Vision 2018:
Sustainable Aquaculture Development

A SUMMARY OF WHAT WE HEARD:
2013 AQUACULTURE CONSULTATIONS

Newfoundland Labrador

Fisheries and Aquaculture

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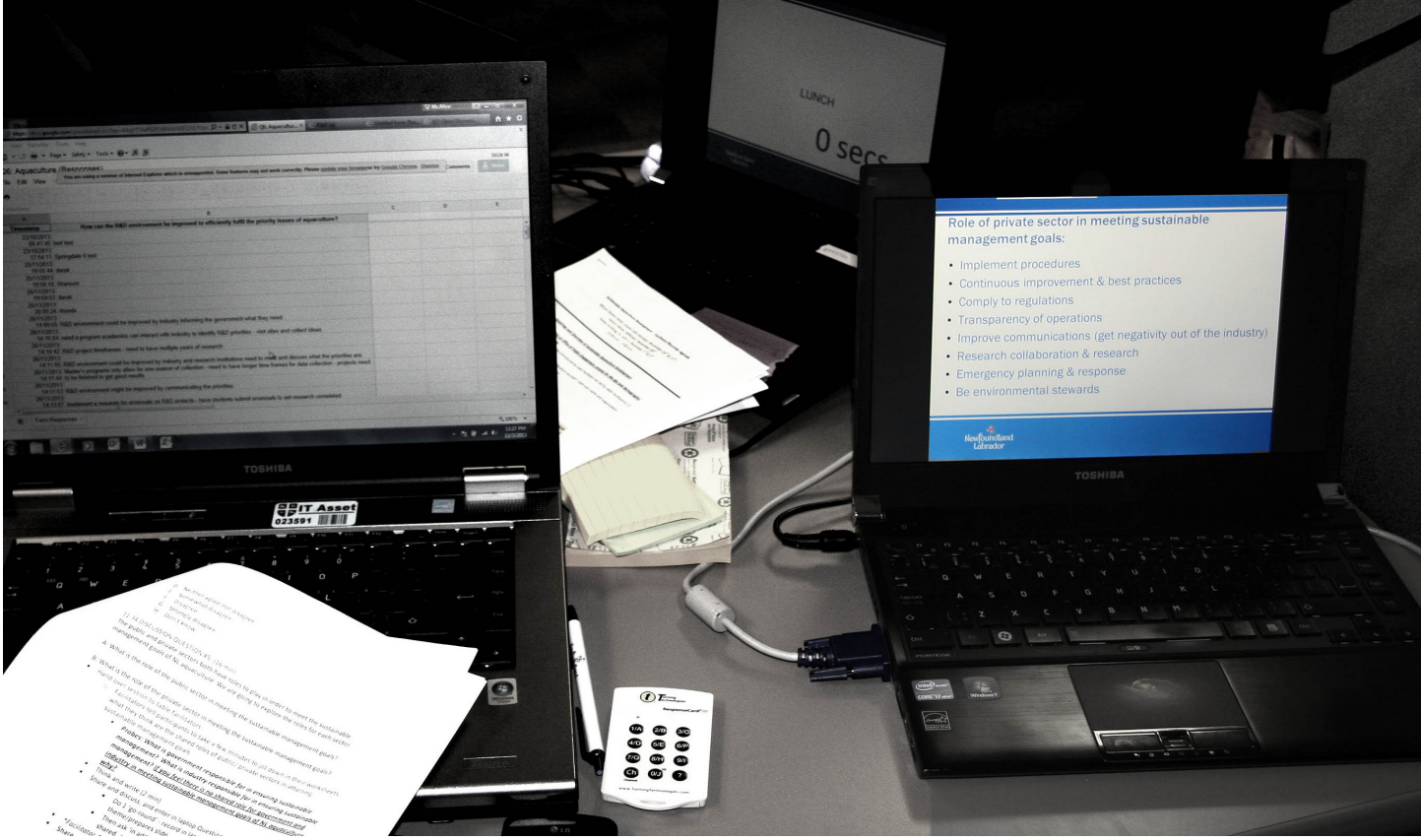


Introduction

The Province of Newfoundland and Labrador is home to an aquaculture industry that is largely focused on the production of salmon and mussels. Since the adoption of the Newfoundland and Labrador Aquaculture Strategic Plan in 2000, total production and value have climbed from 2,718 tonnes worth $13.6 million, to 26,551 tonnes valued at $197 million in 2013. This growth has created welcomed socio-economic opportunities for many rural communities in the province. Continued growth, however, requires a renewed strategic vision to ensure aquaculture development is sustainable. As a result, the Department of Fisheries and Aquaculture is pursuing a renewed strategy for the sustainable development of the Newfoundland and Labrador aquaculture industry to ensure an optimal environment exists for that growth.

In keeping with the Government of Newfoundland and Labrador's commitment to public engagement, the Department of Fisheries and Aquaculture and the Office of Public Engagement have sought feedback to support the development of a renewed aquaculture strategic plan. This document provides a summary of what was heard during this consultation process. This valuable input represents an important contribution to the evolution of the Provincial Government's strategic plan for the aquaculture industry in Newfoundland and Labrador.

Consultation Process

The Department of Fisheries and Aquaculture actively sought out feedback on the strategic direction aquaculture should follow going forward. This included both face-to-face and online consultations that were held in November and December of 2013. A total of 122 participants were heard in this process.

Interested parties were able to submit their feedback to the Provincial Government via the Department of Fisheries and Aquaculture website. The web page provided information about the consultation process, and featured a background document about the industry and a questionnaire comprised of multiple choice and open-ended questions.

The Provincial Government also engaged aquaculture industry representatives, local first nations groups, non-governmental organizations, community leaders, fisheries organizations, academic/research community members, and federal/provincial government organizations through in-session consultations with the assistance of the Office of Public Engagement (See Appendix). All invitees were provided with a strategic plan discussion document, Vision 2018: Sustainable Aquaculture Development, which outlined the Department of Fisheries and Aquaculture's vision for aquaculture management.

What We Heard

The Vision 2018 discussion document presented four strategic priorities for consideration as critical to the future development of sustainable aquaculture in Newfoundland and Labrador:

- Sustainable Management (e.g. animal health, waste solutions, escape prevention)
- Support Capacity (e.g. loan programs, training programs, regulation and policy)
- Infrastructure (e.g. roads, wharves, air access, transportation)
- Research and Development (e.g. invasive species control, broodstock development)

The various participants have differing insights and interests with respect to the aquaculture industry. As a result, the questions asked in the consultation sessions were designed to avail of the particular expertise or unique perspectives of specific participant groups. Beyond the specific questions asked, the process also ensured all participants were given the opportunity to provide comments on anything they felt relevant to the creation of a renewed strategic plan for sustainable aquaculture in the province.

Responses were organized by the strategic priority categories listed previously. The consultation feedback presented here is a summary, and represents the main messages received from participants. Every participating voice has been heard and will be considered by the Government of Newfoundland and Labrador in the development of a renewed sustainable aquaculture strategy.

Sustainable Management

Sustainable management is essential to enable the long-term viability of the aquaculture industry in communities across Newfoundland and Labrador. Input from participants was received regarding the sustainable management of aquaculture in this province. Participants were asked to prioritize the current aquaculture sustainable management issues challenging the industry (Table 1).

Table 1. Participant responses regarding the top five aquaculture sustainable management issues in Newfoundland and Labrador.

Sustainable Management Priorities
Disease Management
Fish and Shellfish Disposal
Feed and Feces Environmental Impacts
Wastewater Treatment
Farmed and Wild Fish Interactions

While participant responses regarding sustainable management priorities were fairly consistent, there were a few other issues of particular importance to certain participant groups. Specifically, some groups felt that cleaning up operational debris and salmonid net cleaning were top priorities.

The vast majority of participants felt there is a shared role for the public and private sectors in meeting sustainable management goals. In-session participant views regarding the roles of the public and private sectors in sustainable aquaculture management were collected (Table 2).

The online questionnaire also sought views on the priority sustainable issues for the aquaculture industry. This feedback can be summarized as follows:

- Salmonid aquaculture should not contribute to wild salmon declines. Disease on the farm must be controlled and escapes must be limited.
- The definition of sustainability needs to be clearly articulated.
- Government must ensure sustainable policies consider the best available science and must help collect that science where knowledge gaps exist.
- Government must ensure industry is following best practices for site selection, biosecurity, and environmental protection.
- Net pen operations should not be located near wild salmon rivers.
- Excess food/fecal matter must not impact organisms such as lobster. Improved techniques and greater effort must be made to monitor the impacts of salmon aquaculture.
- Operational waste management options are critical to sustainable development.
- Veterinary products used to protect against pathogens must not harm the environment or human health.
- Government should be open to the development of land-based, closed-containment aquaculture facilities in the province to promote sustainability.

Table 2. In-session participant views regarding the roles of the public and private sectors in the sustainable management of aquaculture in Newfoundland and Labrador.

Public Sector Roles	Private Sector Roles
• With stakeholder input, clearly define sustainable management and develop proactive sustainable management goals	• Assist government with the management and identification of aquatic invasive species
• Ensure industry follows best practices for environmental management through regulation, compliance, and enforcement	• Pursue best practices for environmental management that are consistent with government regulatory standards
• Ensure sustainable management is science-based	• Actively participate in research and development efforts directed toward sustainability
• Increase environmental and biological monitoring efforts	• Invest in sustainable infrastructure (e.g. waste management) and innovative technologies (e.g. feed formulation)
• Facilitate wastewater treatment infrastructure for both fish processing outflows and municipal/industrial outflows to keep coastal waters clean	• Enhance emergency planning and response protocols
• Support the improvement of waste management infrastructure	
• Develop, implement, and enforce bay management area and biosecurity regulations for both finfish and shellfish sectors	
• Support industry environmental certification efforts	
• Ensure information associated with sustainable management efforts is publicly reported to promote transparency	
• Ensure sustainable aquaculture is congruent with the province's Coastal and Ocean Management Strategy and Policy Framework	

Support Capacity

In order to foster continued sustainable aquaculture development in Newfoundland and Labrador, government must ensure that the appropriate services are in place to support industry growth. The Department of Fisheries and Aquaculture sought views on a variety of issues relating to support capacity including communications, finance, human resources, marketing, and governance.

Communications

Responses to the online questionnaire suggest salmonid aquaculture, specifically, has a very poor reputation and mussel aquaculture has a good reputation (Figure 1). Online comments indicated that the poor perception of salmonid aquaculture was attributed to concerns about the potential impact of net pen aquaculture on the viability of wild salmon populations and the broader environment. Specifically, respondents felt that the risks of disease outbreaks within net pen aquaculture operations and net pen escape events threaten wild salmon populations. Therefore, many online respondents felt salmonid aquaculture is not environmentally sustainable under current industry practices. In addition, concerns were raised by some respondents regarding the use of federal public funds for compensation of private aquaculture operations following disease control efforts.

The reputation of the aquaculture industry was also discussed with the in-session participants. These participants felt that aquaculture overall has a neutral to good reputation, although this varied somewhat among in-session groups (Figure 2). Participants, however, also felt strongly that the aquaculture industry needs a communications/public relations strategy, and the majority felt that government input should be provided.

Figure 1. Online participant responses regarding the reputation of the salmonid and mussel aquaculture industries in Newfoundland and Labrador.

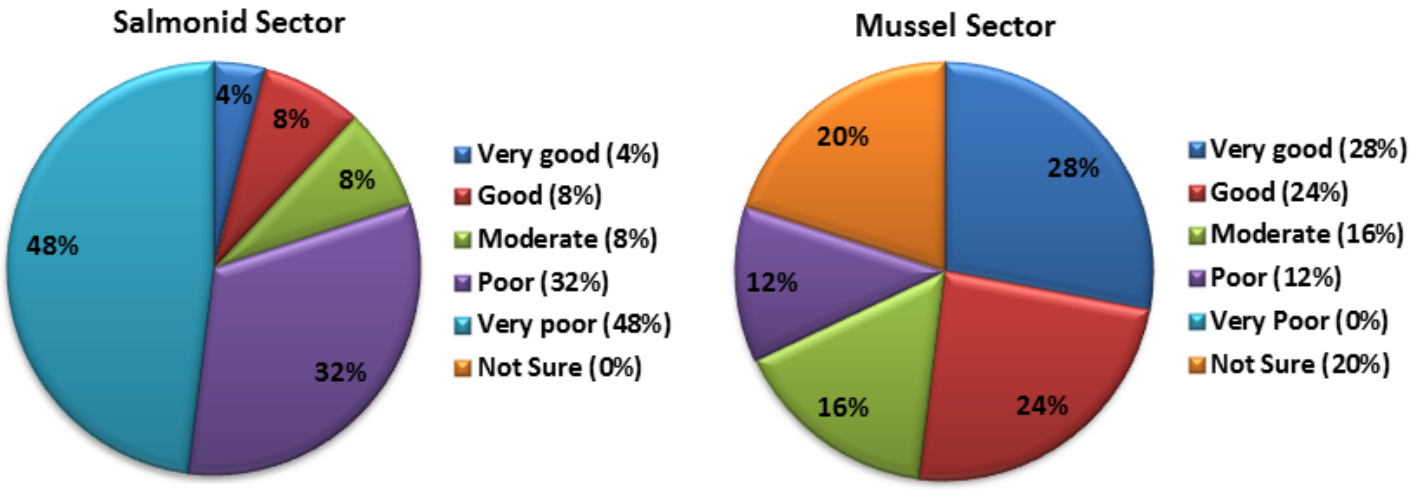
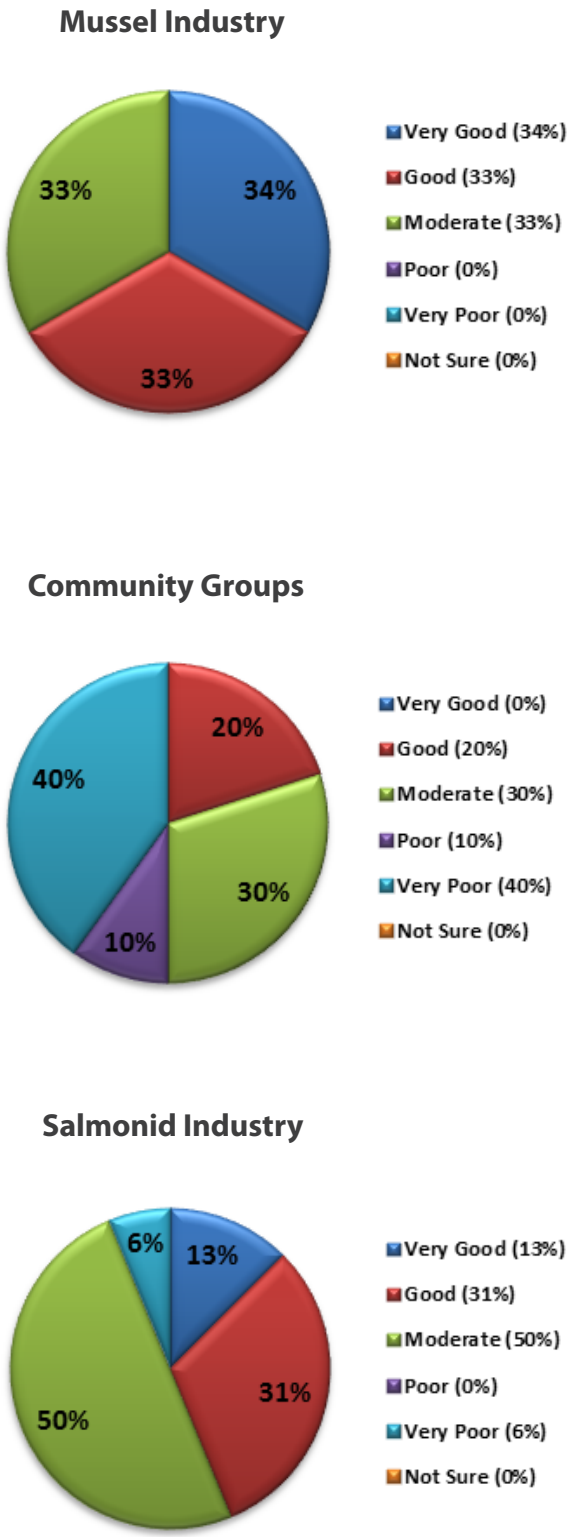
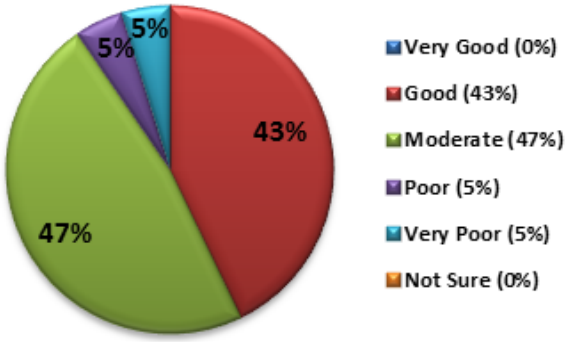


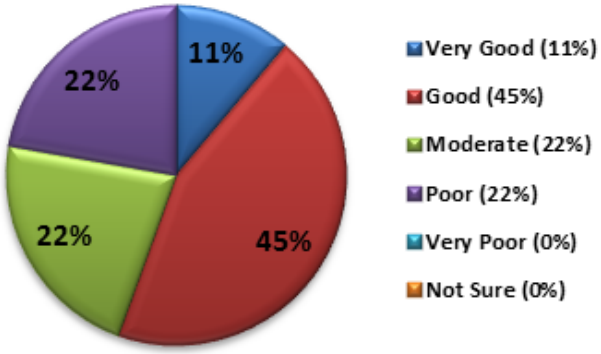
Figure 2. In-session participant responses regarding the reputation of the aquaculture industry in Newfoundland and Labrador.



Research and Development Community



Government Agencies



Financial Support Programs

At present, there are a number of federal and provincial financial support programs available to promote growth and sustainable aquaculture development. Feedback indicated that programs offered by the Department of Fisheries and Aquaculture and Atlantic Canada Opportunities Agency were most beneficial to industry development. There were, however, a number of suggested improvements associated with such programs that include the following:

- Simplify, streamline, and speed up the application processes and program offerings.
- Make the programs more flexible to meet industry needs.
- Make efforts to increase awareness of all the programs available to industry.
- Improve the coordination among the programs offered by different government organizations.
- Ensure programs offered balance short-term and long-term needs. Long-term funding programs are lacking – especially those targeting research and development.
- Improve the evaluation of programs to ensure objectives are being met.

Human Resources

Given the growth of aquaculture in Newfoundland and Labrador, the industry is now experiencing challenges with respect to the recruitment and retention of skilled labour. Participants agreed that aquaculture provides jobs and economic opportunities that can help maintain rural communities in Newfoundland and Labrador. It was strongly felt that the availability of professional development and training opportunities within the province is adequate. When asked about the effectiveness of available federal and provincial recruitment and retention programs, most participants, including industry representatives, were unfamiliar with such programs. The Provincial Nominee Program and the federal Temporary Foreign Worker Program, however, were identified as the best available programs to assist with labour shortages. The following comments and suggestions were made by participants regarding the issue of labour shortages in the aquaculture industry:

- Efforts are needed to increase industry awareness of existing government assistance programs and to ensure those programs can be effective at the local level.
- The employment insurance system impedes access to available labour in some regions.
- The seasonal nature of employment creates retention challenges.
- Immigration that can benefit the long-term labour needs of rural Newfoundland and Labrador is required.
- Limited social infrastructure (e.g. schools, amenities, entertainment) in small, rural communities and non-competitive wages make it challenging for aquaculture businesses to compete in the labour market.
- Innovative technologies represent a possible solution to address challenges associated with labour shortages.

Mussel Market Access

Access to markets has long been a challenge for mussel aquaculturists in this province. Participants were asked what marketing strategies were most effective for supporting mussel exports and how mussel market access can be improved. It was felt that continued participation in trade shows and a general campaign to promote the province's farmed mussels represent the most effective marketing strategies. In order to improve market access, the main response theme was the need to improve the transportation efficiency of live mussels to worldwide markets.

Industry Governance

Participants unanimously agreed that there are aspects of industry governance that should be reviewed; however, the specific issues voiced varied widely. The overall message was that government must ensure that legislation, regulation, policies, and procedures are evaluated regularly to assess the impact and outcomes of aquaculture activities.

Infrastructure

The availability of infrastructure is vital to sustainable aquaculture development. Infrastructure is required to support operational efficiencies, maintain biosecurity, and facilitate further sustainable expansion. Participants were asked to identify the most critical infrastructure needs to support current and future aquaculture operations (Table 3).

Table 3. Participant responses regarding the three foremost infrastructure needs to support current aquaculture operations and potential future expansion.

Current and Future Infrastructure Needs
Wharves
Road Infrastructure
Telecommunications

The responses received were generally consistent among the participants. There were, however, a few important exceptions to note. Specifically, some participants identified processing and transportation capacity as top infrastructure issues for both current and future aquaculture operations.

Participants were also asked to discuss the greatest challenges to meeting the infrastructure needs of the aquaculture industry. The following considerations were highlighted:

- Identifying infrastructure priorities among competing interests and securing funding to address those priorities will represent a significant challenge for both industry and government.
- There needs to be a coordinated infrastructure plan among all stakeholders.
- Government departments need to work more effectively together on multi-jurisdictional issues (e.g. wharf infrastructure).
- Government must be responsive to evolving infrastructure needs. Infrastructure requirements need to be addressed before further development to ensure sustainability – in particular, before salmonid industry expansion.
- Waste management options are important for the further development and sustainability of the salmonid industry.
- The Provincial Government should be open to exploring land-based, closed-containment infrastructure options for the further development and sustainability of the salmonid industry.

Research and Development

Research and development is critical to the growth, prosperity, and sustainability of any industry. Participants were asked a series of questions regarding aquaculture research and development in Newfoundland and Labrador. The greatest limitations to fulfilling aquaculture research and development priorities were identified as:

1. Communication between industry, government, and academia on identification of the priority research and development needs.
2. Access to funding.
3. A lack of coordination in research and development focus and effort among the relevant organizations.

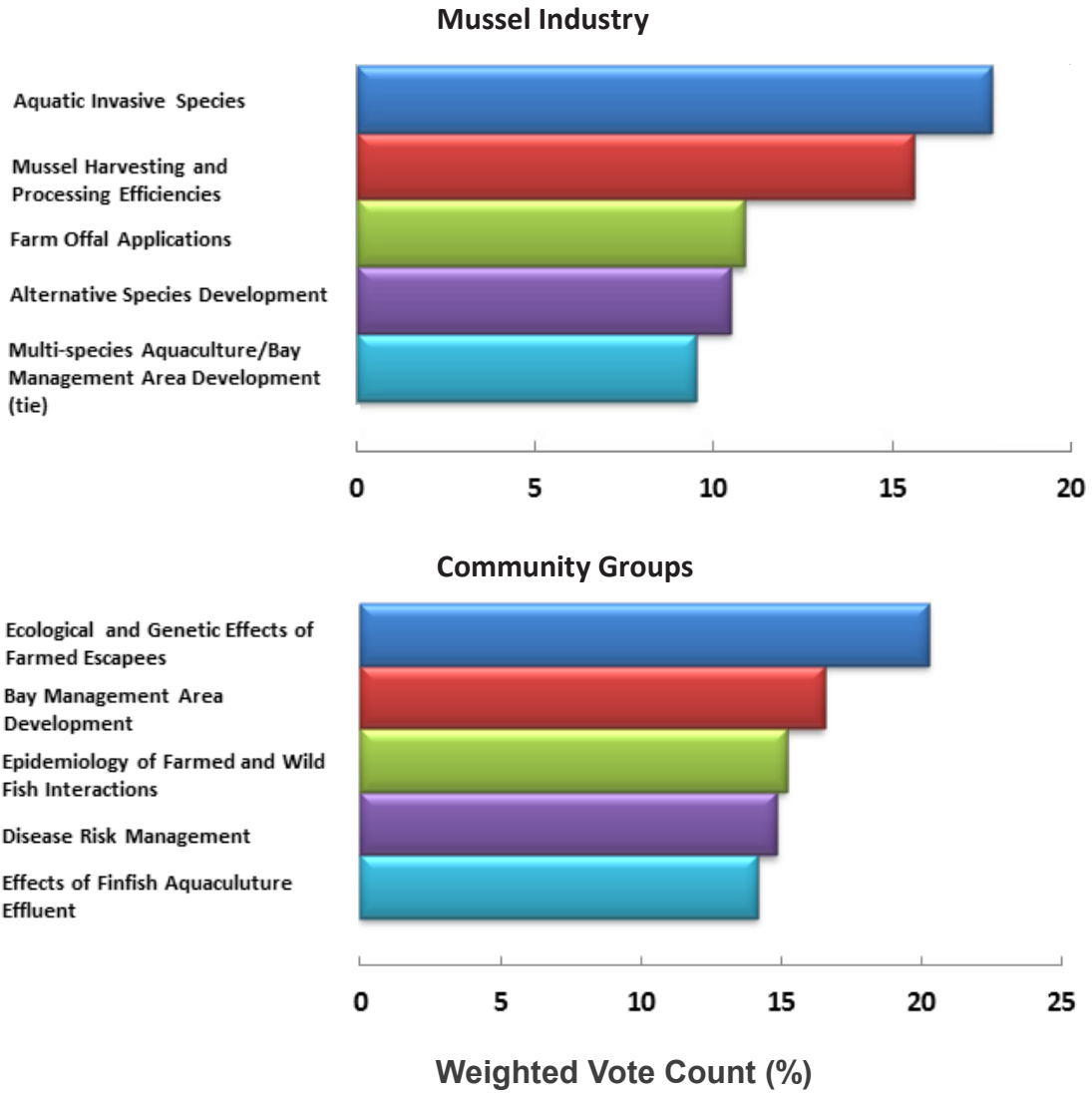
The idea of a multi-participant organization in Newfoundland and Labrador that aims to coordinate research and development efforts to enhance the focus and output of priority aquaculture research and development was strongly supported by nearly all participants. Further themes relating to both the concept of such a multi-participant organization and the research and development system in general were as follows:

- A multi-participant organization should include industry, government, academia, funding agencies, and environmental non-governmental organizations. All participants should have clearly defined roles.
- Research and development should be more accountable to funders, and results should be communicated back to the aforementioned multi-participant organization.
- Research and development should focus on industry-wide issues as opposed to company-specific issues.
- Research and development should not solely be industry-driven. A multi-participant organization should try to balance research prioritization between short-term versus long-term needs and between the interests of the diverse participant groups.
- Funding should to be flexible enough to adapt to changing needs.
- Stable funding mechanisms are needed to carry out long-term research and development objectives.
- Funding should be directed toward projects that complement aquaculture research and development from around the world and not reinvent efforts from elsewhere.

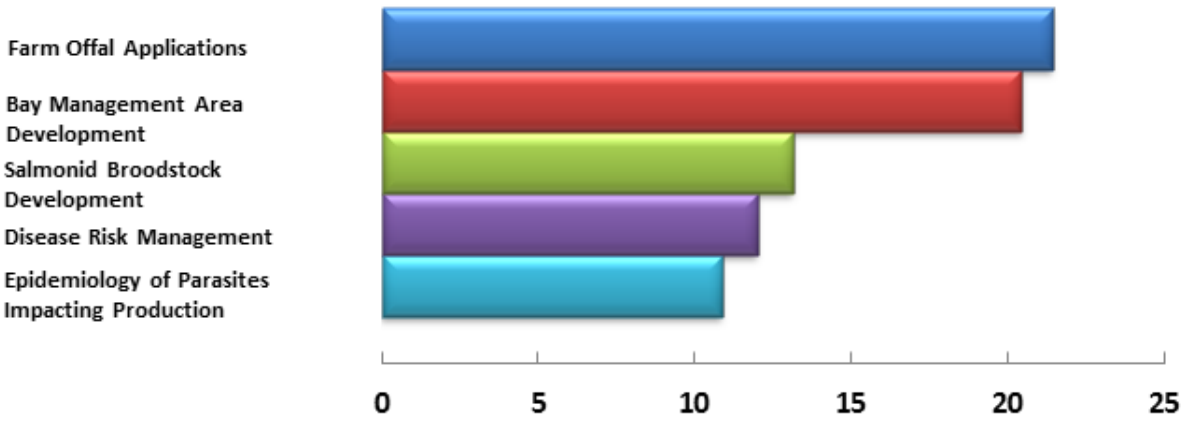
In-session participants were asked to choose the most important research and development topics to support the sustainable development of aquaculture in Newfoundland and Labrador (Figure 3). The top three overall priority research and development topics were:

- Bay Management Area Development
- Disease Risk Management
- Aquatic Invasive Species Control and Mitigation

Figure 3. The top five research and development topics in support of the continued sustainable development of aquaculture in Newfoundland and Labrador, as chosen by each in-session participant group.



Salmonid Industry



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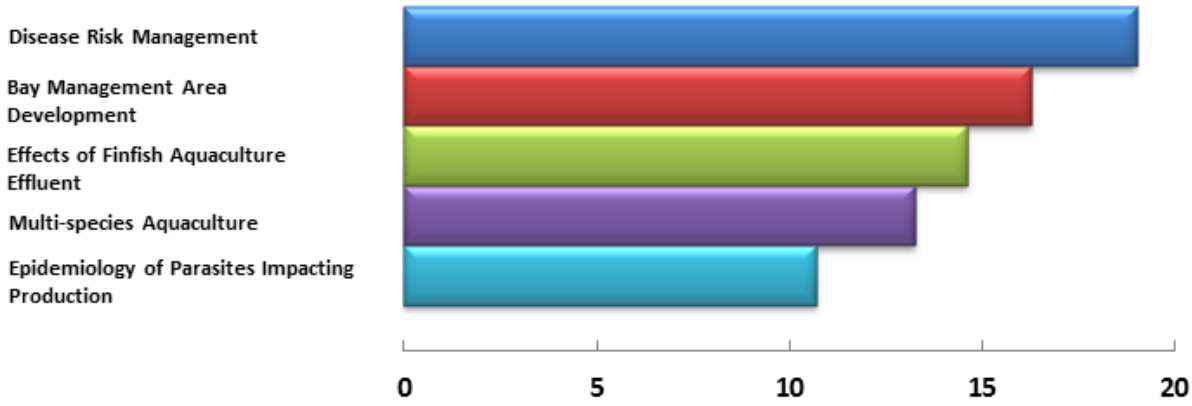
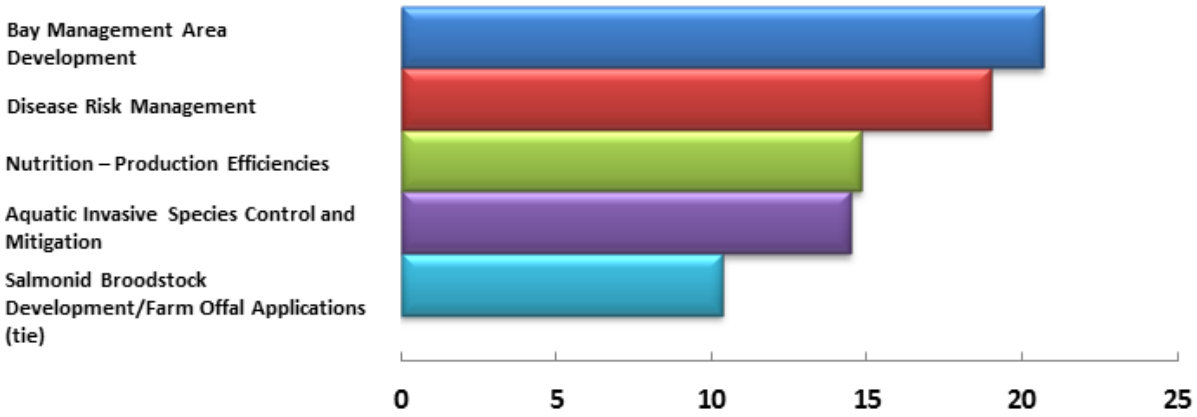


Government Agencies



Weighted Vote Count (%)

Next Steps

This document summarizes the input received from in-session and online participants during this consultation process. The Government of Newfoundland and Labrador is thankful to all those who participated in this consultation process.

The Department of Fisheries and Aquaculture intends to release an updated sustainable aquaculture strategy in 2014-15. Comments received during this consultation process will be used to develop a balanced sustainable aquaculture strategy. The implementation of a new aquaculture strategy will assist the industry with creating benefits for Newfoundlanders and Labradorians.

Appendix: Aquaculture consultation in-session participants.

Consultation Session	Participants
Mussel Industry	Aqua Marine Services Inc. Newfoundland Styro Inc. Newfoundland Aquaculture Industry Association Connaigre Fish Farms Inc. Sunrise Fish Farms Inc. LBA Enterprises Ltd. Shells & Fins Inc. Badger Bay Mussel Farms Ltd. Norlantic Processors Ltd. Silk Stevens Ltd. SIMCorp Marine Environmental Inc. Black Gold Inc. Live Ocean Inc. Atlantic Pacific Trading Inc.
Community Groups	Salmonid Association of Eastern Newfoundland World Wildlife Fund – Canada Environmental Resources Management Association Miawpukek First Nation Community Business Development Corporation Town of St. Alban's Salmonid Council of Newfoundland and Labrador Fish, Food and Allied Workers Town of St. Jacques-Coombs Cove
Salmonid Industry	Gray Aqua Group Ltd. Newfoundland Aquaculture Industry Association Silk Stevens Ltd. SIMCorp Marine Environmental Inc. Northern Harvest Sea Farms Ltd. Cooke Aquaculture Inc. Nova Fish Farms Ltd. FutureNETS & Supplies Ltd. Newfoundland Aqua Services Ltd.
Research and Development Community	Fisheries and Oceans Canada College of the North Atlantic Memorial University – Marine Institute Memorial University – Department of Ocean Sciences Memorial University – Department of Biology Newfoundland Aquaculture Industry Association Canadian Centre for Fisheries Innovation National Research Council
Government Agencies	Newfoundland and Labrador Research & Development Corporation Atlantic Canada Opportunities Agency Fisheries and Oceans Canada Newfoundland and Labrador Department of Municipal Affairs Newfoundland and Labrador Department of Labrador and Aboriginal Affairs Newfoundland and Labrador Department of Transportation and Works Newfoundland and Labrador Department of Environment and Conservation Newfoundland and Labrador Intergovernmental Affairs Secretariat

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