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What We Heard Report

Marine Debris in Atlantic Canada: Insights, Gaps, and Needs

Survey Responses – Fall 2025



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Definitions

Definitions for terms highlighted in **black bold text** throughout the report are provided here.

Atlantic Canadian Microplastics Action Group: A multi-stakeholder working group established after the 2019 Clean Ocean Summit, originally composed of representatives from academia, government, industry, and non-profit, non-government organizations (NGOs) focused on microplastics in Atlantic Canada (Clean, 2019). In 2025, its membership broadened to include organizations addressing all forms of marine debris. The group aims to build a comprehensive network of stakeholders to strengthen coordination and efforts to collect and share standardized marine debris data, collaborate on public education and outreach initiatives, and promote a community-based approach by learning from local groups to prevent the accumulation of marine debris across Atlantic Canada's ecosystems.

Close-ended: A type of survey question where participants respond by selecting from a set of predefined options (e.g., multiple choice, yes/no), rather than providing an open-ended answer.

Ghost gear: Any fishing gear that has been abandoned, lost or otherwise discarded (e.g., nets, traps, line, rope, pots, and floats) (DFO, 2023).

Macroplastics: Marine debris measuring $> 5\text{mm}$ (Government of Canada, 2020). For the purposes of this report, the term "macroplastics" may also encompass non-plastic debris (e.g., rubber, glass, etc.), but excludes fishing gear.

Marine Environmental Quality (MEQ): Fisheries and Oceans Canada's (DFO) Marine Environmental Quality (MEQ) initiative aims to understand the most pressing stressors on the marine environment, evaluate the effectiveness of existing management measures for those stressors, identify gaps, and develop management responses to address those gaps.

Marine debris: Any persistent solid material that is accidentally or deliberately discarded, disposed of, or abandoned in marine and coastal environments (Eaton, 1984; Werner et al., 2016). For the purposes of this report, three categories of marine debris were defined: Microplastics, macroplastics, and ghost gear.

Microplastics: Marine debris measuring $\leq 5\text{ mm}$ (Government of Canada, 2020). For the purposes of this report, the term "microplastics" may also encompass non-plastic debris (e.g., rubber, glass, etc.).

Open-ended: A type of survey question that allows participants to provide their own responses in text form, rather than choosing from pre-defined options. This format enables participants to share detailed answers and include multiple ideas or perspectives in response to a single question.

Background

Marine debris is a global issue with widespread and transboundary impacts, making it an increasingly important management priority for governments worldwide. The Government of Canada has recognized ocean plastics and marine litter as environmental threats and is committed to taking resource-efficient and sustainable actions to address them. To support these commitments, Fisheries and Oceans Canada (DFO) is among the departments leading and supporting initiatives to better understand and address the challenges posed by marine debris.

Examples of current DFO initiatives:

- DFO's Ghost Gear Program has previously funded projects focused on developing and implementing responsible disposal methods for ghost gear and end-of-life fishing gear, retrieving lost gear, and acquiring or piloting technologies to prevent, reduce, and retrieve **ghost gear**. The Program is now transitioning to leading the development of a prevention-focused strategy aimed at modernizing the operations and regulations of Canada's domestic fisheries to address the impacts of ghost gear. Specifically, the Program seeks to establish best management practices to prevent gear loss and develop new regulations for harvesters to manage gear (DFO, 2025a).
- DFO's Science Sector is conducting and supporting research to better understand the source, extent, and impacts of marine debris in aquatic ecosystems.
- DFO's Office of Environmental Coordination leads initiatives related to reducing plastic waste across DFO operations (DFO, 2025b).



Credit: de Mendonça et al. (2021)



Credit: O. Turgeon, DFO Images Bank



Credits: Coastal Action

The **Marine Environmental Quality initiative (MEQ)** within the Marine Planning and Conservation (MPC) Program aims to understand the most pressing stressors on the marine environment, evaluate the effectiveness of existing management measures, identify gaps, and develop management responses to address those gaps. MEQ received funding from 2022 to early 2026 to support marine debris-related work. Some of MEQ's activities related to marine debris in Maritimes Region during this time included the following:

- Provided funding for marine debris cleanup, education, and outreach initiatives through Contribution Agreements;
- Provided funding to support Fourier transform infrared spectroscopy (FTIR) analysis of **microplastic** particles for DFO Science projects;
- Funded the secretariat of the multi-stakeholder **Atlantic Canada Microplastic Working Group**, established during the 2019 Clean Ocean Summit (Clean, 2019);
- Developed and published a technical report on the effects of marine debris on Atlantic Canadian species and ecosystems (Scovil et al., 2025); and
- Established an internal DFO marine debris working group to improve coordination of departmental projects, activities, and initiatives across the Region.

The Survey

It was a priority for MEQ to seek feedback and insights from those working in the field of marine debris research across Atlantic Canada to better understand research and managements gaps and inform needs. As a first step, MEQ collaborated with Coastal Action, a local non-profit environmental organization, to design and distribute a survey to individuals and organizations with knowledge or involvement in marine debris research, education, or outreach within Atlantic Canada. The hope is that this report will provide a helpful summary for those in the field wishing to improve coordination and collaboration to advance work on this important issue.



Credit: Huntsman Marine Science Centre



Credit: Coastal Action



Credit: Huntsman Marine Science Centre

Reconciliation

The Government of Canada aims to advance reconciliation with Indigenous peoples by recognizing the relationships with and ongoing management of their ancestral lands and waters. DFO is committed to recognizing and implementing Indigenous Rights and Title in alignment with Sections 25 and 35 of the *Constitution Act* (1982), the *United Nations Declaration on the Rights of Indigenous Peoples Act*, and the federal Principles Respecting the Government of Canada's Relationship with Indigenous Peoples. This report benefits from Indigenous Knowledge and perspectives.

Methods

Defining Marine Debris

The survey and this report define three categories of marine debris: microplastics, macroplastics, and ghost gear. In general, marine debris refers to any persistent solid material that is accidentally or deliberately discarded, disposed of, or abandoned in marine and coastal environments (Eaton, 1984; Werner et al., 2016). It is typically categorized by material and size, as these characteristics can indicate its source and potential impact. For the purposes of the survey and this report, two size categories were defined: macro ($> 5\text{mm}$) and micro ($\leq 5\text{ mm}$) (Government of Canada, 2020). While marine debris can include many materials, the vast majority is plastic (Gall and Thompson, 2015). Accordingly, the terms “microplastics” and “macroplastics” were used throughout the survey and are used in this report; however, we acknowledge that responses to these terms may also include debris composed of non-plastic materials (e.g., glass, rubber). Additionally, the survey and this report include “ghost gear” as a third category of marine debris, referring to any fishing gear that has been abandoned, lost or otherwise discarded (e.g., nets, traps, line, rope, pots, and floats) (DFO, 2023). Occasionally throughout the survey, the term “marine debris” is used instead of “macroplastics” or “ghost gear”, as it refers to debris that does not fall under “micro”. It is noted that this interchangeable use of terminology is not unusual in this field.

Designing the Survey

MEQ and Coastal Action co-lead the development and distribution of the survey. Coastal Action is a non-profit environmental organization based in Mahone Bay, Nova Scotia, with expertise in marine debris research and public outreach and education. As the secretariat for the Atlantic Canada Microplastics Working Group and the Canadian Marine Plastics Action and Collaboration (CAMPAC) Community of Practice (CoP), their strong network and experience made them well-positioned to carry out this work. The survey included questions organized into six topics:

1. Stakeholder Mapping and Network Building
2. Outreach, Education and Community Engagement
3. Collection Methods and Standardization
4. Data to Inform Solutions
5. Training and Capacity Building
6. Final Thoughts

The first five topics reflect goals identified by participants of the Atlantic Canada Microplastics Working Group in their 2024-2025 workplan. These goals, along with Coastal Action’s knowledge of potential gaps and needs in this field, informed the development of survey questions. This approach ensured that the results would help to prioritize workplan items for the Working Group and CAMPAC CoP. It is worth noting that in 2025, the Working Group expanded its membership to include individuals working on **macroplastic** and ghost gear-related initiatives. The survey draft was reviewed by MEQ staff, and feedback was provided prior to its distribution. The full list of survey questions is provided in Appendix A.

Distributing the Survey

Although this project was designed and led by MEQ in Maritimes Region, whose administrative boundaries extend from the northern tip of Cape Breton to the New Brunswick-Maine border, marine debris is a transboundary issue. To ensure broad representation, MEQ sought input from individuals and organizations engaged in marine debris work across Atlantic Canada, including areas within the DFO Gulf and Newfoundland and Labrador Regions. Drawing on the Atlantic Canada Microplastics Working Group participant list and additional network contacts, Coastal Action provided MEQ with a list of potential survey recipients for review. This list included stakeholders and Rightsholders with knowledge of or past or current involvement in marine debris (i.e., microplastics, macroplastics, and/or ghost gear) research, education, outreach, or management within Atlantic Canadian environments. To ensure comprehensive coverage, the contact list was also shared with MEQ colleagues in the Gulf and Newfoundland and Labrador Regions for additions prior to distribution. A list of 110 contacts was compiled.

Coastal Action sent the survey to the identified contacts via email (Appendix B), providing them with a link to a Google Form containing the survey questions. The survey was originally open from August 19 to September 12, 2025, but the deadline was extended to September 26th in an effort to increase participation. Reminder emails to complete the survey were sent to participants on September 5th and 15th. Once the survey closed, Coastal Action compiled the responses and provided MEQ staff with a summary report along with a copy of all submissions.

What We Heard Document

This What We Heard document was prepared by MEQ staff and summarizes the feedback provided by survey respondents. Throughout the document, a selection of anonymous direct quotes from **open-ended** questions is included to illustrate the nature of the responses. Because many survey questions were open-ended, or **close-ended** with the ability to select multiple options, response counts are often shown as 'n =' to indicate the number of participants who provided that suggestion. This accounts for the possibility of multiple ideas or answers within a single response. Percentages are also used throughout, typically for close-ended questions where respondents could select only one fixed answer from a pre-defined list.

Results

Topic #1: Stakeholder Mapping and Network Building

Of the 110 email invitations sent, 26 responses were received from individuals representing a variety of organizations (**Figure 1**), resulting in a response rate of approximately 24%. Survey participants represented a diverse range of roles within their organizations, including scientists, researchers, project managers, academic professionals, executive leaders, consultants, coordinators, and specialists in marine planning, shoreline cleanup, and watershed management. Among respondents, 31% reported conducting work in New Brunswick, 23% in Nova Scotia, 19% in Newfoundland and Labrador, 12% in Prince Edward Island, and 12% in two or more Atlantic provinces. One individual indicated work outside Atlantic Canada; however, their input was included due to its relevance to the region.

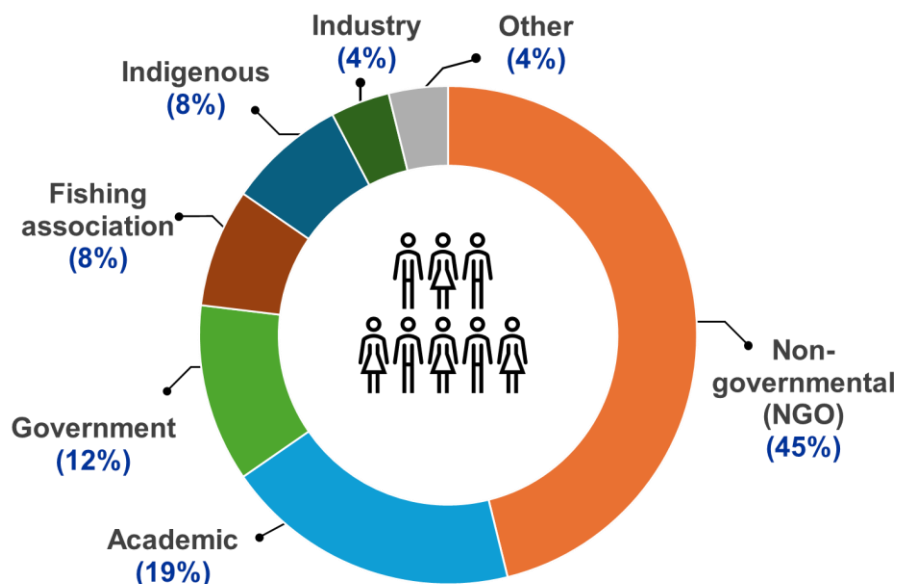


Figure 1. Organization affiliations of the 26 survey respondents. Categories were defined based on participant responses. ‘Other’ refers to an organization that operates as a partnership, but functions as a non-profit.

About 23% of survey participants focus their work on microplastics, 19% on ghost gear, and 8% on macroplastics, while the remaining 50% work on two or more types of marine debris. The most common environment for marine debris work was water (n=19), followed by fauna (n=9), sediment (n=8), and beaches or shorelines (n=5). Additional areas of work included eelgrass habitats and the atmosphere.

Examples of projects led by survey participants:

- Seabin installation and management
- Shoreline cleanups
- Ghost gear and macroplastic retrievals
- Microplastics sampling in water, sediment, and biota
- Waste audits
- Education and outreach campaigns
- Data management



Survey participants were asked about their interest in contributing to a regional map of marine debris initiatives. This question originated from a workplan item of the Atlantic Canada Microplastics Working Group, where members had previously expressed interest in developing a comprehensive map to capture all past and ongoing projects across Atlantic Canada. Survey results showed interest in this initiative; 42% of respondents answered “yes”, while 58% indicated potential interest but noted they would need more information. Potential limitations or constraints in contributing to this type of initiative may align with those outlined in Figure 2 under Topic #4: Data to Inform Solutions.

Topic #2: Outreach, Education, and Community Engagement

In an effort to identify existing outreach and education initiatives, assess gaps and long-term priorities, and develop a strategy to address those gaps, respondents were asked about their involvement in outreach and education activities. The survey reinforced the commitment of Atlantic Canadian organizations to marine debris outreach and education, with 85% of respondents reporting involvement.

Sample audiences targeted by education and outreach activities

n represents the number of respondents reporting. These categories were developed as high-level groupings to organize the responses received.



- General public — $n = 14$
- Youth (e.g., school groups) — $n = 7$
- Industry (e.g., fishing, aquaculture, peat) — $n = 3$
- Indigenous Nations — $n = 2$
- Non-governmental organizations (e.g., watershed organizations) — $n = 2$
- Graduate students — $n = 1$

Survey respondents reported participating in a wide range of activities and events, such as Oceans Day outreach, community shoreline cleanups, harbour signage, and the development of instructional videos, handouts, and workshops on monitoring techniques and laboratory analyses. Other efforts mentioned included workshops and signage promoting good beach practices, producing a podcast series on plastic pollution, and engaging through presentations, social media campaigns, op-eds, and media interviews. Respondents were also asked which communication strategies they found effective for sharing marine debris data, and the top answers were interactive activities (e.g., marine debris models, cleanups, lab activities) ($n = 7$), visual aids (e.g., posters, videos, slide decks, web pages, maps) ($n = 6$), and social media ($n = 4$).

When asked about gaps and challenges in marine debris outreach and education, the most commonly cited issue was **lack of audience engagement**. This limitation was not unique to any one region, with

similar experiences reported across all Atlantic provinces. Respondents suggested that low engagement may stem from limited public awareness, a lack of tangible individual actions, or repetitive messaging.

“...everyone is too busy to care these days”

“We [have] made social media posts in the past, but everything gets repetitive very quickly”

“Many are also becoming normalized to all the crisis events whether it’s plastics, climate change, tariffs, and more so plastics has fallen on the importance scale to resolve since 2018”

Funding was also identified as a key challenge. In some cases, funding concerns were mentioned without additional context; in others, respondents noted that insufficient funding was the primary barrier to maintaining consistent program delivery and supporting outreach initiatives. Additional challenges included a lack of general knowledge on the topic, fear from the public when presented with information, limited time for engagement, and a lack of supporting materials. Some supporting materials were provided after the survey closed and are listed in Appendix C, along with publicly available data shared by survey participants. Respondents also noted a lack of designated federal leadership as a barrier to effective and consistent outreach, education, and community engagement.

Topic #3: Collection Methods & Standardization

Accurately estimating the types and abundances of marine debris is challenging due to its widespread distribution, multiple input sources and transport mechanisms, and the lack of standardized monitoring and reporting methods across the field (Dimitrijevic et al., 2019; Provencher et al., 2020; Galgani et al., 2021). To assess interest in standardizing and sharing marine debris collection methods among members, and to explore the development of best practices informed by existing research, related questions were included in the survey.

58% of survey respondents reported active involvement in marine debris monitoring, sampling, or laboratory analysis, using a range of different methods. Among these respondents, half indicated they would be willing to share their current methods or protocols to support the development of best practices, while the other half expressed potential interest but noted they would need more information. One respondent stated they would not share their protocols because they do not own them.

Publicly available protocol resources shared by survey respondents

Microplastic-related protocols

- <https://civiclaboratory.nl/2016/06/29/ladi-trawl/>
- <https://civiclaboratory.nl/clear-lab-book/>
- <https://civiclaboratory.nl/2017/12/30/how-to-investigate-fish-guts-for-marine-microplastics/>
- <https://www.abbatekgroup.com/mpconnect>
- <https://www.oaepublish.com/articles/wecn.2023.61>

Macroplastic and ghost gear-related protocols

- <https://www.ahoi.ca/news> (methods described in blogs)
- <https://civiclaboratory.nl/2015/07/25/beach-clean-ups/>



When asked which additional tools or resources would help improve data collection or analysis efforts, 16 responses were received, with some individuals providing more than one suggestion. Five respondents mentioned **funding**, while others suggested the following, with example quotations provided in the sub-bullets:

- **Access to non-funding resources (n = 7)**
 - “Lab partnership”; “More access to labs”
 - “Drone surveys; underwater ROV work...”
 - “Less expensive spectroscopy would facilitate projects”
 - “Increased local availability of FTIR”
- **Access to existing data (n = 4)**
 - Delay in results; “Still waiting on results from 2021 and 2022”
 - “Continuing to build open source spectral libraries”
 - “A general database on FTIR and/or Raman spectra of weather[ed] microplastics for identification”
- **Method/protocol sharing and/or standardization of data collection (n = 4)**
 - “Formalized marine debris collection guidelines”
 - “Data sharing with other NGOs has been a challenge due to differing items collected. A procedure for sharing data across cleanup organizations would be helpful”
- **Government support (n = 1)**

Topic #4: Data to Inform Solutions

As noted earlier, data accessibility can often be a challenge in the marine debris field. The survey included questions aimed at assessing the current state of data sharing and gathering suggestions to advance the use of data in developing solutions that prevent marine debris from entering the environment.

With respect to sharing data, 50% supported the development of a shared data platform to improve information access, with the other half of participants being unsure. No respondents were fully against it. Many survey respondents shared barriers and constraints to sharing marine debris data, which are summarized in **Figure 2**.

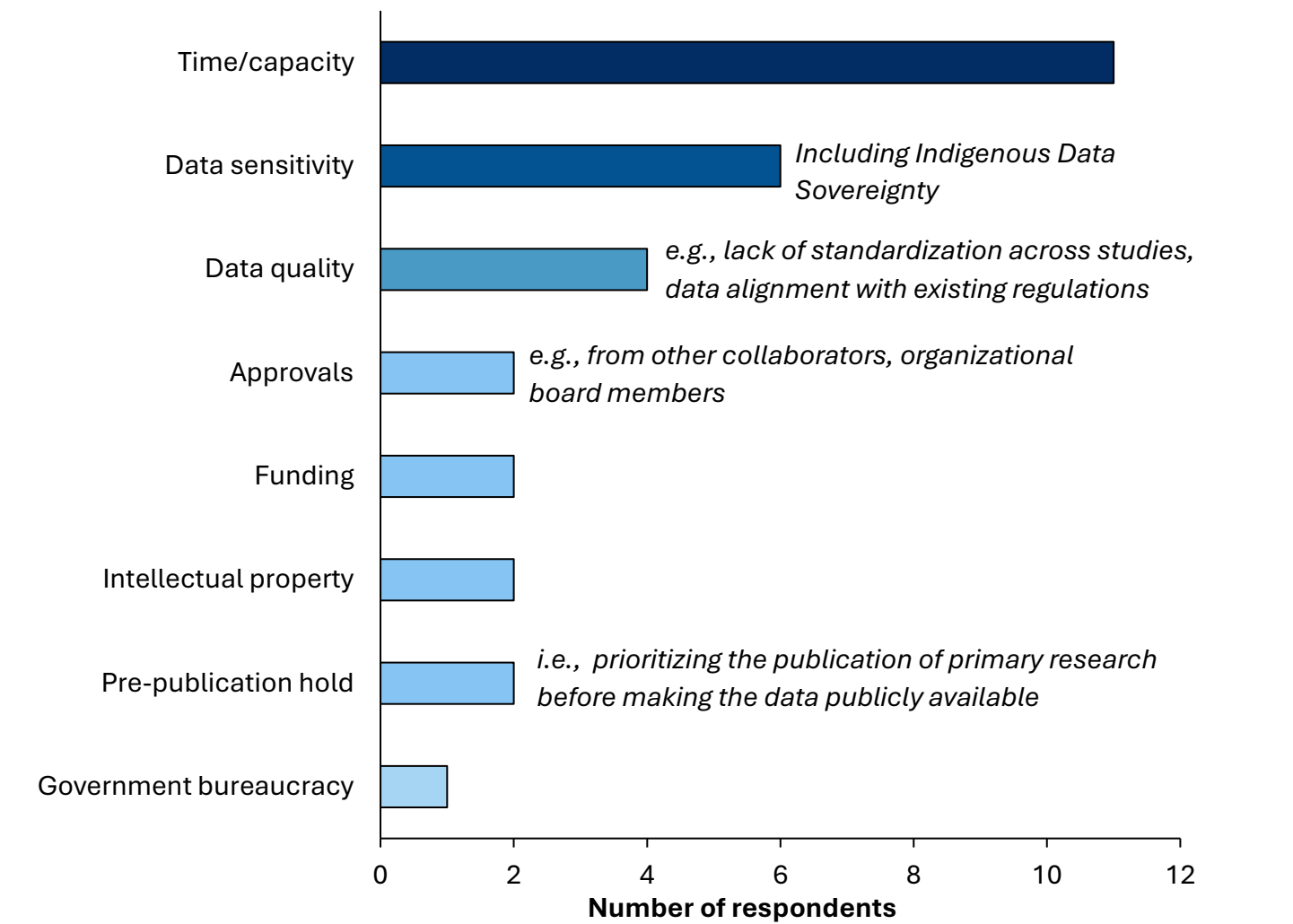


Figure 2. Reported barriers and constraints to sharing marine debris data, based on survey responses. Some participants did not answer this question, while others identified multiple barriers. This was an open-ended question; the categories shown represent high-level groupings developed to summarize responses.

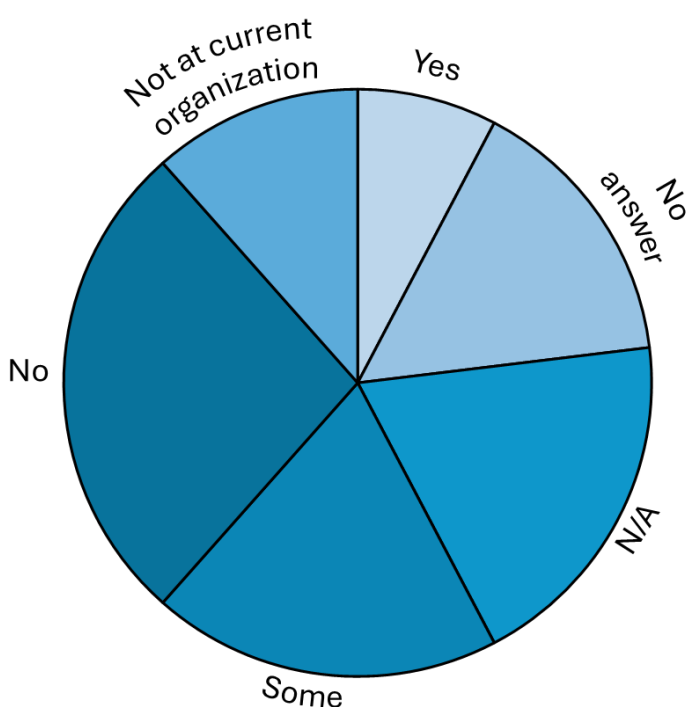
“A lot of the time when organizations receive funds to collect data the full cost and time required to manage and share data is not factored in. Either it is not eligible for funding, it is not estimated or planned for properly, or a number of other factors could be at play. This is something that needs to be planned for before the project begins and remain a priority throughout.”

When asked which formats or tools would be most helpful for sharing marine debris data, the most frequent response was public databases (n = 9), followed by infographics such as fact sheets (n = 7) and dashboards and maps (n = 3 each). Other suggestions included social media, standardized spreadsheets, and workshops (n = 2 each).

“Different formats for different audiences. Fact sheets and maps are useful for sharing with the public. Public databases will be more useful for researchers who are interested in being able to combine and analyze publicly shared data.”

Topic #5: Training and Capacity Building

To explore interest and needs related to expanding marine debris training opportunities, respondents were asked whether they had previously received training in marine debris sampling, laboratory analysis, or identification. Results showed that many had either never received training or that ‘training’, as it was described in the survey, was not applicable to their organization (**Figure 3**).



◀ **Figure 3.** Survey responses to the first part of the question “Have you or your team received any training in macro/microplastics sampling, lab analysis or identification, and what are your most pressing training needs or barriers (e.g., funding, equipment, expertise) to building capacity in this area?”.

With respect to needs and barriers to building training capacity, many survey respondents identified funding as the primary challenge. Loss of expertise was also noted as a barrier, particularly due to the turnover of subject-matter experts (e.g., PhD students, post-doctoral fellows), which results in a loss of organizational knowledge. One respondent suggested improving accessibility by offering online versions of laboratory training that are typically only available at in-person conferences, and another highlighting the need for continued training in up-to-date methods. Several respondents also emphasized the need for greater collaboration and coordination among organizations working in this field.

To gauge the interest of Atlantic Canadian organizations in collaborating to build capacity for marine debris work and management, survey respondents were asked whether they would be interested in attending a regional workshop. **81%** responded “yes”, **15%** responded “maybe” (primarily due to logistical concerns), and one respondent did not answer.

Workshop Topics Suggested by Survey Respondents

These responses represent feedback provided by survey participants. Please note that some topics fall outside the scope of MEQ’s mandate.

- **Marine debris management:**
 - Legislation, guidelines, and defined roles/responsibilities
 - Land-based prevention and management strategies
 - Policy development for microplastics monitoring
 - Industry requirements for compliance and implementation; policy changes to reduce plastic production and dependency
 - Measures to protect human and environmental health
 - Upcycling and circular economy options for plastics
 - Review and restructuring of provincial infrastructure to enable Extended Producer Responsibility (EPR) programs
- **Ghost gear recovery**
 - Alternative material and equipment options for fishing gear
- **Methods Standardization**
 - Guidelines and protocols for marine debris collection
 - Standards for processing and analyzing microplastic samples
 - Best practices for protocol updates
 - Microplastics weathering
- **Data Management**

Topic #6: Final Thoughts

To capture any remaining feedback, survey participants were invited to share additional thoughts, concerns, or suggestions for advancing marine debris work in Atlantic Canada. Many respondents emphasized the need for funding, particularly for activities such as macroplastic and ghost gear retrievals, upcycling initiatives, and collaborative projects across regions and institutions. Collaboration itself was a recurring theme, with calls to strengthen partnerships with Indigenous groups and experts beyond Atlantic Canada. In fact, when asked whether their work would benefit from greater coordination and the identification of shared priorities or goals, **85% of respondents agreed**. The remaining 15% were not strictly opposed; one respondent noted that collaboration would be valuable if it focused on concrete actions rather than routine meet-and-greet sessions, while another suggested it was not essential given the inherent variability in collection and analysis methods caused by differences in oceanographic conditions and fishing practices across regions. Additional feedback included interest in establishing a network of organizations to advocate for mandatory microplastic testing by municipalities and companies. Several participants highlighted the importance of standardizing marine debris sampling and retrieval methods to enable meaningful comparisons of results, and one respondent stressed the need for systemic changes to achieve progress.

“Marine debris cleanups are a good activity for crews working for watershed groups during hot weather, when they cannot plant trees or do certain activities in areas due to endangered species. Labour force is available if the funding is there to pay at least part of their wages.”

“A standard operation procedure (SOP) or best practice guide [has] to be developed to make results comparable.”

“Continued funding for microplastics work in Atlantic Canada is important for building the knowledge base on the topic, filling data gaps, and informing government & public on the topic.”

Next Steps

The input received through this survey is valuable for providing a current 'state of affairs' for this work in the region and for guiding next steps for Coastal Action and others interested in improving the coordination of marine debris work within Atlantic Canada.

We recognize that the small sample size of respondents is a limitation of these results. While responses were received from a range of organizations, including at least three responses from each of the Atlantic provinces, additional feedback from others on the original contact list, and beyond, would be valuable. As such, Coastal Action staff will continue to provide the opportunity for interested parties to complete the survey or send feedback via email to ensure diverse perspectives inform next steps.

Thank you to everyone who took the time to complete the survey and for your thoughtful responses.

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Appendices

Appendix A. Copy of survey

Microplastics and Marine Debris Survey

Thank you for participating in this regional survey to help identify stakeholders, current efforts, and future needs related to microplastics and marine debris in Atlantic Canada. This work is being done in collaboration with Fisheries and Oceans Canada's (DFO) Marine Environmental Quality group and your input will inform a "What We Heard" report to support network building, data sharing, and the advancement of collaborative action.

This survey is intended for individuals and organizations involved in research, monitoring, education, outreach, or policy related to microplastics and/or marine debris. This survey contains 23 questions and it should take approximately 15–20 minutes to complete. If a question does not apply to you, please enter N/A.

If you have questions or would prefer to share information via phone or interview, please contact: [REDACTED] at [REDACTED]@coastalaction.org

Thank you for your time and contribution!

** Indicates required question*

Stakeholder Mapping and Network Building (Section 1 of 6)

1. Organization/Institution Name: *

2. Which type of organization do you work for? *

- ☐ Government (please indicate which department in 'Other' field)
- ☐ ENGO
- ☐ Academic
- ☐ Other: _____

3. Your Name and Role/Title:

4. Geographic Area of Work: *

- ☐ Newfoundland and Labrador
- ☐ Nova Scotia
- ☐ New Brunswick
- ☐ Prince Edward Island
- ☐ Other: _____

5. Would you like to be added to the Atlantic Microplastic Working Group directory?

The Atlantic Microplastics Working Group connects Atlantic Canada's researchers and educators to share knowledge and collaborate on macro/micro plastics research, education, and outreach in

marine and freshwater environments.

- ☐ Yes
- ☐ No
- ☐ Already a member

6. Which area of Marine Debris are you currently or have worked in? *

- ☐ Microplastics
- ☐ Macro plastics
- ☐ Ghost Gear
- ☐ Other: _____

7. Which environment(s) does or has your work focused on with microplastics and/or marine debris? *

- ☐ Water
- ☐ Sediment
- ☐ Atmosphere
- ☐ Fauna (animal ingestion)

8. Please list ANY current or past microplastic and/or marine debris projects you're involved with, including location(s). *

9. Would you be interested in contributing to a map of microplastic and/or marine debris work in the region? *

- ☐ Yes
- ☐ No
- ☐ Maybe – would like more information

If yes:

Please provide links to any data that is already mapped or publicly available

Outreach, Education & Community Engagement (Section 2 of 6)

10. Are you or your organization involved in outreach or education related to microplastics? *

- ☐ Yes
- ☐ No

If yes:

Please describe your educational activities or materials, and who your target audience is

11. What gaps or challenges have you encountered in microplastic and/or marine debris outreach or education (e.g., limited audience engagement, lack of materials, etc.)? *

12. What science communication strategies have you found effective for sharing microplastic and/or marine debris data (e.g. posters, videos, school programs, slide decks, etc.) ?

Collection Methods & Standardization (Section 3 of 6)

13. Are you involved in any microplastic and marine debris sampling, lab analysis, or monitoring? *

☐ Yes

☐ No

If yes:

What methods do you use (e.g., field collection techniques, lab analysis, FTIR, etc.)?

14. Would you be willing to share your current methods or protocols to support best practice development? *

☐ Yes

☐ No

☐ Maybe – need more information

If yes:

Please provide links to any public resources

15. Do you have access to lab/analysis facilities in Atlantic Canada? *

☐ Yes

☐ No

If yes, please specify the facility and type of analysis supported:

16. What additional tools or resources would help you improve your data collection or analysis efforts? *

Data to Inform Solutions (Section 4 of 6)

17. Would you support the development of a shared data platform to improve information access? *

☐ Yes

☐ No

☐ Unsure

18. What barriers or constraints are there for sharing microplastic and marine debris data? (e.g. privacy, data sensitivity, lack of time/capacity)? *

19. Which formats or tools would be most helpful for sharing microplastic and marine debris data (e.g., fact sheets, dashboards, public databases)? *

Training and Capacity Building (Section 5 of 6)

20. Have you or your team received any training in macro/microplastics sampling, lab analysis or identification, and what are your most pressing training needs or barriers (e.g., funding, equipment, expertise) to building capacity in this area? *

21. Would you be interested in attending a regional workshop focusing on marine debris research and management?

Please list any specific topics you'd like the workshop to include

Final Thoughts (Section 6 of 6)

22. Do you have any additional thoughts, concerns, or suggestions for advancing microplastic and/or marine debris work in Atlantic Canada? *

23. Do you feel your work would benefit from increased coordination with other groups and identification of common priorities or goals? *

Survey Complete! Thank you for your time in completing this survey.

Appendix B. Copy of email requesting survey completion

Hello,

You are invited to take part in the Microplastics and Marine Debris Survey, developed in collaboration with Fisheries and Oceans Canada's (DFO) Marine Environmental Quality group. Your feedback will help identify stakeholders, current efforts, and future needs related to microplastics and marine debris in Atlantic Canada.

The survey should take approximately 15–20 minutes to complete. Your responses will inform a “*What We Heard*” report, which will support network building, data sharing, and collaborative action.

- Survey Link: _____

The survey will remain open until September 12th, 2025.

Please feel free to share this invitation with other individuals or organizations engaged in microplastics and marine debris efforts in Atlantic Canada!

Thank you in advance for taking the time to share your valuable perspective on this important initiative.

Appendix C. Shared public resources to support engagement efforts

Publicly available data:

- <https://civiclaboratory.nl/2017/12/30/data-sets/>
- <https://www.coastalaction.org/atlanticecosysteminitiative.html>
- <https://catalogue.cioos.ca/dataset/?eov=marineDebris>

Education and outreach materials:

- <https://kswnsconservation.ca/resources/resources-for-educators/>
- https://www.coastalaction.org/uploads/1/2/2/2/122203881/microplasticoutreach_presentation2024_combined.pdf
- https://www.coastalaction.org/uploads/1/2/2/2/122203881/waste_reduction_tips_infographic_.pdf
- https://www.coastalaction.org/uploads/1/2/2/2/122203881/what_can_you_do_handout_en_fr_final.pdf
- https://www.coastalaction.org/uploads/1/2/2/2/122203881/marine_microplastic_-_general_public_handout.pdf
- <https://www.coastalaction.org/uploads/1/2/2/2/122203881/macro2micro.png>
- <https://oceanlegacy.ca/education-research/>
- <https://www.dfo-mpo.gc.ca/fisheries-peches/management-gestion/ghostgear-equipementfantome/educational-guide-pedagogique-eng.html>