*.

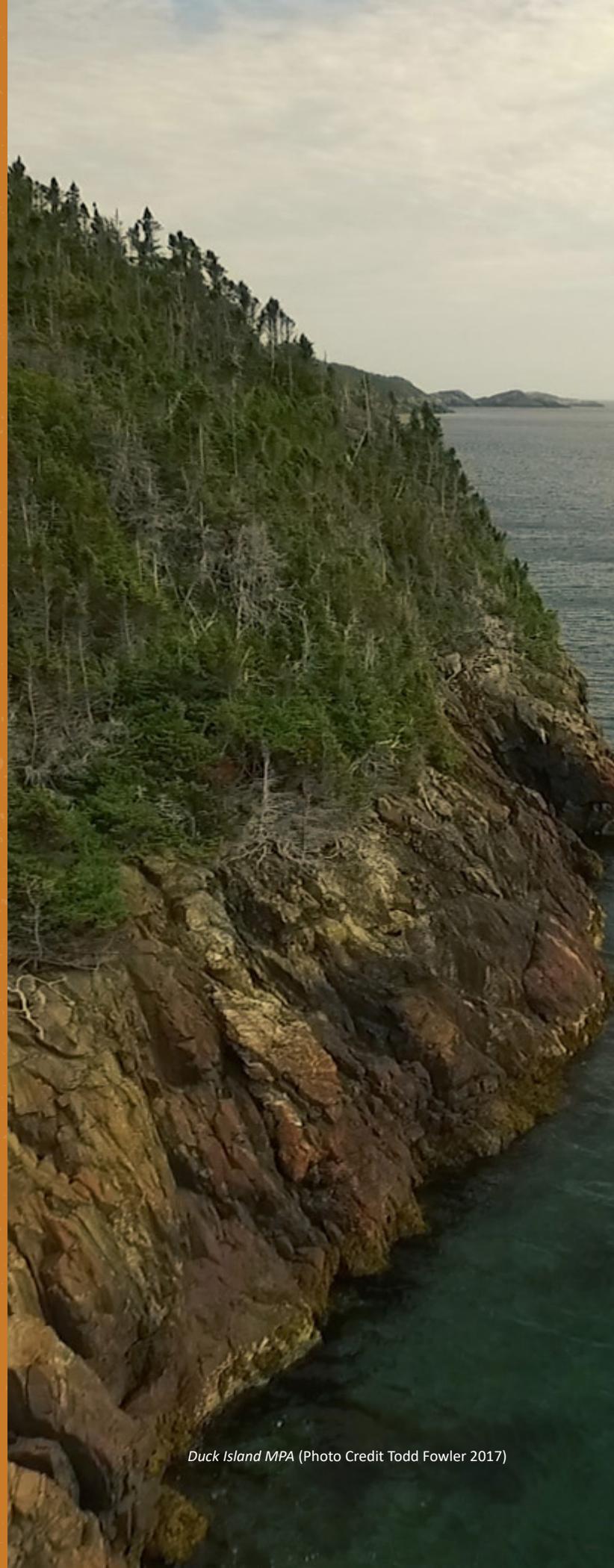
03

MARINE PROTECTED AREAS MANAGEMENT

3.1 Management Highlights and Goals

The main activities of the Eastport MPAs management program include scientific monitoring, enforcement and compliance monitoring, and public awareness and education initiatives. Members of the EPLPC participate heavily in science monitoring programs during the harvesting season within the EPLMA which are coordinated by the Fish, Food and Allied Workers (FFAW) Union that represents lobster harvesters in NL. Dedicated DFO enforcement patrols within and surrounding the MPAs regularly to scan for adherence to local licensing conditions. Opportunities for information sharing and outreach on the MPAs have remained as shared responsibility among participating groups internal and external to DFO.

Advice and discussions on these program aspects are solicited at annual advisory committee meetings held on the Eastport Peninsula, therefore maintaining the structure of the Advisory Committee is important to the overall management of the MPAs. As many of the local harvesters that have supported the MPAs over the years are retired or are nearing retirement, it has become important to ensure that active, as well as new, harvesters are aware of the MPAs and have the opportunity to be represented or participate on the committee.



Duck Island MPA (Photo Credit Todd Fowler 2017)

The main objectives for this 5-year management cycle are to:

- Maintain effective management of the MPAs and to uphold good relations with the local user groups by strengthening the role of community members in the monitoring and management of the MPAs.
- Develop strategies to renew the Advisory Committee membership. Discuss potential new opportunities at the annual Advisory Committee meetings to ensure local perspectives are considered;
- Solicit public interest in the MPAs by using modern tools to provide updated information on the MPAs to the public via websites, documentaries, etc.;
- Conduct further analysis of lobster tagging data (e.g. movement by size groups) and disseminate this information to harvesters;
- Improve record of location (map) of fall research sites at Round Island and at-sea sampling sites (GPS);
- Further explore data from the small and large modified traps and look into other data exploration and analysis opportunities from our long-term data sets;
- Work with harvesters and the Advisory Committee to develop a permanent regulatory instrument specifying harvester use of the inner and outer EPLMA with Fisheries Management branch of DFO; and
- Work with Marine Environmental Quality, Aquatic Invasive Species, and Species At Risk programs to promote education and awareness of these themes in the Eastport area.

3.2 Conservation Objectives and Associated Management Strategies and Actions

Conservation objectives describe the goals of the MPAs and are based on the best available scientific and local ecological knowledge. The specific purpose of designating the Eastport MPAs is to maintain a viable population of American lobster. To ensure that the regulations and management actions are effective, there must be

a standard against which they can be measured. That standard is provided by the conservation objectives and associated indicators, which were developed by DFO in collaboration with the Advisory Committee.

Conservation objectives for the Eastport MPAs are:

1. Maintain a viable population of lobster through the conservation, protection, and sustainable use of resources and habitats within the EPLMA;
2. Ensure the conservation and protection of threatened or endangered species;
3. Ensure participation of interested and affected stakeholders in the overall management of the resource;
4. Increase stewardship and public awareness of American lobster, the ecosystem of the Eastport MPAs, and the marine conservation measures;
5. Promote scientific research to increase levels of understanding regarding the Eastport MPAs' ecosystem and help to achieve the conservation objectives;
6. Ensure potential economic benefits offered by conservation of the resource are centered in the local communities of the Eastport Peninsula; and
7. Maintain and enhance the quality of the Eastport ecosystem.

Items 1 and 2 are the primary (regulatory) conservation objectives for the Eastport MPAs. Items 3-7 are secondary (non-regulatory) conservation objectives which support general marine conservation and the overarching goals of the Advisory Committee.

These objectives provide the basis for developing management strategies and actions which make up the foundation of the management plan. Management strategies and actions designed to achieve the conservation objectives over the term of this management plan are described in Table 2.



Photo Credit Annamarie Buchheit 2023

TABLE 2. Eastport Regulatory and Non-Regulatory Conservation Objectives and Management Actions

<p>REGULATORY CONSERVATION OBJECTIVE 1</p>
<p>Maintain a viable population of lobster through the conservation, protection, and sustainable use of resources and habitats within the EPLMA.</p>
<p>Management Strategy</p>
<p>Protect lobster and their habitat through legislation within the MPAs and EPLMA.</p>
<ul style="list-style-type: none"> • Monitor the lobster population inside the MPAs, and within the EPLMA, to ensure that management measures are effective. The monitoring program includes: <ul style="list-style-type: none"> - Collection of data from commercial log books and at-sea sampling to determine <i>Commercial catch per unit effort (CPUE)</i>, <i>Population Size Structure</i>, and <i>Population Estimate</i> inside the EPLMA. - Collection of data via fall tagging program to allow survey of small and large sized lobsters. Analyze data to monitor any changes in the population’s size structure and average size inside the MPAs compared to outside the MPAs. • Monitor extent of lobster movement over time using tagging data. • Develop a tag return incentive to gather information on tagged lobster caught in the commercial fishery. • Prior to the next management cycle, compile a detailed monitoring report covering all existing sources of data, and seek Science advice, as needed, on future monitoring and management based on this report.
<p>Management Strategy</p>
<p>Promote compliance with the MPA regulations and associated management actions by ensuring there is adequate enforcement compliance monitoring.</p>
<ul style="list-style-type: none"> • Continue to work with DFO C&P to support dedicated enforcement patrols within and surrounding the MPAs. • Work with DFO FM and Licensing to develop a long-term policy regarding inner/outer EPLMA licenses, including a potential limit on number of harvesters fishing within the inner EPLMA zone, as well as a policy supporting license transfers and sale of those licenses.
<p>REGULATORY CONSERVATION OBJECTIVE 2</p>
<p>Ensure the conservation and protection of threatened or endangered species.</p>
<p>Management Strategy</p>
<p>Protect Species at Risk through monitoring, public awareness, and education initiatives.</p>
<ul style="list-style-type: none"> • Encourage local fish harvesters to report any observation of Species at Risk in lobster pots within the EPLMA. • Collaborate with researchers conducting multi-species studies in the area to collect information on the incidences of Species at Risk within the EPLMA and surrounding area. • Determine a population estimate of wolffish within the EPLMA if adequate data is obtained.

NON-REGULATORY CONSERVATION OBJECTIVE 3

Ensure participation of interested and affected stakeholders in the overall management of the resource.

Management Strategy

Continue to collaborate with local stakeholders via the Advisory Committee, public meetings, and monitoring programs.

- Hold Annual Meetings of the Eastport MPA Advisory Committee to provide an update on the latest research, monitoring, and enforcement, as well as to discuss management strategies.
- Hold science briefings, regional workshops, and public meetings to provide updates on status of research, monitoring, and management actions associated with the MPA and the larger EPLMA.
- Engage harvesters in the seven core communities, and surround LFA 5 area, to promote the collection of data relating to tags and returning this information to DFO for analysis.
- Continue to encourage participation of local harvesters in the MPA Advisory Committee, in monitoring, and research programs associated with the MPA.

NON-REGULATORY CONSERVATION OBJECTIVE 4

Increase stewardship and public awareness of American Lobster, the ecosystem of the Eastport MPAs, and the marine conservation measures.

Management Strategy

Develop and distribute relevant communications materials to interested and affected stakeholders.

- Maintain the Eastport MPAs website on the national DFO webpage, update content as required.
- Increase public awareness through involvement in community events.
- Develop, produce, and distribute future issues of “The Coastal Current”.

NON-REGULATORY CONSERVATION OBJECTIVE 5

Promote scientific research to increase levels of understanding regarding the Eastport MPAs ecosystem and help to achieve the conservation objectives.

Management Strategy

Collaborate with scientists and local stakeholders to conduct scientific research.

- Encourage involvement of graduate students (e.g., from MUN, MI) in research projects on the Eastport Peninsula.
- Collaborate with existing research programs to provide scientific support for MPA related research.
- Continue to encourage participation of local harvesters on the MPA Advisory Committee for monitoring and research programs associated with the MPA.

NON-REGULATORY CONSERVATION OBJECTIVE 6

Ensure potential economic benefits offered by conservation of the resource are centered in the local communities of the Eastport Peninsula.

Management Strategy

Collaborate with local harvesters to explore further economic benefits.

- Continue involving local harvesters in the annual Eastport Monitoring programs to provide economic benefits through expenditures associated with research activities in the area.
- Continue to support the allocation of Inner LFA5 commercial lobster fishing licences to harvesters from the seven core communities within the EPLMA.
- Increase tourism in the area through public awareness materials, participation in public events, etc.
- Investigate further possible economic benefits associated with the MPA.

NON-REGULATORY CONSERVATION OBJECTIVE 7

Maintain and enhance the quality of the Eastport ecosystem.

Management Strategy

Collaborate with subject matter experts to distribute relevant information to affected stakeholders.

- Develop teaching aids with respect to marine debris, aquatic invasive species, and species at risk and provide presentations or handout materials.

04

MONITORING & RESEARCH

Monitoring the condition and trends of biological and ecological indicators to determine if the MPA is meeting the conservation objectives are critical components of the Eastport MPA Management Plan. Lobster fishers began collecting data with scientists from Memorial University of Newfoundland (MUN) and the DFO in the EPLMA in 1997. In recent years, harvesters of the EPLPC have carried out the monitoring program with support from DFO.

The MPAs science monitoring program has four components: logbooks; at-sea sampling; fall sampling (tagging program); and the tag return program (all described below). The spring program (log books and at-sea sampling) is conducted during the commercial fishery, while the fall sampling is a research program which monitors and tags lobsters inside and outside the MPA.

Analysis from these data sources indicates that in the local area (1) catch-per-unit-effort is increasing over time, (2) the average size of both male and female lobsters are increasing inside the MPAs, and (3) the population size structure is broadening.

Lobster harvesters from the seven core communities are eligible to participate in the commercial catch sampling and fall tagging research. The collegial exchange of information between fishers, scientists, fishery managers, and enforcement officers at the Advisory Committee meetings and in the field has benefited all participants with increased knowledge, understanding, trust, and efficiency.



Photo Credit Annamarie Buchheit.2023



4.1 Logbooks

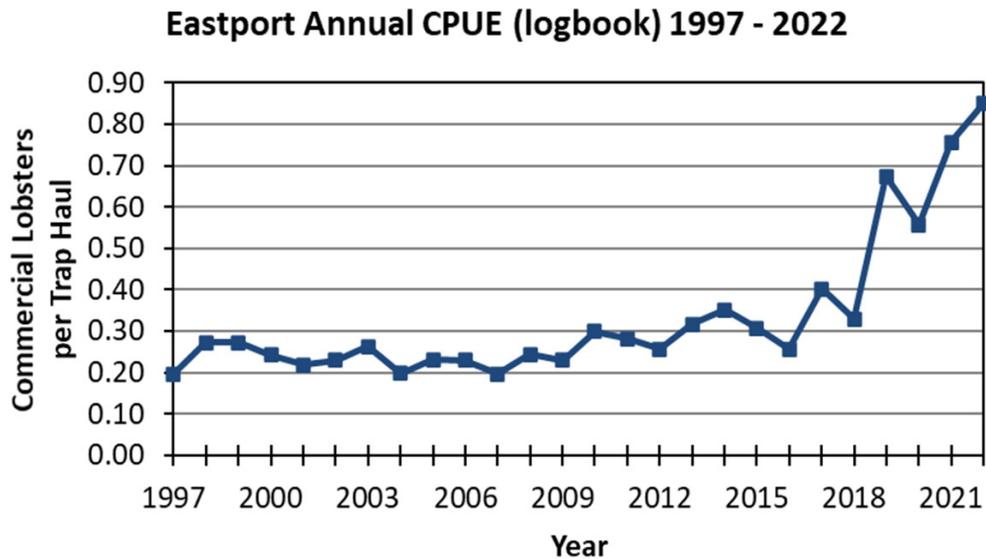
From 1997 to 2009, Eastport lobster harvesters participated in a voluntary logbook program throughout the commercial lobster fishing season. Each day they collected information on the number of legal size lobsters caught, number of traps hauled, number of commercial berried (egg-bearing) females, number of lobster V-notched by the harvester, and the number of undersized males and females (Janes 2005). In 2010, the log book program became mandatory for all lobster fishers as a condition of license. This program collects the same data except for information on undersized lobsters and berried females. That year the Eastport harvesters used only the mandatory logbooks, and data on undersized lobsters and berried females was not collected. This practice was reviewed, and now a single combined logbook with mandatory and voluntary sections (on undersized lobsters and berried females) has been put in place for Eastport peninsula harvesters.

The logbook data is used to calculate CPUE, providing a measure of abundance of commercial-sized lobsters in the Eastport area. Data shows that commercial CPUE has increased from 1997 to 2022 (Figure 3). This is consistent with average CPUE for the Newfoundland region, but some areas have declined while other areas have increased (DFO 2021-a).



Juvenile lobster (Photo Credit Annamarie Buchheit 2023)

FIGURE 3. Annual commercial lobster CPUE in Eastport (1997-2022)



4.2 At-sea sampling program

At-sea sampling data has been collected annually since 1998 throughout the EPLMA. During the commercial fishing season, harvesters sample every third commercial trap, recording carapace length, sex, and presence of eggs and/or V-notch. From this data, average size (carapace length) is calculated for males and females, and size frequency distributions are created and used as biological indicators. Results show that the average size of males and females has increased (Figure 4).

This program provides data on the population structure during the commercial season. Detailed data for 2022 from the Eastport area is shown in Figure 5.

The increased abundance of very large females is likely a result of V-notching. The increased number of large lobster (both male and female) provides a higher reproductive capacity.



Large, egg-bearing female lobster with v-notch
(Photo Credit Tammy Elliott 2022)

FIGURE 4. Average commercial lobster size in the Eastport area from 1998 to

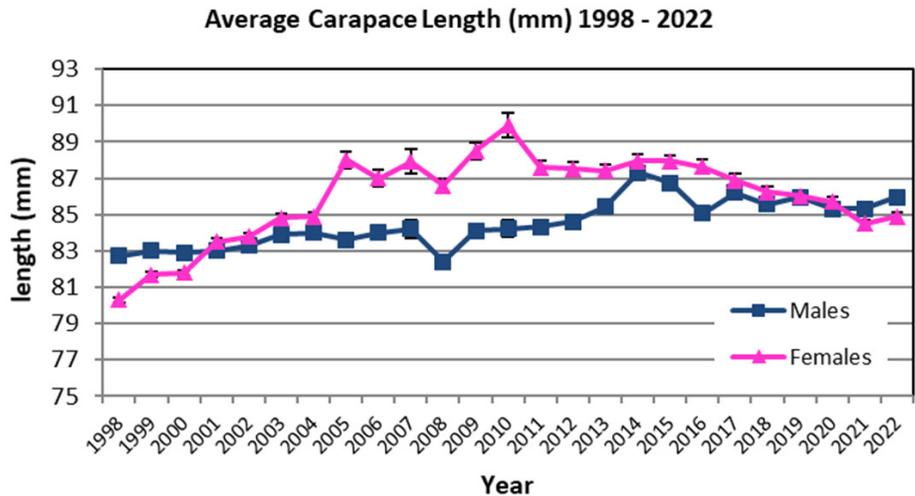
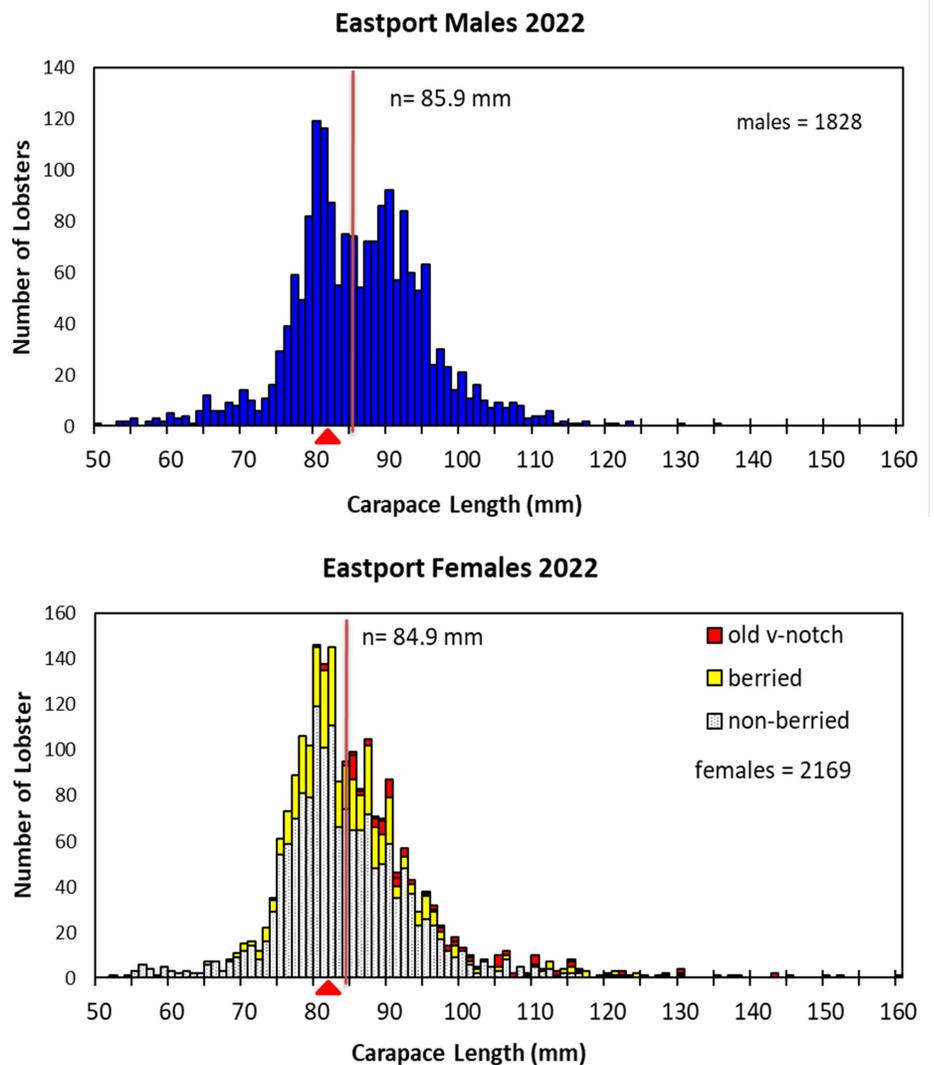


FIGURE 5. Size structure of male (left) and female (right) lobsters in the EPLMA. Red arrow indicates the minimum legal size of 82.5 mm carapace length and red line indicates average size (n).



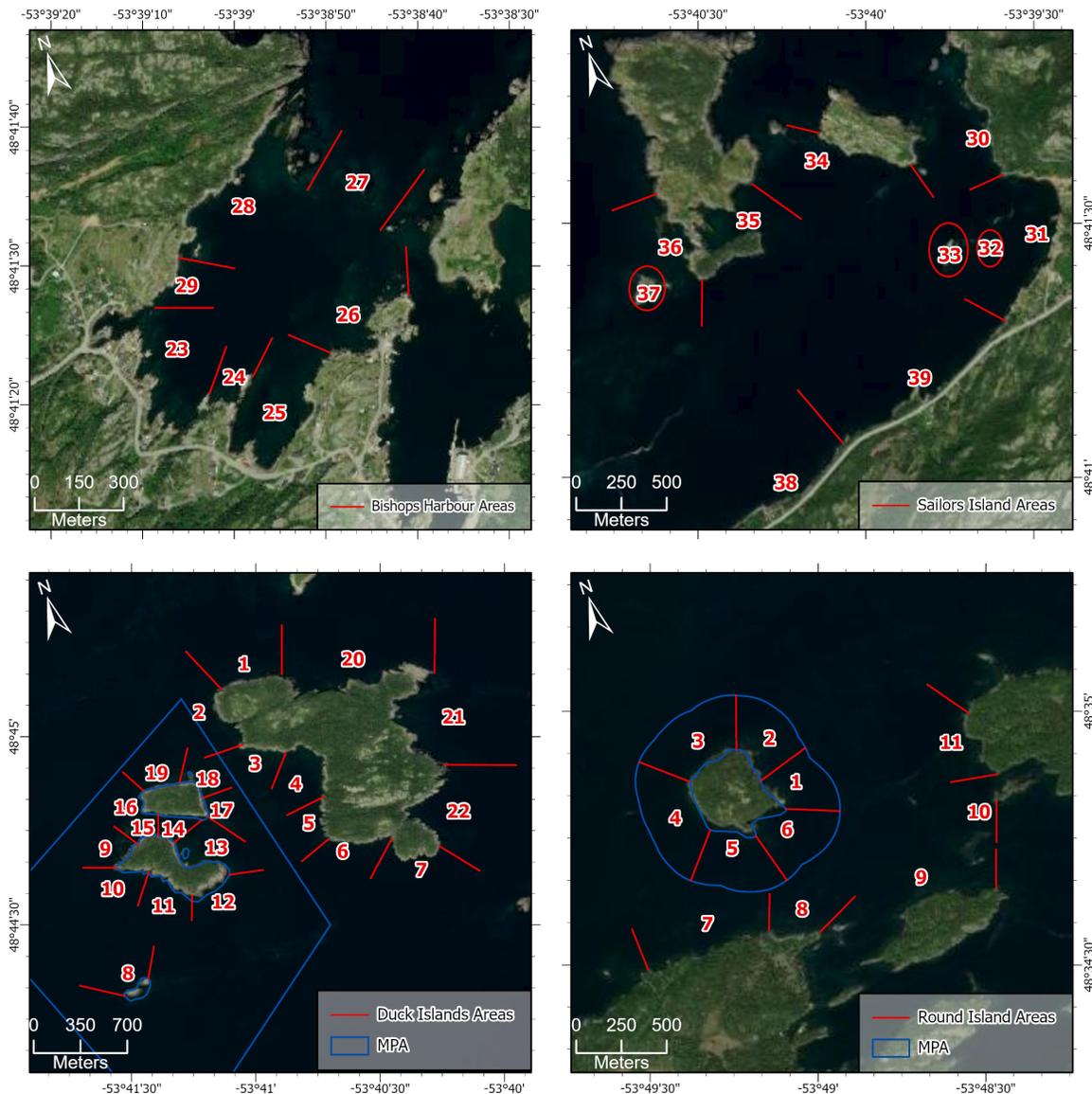


Data collection - fall tagging program (Photo Credit Todd Fowler 2017)

4.3 Fall sampling program

Since 1997, two crews of harvesters were trained and hired to conduct the tagging program. Originally sampling 50 pots per crew over the entire season, in recent years, a total of 120 pots per crew are sampled – which includes 20 small and 20 large modified traps, and 80 commercial traps. This research takes place early in the fall (September – October) inside the MPA (Round and Duck Islands) as well as outside the MPA in the adjacent commercial fishing areas (Figure 6). Traps are sampled every day, weather permitting, for a 3 to 5 week period. Fishers tag the lobster with streamer tags and collect and record information on carapace length, sex, berried status, v-notch status, tag numbers, trap number, and area and location captured or recaptured. All lobster captured are measured to collect information on the population structure and average size of lobsters.

FIGURE 6. Fall tagging sampling areas Top Left: Bishop’s Harbour (Duck Islands reference areas). Top Right: Sailor’s Island. (Duck Islands reference areas) Bottom Left: Duck Islands. Bottom Right: Round Island. Reference areas for Round Island not shown (not yet mapped).



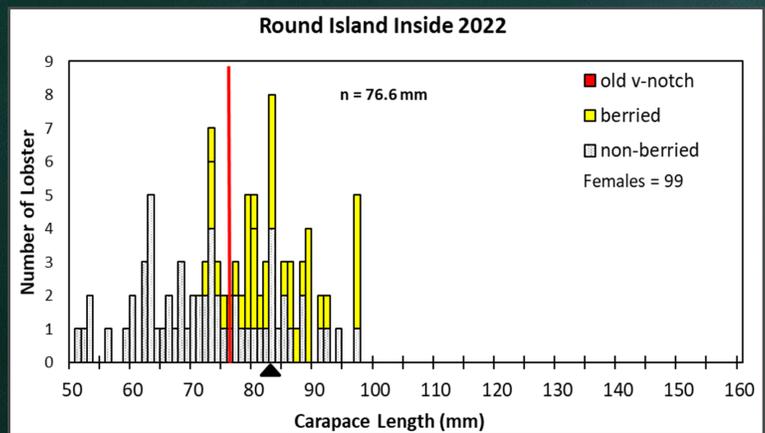
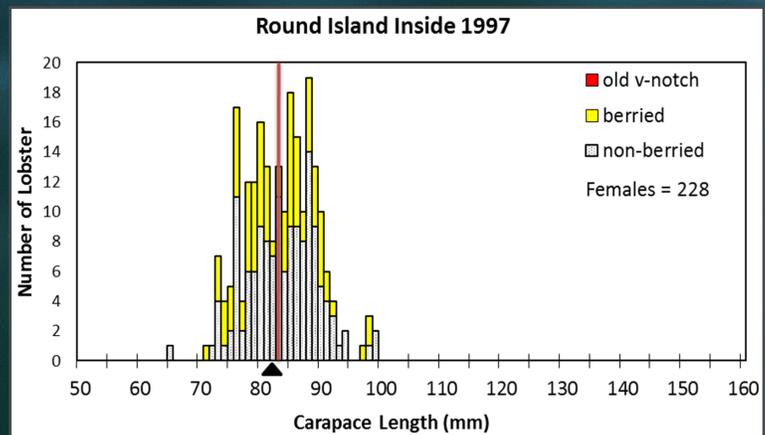
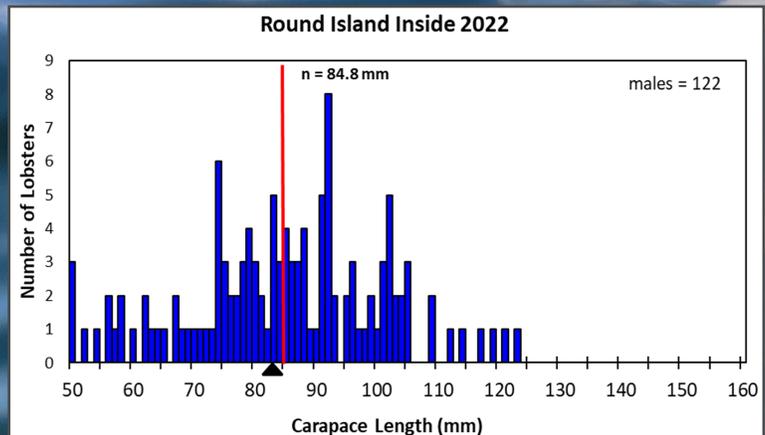
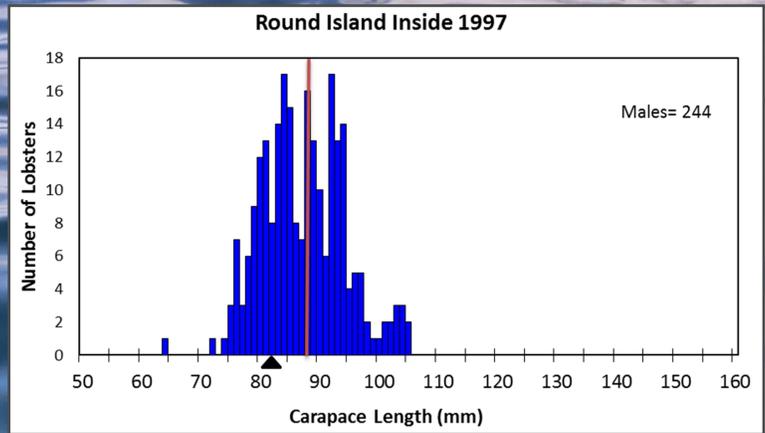
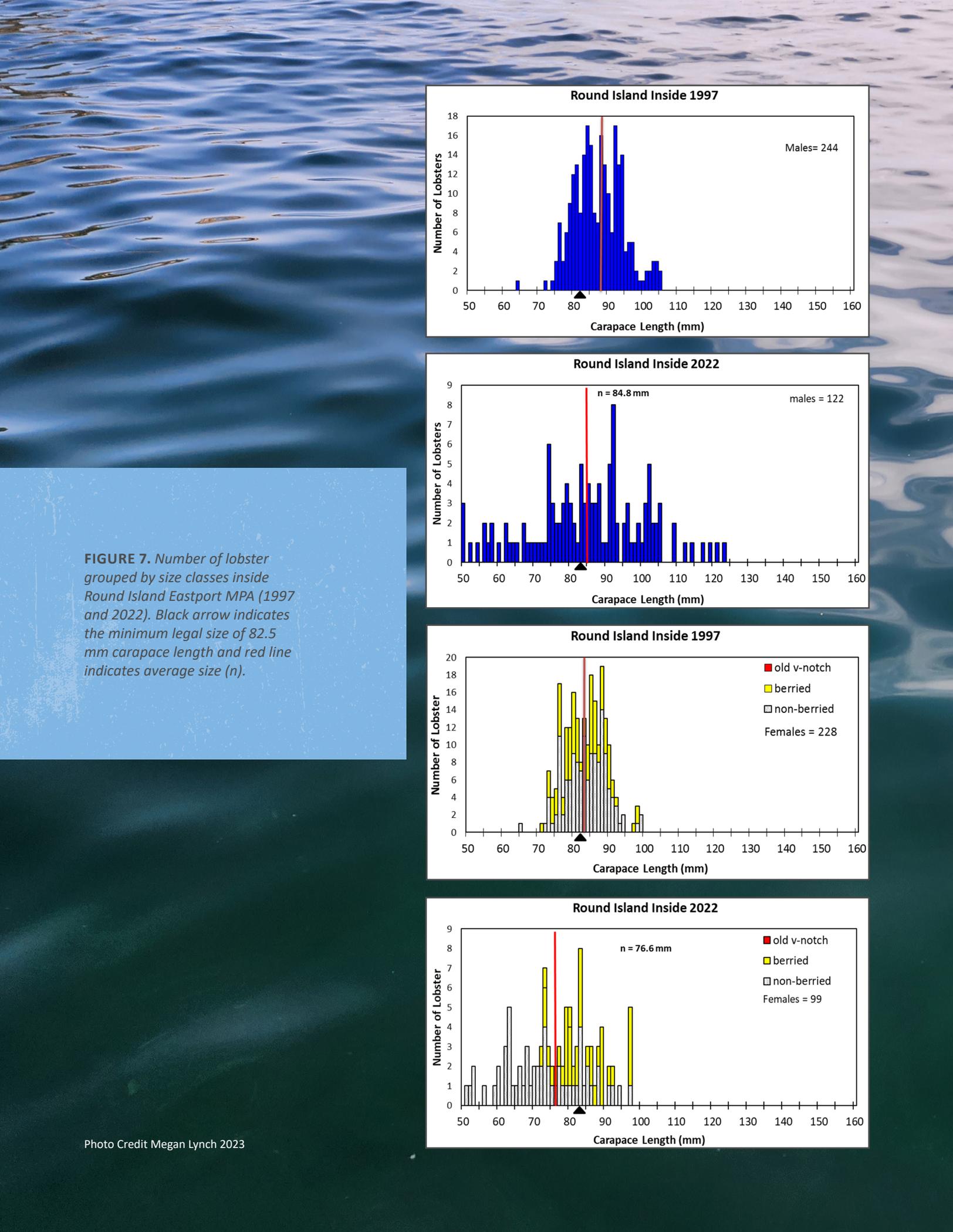


FIGURE 7. Number of lobster grouped by size classes inside Round Island Eastport MPA (1997 and 2022). Black arrow indicates the minimum legal size of 82.5 mm carapace length and red line indicates average size (n).

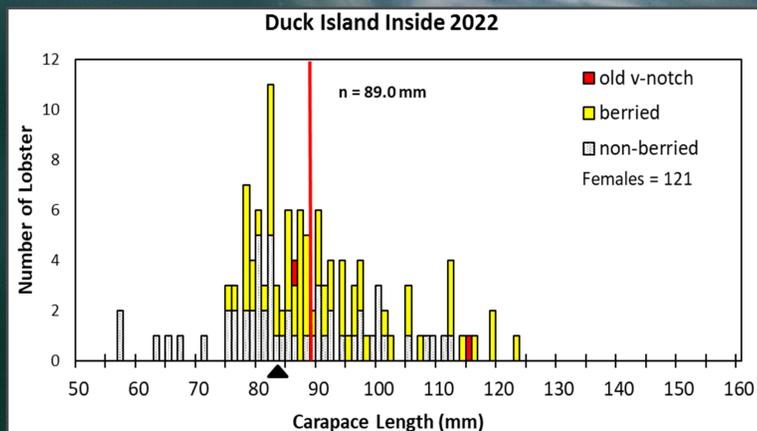
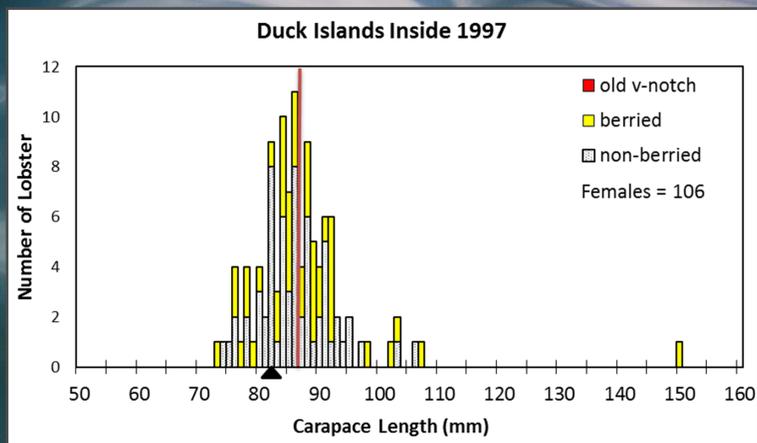
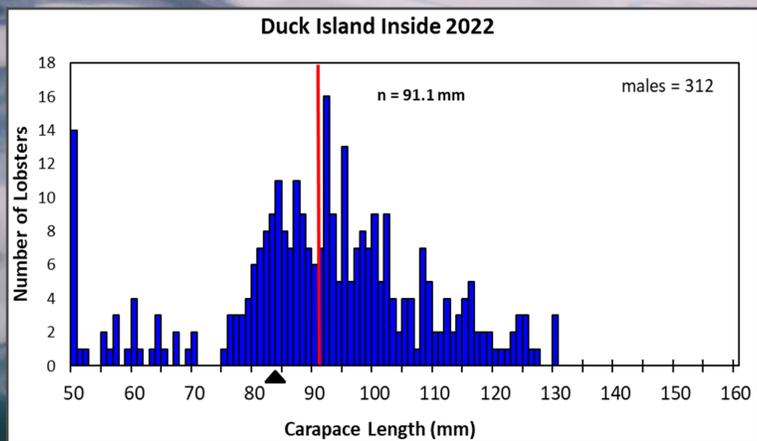
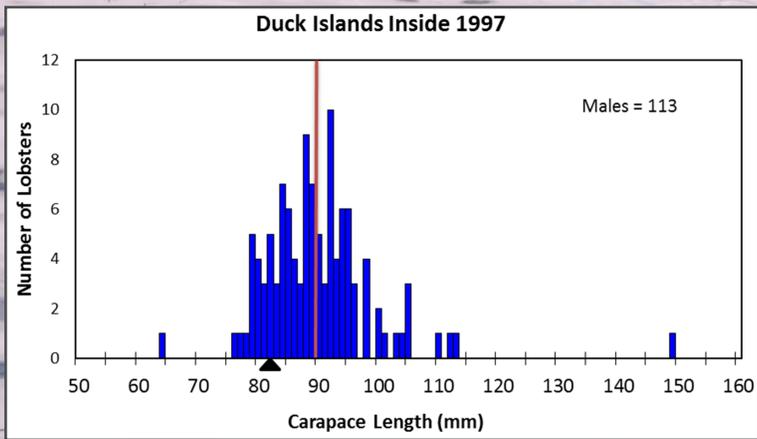
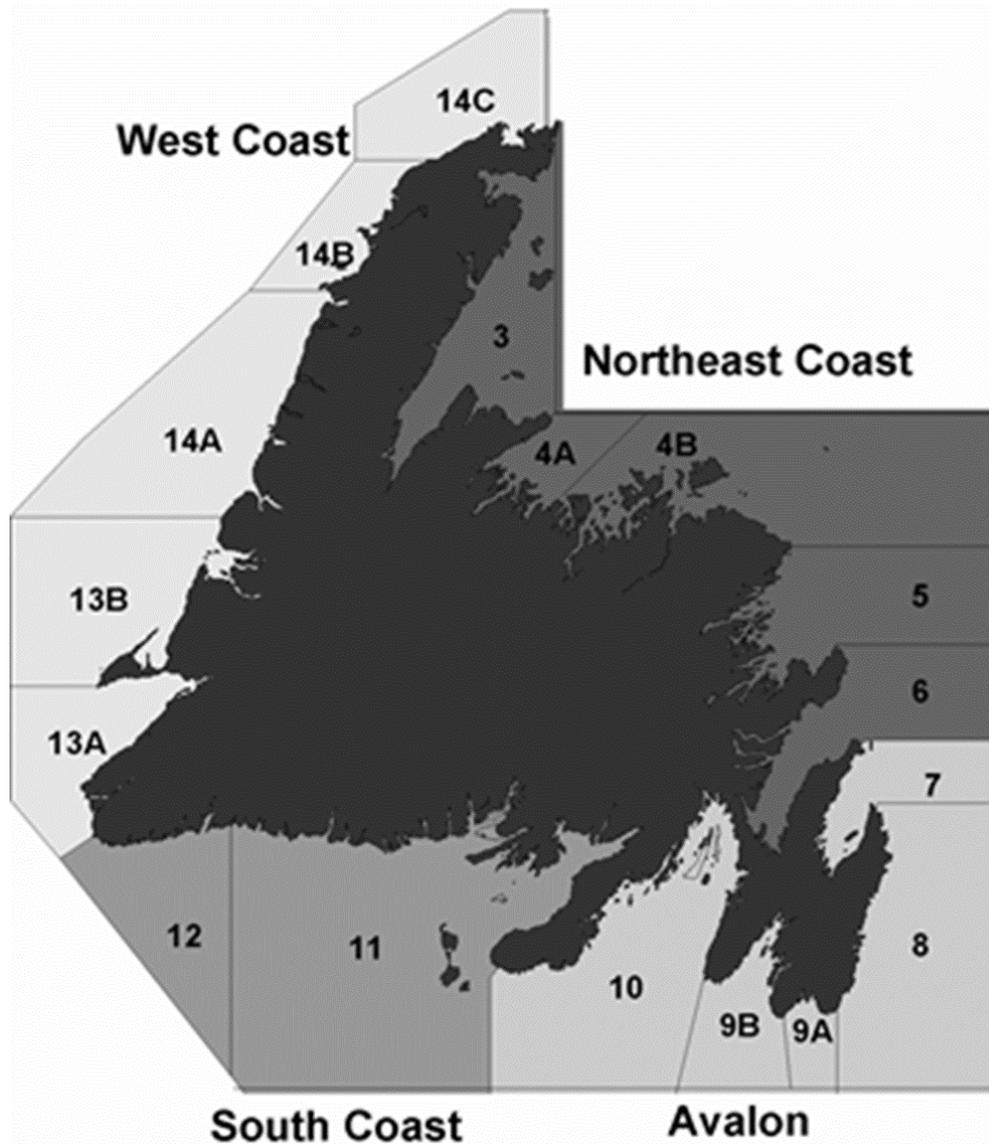


FIGURE 8. Number of lobster grouped by size classes inside Duck Islands Eastport MPA (1997 and 2022). Black arrow indicates the minimum legal size of 82.5 mm carapace length and red line indicates average size (n).

4.4 Assessment of American Lobster in Newfoundland

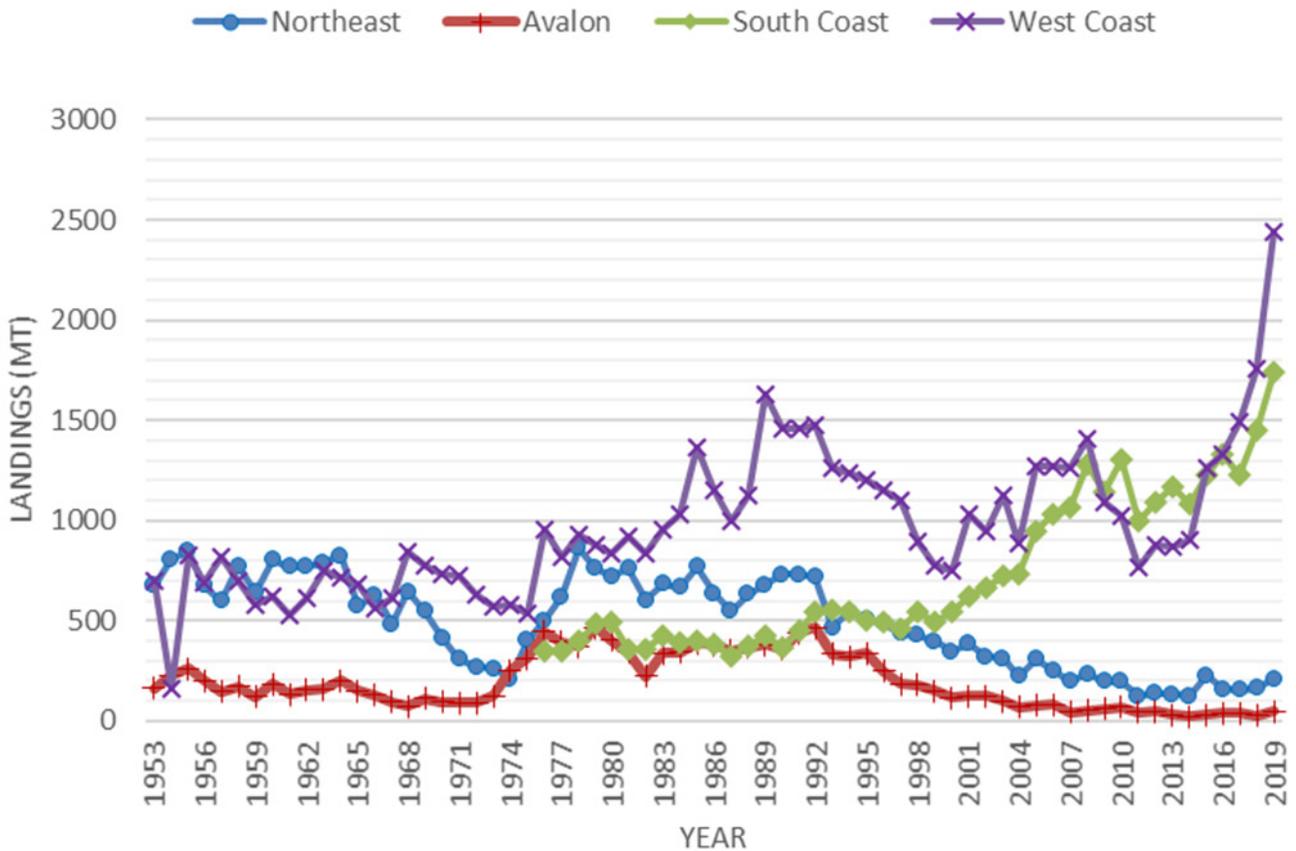
The latest assessment of American lobster in Newfoundland took place in 2021 and is currently assessed every three years. Lobster Fishing Areas (LFAs) are assessed based on four geographical regions: Northeast Coast (LFAs 3-6) (where the Eastport MPAs are within LFA 5), Avalon (LFAs 7-10), South Coast (LFAs 11-12), and West Coast (LFAs 13-14), Figure 9. The assessment is limited to fishery-dependant data, and uses reported landings, catch per unit effort (CPUE), and relative survival index as key indicators of the status of the resource. There are sources of uncertainty associated with these data, e.g., inconsistent reporting across areas, and as such it is difficult to determine total removals for any given year (DFO 2021-a).

FIGURE 9. Newfoundland Lobster Fishing Areas (LFAs 3-14) combined into assessment regions (DFO, 2021)



Overall, summer sea surface temperature has been increasing since 1981 in all four regions, leading to favorable oceanographic habitat conditions for lobster. However, reported landings in the South and West Coast Regions are increasing while those in the Northeast Coast and Avalon Regions are near historic lows as shown in Figure 10.

FIGURE 10. Trends in reported landings from 1953 to 2019 in the Northeast Coast, Avalon, South Coast, and West Coast assessment Regions (DFO 2021)

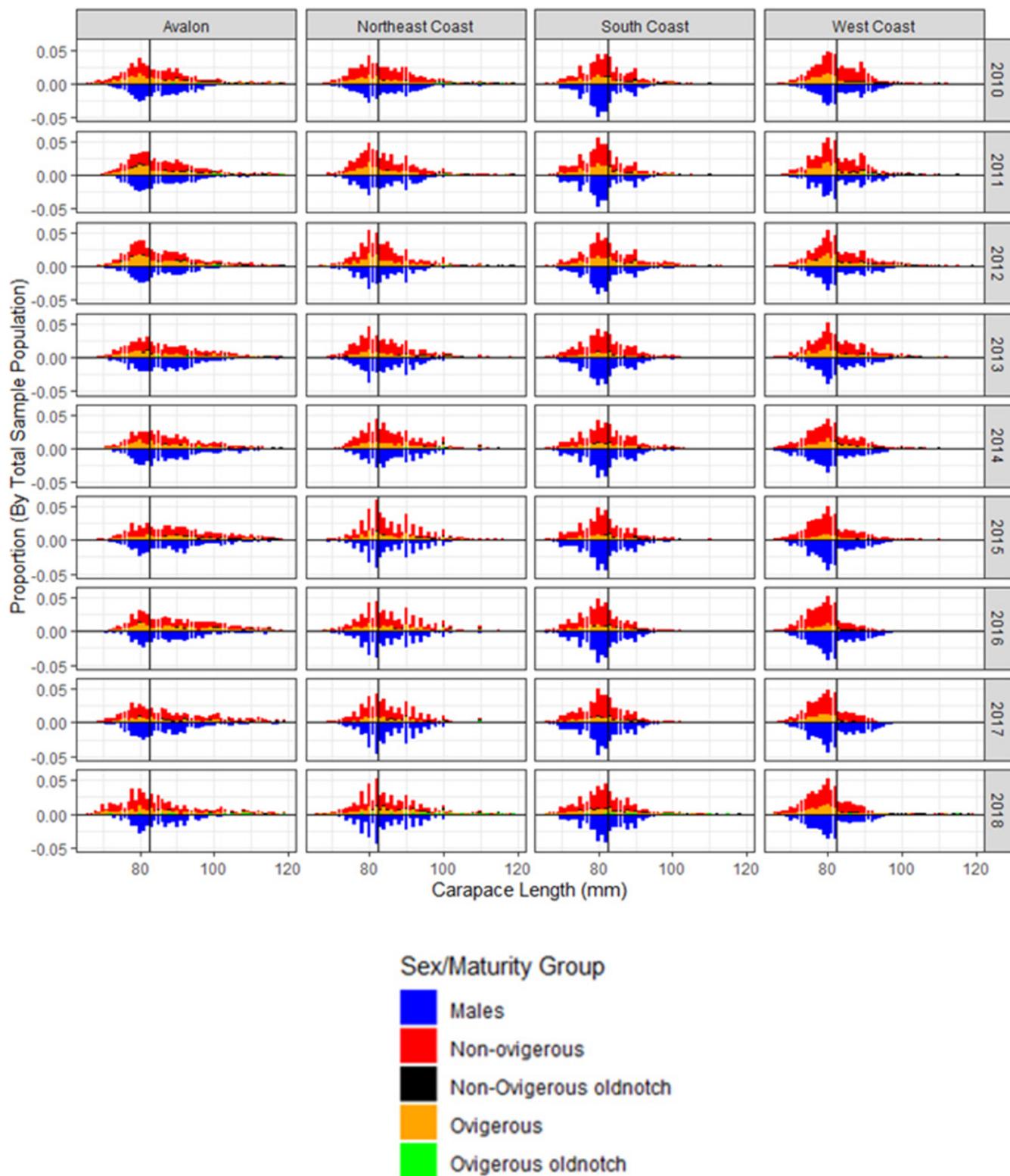


In the South and West Coast Regions, CPUE has steadily increased over the years to reach recent highs, while remaining unchanged and at low levels in the Northeast and Avalon regions. Based on size frequency distributions (Figure 11), there are more lobster attaining larger sizes in the Northeast and Avalon Regions while few lobster are surviving to larger sizes in the South and West Coast Regions. This suggests there is higher fishing pressure in the South and West Coast Regions compared to the Northeast Coast and Avalon Regions. V-notching was shown to have a high level of efficacy at protecting egg-bearing females from fishing mortality. In all assessment Regions, the majority of large surviving lobster in the population were v-notched females.



Measuring carapace length (Photo Credit Megan Lynch 2023)

FIGURE 11. Size-frequency distributions for males (bottom panel) and females (top panel) maturity groupings in each of the four regions from 2010 to 2018. The black vertical line represents the minimum legal size of 82.5 mm carapace length.



05

COMPLIANCE PROMOTION & ENFORCEMENT

To achieve the conservation objectives, effective compliance strategies are required. This component of the Management Plan addresses the operational responsibilities of DFO to meet regulatory requirements. The Eastport MPAs Advisory Committee identified compliance concerns within the MPAs early on. Critical periods have been identified as the summer months when tourism is at its peak (i.e., July – August); and the early fall season (i.e., September – October) because lobster monitoring and recreational cod fisheries are both taking place.

Since 2007, the Marine Planning and Conservation Program (formerly Oceans Program) has entered into Service Level Agreements (SLAs) with the C&P Program to increase patrols in the Eastport MPAs and the EPLMA. Fisheries officers are designated as Enforcement Officers under the *Oceans Act* and have the power to collect evidence and lay charges. Officers make additional boat and air patrols to enforce the MPA regulations, especially during vulnerable times of the year. Compliance strategies include monitoring and surveillance activities, special investigations, or undercover operations as deemed necessary, and a combination of education and awareness programs.



DFO Conservation and Protection patrols (Photo Credit Todd Fowler 2017)



There were 241 boat patrols and 49 aircraft surveillance flights of the MPA completed under the SLAs between 2007 and 2022. Over the years, several searches were conducted, minor wildlife violations were found, and a written warning was issued under the MPAs' regulations. To date, no charges have been laid. Enforcement and compliance monitoring will continue to be an important component of the Eastport MPAs program. Reduced poaching and adherence to mandatory controls and protection measures is supported by increased patrols by DFO Conservation and Protection as well as self-policing by local harvesters. The relationship between the community and DFO is strong and it's believed that any illegal activity in the area would be reported.

The aim of compliance monitoring is to promote adherence to the regulations and management measures. Non-compliance detected by patrols and inspections will result in appropriate enforcement actions. Enforcement of the regulations and subsequent offences will be dealt with under the *Oceans Act* or *Fisheries Act* as applicable. There will also be a reliance on feedback by community members to assess the effectiveness of compliance programs and adherence to management measures. Fisheries Officers have reported excellent cooperation from community residents, showing continued support for the Eastport MPAs. Violations of the regulations carry penalties under the *Oceans Act* for summary convictions and indictable offences. Violations of the *Fisheries Act* such as non-compliance with license conditions or management measures carry additional penalties.



Conservation and Protection (Photo Credit DFO 2023)

06

PUBLIC AWARENESS, ENGAGEMENT, EDUCATION & OUTREACH

Public awareness, supported by educational and stewardship initiatives, are critical factors in ensuring the long term success of a MPA. Compliance with regulations is higher when community members and the general public are aware of objectives and management strategies of an MPA. The Eastport MPAs was initiated at the request of local users and community representatives, and their involvement in the planning and subsequent management of the MPA has continued through their participation in the Advisory Committee. Their knowledge and understanding of the ecological importance of Eastport is likely to further instill an attitude of appreciation and pride from people living, working, and visiting in the area.



MPA public advisory sign (Photo Credit Megan Lynch 2023)



6.1 Meetings

DFO has worked collaboratively with stakeholders and interested parties in the development and management of the Eastport MPAs. This collaboration is facilitated through annual meetings of the Advisory Committee in Eastport, as well as public meetings and science briefings occurring when necessary to present the results of the monitoring and research and receive feedback and questions from stakeholders.

6.2 Projects

Website (on-going)

The MPAs' website (<https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/eastport/index-eng.html>) was established in 2002 during the development phase of the Eastport Marine Protected Areas and has continued to serve as an online resource since that time. The site contains links, background information, maps, photos, the Eastport MPAs Regulations, and the Activity Application process and will continue to be updated as appropriate with new and revised content.

Mini Documentary (complete)

In 2016, Todd Fowler of Skyreach Media was contracted to produce a mini documentary video on the Eastport MPA. This high quality mini documentary showcases the beauty of the Eastport Peninsula and provides a great overview of the history of the MPA, providing an educational and awareness experience. This mini documentary will be used in communications materials aimed at school aged children as well as the general public. This video will give people a general sense of where the MPA is, what it is surrounded by, the environment in which it is situated, and its purpose. The video can be viewed online at <https://youtu.be/-RyVIKVZ5-A>.



Advisory committee meeting (Photo Credit Nadine Templeman 2023)

07

REPORTING AND ADAPTIVE MANAGEMENT

This management plan is a living document, and may be adapted in consultation with the Advisory Committee and affected users as new information becomes available. Over the next two years, data collected from the Eastport MPAs monitoring programs will be further analyzed and incorporated into a detailed monitoring report.

The renewal of the Advisory Committee is another challenge that needs to be addressed to ensure that all affected groups continue to be represented and that local information is considered in decision-making. The Committee was initially formed in 2002 and membership and meeting attendance has gradually declined since that time as founding members have retired and passed on. The original Terms of Reference (ToR) did not include mechanisms to promote membership renewal and ensure that all affected parties have the opportunity to be involved. A new ToR will be drafted to include provisions for renewal and will be reviewed by the Committee.

Public meetings should also be held regularly as an avenue to attract new members. Collaboration with researchers will continue in order to investigate areas of study that will benefit the MPAs and lobster research within the Newfoundland Shelves Bioregion. The success of this small coastal MPA relies upon community support and the participation and involvement of the Advisory Committee.

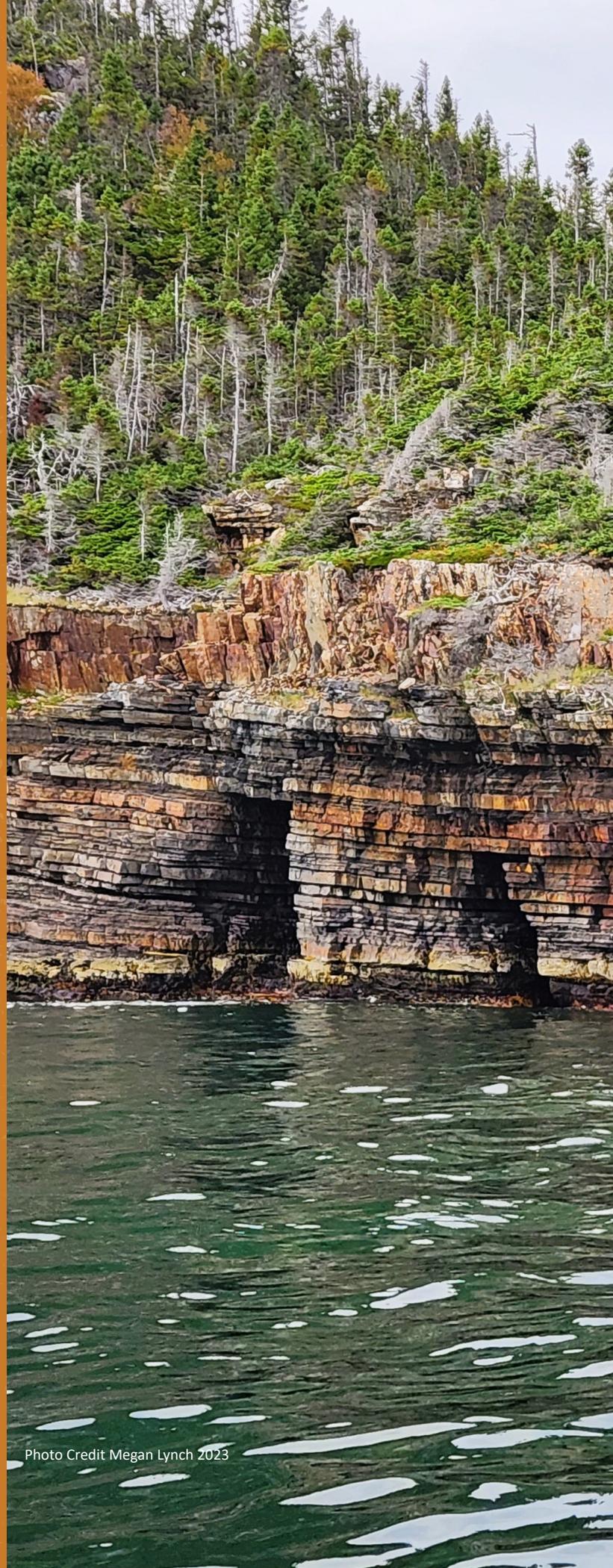


Photo Credit Megan Lynch 2023



APPENDIX A:

REFERENCES





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APPENDIX B:

REGULATIONS



Eastport Marine Protected Areas Regulations
SOR/2005-294

OCEANS ACT

Registration 2005-09-26

Eastport Marine Protected Areas Regulations

P.C. 2005-1658 2005-09-26

Her Excellency the Governor General in Council, on the recommendation of the Minister of Fisheries and Oceans, pursuant to subsection 35(3) of the Oceans Act, hereby makes the annexed Eastport Marine Protected Areas Regulations.

S.C. 1996, c. 31

INTERPRETATION

1. (1) In these Regulations, “waters” means, in addition to the waters, the bed and subsoil below the waters to a depth of two metres.

(2) In these Regulations, all geographical coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD 83) geodetic reference system.

(3) In Schedule 1, the lines connecting the points are rhumb lines.

APPLICATION

2. These Regulations apply to the marine protected areas designated in section 3.

DESIGNATION

3. The following areas of the sea in Bonavista Bay are designated as marine protected areas:

(a) those waters within an area of the sea — depicted in Schedule 1 and to be known as the Eastport – Duck Island Marine Protected Area – whose outer limit is a series of rhumb lines commencing at a point 48°45’06” N, 53°41’18” W, then to a point 48°44’30” N, 53°40’42” W, then to a point 48°43’54” N, 53°41’18” W, then to a point 48°44’30” N, 53°42’06” W and then to the point of commencement and whose inner limit is the low-water line of the islands within the outer limit; and

- (b) those waters within an area of the sea — depicted in Schedule 2 and to be known as the Eastport – Round Island Marine Protected Area – whose outer limit is a line every point of which is at a distance of 198.12 m (650 feet) from the nearest point of the low-water line of Round Island and whose inner limit is the low-water line of the island.

PROHIBITED ACTIVITIES

4. (1) In a marine protected area, no person shall

(a) disturb, damage or destroy, or remove from the marine protected area, any living marine organism or any part of its habitat; or

(b) carry out any activity — including depositing, discharging or dumping any substance, or causing any substance to be deposited, discharged or dumped — that is likely to result in the disturbance, damage, destruction or removal of a living marine organism or any part of its habitat.

(2) Despite subsection (1), a person may carry out any activity excepted under section 5 or any scientific or educational activity for which a plan is approved under section 7.

EXCEPTIONS

5. The following activities may be carried out in a marine protected area:

(a) fishing that is carried out in accordance with the *Aboriginal Communal Fishing Licences Regulations*; and

(b) any activity that is carried out for the purpose of public safety, national security or law enforcement or in response to an emergency.

ACTIVITY PLAN

6. Every person who proposes to carry out a scientific or an educational activity in a marine protected area shall submit to the Minister for approval, not less than 60 days before the day on which the activity is proposed to begin, a plan that contains the following information and documents:

(a) the name, address and telephone number, and if applicable, the facsimile number and electronic mail address, of a person who can be contacted in respect of the plan;

(b) a detailed description of the proposed activity that sets out
 - (i) the purpose of the proposed activity,



- (ii) the period or periods during which the proposed activity is to be carried out,
- (iii) a map on which the location of the proposed activity is identified,
- (iv) the types of data that are to be collected, if any, and the sampling protocols or other techniques to be used to collect the data,
- (v) the types of equipment, if any, that are to be used during the proposed activity, including those for gathering data, and if any of the equipment is to be anchored or moored in the marine protected area, the methods by which the anchoring or mooring is to be conducted,

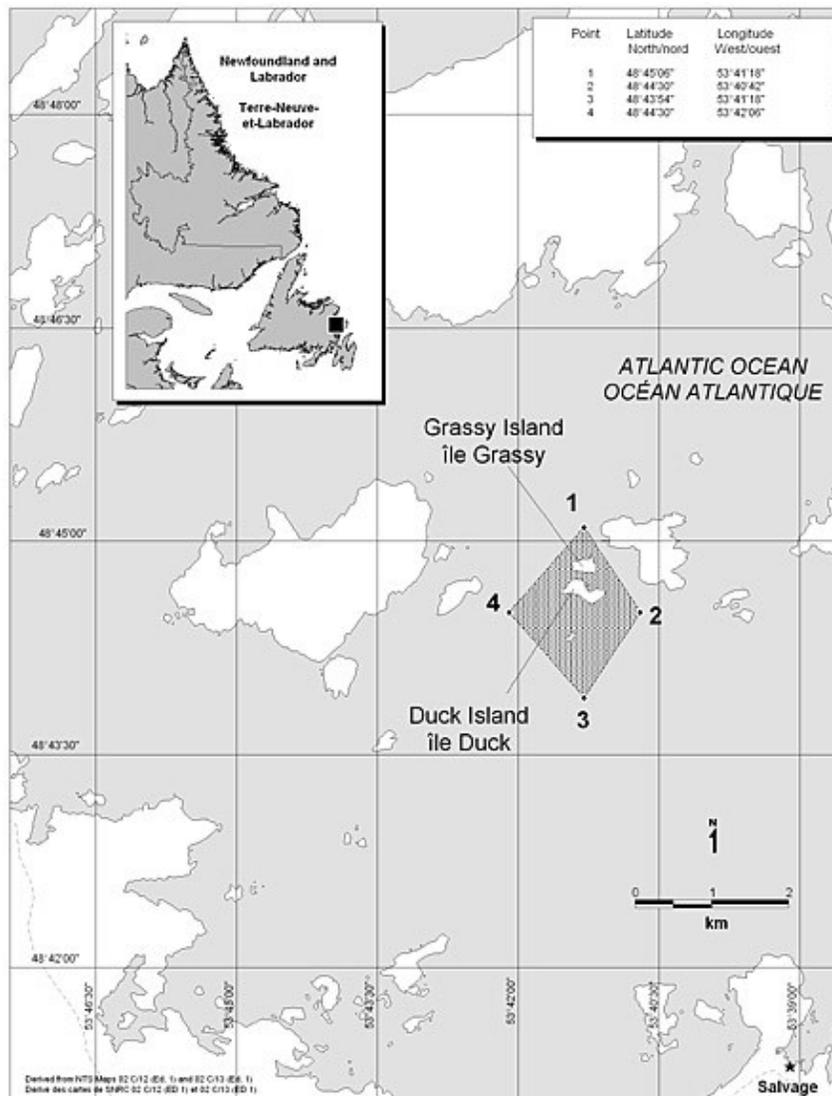
(vi) the type and identity of every vessel, within the meaning of section 2 of the *Canada Shipping Act*, that is to be used to carry out the proposed activity, and

(vii) every substance, if any, that is to be deposited, discharged or dumped within the marine protected area during the proposed activity;

(c) an assessment of the environmental effects that are likely to occur within the marine protected area as a result of the proposed activity; and

(d) a list of every licence, permit, authorization or consent obtained or applied for in respect of the proposed activity.

SCHEDULE 1
(Subsection 1(3) and paragraph 3(a))
EASTPORT – DUCK ISLAND MARINE PROTECTED AREA



7. (1) Subject to subsection (2), the Minister shall, within 30 days after the day on which a plan that is submitted in accordance with section 6 is received, approve the plan if the proposed activity is not likely to damage or destroy the habitat of a living marine organism in the marine protected area and

(a) in the case a scientific activity, the proposed activity is to be carried out for the purpose of monitoring the effectiveness of conservation measures implemented in, or for the management of, the marine protected area; and

(b) in the case of an educational activity, the proposed activity is to be carried out for the purpose of increasing public awareness of the marine protected area or providing information in respect of the conservation measures implemented in that area.

(2) The Minister shall not approve a plan if the cumulative environmental effects of the proposed activity in combination with any other past and current activities carried out within the marine protected area are likely to damage or destroy the habitat of living marine organisms in that area.

REPORTING OF ACCIDENTS

8. Every person involved in an accident that is likely to result in any disturbance, damage, destruction or removal prohibited under subsection 4(1) shall, within two hours after its occurrence, report the accident to the Canadian Coast Guard.

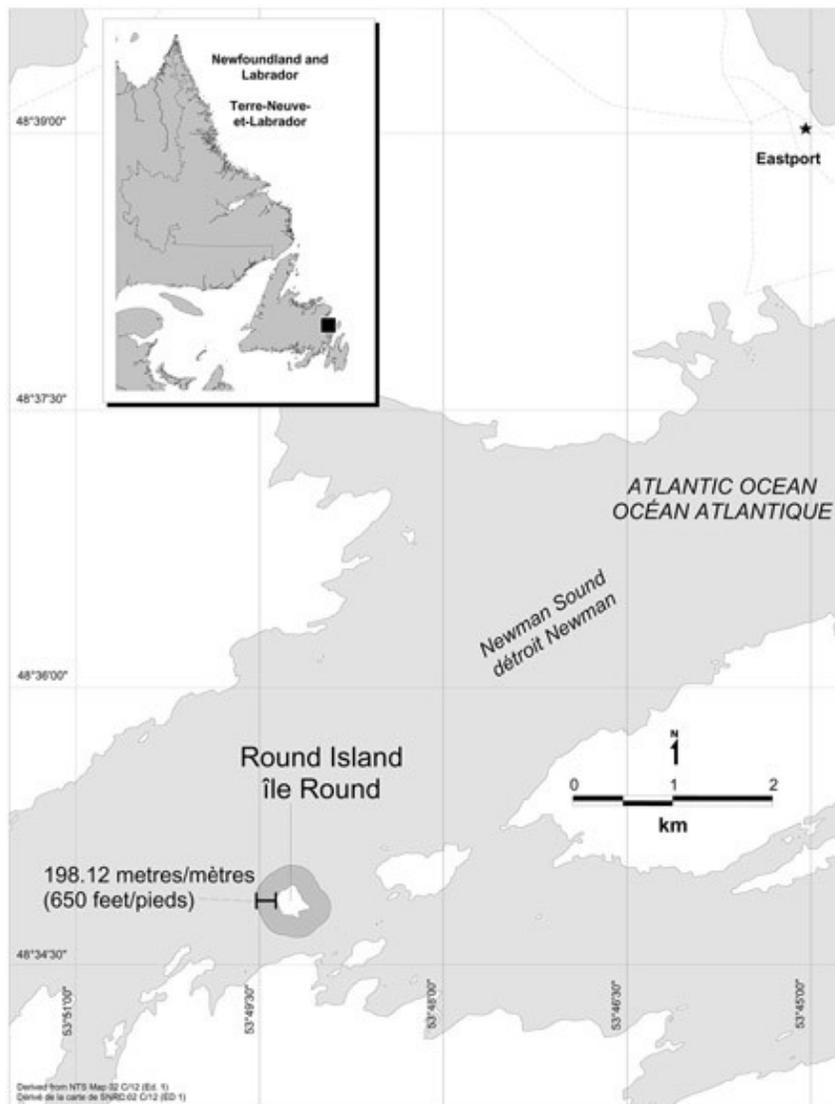
COMING INTO FORCE

9. These Regulations come into force on the day on which they are registered.

SCHEDULE 2

(Paragraph 3(b))

EASTPORT – ROUND ISLAND MARINE PROTECTED AREA





Sandy Cove Beach, NJ (Photo Credit Megan Lynch 2023)

