ACAS Provincial Department Report

Department of Fisheries and Aquaculture David Mitchell

1. INTRODUCTION

The commercial fishery combined with the aquaculture industry is worth approximately one billion dollars to the Nova Scotian economy. In recognizing the importance of these industries to our coastal communities, the Department of Fisheries and Aquaculture (DFA) has a mandate to foster the prosperous and sustainable development of these industries.

It is for these reasons that DFA is a partner in the Atlantic Climate Adaptation Solutions (ACAS) project (www.atlanticadaptation.ca). As part of the provincial involvement in this project, DFA has developed a coastal vulnerability assessment tool. This tool, and the supporting methodology, can be used to assess the vulnerability of fisheries and aquaculture infrastructure to impacts of climate change. By developing an understanding of the vulnerability faced by coastal infrastructure key to the fishing and aquaculture industries and the communities that rely on them, better planning for the future can be initiated.

2. OVERVIEW OF THE DEPARTMENT

DFA plays a direct role in supporting the fishing industry and coastal communities throughout Nova Scotia. The key pieces of legislation that support the Department's roles and responsibilities are the:

- *Fisheries and Coastal Resources Act*
- *Fish Harvester Organizations Support Act*
- *Fish Harvesters Registration and Certification Act*

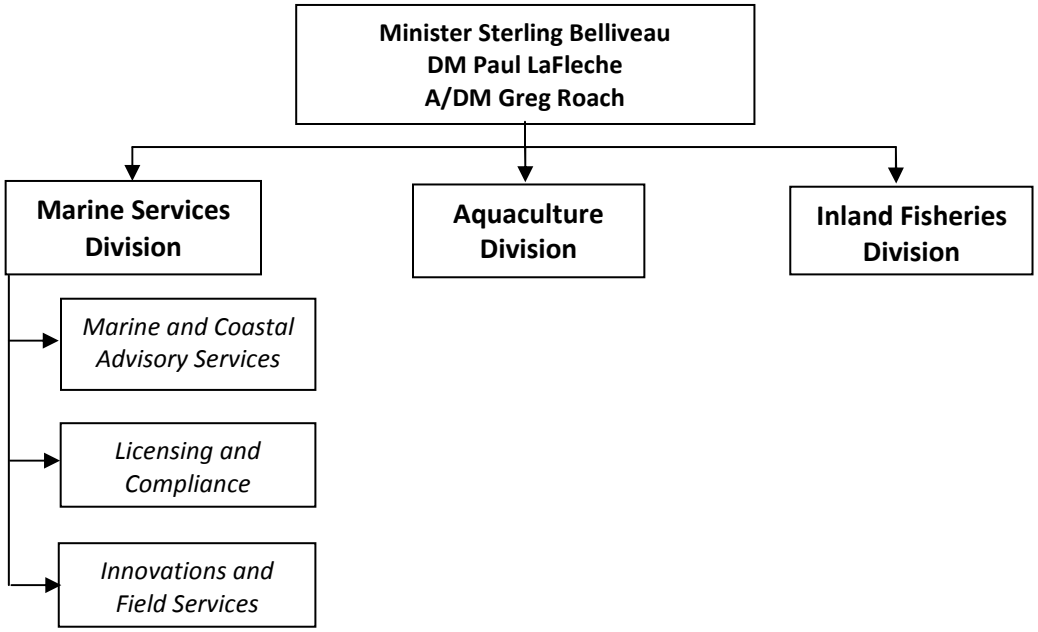
There are three divisions within the Department, each with its own area of responsibility:

1) The **Aquaculture Division** provides information and statistics on aquaculture operations on in Nova Scotia. A key role of the Division is the leasing and licensing of aquaculture sites in Nova Scotia. In support of this industry, the Division has developed an Aquaculture Strategy, an Aquaculture Site Mapping Tool, and an Environmental Monitoring Program.

2) The **Marine Services Division** is an umbrella-type structure that contains four distinct areas of operation:
   - **Marine and Coastal Advisory Services** provide research and provincial opinions on marine and coastal resource and management issues.

- Located within the Marine and Coastal Advisory Services is the **Coastal Section**. The primary task of the Coastal Section is the development of a Coastal Strategy for the Province of Nova Scotia.
- **Licensing and Compliance Services** is responsible for licencing fish buyers and processors, and ensuring compliance with requirements outlined in the licencing process.
- **Innovations and Field Services** is focused on supporting strategic initiatives related to seafood harvesting and processing sectors. These include reducing fuel consumption, responsible fishing practices, and section planning. Another role of the innovation and field services, are the **Coastal Resource Coordinators.** Located in eight regional offices throughout the province, their role is to support local dialogue with the fishing and aquaculture industries on a broad range of topics.

3) The **Inland Fisheries Division** works to protect, conserve, and enhance the quality and diversity of the fishery resources of this province and to provide continued and varied angling opportunity through resource assessment and classification, enhancement, and management of that resource.



3. CLIMATE CHANGE AND ADAPTATION ISSUES

Working waterfronts and coastal infrastructure provides services to a number of the Department's areas of operation.

Working waterfronts in Nova Scotia come in a variety of sizes and address a range of users. Coastal infrastructure that directly supports users in the fisheries and aquaculture industry is of particular interest to DFA. Currently, DFO's Small Craft and Harbours (SCH) Program directly supports key ports and related infrastructure reliant on the commercial fisheries.

Despite this, many harbours and related infrastructure throughout the province do not meet the criteria for direct support from SCH, thus are forced to seek funding and support from other sources. This is a key concern to DFA, for many of these non-SCH harbours continue to, or have the potential to, support aspects of the fishing and aquaculture industries.

One of the key challenges that these non-SCH harbours face, is an inability to conduct strategic planning exercises around the challenges and opportunities they face going into the future. Coastal hazards associated with climate change are a key consideration when assessing the long-term viability of coastal infrastructure. It is for this reason that DFA decided to invest in a tool that would allow users or related stakeholders to conduct their own rapid assessment of the risks associated with specific coastal hazards associated with climate change.

4. ACAS- Related Inputs and Activities

Completing the project required DFA to:

- Develop a project proposal to be included as part of Nova Scotia's ACAS submission.

- With the acceptance of the DFA's proposal, a letter of support was signed with Environment to commit $30,000 of provincial ACAS money to the project, and a contribution of $20,000 in-kind on behalf of DFA.

- As part of moving the project forward, DFA identified a project manager to oversee the projects development.

- A request for proposals (RFP) was developed and sent to five (5) consulting firms, with three submitting a response.

- An evaluation matrix was developed based on the RFP, and a four person panel was established to review the proposals and reach a consensus on a successful bidder. Based on this review CBCL Limited was offered the contract.

- To facilitate informed and timely feedback to CBCL Limited on the completion of the project deliverables, a review team was established. This review team included two Coastal Recourse Coordinators, and two members of the Provincial Oceans Network Secretariat within DFA. DFO's SCH staff were also offered an opportunity to provide comment on the preliminary work developed by CBCL Limited.

- During the course of the project's development, the project manager within DFA was required to facilitate access to key pieces of information from within the Department and DFO.

5. ACAS-RELATED DELIVERABLES AND THEIR VALUE TO THE PROVINCE

The *Assessment of Coastal Infrastructure Relevant to the Fishing and Aquaculture Industries Project,* sought to produce an easy-to-use assessment form for conducting vulnerability assessments. This form could be used by governments and stakeholders to create a methodology for assessing the vulnerability of infrastructure related to the fisheries and aquaculture industries in Nova Scotia.

As part of this project six key deliverables were achieved:

1. **A definition of vulnerable coastal infrastructure relevant to the fishing and aquaculture industries**: This identifies specific pieces of coastal infrastructure such as wharfs, headlands and causeways. Having this infrastructure defined so clearly is a critical first step in supporting conversations about the importance of these industries and the need for adaptation.

2. **A definition of coastal vulnerability**: This sets out the specific coastal hazards that need to be considered when assessing coastal infrastructure. The coastal hazards identified provide an important list in which to assess immediate and future coastal vulnerability.

3. **An assessment of recognized fisheries and aquaculture infrastructure in the six ACAS areas**: An important deliverable of this project involved establishing an inventory of relevant fisheries and aquaculture coastal infrastructure in the six ACAS areas. This list will support conversations about the importance and future of these industries in those areas.

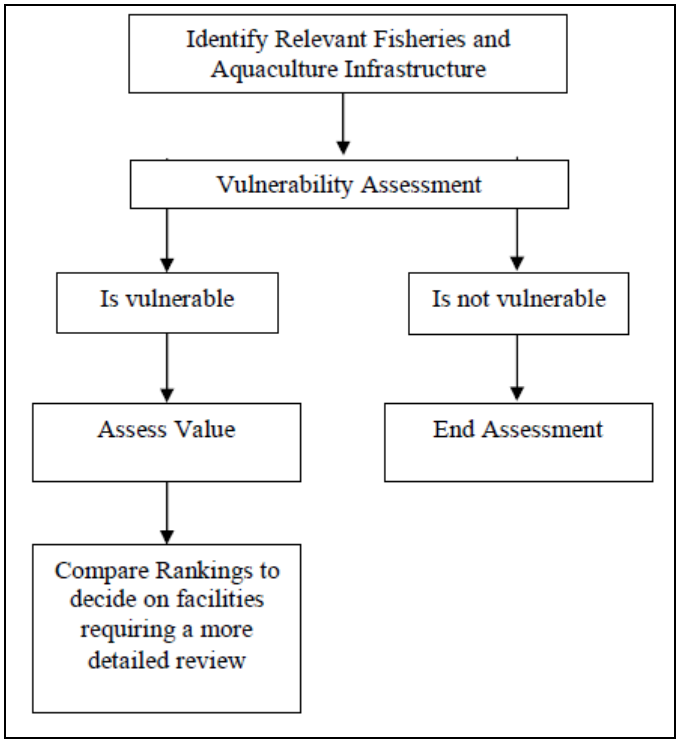
4. **An assessment of the social and economic value of infrastructure identified**: This provides an important measurement of the value of this coastal infrastructure and why it is important to begin planning for future impacts of climate change.

5. **An assessment framework**: Provides a legible worksheet from which targeted audiences can understand and conduct an assessment exercise. The way the framework is designed lends itself to being updated or adapted as new assessment criteria are identified.

6. **A clearly defined methodology for implementing the vulnerability assessment tool**: Laid out in a step by step process, the simple and straightforward methodology of this project can easily be applied by a broad range of users.

Table 1.1 demonstrates the general process followed to develop and apply the tool.

Table 1.1



6. Adaptation Priorities and Envisaged Program for Follow Up

With the completion of this tool, the priority for DFA is to develop a broader range of vulnerability assessment criteria and incorporate other relevant social and economic activities. This will lead to a more complete assessment of the value of coastal infrastructure and will facilitate a more informed discussion around the opportunities and challenges that exist.

In terms of advancing this work, DFA would like to broaden the reach of this tool to include community groups and others who have been traditionally less involved in the long-term planning for coastal infrastructure.

7. Conclusions and Lessons Learned

The tool has the ability to initiate discussions at the local and government level regarding the vulnerability assessment and future potential of working waterfronts in Nova Scotia. Following the presentation of this project at Nova Scotia's ACAS conference, we have received considerable interest from community groups, graduate students, and other levels of government.

Within DFA, the tool has the potential to strengthen strategic planning for industries such as aquaculture as the Aquaculture Division has invested in developing

suitability mapping for future aquaculture sites on Nova Scotia's coast. The coastal infrastructure vulnerability assessment tool could add another layer to the Aquaculture Division's suitability mapping. The tool could offer the Division an ability to assess the vulnerability and condition of key pieces of coastal infrastructure, which could support future aquaculture sites.

The work of the Marine Service Division will also be supported by the coastal infrastructure vulnerability assessment tool. Currently the division employs eight Coastal Resource Coordinators, located in provincial regional offices. The CRCs have the ability and mandate to engage the fishing industry and local coastal communities in discussions about the future of coastal infrastructure. This tool can be an asset in fulfilling this task.

As well, the Coastal Section is coordinating the development of a Coastal Strategy for the Province of Nova Scotia. The proposed Coastal Strategy seeks to support working waterfronts by working to "*Develop tools and resources for planning and capacity to support economic activities and address safety issues*." The potential benefits of this tool will directly support this action, and the Coastal Strategy as a whole.

The benefits of this tool as outlined in this report provide concrete examples of its significance, and how it can be applied within the Department of Fisheries and Aquaculture. This tool also has the potential for supporting other strategic initiatives within the provincial government such as the Climate Change Action Plan.