



Clean Ocean: A Marine Waste Summit

2019 Report

Clean
Inspiring Environmental Change

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About Clean Foundation

Clean Foundation (“Clean”) promotes green solutions for today – and supports the environmental leaders of tomorrow. We are a Nova Scotia-based independent, non-governmental environmental charity that began in 1988. Our passion is providing the knowledge, tools and inspiration needed to encourage the actions that lead to positive environmental change. We collaborate with many partners to support a fair transition to a cleaner economy and greener society. Our focuses include:

- Reducing energy poverty
- Supporting under-served communities
- Developing the green economy workforce
- Educating and promoting action on climate change
- Protecting the natural environment

We know this work is not easy, but our incredible partnerships and years of experience keep us focused on the possible.

Clean took the lead on organizing and managing the 2019 Summit in partnership with Coastal Action and the Government of Canada.



Acknowledgements

Advisory Committee

The success of this year's Clean Ocean Summit required input from key stakeholders in the planning stages. This year's Advisory Committee members focused on integrating an Indigenous perspective. The Advisory Committee provided input on the format and topics of the Summit activities, which ensured another successful event.

We extend a special thank you to our Advisory Committee members for their invaluable contributions. The Advisory Committee was comprised of:

Alanna McPhee

Director, Programs
Divert Nova Scotia

Ariel Smith

Team Lead, Coastal and Marine
Coastal Action

Ashley David

Coordinator, Solid Waste-Resource
Nova Scotia Department of Environment

Erica Stuart

Program Coordinator, Area Ecosystems
Fisheries and Oceans Canada

Dave McGinnis

Director
Environmental Services Association
Maritimes

Kate Nelson

Program Manager, Mi'kmawey Green
Communities
Confederacy of Mainland Mi'kmaq

Susanna Fuller

Vice-President, Operations and Projects
Oceans North

Tony Walker

Assistant Professor
Dalhousie University, School for Resource
and Environmental Studies

Facilitators

We thank Paul Black (of Fisherwick Collaborations) and Daniel Holland (of Solais Partners) again for their integral contribution to development and facilitation of both the 2018 and 2019 Summits. They provided the expert guidance needed to create the ideal setting for delegates to share knowledge and support the process of furthering ideas and impacts.

Clean acknowledges that the 2019 Clean Ocean Summit was hosted in Mi'kma'ki, the traditional territory of the Mi'kmaq. Mi'kma'ki is historically unceded as the Peace and Friendship treaties were relational treaties, not land treaties. We at Clean believe we are all treaty people, and we commit as an organization and as individuals to working to advance the goal of reconciliation with Canada's Indigenous peoples.

Sponsors

We greatly appreciate the financial and in-kind contributions of our sponsors, which were vital to making the Summit happen.

Presenting Sponsors



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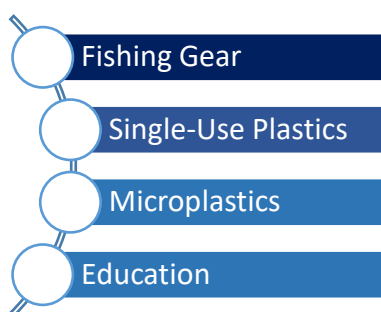


Executive Summary

Ocean health is vital to human well-being and to innumerable plant and animal species. In Atlantic Canada, we rely on a clean ocean for our livelihoods, lifestyles, cultures, and traditions. Plastic products and packaging have made our lives more convenient, but at a cost to the environment. Atlantic Canadians are now recognizing their vulnerability and have a vested interest in minimizing and eliminating the effects of marine waste.

The first Clean Ocean Summit took place in November 2018 in St. Andrews, New Brunswick. Delegates from diverse sectors and communities came together to discuss the issue of marine waste, what steps are already being taken in the Maritime region, and what new actions could be pursued. In November 2019 the second Clean Ocean Summit was held in Halifax, Nova Scotia. After recognizing the missing players from the previous Summit, we aimed to increase the participation and representation from all four Atlantic provinces, municipal government and industry. At the second Summit, we hosted 96 delegates from 59 organizations across Atlantic Canada, with a few from the United States and central Canada.

As with the first Summit, our objective was to foster the conditions for the Action Groups to tackle the issues surrounding marine waste in Atlantic Canada. From the last day of the 2018 Clean Ocean Summit until today, numerous action plans are in the works addressing:



This year's Summit was more complex with a larger attendance, a broader mix of delegate knowledge levels, sectoral expertise, and expectations for the Summit. The 2019 location was more convenient for most delegates than 2018, but also presented challenges in terms of retaining delegates' focus in that it provided more opportunities to tag other business on to the event. The 2019 Summit also had a stronger focus on policy and collaborating with government, in part due to the Canadian Council of Ministers of the Environment (CCME) Engagement Session on Zero Waste that was following the Summit's activities.

In addition to the return of the popular five-minute 'lightning talks' that highlighted the work of marine waste champions, we also held two panel discussions on microplastics monitoring and effective approaches to public policy change, before asking the delegates to engage in detailed action planning on each of the three key themes: Single-Use Plastics, Fishing Gear and Microplastics. (The Education Action Group that formed in 2018 was adapted this year so that individuals with expertise in ocean education were embedded within each of the other three Action Groups.)

The Single-Use Plastics and Fishing Gear Action Groups, which formed in 2018, updated their action plans for 2019-20. The Fishing Gear Action Group identified five priorities: 1) identifying ghost gear hotspots for removal and create best management practices; 2) finding convenient solutions and incentives for shoreside disposal; 3) identifying fishing industry champions as a part of a broader communications strategy; 4) developing an EPR strategy for waste fishing gear; and 5) improving ease of and increasing retrieval of ghost gear.

The Single-Use Plastics Action Group identified three priorities for the coming year: 1) having eight communities in Atlantic Canada adopt business recognition programs for reducing single-use plastics in restaurants and cafés; 2) expanding the inventory of regionally specific clean-up data; and 3) optimizing / aligning single-use plastics policies across Atlantic Canada.

While new this year, the Microplastics Action Group was able to create strong momentum over the two days by virtue of the leadership provided by Coastal Action. This group identified five goals for the year: 1) creating a directory of Atlantic Canadian stakeholders; 2) determining what outreach and education initiatives already exist and identify gaps and long-term priorities to fill in those gaps; 3) developing community engagement strategies for the prevention of microplastic accumulation; 4) standardizing and communicating microplastic collection methods; and 5) using data to inform the solutions that best prevent microplastics from entering the environment.

According to the feedback survey, delegates were overall happy with the Summit and its outcomes. Most respondents (over 80%) said they'd want to attend another Clean Ocean Summit in the future. However, there are no plans at present to host a third Clean Ocean Summit in 2020. There are two rationales for this. First, the original intention of the Clean Ocean Summit was to convene key stakeholders working on marine waste issues to allow them to learn from one another, develop networks and partnerships, and spur coordinated action in Atlantic Canada. The hope was that the Action Groups would become self-governing and self-sustaining. It was apparent at the 2019 Summit that this transition had begun for the Single-Use Plastics and Fishing Gear groups. The Microplastics Action Group, though new in 2019, benefitted from the existing leadership of groups like Coastal Action, the Clean Annapolis River Project, ACAP Saint John and ACAP Humber Arm. This leadership and commitment have allowed the group to reach a maturity level faster than the other groups from the first Summit.

Second, it was apparent from the 2019 Summit that the increased sophistication of the Action Groups versus the 2018 Summit meant each group had distinct themes and issues that could not easily be reconciled as part of an integrated whole. While the Action Groups might benefit from a third annual meeting, we would suggest that these meetings may be more effective if they were convened separately by each group according to their particular needs and member availability.

Background

From harm to wildlife caused by waste fishing gear to the mounting evidence of the damages posed to the ecosystem and human health by microplastics, there is a need to scale up our response to the threat of marine waste in the Atlantic Canada. Over the past year, the Canadian government has made significant commitments to address single-use plastics and waste fishing gear. There is a wealth of excellent work being done on this issue by academics, regulators, civil service organizations, industry, and members of the public.

The first Clean Ocean Summit in Saint Andrews, New Brunswick, created a forum for Maritime change-makers to meet, discuss, and partner to enhance and broaden their impacts. This meeting of key players was intended to alleviate the risk of duplication of efforts due to lack of awareness of results and the replication of unsuccessful projects. All delegates participated with the intent to share lessons learned, to find opportunities and innovations from outside the region not being explored, and to broaden their networks to aim for bigger solutions.

The second Clean Ocean Summit in Halifax, Nova Scotia focused on building on the momentum created at the first Summit to continue to drive the Atlantic Canadian discussion and actions to reduce marine waste. The themes of the Summit broadened to microplastics in addition to fishing gear and consumer plastic debris. Rather than continuing with the separate Education Action Group, ocean literacy experts were embedded in each of the other three Action Groups.

Summit Preparation

Similar to the previous Summit, the second Summit required three aspects to architect the two-day event into outcome-generating plans: a defined scope, a geographically and sector balanced delegate list¹, and a pre-Summit survey².

Scope

The scope of this Summit remained focused on the action areas identified in 2018: waste fishing gear (nets, rope, bait boxes, etc.), single-use plastics (especially takeaway packaging) and ocean literacy. Microplastics was added as an action area in partnership with Coastal Action, who have scientific expertise and established networks working on this matter. Liquid contaminants (e.g. oil, bilge, and wastewater), biological contaminants, and derelict vessels remained out of scope.

Invite List

Marine waste is a complex challenge, and the solutions do not lie with any one group or sector. Accordingly, we increased the delegate attendance by a third to have more participation from representatives of many perspectives, locations, knowledge, and sectors, including:

- | | |
|--|---|
| ❖ Municipal, provincial and federal governments | ❖ Consulting businesses |
| ❖ Academic and research institutions | ❖ Fishing and seafood industry associations |
| ❖ Indigenous groups | ❖ Fishing industry |
| ❖ Organizations with diversion and/or waste reduction mandates | ❖ Fishing gear manufacturers |
| ❖ Environmental non-governmental organizations | ❖ Plastics industry association |
| | ❖ Grocery retailers |
| | ❖ Food and beverage companies |

¹ For a full list of delegates that attended the Summit, view Appendix A.

² For the summary of the delegates' responses to the survey, see Appendix B.

Pre-Summit Survey

Delegates were asked to complete an advance survey to help the facilitators understand their expectations going into the Summit, their views on responsibility, and their preferred Action Group choice. The survey results guided the planning for Summit discussions, Action Group sessions, and outcomes. Delegates were not expected to do any preparation to complete the survey (e.g., no research) but were asked to give some thought to what they, and any organization they might represent, were prepared to do following the Summit to help achieve their Action Groups' goals.

Of the 60 received responses, most were submitted by young professionals working in non-governmental organizations, followed by government and academia. Most attendees wished to participate in the Fishing Gear Action Group as their first choice. The responses also indicated that delegates believed the government and fishing industry are most responsible for tackling marine waste issues. When asked about their confidence in the federal government's ability to address marine waste, over half of delegates were "somewhat confident". More than half of respondents also said they experienced plastic reduction initiatives in their organizations or communities and just over 75% felt these initiatives had been "somewhat effective" in addressing ocean waste. When asked what they hoped the Summit would achieve, many respondents indicated they wanted examples of solutions that could be replicated and to build a network to help implement these solutions.

Summit Overview

The Summit³ began with an opening prayer by Elder Catherine Martin from Millbrook Mi'kmaq First Nation, on whose traditional territory the Summit was held. Following the opening prayer, the facilitators gave an introduction, laid the ground rules, and shared highlights of the survey results to provide context for what delegates were bringing to and hoping to get out of this Summit. The facilitators then provided an overview of the Summit schedule. Participating delegates were given the choice to join one of three Action Groups (Fishing Gear, Single-Use Plastics or Microplastics) for the duration of the Summit.

Presentations

In order to better understand the issues and what is being done in the region, delegates heard presentations providing context for the scale and impacts of the problem in Atlantic Canada and North Eastern USA, as well as presentations of the types of initiatives and champions already addressing solid marine waste. These presentations were "lightning talk" style, where representatives had five minutes to present. The topics included:

1. **"NOAA's Marine Debris Program"** presented by Demi Fox from the National Oceanic Atmospheric Administration
2. **"Employing Extended Producer Responsibility Strategies to Recover Primary Plastics and Mitigate Single-Use Plastic Pollution"** presented by Avalon Diggle from the School for Resource and Environmental Studies at Dalhousie University



³ For the Summit's schedule of activities, see Appendix C

3. **“Quantifying the presence of microplastics in the digestive tract of American Lobster sampled in Saint John Harbour”** presented by Brontë Thomas from Peskotomuhkati Nation at Skutik
4. **“Halifax Regional Municipality’s Waste Management Programs”** presented by Chloe Kennedy from Halifax Solid Waste Resources
5. **“The Making of the World’s First 100% Recycled PET Plastic Home”** presented by David Saulnier from JD Composites Inc.
6. **“An International Look at Ocean Plastics”** presented by Tony Walker from the School for Resource and Environmental Studies at Dalhousie University
7. **“Debris Free Fundy program”** presented by Jackie Walker from the Huntsman Marine Science Centre

As requested by the delegates who attended the Summit last year, we added more presentations in the form of two hour-long panels:

1. **“Microplastics Monitoring”** moderated by Alexa Goodman (Coastal Action); paneled by Ariel Smith (Coastal Action), Rebecca Teddiman (Nova Scotia Community College), and Susanna Fuller (Oceans North)



Ariel Smith provided an overview of Coastal Action’s surface water sampling for microplastics, sharing their experience building and using the Low-tech Aquatic Debris Instrument (LADI) surface water trawl for microplastic sampling in near-shore locations of Atlantic Canada. The LADI surface water trawl quantified microplastics (<5 millimeter) in three near-shore rural communities of Atlantic Canada to better inform solutions around plastic pollution in those regions. The trawl was built by Coastal Action using the Memorial University Civic Laboratory for Environmental Action Research (CLEAR)'s design.

Coastal Action is completing the sampling portion of the three-year project and will be organizing data and reporting this fall and winter. The project is funded by Environment and Climate Change Canada and is in partnership with Clean Annapolis River Project, ACAP Humber Arm, and Dr. Max Liboiron and her team at CLEAR.



Rebecca Teddiman presented on her new sediment sampling methodology, including the preliminary results. As part of her research, she sieves the top layer of sand and filters it through mesh, which can pick out plastics as small as 100 microns. The initial research is focused on finding out how much microplastic litters beaches across Nova Scotia. Much of what has been discovered so far has come from packaging and bigger plastics that have broken down over time. Once researchers have an idea as to how much is out there, they will have a better idea as to how to deal with the issue.

Susanna Fuller presented on the importance of integrating citizen science and education workshops in the overall theory of change and engaging communities in knowledge gathering and solutions to reduce impacts on the marine environment. Dr. Fuller provided a high-level review of Ocean North's waste management report in Indigenous communities (Arctic and Eastern Arctic), with relevance in Atlantic Canada. She discussed the role of microplastic workshops in engaging community volunteers to build community knowledge and capacity and emphasized the importance of educating ourselves on the solutions and doing our best to commit to them (for example, advocating for the use of laundry strips, not washing clothes on the delicate cycle, reducing plastic household use generally wherever possible). Finally, she endorsed sharing best practices and results for engaging communities on environmental challenges noting that it's not just the responsibility of scientists to solve problems, and that communities have a vested interest in improving environmental conditions and have valuable first-hand perspectives to bring to the discussion.



2. “Panel #2: Effective Approaches to Public Policy Change” moderated by Shannon Harding; paneled by Gina Patterson, Mark Butler, Murray Coolican, Michel Samson, and Sandra McKenzie

The second panel was designed by the facilitators and led by Shannon Harding (Clean). The panel was curated to give delegates (who were comprised of mostly delegates under 35) a better understanding of how the Action Groups can effectively affect policy. The panel represented a balanced view from political, non-governmental organizations, policy, and civil service backgrounds. The two questions that were posed to all panelists were:

(1) What’s your best piece of advice for constructively approaching public policy change?

(2) Can you give an example of a complex issue you were involved in (or observed closely) around a change in practice, law, regulation or policy that involved many stakeholders?



Some of the biggest takeaways were to remember to take a positive lens by recalling that government policymakers are only human and generally want to do good. Approaching policy changes with thorough research, optimism and a willingness to collaborate goes far. It can also be effective to approach policymakers as a coalition representing most, if not all, stakeholders, because it helps fulfill government's requirement for public consultation. Finally, it is important to note that coalitions don't always have to go directly to the Deputy Minister or Minister to get the result they want. The panelists suggest working with public servants who are connected to the relevant Deputy Minister or Minister to offer to work together on policy change.



The Action Planning Process

The remainder of the Summit focused on the development of action plans by the Action Groups. Delegates heard a five-minute year recap from each Action Group of their activities in the prior year.

Education: This group was mostly comprised of Canadian Ocean Literacy Coalition (COLC) members and, to avoid duplication of efforts, the Education Group members elected to continue their efforts through COLC. Julia Ostertag, on behalf of COLC, presented their key objectives:

1. to build a national strategy that identifies and addresses ocean literacy priorities, gaps, recommendations, and implementation plan(s);
2. to establish and support an active ocean literacy research and monitoring program for Canada; and
3. to amplify ocean literacy initiatives and joint activities of COLC members that catalyze broad momentum and public engagement across Canada.

The delegates who identified education as their primary Action Group choice were asked to meet periodically during the breaks at the Summit to discuss ocean literacy integration into the three other Action Groups.

Single-Use Plastics: This group held eight calls since January 2019 and has 15 active members. This group's focus areas are:

1. 'caps-on' programming (sub-group effort to align Canadian best practices for recycling bottle caps);
2. expansion of existing Business Recognition Programs (sub-group effort to pilot Coastal Action's Ocean Friendly Nova Scotia program in Halifax and develop a program expansion to focus on Offices);
3. data access and sharing (sub-group effort to collaborate on microplastics research and data collection); and
4. plastic bag ban research (sub-group effort to understand the efficacy of bag bans).

Fishing Gear: The Fishing Gear Action Group (the largest of the three groups with over 50 members), rebranded as the Fishing Gear Coalition of Atlantic Canada (FGCAC) in late spring 2019. Their mission is "collaborative action on developing solutions for abandoned, lost, and discarded fishing gear". The monthly calls keep them connected and help build their network and share knowledge. The FGCAC is working on a Comprehensive Report, funded by WWF Canada, titled 'State of Abandoned, Lost and Discarded Fishing Gear in the Canadian Maritimes'. Alexa Goodman, the FGCAC Secretariat and Researcher, is leading the research. All FGCAC members can provide feedback throughout the project, which will be complete by the end of March 2020. The Comprehensive Report has four chapters:

1. Regulatory Framework (draft completed August 2019)
2. State of Knowledge in Canada (draft completed October 2019)
3. Solid Waste Management (draft completed September 2019)
4. Quantification & Local Context (draft due February 2019)

After hearing the recaps of each Action Group's work over 2018-19, delegates were asked to join their first choice Action Group and develop a clear mandate, identify three to five goals that help fulfill the mandate, and determine the steps needed to complete the goals within a set of concrete timelines. The facilitators encouraged delegates to create work plan goals that were Specific, Measurable, Attainable, Relevant, and Time-based (so-called "SMART" goals).

A new component to the 2019 Clean Ocean Summit was determining plan viability by submitting draft work plans for evaluation by the policy panelists that presented earlier. The panelists asked clarifying questions, offered feedback and made suggestions to make each group's goals more impactful and attainable.

To cap off the Summit, representatives from each Action Group presented their work plans, including tasks, timelines, necessary resources, potential challenges, and anticipated results. Following the presentations, other delegates had the opportunity to ask questions and suggest changes to the work plans, offer connections or resources, and build on the excitement about the work ahead.

Looking Forward

Since the Summit, the three Action Groups have made committed plans to the sub-divided goals and continue the efforts.

Fishing Gear Coalition of Atlantic Canada

Members decided their mandate would be: *"Collaborative action on preventing and developing solutions to end-of-life abandoned, lost and discarded fishing gear and associated materials"*. Members identified several discussion areas, including: identifying target areas for gear removal; engaging governments on Extended Producer Responsibility (EPR) programs for fishing gear and other associated materials; creating a shift in understanding from seeing old fishing gear as a waste to a valuable resource; and understanding what forces are driving some industry members to dispose of waste gear at sea.

Following these discussions, members agreed upon five goals to address and eliminate the harms caused by waste fishing gear:



Goals

1. Identify ghost gear hotspots for removal and create best management practices
2. Find convenient solutions and incentives for shoreside disposal
3. Identify fishing industry champions as a part of a broader communications strategy
4. Develop an EPR strategy for waste fishing gear
5. Improve ease of and increase retrieval of ghost gear

Single-Use Plastics Action Group

Members of this Action Group decided their mandate would be: *“Reducing the consumption of single-use plastics through evaluating and prioritizing the items causing the most harm and identify sustainable alternatives.”* Members brainstormed some of the following goals to focus on over the next year: finding alternatives to get clean drinking water for communities; phasing out Styrofoam; influencing a cigarette butt EPR program; education, and coordination and engagement about alternatives to single-use plastics.



In discussing possible solutions and reflecting on their expertise and networks, this Action Group chose the following three goals:

Goals

1. Have eight communities in Atlantic Canada adopt Business Recognition Programs for restaurants and cafés
2. Expand inventory of regionally specific clean-up data by September 2020
3. Optimize/align single-use plastics policies across Atlantic Canada

Microplastics Action Group

Members of this Action Group decided their mandate would be: *“Establish a data repository combining the 'who's who' of Atlantic Canada's microplastic field and what they are doing as a framework for determining research already conducted to enhance coordination efforts. Engage communities to collect microplastic data in their areas using standardized methods. Coordinate efforts on public engagement and education on microplastics in Atlantic Canada. Take a community-based approach to the issue of microplastics by learning from local groups in each area in efforts to prevent the accumulation of microplastics in ecosystems across the region.”*

With this mandate in mind, members brainstormed some of the following goals: celebrating business champions that eliminate plastics in communities across Atlantic Canada; and determining regulatory players in the Atlantic Canadian region that focus on microplastic pollution.



To address the challenge of microplastics, this Action Group identified five goals to focus on over the next year:

Goals

1. Create and expand on the existing network of Atlantic Canadian stakeholders and create a directory to share
2. Determine what outreach and education initiatives already exist and identify gaps and long-term priorities to fill in gaps
3. Develop community engagement strategies for the prevention of microplastic accumulation
4. Standardize and communicate microplastic collection methods
5. Use data to inform the solutions that best prevent microplastics from entering the environment

Reflecting on Results

This year's Summit was more complex with a larger attendance, a broader mix of delegate knowledge levels, sectoral expertise, and expectations for the Summit. This year's location was more convenient for most delegates, but also presented challenges in terms of retaining delegates' focus; wherein this year's location provided more opportunities to tag other business on to the event than was the case with the first Summit.

The participants in this year's Summit were ~55-60% new, which both added a fresh perspective and slowed the process of work plan development. Even though we had the Action Groups complete recaps of their first year's activities at the beginning of the first day, most of the new delegates required more understanding as to why the Action Groups chose the goals they did last year, which delayed the start of the working sessions. The facilitators decided to change course to allow the Action Groups the freedom to re-evaluate the old goals and re-plan based on the commitments from the current mix of delegates.

There was also uneven commitment to pursuing work plan goals within the Action Groups, with a lot of the same members volunteering to support multiple goals while other delegates were unable to contribute to goals that were not relevant to their work, interests, or connections. For this reason, something to consider for future work planning is to select goals to which most, if not all, members can contribute.

There were 30% more delegates in 2019 versus 2018. This contributed to more diversity of views, wider sectoral representation, and greater differences in member expectations that required significantly more effort from the facilitators and Action Group Co-Chairs to work through. There was also a disconnect between those delegates who were at last year's Summit and were familiar with the Action Group's context and goals, and new delegates who did not necessarily buy in to existing goals.

This year's agenda³ was more structured and focused on producing results. By request of the delegates from 2018, we added more presentations and working group session time, which resulted in shorter breaks. However, the longer days and shorter breaks were also challenging for delegates to maintain focus and energy levels.

³ See Appendix C.

Connection to CCME's Engagement Session on Zero Waste

The Summit had a stronger focus on policy and collaborating with government, largely due to the Canadian Council of Ministers of the Environment (CCME) Engagement Session on Zero Waste that was following the Summit's activities. CCME reached out requesting our invite list to see who would be valuable to attend their session. In return, they shared their invite list which allowed us to invite several new individuals. As an example, a non-Nova Scotian municipality representative reached out requesting to be a delegate at the Summit, which they learned about by being invited to CCME's Engagement Session. This resulted in a new active member in the Single-Use Plastics group and the expansion of that group's work plan to include projects in all Atlantic provinces.

Delegate Feedback

According to the feedback survey⁴, delegates were overall happy with the Summit and its outcomes. Delegates were most pleased with the Summit location, since most attendees lived relatively nearby and it had good meeting spaces. Most respondents (over 80%) said they'd want to attend another Clean Ocean Summit in the future, which leads us to the question: What's Next?

What's Next?

With the surplus of Summit funding, Clean has provided each of the three Action Groups with small grants of \$4,000 to kickstart their 2020 Work Plans. These grants were designed to bridge short-term needs, while Action Groups work on securing their projects and funds. Groups will be required to spend the funds by October 31st, 2020 and provide brief summary reports on the work accomplished with the funds.

At this time, there are no plans to host a third Clean Ocean Summit in 2020. There are two rationales for this. First, the original intention of the Clean Ocean Summit was to convene key stakeholders working on marine waste issues to allow them to learn from one another, develop networks and partnerships, and spur coordinated action in Atlantic Canada. The hope was that the Action Groups would become self-governing and self-sustaining. It was apparent at the 2019 Summit that this transition had begun for the Single-Use Plastics and Fishing Gear groups. The Microplastics Action Group, though new in 2019, benefitted from the existing leadership of groups like Coastal Action, the Clean Annapolis River Project, ACAP Saint John and ACAP Humber Arm. This leadership and commitment have allowed the group to reach a maturity level faster than the other groups from the first Summit.

Second, it was apparent from the 2019 Summit that the increased sophistication of the Action Groups versus the 2018 Summit meant each group had distinct themes and issues that could not easily be reconciled as part of an integrated whole. While the Action Groups might benefit from a third annual meeting, we would suggest that these meetings may be more effective if they were convened separately by each group according to their particular needs and member availability.

Clean's roles in convening and supporting the Action Groups are evidently no longer required after the grants are provided. Clean is hopeful that the Action Groups will continue meeting, expanding their membership, developing their work plans, accomplishing goals, and setting new ones. Clean is incredibly proud and feels privileged to be a part of the joint efforts to address marine waste in Atlantic Canada. The three Action Groups will continue to be a model of how to best solve complex environmental, social and economic problems like marine waste.

⁴ Delegate Survey results are shown in Appendix D.

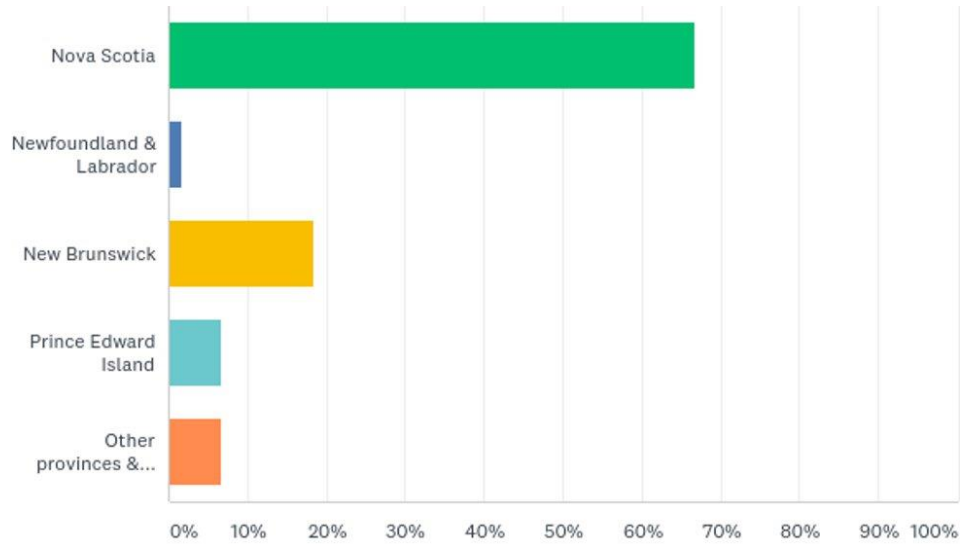
Appendix A: List of Represented Organizations

Delegates who attended the 2019 Clean Ocean Summit

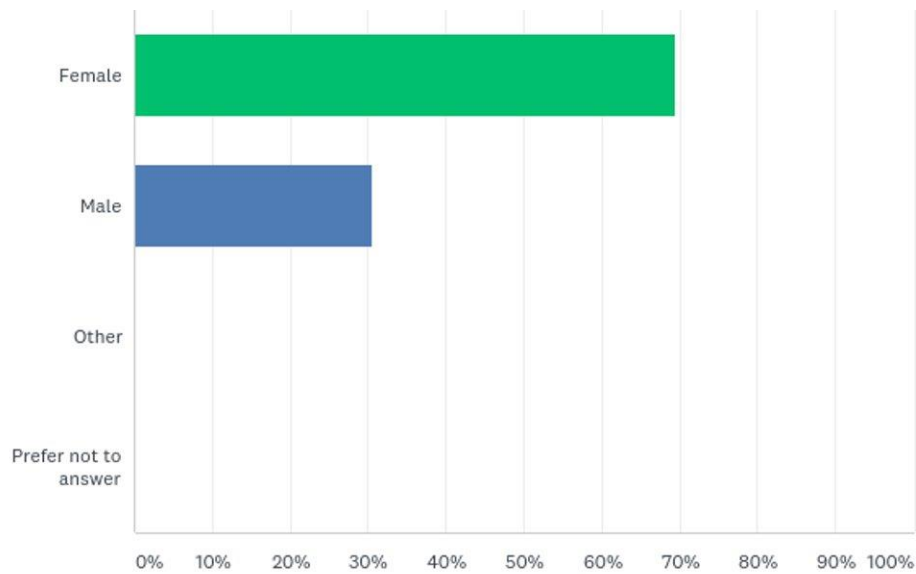
Acadian Regional Federation of Professional Fishermen
ACAP Humber Arm
ACAP Saint John
AGAT Laboratories
Ashored Innovations
Association of Professional Acadian Crab Fishermen Inc.
Atlantic Policy Congress of First Nation Chiefs Secretariat
Atlantic Used Oil Management Association
Canadian Ocean Literacy Coalition
Canadian Wildlife Federation
Cape Breton Environmental Association
Choosethical Ventures Inc.
Clean Annapolis River Project
Clean Foundation
Coastal Action
Coldwater Lobster Association
Dalhousie University
Department of Fisheries and Oceans
Dillon Consulting
Divert NS
EnviroCulture Consulting
Environment & Climate Change Canada
Environmental Services Association Maritimes
Fishermen's & Scientists Research Society
Fundy North Fishermen's Association
Fundy Regional Service Commission
G-Man Waste Removal
Grand Manan Fishermen's Association
Halifax Solid Waste Resources
Homarus Inc.
Huntsman Marine Science Centre
JD Composites Inc.
Kwilmu'kw Maw-klusuaqn Negotiation Office
Maliseet First Nation Conservation Council
Maritime Aboriginal Peoples Council
Maritime Fishermen's Union
Mi'kmaw Conservation Group
Millbrook Mi'kmaq First Nation
National Oceanic and Atmospheric Association
Net Your Problem
New Brunswick Department of Agriculture, Aquaculture and Fisheries
New Brunswick Department of Environment and Local Government
Nova Scotia Community College
Nova Scotia Department of Fisheries and Aquaculture
Nova Scotia Environment
Oceans North
Organic Fabrics
Peskotomuhkati Nation at Skutik
Pictou County Solid Waste
Pictou Landing First Nation
Placentia Bay Ocean Debris Survey
Prince Edward Island Department of Agriculture & Fisheries
Prince Edward Island Fisherman's Association
Resqunit Canada Inc
Terrapure
The Confederacy of Mainland Mi'kmaq
The Lobster Trap Company
The Tare Shop
University of New Brunswick
World Wildlife Fund Canada

Appendix B: Pre-Summit Survey Results

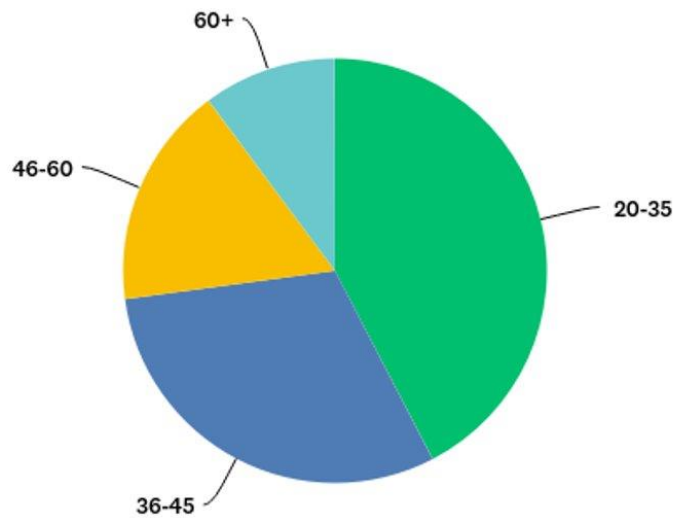
1. Where province do you come from?



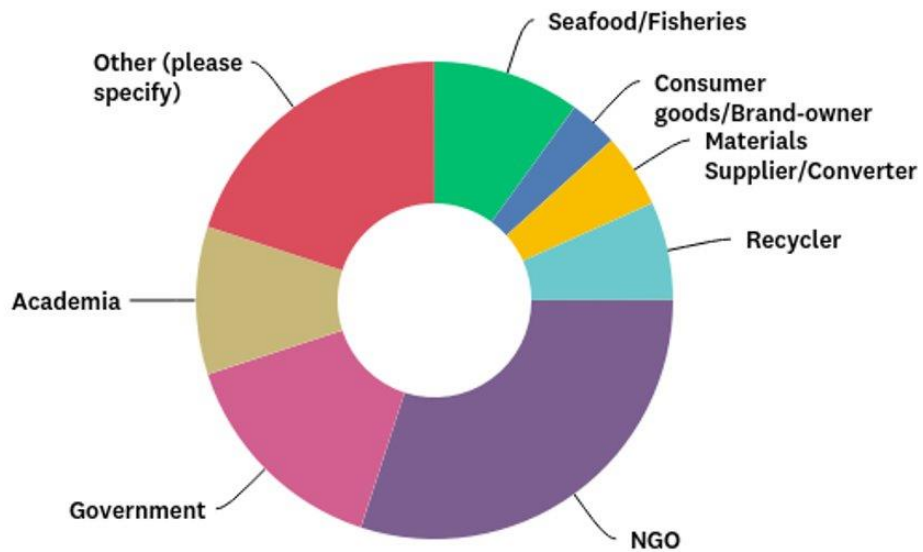
2. Which gender do you identify as?



3. What age group do you fit in to?



4. Which sector do you currently work in?



5. How many years have you been working in this sector?

ANSWER CHOICES	RESPONSES	
0-3	43.33%	26
4-7	18.33%	11
8-10	11.67%	7
10+	26.67%	16
Total Respondents: 60		

6. Do you feel we have improved in our efforts to find solutions to ocean pollution in the last 30-40 years?

ANSWER CHOICES	RESPONSES	
A great deal	3.33%	2
A lot	11.67%	7
A moderate amount	46.67%	28
A little	28.33%	17
None at all	3.33%	2
No opinion	6.67%	4
TOTAL		60

7. Do you feel public awareness of marine waste as a problem has increased in the last 30-40 years?

ANSWER CHOICES	RESPONSES	
A great deal	28.33%	17
A lot	33.33%	20
A moderate amount	30.00%	18
A little	8.33%	5
None at all	0.00%	0
TOTAL		60

8. How much do you feel public awareness of marine waste as a problem has increased since this time last year?

ANSWER CHOICES	RESPONSES	
A great deal	8.47%	5
A lot	33.90%	20
A moderate amount	30.51%	18
A little	22.03%	13
None at all	5.08%	3
TOTAL		59

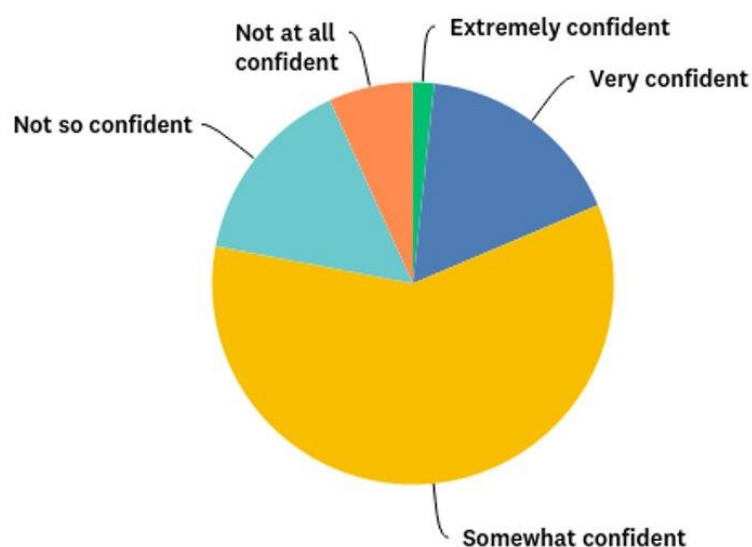
9. What do you see as the most severe impact from marine waste on local ecosystems in the Atlantic provinces?

ANSWER CHOICES	RESPONSES	
Biodiversity impacts	10.00%	6
Ecosystem impacts (e.g. ecological processes, living and non-living organisms etc.)	76.67%	46
Human health implications	6.67%	4
Aesthetics considerations	3.33%	2
Economic impact (e.g. tourism, fishing industry, recreation etc.)	3.33%	2
TOTAL		60

10. Who are the key stakeholders required to address the Atlantic marine waste issue? (Check all that apply)

ANSWER CHOICES	RESPONSES	
Municipal Government	67.80%	40
Provincial Government	84.75%	50
Federal Government	86.44%	51
Brandowners/Consumer products	64.41%	38
Packaging suppliers	72.88%	43
Manufacturers	69.49%	41
Product and packaging supply chain	71.19%	42
Fishing Industry	86.44%	51
NGOs	57.63%	34
Foundations	35.59%	21
Supra-governmental orgs (e.g. the UN, G7, etc)	37.29%	22
Individual consumers	61.02%	36
Other (please specify)	11.86%	7
Total Respondents: 59		

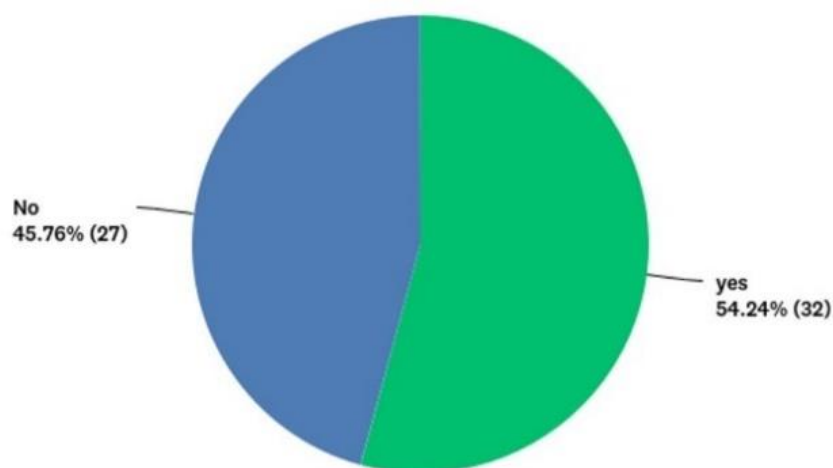
11. How confident are you that this is something the federal government is prepared to address?



12. How confident are you that this is something your provincial government is prepared to address?

ANSWER CHOICES	RESPONSES	
Extremely confident	0.00%	0
Very confident	5.08%	3
Somewhat confident	52.54%	31
Not so confident	30.51%	18
Not at all confident	8.47%	5
Please specify province here (use initials, e.g., NB, NS, PE, NL)	3.39%	2
TOTAL		59

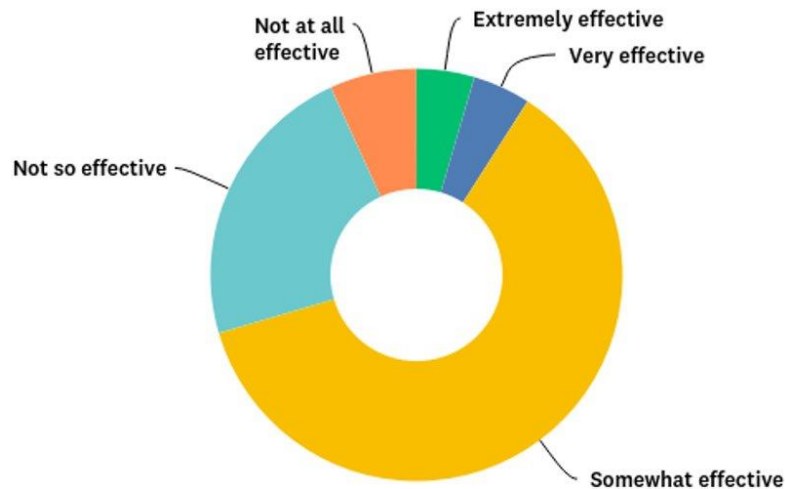
13. Have you experienced a plastic use restriction or prohibition in your community or work?



14. If yes, what was the policy?

ANSWER CHOICES	RESPONSES	
Water bottle ban	5.26%	2
Plastic bag ban	68.42%	26
Other (please specify)	47.37%	18
Total Respondents: 38		

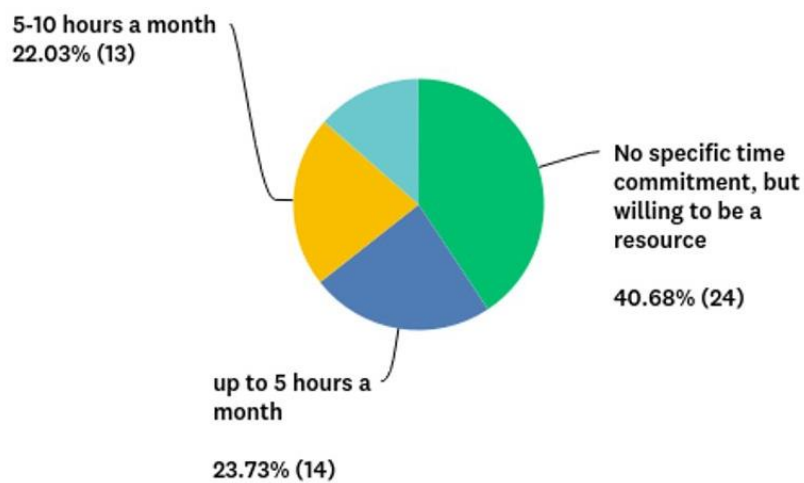
15. How effective do you feel this intervention was in addressing the issue of ocean waste?



16. What do you expect to gain coming out of this summit? (check all that apply)

ANSWER CHOICES	RESPONSES	
A greater awareness of ocean waste solutions and what they involve	57.63%	34
Build a collective action plan that we can all contribute to	66.10%	39
Be exposed to a coalition of like-minded people engaging with this issue and resources to draw upon	61.02%	36
Translate best practice frameworks into actionable concepts that I can put to practice in my own community and/or workplace	49.15%	29
Be better informed to liaise with elected officials about policy	37.29%	22
Create greater collaboration between key stakeholders to devise and implement solutions	67.80%	40
Other (please specify)	6.78%	4
Total Respondents: 59		

17. How much time are you able and willing to contribute towards outcomes and actions after the summit has concluded?



18. Which working group stream are you most interested in working on/continuing with at the Summit? (rank order)

	1	2	3	4	TOTAL	SCORE
Microplastics	14.81% 8	25.93% 14	29.63% 16	29.63% 16	54	2.26
Single-use plastics	29.09% 16	43.64% 24	14.55% 8	12.73% 7	55	2.89
Fishing gear (Note: there will likely be a division of work on the fishing gear issues this year, based on feedback from the working group. We will have a sorting process at the Summit itself.)	45.45% 25	12.73% 7	25.45% 14	16.36% 9	55	2.87
Education (Note: It is unlikely that this will be its own working group stream this year, but will be embedded within each stream. Sp please rank this first if this is your passion/work, but know that the #2 and #3 choices are where your efforts would most likely be oriented)	18.52% 10	18.52% 10	29.63% 16	33.33% 18	54	2.22

Appendix C: Summit Agenda

Sunday, November 17th

Hotel Check-in (4pm-7pm)

Optional Reception (7pm-9pm)

Monday, November 18th

Breakfast & Summit Check-in (8am-9am)

Morning session (9am-12:30pm)

- Opening Prayer from Millbrook Mi'kmaq First Nation
- Intro, Ground Rules, Summit Review
- Collective context setting and casting forward to imagine the world in 2024
- Lightning round talks
- Break (10:45am-11:15am)
- Presentation by Mi'kmaq Elder Catherine Martin
- Present pre-Summit survey results and planned working group sessions

Lunch Panel: Microplastics sampling in your community led by Coastal Action (12:30pm-1:30pm)

Afternoon session (1:30pm-5:15pm)

- Lighting round talk
- Present final themed Action Groups and participant lists
- Working group session #1
- Break (3:15pm-3:30pm)
- Working group session #2
- Check-in, Debrief & Tweaks for tomorrow

Dinner (6:30pm-8:30pm)

- Dress: Business Casual

Tuesday, November 19th

Breakfast & Registration (7:30am-8:30am)

Morning session (8:30am-12:30pm)

- Summit Re-Cap and Welcome Back
- Lightning talk rounds
- Panel: "Effective Approaches to Public Policy Change"
- Working group session #3
- Break & hotel check-out (10:45am-11:00am)
- Working group session #4

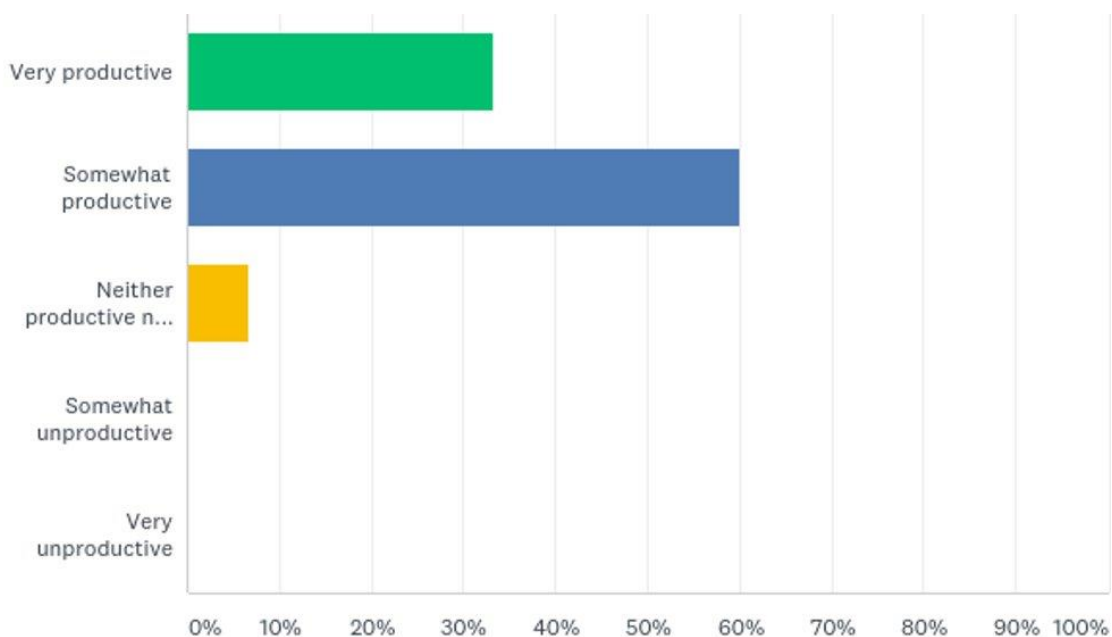
Lunch (12:30pm-1:30pm)

Afternoon session (1:30pm-5:15pm)

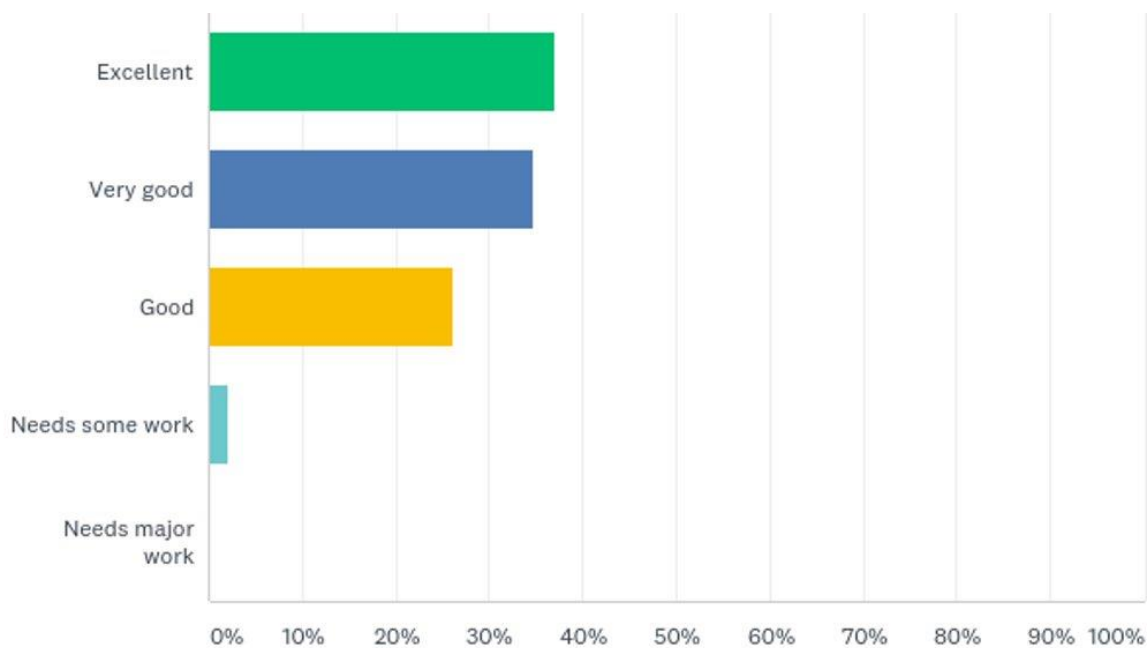
- Plenary Check-in, final tasks outlined, feedback opportunity
- Working group session #5
- Break (3:15pm-3:30pm)
- Action Groups present to plenary, encourage feedback and suggestions, and make final plans
- Summit Wrap-up and Closing Prayer from Millbrook Mi'kmaq First Nation

Appendix D: Post-Summit Survey Results

1. Overall, how productive do you think the summit was?



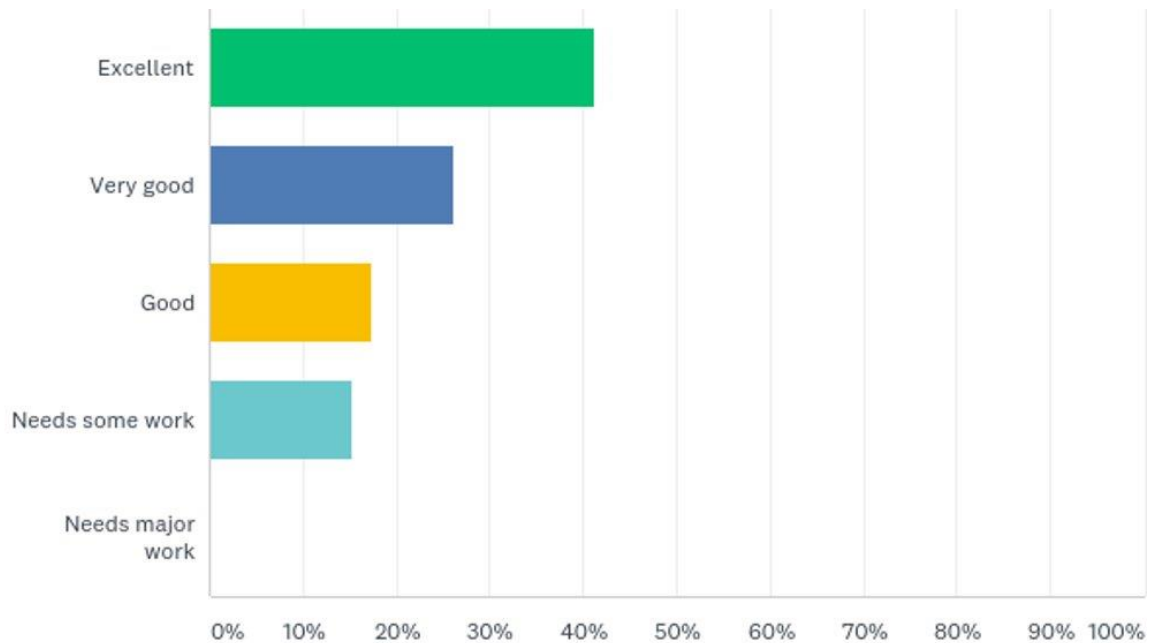
2. The 2019 Clean Ocean Summit was...



3. The organization of the Summit was...

ANSWER CHOICES	RESPONSES	
Excellent	36.96%	17
Very good	34.78%	16
Good	26.09%	12
Needs some work	2.17%	1
Needs major work	0.00%	0
TOTAL		46

4. The Summit facilitation team was...



5. How likely would you be to sign-up for another Clean Ocean summit in 2020, if one were held?

ANSWER CHOICES	RESPONSES	
Very likely	63.04%	29
Somewhat likely	23.91%	11
Neither likely nor unlikely	8.70%	4
Somewhat unlikely	4.35%	2
Very unlikely	0.00%	0
TOTAL		46