

Barriers to Implementing a Bottom-Up Management Approach to Coastal MPAs: a  
Canadian Case Study

By

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## **Abstract**

Marine protected areas (MPAs) are employed as a conservation strategy across the world, protecting species and habitats and helping to rebuild declining populations. However, proposals for coastal MPAs are often met with resistance from local communities, where reserves are perceived to lead to negative social, economic, cultural and political impacts. Shifting from the traditional top-down governance structure to a more community-based or “bottom-up” approach is increasingly advocated as a means to secure local support and enhance the effectiveness of marine conservation measures. This research sought to identify site-specific barriers that may limit the application of a bottom-up management approach for a potential MPA, the Eastern Shore Islands area of interest. A literature review was first conducted to examine four previous resource management initiatives on the Eastern Shore, which provided a contextual background and lessons learned for current implementation processes. Potential barriers to community-based co-management of an Eastern Shore Islands MPA were then analysed using a framework for co-management. Key barriers identified include a history of mistrust, contrasting visions for coastal management, and a lack of local leadership supporting the process. As the initiator of the MPA, the federal government should assume responsibility in addressing these barriers, including taking time to mend past relations and build trust, and communicating with communities more effectively.

*Keywords:* marine protected areas; Nova Scotia; community-based; co-management; collaborative planning

## **Abbreviations**

AOI: Area of Interest

AESC-PEHA: Association of Eastern Shore Communities Protecting Environment and Historical Access

APES: Association for the Preservation of the Eastern Shore

CBD: Convention on Biological Diversity

DFO: Fisheries and Oceans Canada

EBSA: Ecologically and Biologically Significant Area

ENGO: Environmental non-government organization

ESFPA: Eastern Shore Fisherman's Protective Association

ESSIM: Eastern Scotian Shelf Integrated Management

IPA: Indigenous Protected Area

IUCN: International Union for Conservation of Nature

LOMA: Large Ocean Management Area

LFA: Lobster fishing area

MPA: Marine Protected Area

NSNT: Nova Scotia Nature Trust

OECM: Other Effective Area-Based Conservation Measure

WITAP: Wild Islands Tourism Advancement Partnership

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# **1. Introduction**

## **1.1 A community-based co-management approach to management of MPAs**

The implementation of marine protected areas (MPAs) as a strategy to maintain biodiversity and conserve ecosystem structure and function continues to increase globally (Jentoft, Chuenpagdee & Pascual-Fernandez, 2011). MPAs have broad appeal for management because, in addition to ecological and conservation outcomes, they can serve social, economic and cultural objectives by enhancing recreational opportunities, promoting cultural heritage and benefitting fisheries and tourism (Government of Canada (GOC), 2011). In recognition of the valuable role MPAs can play in conservation, Canada has committed to international targets set under the Convention on Biological Diversity (CBD) to expand marine protection to 10 percent of all coastal and marine waters by 2020 (commonly referred to as Aichi Target 11). In December 2017, Canada exceeded its interim target of 5 percent protection by 2017 protecting 7.75 percent of its ocean territory through national networks of MPAs and other effective area-based conservation measures (OECMs) (Fisheries and Oceans Canada (DFO), n.d.). However, it is becoming increasingly apparent that this spatially-focused target has promoted quantity over quality (De Santo, 2013), whereby a large proportion of MPAs and OECMs are not being implemented or managed effectively and are consequently failing to meet their conservation goals (Robb, Bodtker, Wright & Lash, 2011; Robb, Bodtker & Wright, 2015; Jessen et al., 2017).

Coined “paper parks”, these ineffective MPAs exist on maps and in legislation, but do little for conservation in the water (Dehens & Fanning, 2018). A recent study examining the level of protection offered by MPAs in Canada’s continental waters determined that just 0.11% is protected in fully-implemented MPAs, and only 0.01% in fully-protected MPAs, in which all



extractive uses are prohibited (Jessen et al., 2017). MPAs were considered fully implemented if they met four criteria: legal designation, permanence, presence of an administrative structure, and a completed management plan. Results demonstrated that the vast majority of MPAs do not meet all four criteria and therefore currently fail to deliver adequate protection (Jessen et al., 2017). Another study that examined MPAs in the Canadian Pacific found that, although 90% of MPAs were intended to exclude commercial fishing, in practice only 2.5% met this goal (Robb et al., 2015).

This discrepancy between conservation objectives and management action may be attributed to ineffective governance systems. By definition, MPAs are governance tools, imposing a new structure of rights and rules to control how marine resources are used (Pomeroy, Parks & Wilson, 2004). MPAs may be managed under a spectrum of governance arrangements, with varying levels of government, community and private-sector involvement (Worboys, Lockwood, Kothari, Feary & Pulsford, 2015). Canada classifies MPAs according to their management approach and governance regime, based on guidance from the International Union for Conservation of Nature (IUCN) (Environment and Climate Change Canada, 2016). The inclusion of governance as a classification category was formally adopted by the Government of Canada in 2015; prior to this, governance of protected areas was interpreted based on ownership (Environment and Climate Change Canada, 2016). The IUCN defines four governance types: governance by government; shared governance; private governance; and governance by indigenous peoples and local communities (Borrini-Feyerabend et al., 2013). Governance regimes are primarily differentiated by who holds the power, authority, and responsibility for the protected area (Borrini-Feyerabend et al., 2013).

Although the Government of Canada has committed to conserving 10 percent of coastal

and marine areas by 2020, as of 2015 less than 1% of its marine estate had been protected (Bujold et al., 2018). In 2016, the Minister of Fisheries, Oceans and the Canadian Coast Guard announced a renewed commitment to reaching Aichi Target 11 (Bujold et al., 2018). The number of MPAs and the protected area coverage has increased significantly since then, offering an opportunity to examine current governance regimes as well as explore regimes that may be more effective over the long-term.

In Canada, most MPAs have been designated at the federal level under national legislation (Robb et al., 2011). Employing a top-down approach, the government uses laws and regulations to enforce management strategies and promotes resource stewardship from a distance (Sargeant, 2015). However, in Canada, a single MPA may be managed by multiple agencies, each with its own objectives and management approaches, which has resulted in a fragmented governance with communication and coordination challenges (De Santo, 2013; Robb et al., 2011). More broadly, the limited effectiveness of MPAs to deliver expected social and ecological results can be traced back to a failure to include local communities in the design and implementation of management measures (Ferse et al., 2010). Because of this, MPA proposals are often met with resistance from coastal communities, particularly those who rely heavily on wealth generated from fishing industries, where restricted access to existing marine areas are perceived to lead to negative social, economic, cultural and political impacts (Bennett & Dearden, 2013). Many coastal communities rely on resources from the marine environment, making them fearful of MPAs and skeptical of government (Dehens & Fanning, 2018). Since low community support is often associated with poor compliance of regulations, conservation success of MPAs is often predicated by local support for protection (Heck, Dearden & McDonald, 2012).

### *Community Participation in MPAs*

Community-based co-management has increasingly been promoted as a means to overcome social barriers and enhance the overall effectiveness of MPAs. Simply put, co-management involves the “shared administration of natural resources by two or more parties” (Plummer & Fitzgibbon, 2006, pp. 51). Central to this definition is the sharing of both power and responsibilities, requiring decision-making processes to be decentralized (Plummer & Fitzgibbon, 2004). Co-management arrangements can include a range of governing bodies, and are advantageous in MPA management because they potentially allow for the inclusion and participation of a more diverse range of stakeholders and knowledge in decision making processes (Borrini-Feyerabend et al., 2013). Community-based co-management is a form of participatory governance in which the people living closest to the resource are involved in the design, implementation, and monitoring of management measures (Kearney et al., 2007). It is based on the premise that local communities have a greater interest in sustainable use of the resources because they experience the direct impacts and benefits (Halik, Verweij, & Schlüter, 2018). When community participation in management becomes a right it also becomes a tool of empowerment, providing a platform for otherwise marginalized voices and rebalancing power dynamics by broadening interest groups (Pieraccini & Cardwell, 2016).

There are also benefits for governmental actors to opening up to more diverse governance types and enhancing governance quality (Borrini-Feyerabend et al., 2013). The inclusion of more governance types would likely advance the coverage of protected areas, expanding the capacity of countries to meet their conservation targets and international obligations, which should ultimately lead to greater protection of the marine environment (Borrini-Feyerabend et al., 2013). The involvement of more people and institutions in conservation is likely to generate more

resources, expanding institutional capacity for conservation and enhancing cost-effectiveness. Furthermore, adding pluralism into governing systems by increasing the number of actors builds resilience by buffering the system against the failings of any one institution (Borrini-Feyerabend et al., 2013). Co-management may also increase the effectiveness of protected area management by facilitating the co-production of knowledge from different actors that has been acquired at different scales of learning (Berkes, 2008).

The diversity of skills and expertise that communities can bring into conservation planning can help foster greater innovation and adaptability (Kothari, Camill & Brown, 2013). Multiple actors from different backgrounds helps to strengthen protected area governance, by combining strengths and overcoming potential weaknesses (Kothari et al., 2013). Advantages of incorporating stakeholder input at all stages of planning and implementation processes are related to improved acceptability, legitimacy, and support for future MPAs (Gaymer et al., 2014).

However, there are challenges associated with co-management of MPAs and this form of governance is not always the best solution for all protected areas. Although co-management can reduce conflict, community participation also has the potential to increase it with the inclusion of more actors, and it can be more complicated, expensive and time-consuming to include everyone (Burt et al., 2014). It is also important to recognize that not all stakeholders have equal rights; people are embedded in dependencies and hierarchies, holding different positions and views and will respond differently (Ferse et al., 2010; Singleton & Singleton, 2009). Communities should not be treated as homogenous entities in terms of perceptions, interests and actions (Ferse et al., 2009).

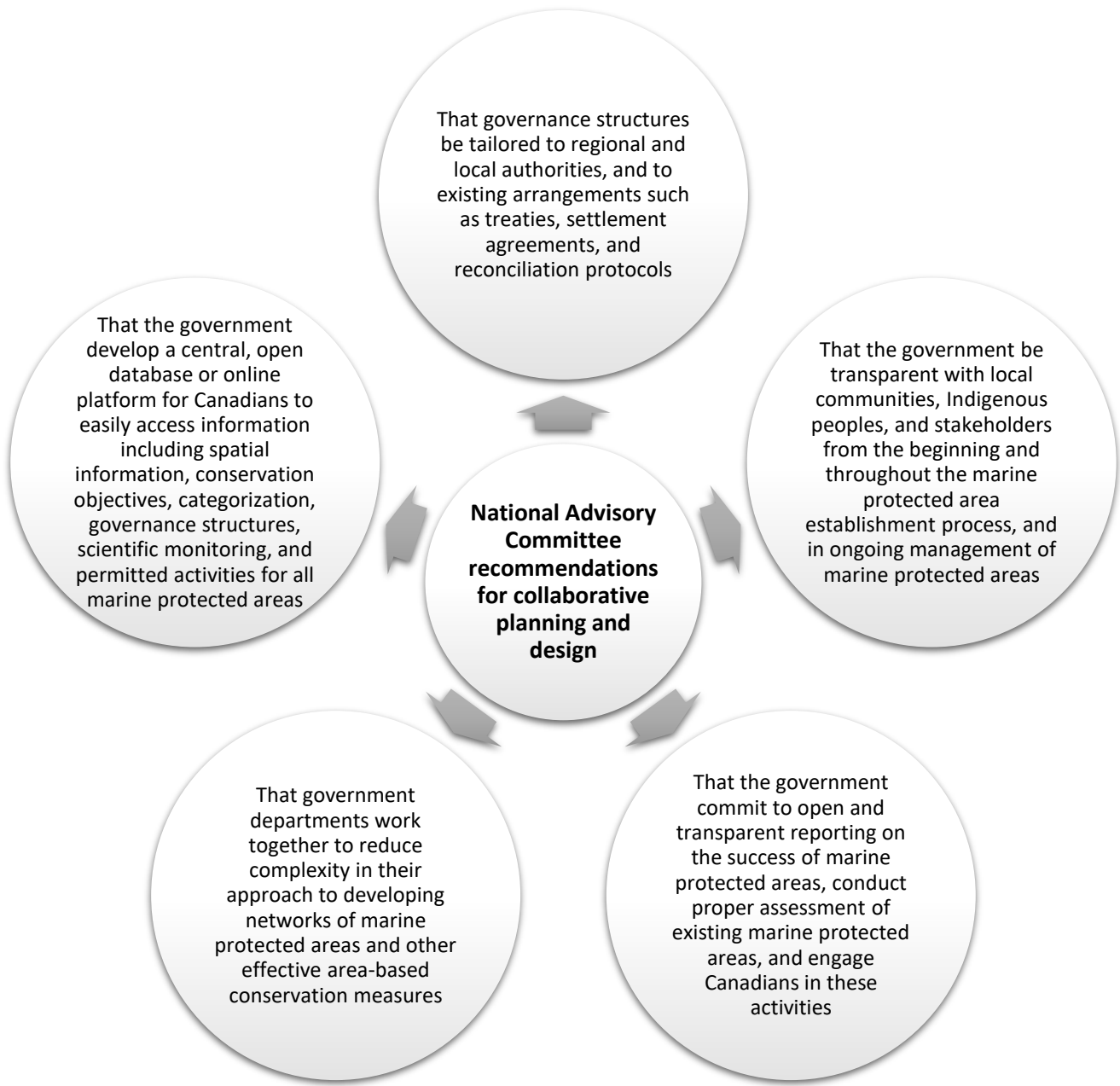
It possible that resource allocation at the level of the community could lead to an unfair

distribution of benefits, to more vocal or influential community members (Burt et al., 2014). In cases where distribution of power is asymmetrical among stakeholders, collaborative management is more likely to succeed if there is a natural “leader” to mediate discussions and bring about balance of power (Ansell & Gash, 2008). It may also be that stakeholder groups which are willing and able to participate in planning processes may only represent a narrow spectrum of interests and not the broad public opinion (Day & Gunton, 2003). It is the responsibility of planners to ensure that all interest groups are represented throughout the process (Day & Gunton, 2003). In spite of these risks, however, community-based MPAs give a voice to the local people who will be most affected by management decisions and empowers them to participate in the stewardship of their resources. The success of collaborative planning is reliant on having each relevant stakeholder group represented (Day & Gunton, 2003). Protected areas with genuine participation from affected stakeholders are more likely to deliver positive outcomes for livelihoods and biodiversity (Ward, Holmes, & Stringer, 2017).

A system that integrates both top-down and bottom-up processes, a shared governance model, has repeatedly been shown to be most effective governance model for achieving management objectives (Worboys et al., 2015; Jones et al., 2016; Mast, 2018). There is recent empirical evidence which supports the position that a decentralized, bottom-up management approach is associated with improved ecological outcomes. Using an extensive dataset for MPA conditions for coral reefs around the world, Mast (2018) analyzed 218 MPAs in temperate and tropical locations under multiple governance models, and found that a co-management approach led to larger reef fish biomass than top-down arrangements.

The importance of collaborative management with affected communities for MPAs has recently been recognized by the Canadian National Advisory Panel on Marine Protected Area

Standards, which released its recommendations in October of 2018 (Bujold et al., 2018). The report advises the federal Minister of Fisheries, Oceans and the Canadian Coast Guard to implement minimum protection standards in federal MPAs during the ongoing reform of the *Oceans Act*, and includes five recommendations to improve collaborative planning and design (Figure 1). Many of these recommendations echo those made earlier in the year by the House of Commons Standing Committee on Fisheries and Oceans that are intended to strengthen the *Oceans Act* Marine Protected Areas establishment process (Standing Committee on Fisheries and Oceans, 2018). These recommendations call for more community participation in MPA design and management and reflect that the top-down paradigm for coastal management is shifting towards a more collaborative, community-based approach.



*Figure 1. Recommendations made by the Canadian National Advisory Panel on Marine Protected Area Standards to improve collaborative planning and design for Oceans Act MPAs (Bujold et al., 2018)*

## **1.2 MPAs in Canada that have benefitted from community-based approach**

Although not currently the norm in Canadian MPAs, there are multiple protected areas that have benefitted from a collaborative management approach. These arrangements are particularly evident in Indigenous Protected Areas (IPAs), which are managed through a range of cooperative and shared governance models involving Indigenous and Crown governments. The contribution of IPAs that meet protection standards towards Canada's area-based conservation targets has recently become a political priority (Bujold et al., 2018; Indigenous Circle of Experts, 2018). In addition to conservation outcomes, IPAs can provide a number of social, cultural and legal benefits, and may also help to foster reconciliation (Bujold et al., 2018; Indigenous Circle of Experts, 2018).

The Gwaii Haanas National Marine Conservation Area Reserve (NMCAR) and Haida Heritage Site, located on the Pacific coast and spanning approximately 3,400 km<sup>2</sup>, is the only MPA in Canada with an official co-management strategy (Ban & Frid, 2018). The Gwaii Haanas NMCAR is governed by the Archipelago Management Board, which has an equal number of representatives from federal and Haida governments (Bujold et al., 2018). The joint management arrangement was formalized through the signing of the 2010 Gwaii Haanas Marine Agreement, which states that the both parties share responsibility in the planning, operations, management and use of the marine area (Gwaii Haanas Marine Agreement, 2010). The Gwaii Haanas Interim Management Plan (2010) for the MPA incorporates the Haida Nation's vision for marine conservation and is based on five guiding principles: showing respect, working together, balancing protection and ecologically sustainable use, fostering innovation and demonstrating accountability (Gwaii Haanas Marine Agreement, 2010).

In the Western Arctic, both the Anguniaqvia niqiqyuam MPA and the Tarium Niryutait MPA



(approximately 2,358 km<sup>2</sup> and 1,750 km<sup>2</sup> in size) are co-managed as per the terms of the Inuvialuit Final Agreement. They were designated as *Oceans Act* MPAs by Fisheries and Oceans Canada (commonly referred to as DFO) in 2010 and 2013, respectively (Bujold et al., 2018). The Anguniaqvia niqiqyuam MPA was first identified as a potential site for an MPA by the adjacent community, which had called to protect beluga whales migrating in the area for subsistence harvest (Standing Committee of Fisheries and Oceans, 2018). The federal government works with the Fisheries Joint Management Committee and the local communities adjacent to the reserve to co-manage the areas and jointly provide guidance on management, monitoring and research decisions (Bujold et al., 2018).

The Eastport MPA is an example of a community-led MPA, initiated by local fishermen. Located on the island of Newfoundland within the province Newfoundland and Labrador and spanning 2 km<sup>2</sup>, it was originally established as a fisheries reserve, with the focal purpose of protecting lobster. In the early 1990s, lobster harvesters had begun to recognize serious declines in stock abundance, as indicated by a decrease in landings. A group of local fishermen and stakeholders worked in partnership with DFO to develop a spatial management plan to protect against the collapse of the local lobster fishery (DFO, 2014). In 1997, the fishery committee proposed the establishment of two no-take fishing reserves and in 2005, under the *Oceans Act*, the Eastport closures were granted official MPA status and given stronger protection (Department of Justice Canada, 2008). Compliance with management measures is enforced through restrictive access to fishing area and increased patrols by DFO, but is largely achieved through self-policing by local fishermen (DFO, 2013). The federal advisory committee involved in the management of the MPA continues to recognize the value of stakeholder support and involvement, holding annual scientific briefings, regional workshops and public meetings to

provide updates on the status of research, monitoring and management actions that are associated with the MPA (DFO, 2013).

### **1.3 Eastern Shore Islands area of interest (AOI) as a candidate for co-management**

In March 2018, DFO announced that it had identified two regions in waters off Nova Scotia as areas of interest (AOI) for potential designation as MPAs (Gunn, 2018). The two AOIs are part of a larger “master” MPA network plan for the Scotian Shelf bioregion of Atlantic Canada, which, at the time of writing, has still not been publicly released. Since the announcement, the Eastern Shore Islands AOI has received a considerable amount of attention for three key reasons: it is the first inshore *Oceans Act* MPA proposed for Nova Scotia; it is the largest proposed coastal MPA in Canada to date (spanning approximately 0.03% of Canada’s ocean territory); and it is the site of a lobster fishery that is often referred to as the backbone of the local economy (Gunn, 2018; DFO, 2018a). Many environmental non-government organizations (ENGOS) and local community groups are advocating for a co-management approach, if this approach is successful it could set an example for other sites. Given the communities’ history of playing an active role in the management of its natural resources, the Eastern Shore Islands AOI presents a unique opportunity for the federal government to work with local communities to establish a bottom-up approach to management of an MPA (Gunn, 2018).

### **1.4 Research Objectives**

As Canada continues to work towards meeting its international commitments to marine conservation, increasingly through co-management arrangements, it is necessary to identify current institutional and social barriers that may limit successful collaboration. Since community support is key to making co-management arrangements work, pre-implementation barriers should be identified during the early phases of co-management. The proposed Eastern Shore

Islands MPA has the potential to be a frontrunner for bottom-up management approach for MPAs in Canada, making it an ideal choice for this case study. By reviewing previous management initiatives in the Eastern Shore region, as well as the current steps that have been undertaken by DFO, the potential for co-management of the AOI will be evaluated using a framework for collaborative governance. These objectives will be researched by answering the following questions:

- 1) Using the Eastern Shore Islands as a case study, what are potential barriers that may limit the application of a bottom-up management approach to coastal MPAs?
- 2) Once potential barriers have been identified, can barriers to community co-management be overcome? I.e., can a co-managed MPA in the Eastern Shore Islands succeed?
- 3) What recommendations can be made to facilitate co-management processes for the proposed MPA?

## **2. Approach**

This research attempts to answer these questions in three parts. First, a literature review pertaining to co-management theory and MPA governance in Canada was conducted to provide a brief historical overview of governance approaches. The second section involved a review of four previous resource management initiatives (conservation and stewardship initiatives) on the Eastern Shore, to provide a contextual background and “lessons learned” for current MPA implementation processes. The four case studies were chosen because of the bearing and influence that they continue to have on perceptions of current implementation processes for the future MPA. Lastly, using primarily grey literature, the current processes for the implementation of the Eastern Shore Islands MPA were analysed using a framework for collaborative governance – to assess the feasibility of a co-management approach. Major barriers and

facilitators were analyzed, and recommendations were made to overcome potential barriers.

## **2.1 Literature Review of Case Studies**

The literature review process for co-management involved searching peer-reviewed literature using Novanet Basic Search, hosted by Primo through the Dalhousie University server. Key search terms included “co-management”, “collaborative management”, “co-governance”, “shared governance of natural resources” and “governance of marine protected areas”. The literature review for the case studies and current MPA implementation processes was more broad, and included peer-reviewed and grey literature, and white papers. With the exception of the Eastern Scotian Shelf Integrated Management (ESSIM) initiative, most of the case studies had not been written about extensively in peer-reviewed literature sources. Much of the review was based on newspaper articles and reports from community organizations. Additionally, due to an internship placement, the author of this paper attended a community meeting for the Eastern Shore Islands AOI, which provided invaluable insight into current processes.

## **2.2 Co-Management Analysis**

The literature describes many success factors (referred to as preconditions, antecedents and starting conditions) that are necessary for implementing co-management arrangements for nearshore resources. Evaluating preconditions present at the outset of collaboration is important because they can help to identify whether a co-management arrangement is feasible under the current circumstances (Plummer & Fitzgibbon, 2004). The preconditions for co-management of an Eastern Shore Islands MPA were qualitatively analyzed using a conceptual co-management framework, developed by Plummer and Fitzgibbon (2004) (Figure 2). The framework organizes co-management into context, components and linking mechanisms; however, for the purpose of this study, only preconditions were analyzed.

Additionally, although the framework serves as a solid foundation for assessment, it had to be altered to adjust to some of the limitations of the study. This is reflective of the complexities of collaborative processes; key variables and relationships that are synthesized from the literature must be simplified to produce a general framework or model, which will not apply to all circumstances. Plummer and Fitzgibbon's (2004, pp. 880) "willingness for users to contribute" to co-management was not analysed, because this condition is difficult to assess without direct input from those affected by or involved in management systems. Furthermore, two other key starting conditions which are frequently cited in co-management literature were included to strengthen the framework: a prehistory of trust (Ansell & Gash, 2008; Emerson, Nabatchi, & Balogh, 2012; Vaughan & Caldwell, 2015) and the legal framework/institutional design (Ansell & Gash, 2008; Emerson et al., 2012). To analyse institutional design, elements from Ansell and Gash's (2008) model of collaborative governance were included in the analysis: participatory inclusiveness, forum exclusiveness, clear ground rules and process transparency. For collaborative planning to be successful, it is not necessary to adhere to each of these preconditions; rather, they can help to serve as a reference point to determine whether it is currently plausible to commence a collaborative planning process (Day & Gunton, 2003). Table 1 provides a brief description of each of the preconditions to be analyzed.

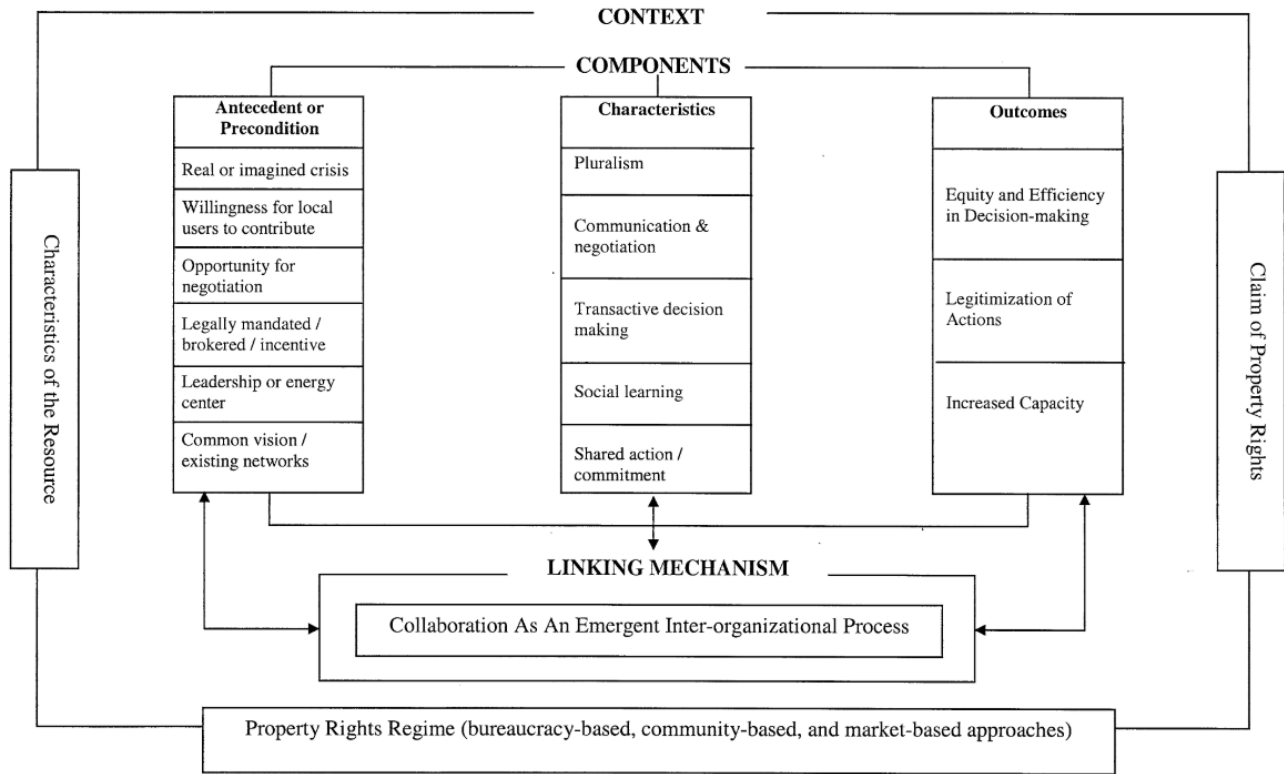


Figure 2. Framework of co-management of natural resources (Plummer & Fitzgibbon, 2004).

Table 1. Preconditions for co-management.

Preconditions for co-management	Description
1) <i>Perceived crisis (real or imagined)</i>	External actions or events (e.g. clearcutting forest) that are widely viewed as an urgent issue which needs to be addressed (Day & Gunton, 2003).
2) <i>Opportunity for negotiation</i>	Whether there is adequate time available or mechanisms in place to alter the framework for collaborative governance.
3) <i>Incentives for (and constraints on) participation</i>	Incentives can be either positive (e.g. economic opportunities) or negative (e.g. situational or institutional crisis), and must exist to persuade leaders and participants to work together in order to achieve specific strategic objectives (Emerson et al., 2012). Alternatively, there may be constraints on participation which hinder collaboration.

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4) <i>Leadership or energy centre</i>	Leadership refers to an individual or entity that is in a position to initiate or help secure resources and support for co-management (Emerson et al., 2012).
5) <i>Common vision</i>	A shared or common vision among actors aids in decision making and may help legitimize the process (Plummer & Fitzgibbon, 2004).
6) <i>Prior history of trust</i>	If there is a prehistory of conflict or cooperation among stakeholders and agencies or between stakeholders and agencies, it will hinder or facilitate cooperation (Ansell & Gash, 2008).
7) <i>Institutional design</i>	The feasibility of applying a particular governance approach is highly dependent on existing institutional frameworks (Gaymer et al., 2014). Co-management arrangements involve institutional structures where “the powers, roles and responsibilities of each partner are clearly delineated” (Kothari et al., 2013, pp. 3).

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## **2.3 Limitations**

### *Methodological Approach/Data Collection*

The initial approach for this research was to collect and analyze primary data. This was to be done by conducting semi-structured interviews with participants that have been or will be involved in the implementation and management of the proposed Eastern Shore Islands MPA, as well as stakeholders that will be directly and indirectly affected by the designation. This selection of stakeholders was to represent “the community” associated with the proposed Eastern Shore Islands AOI. This approach was intended to assess implementation barriers from a multi-stakeholder perspective. However, after receiving input from individuals already involved with the community, it was decided that given the high degree of involvement from multiple organizations and the uncertainty surrounding the process, the sudden involvement of new project may overwhelm and compromise the overall success of the initiative. The research

approach was therefore adapted to adjust to these limitations. Instead of interviews, an online survey was to be distributed to the same stakeholder groups. Prior to making the survey publicly available, it was distributed to a small group of community representatives for feedback.

Although no one took issue with the content of the survey, their responses indicated that it was not the right time to get involved, as the community was already feeling overwhelmed. With respect to this feedback, the author decided to focus instead on a historical review of the region based on a literature review.

### *Data Analysis*

Due to the aforementioned limitations, much of the information referenced in the report was sourced from grey-literature, such as ENGO documents, local and national newspaper articles and minutes recorded from community meetings. Opinion-based information collected from these sources may not accurately represent the viewpoints of groups or communities by showcasing actors with strong emotions, e.g. fishermen against the implementation of an MPA. Relying on these sources could have led to a skewed interpretation of community values or viewpoints. Additionally, multiple preconditions that are commonly mentioned in co-management literature could not be analyzed for this research. This was primarily due to inability to engage directly with stakeholders, but was also limited by the timeframe available for research. For example, social capital is often described as being an important factor facilitating co-management. However, without collecting primary data from communities it is difficult to accurately assess this component. Underlying each of the preconditions for collaborative governance is “the notion of relationships between people”, and although this report provided perspectives from afar, future work could build off these preliminary results with more community engagement (Plummer & Fitzgibbon, 2004). Lastly, data from the literature were



analyzed qualitatively by a sole researcher, and were potentially subjective to personal bias.

There is always the risk that two different researchers could draw different conclusions from the analyzing the same set of data (Bengtsson, 2016).

### **3. Co-Management Theory**

#### **3.1 Differentiating Between Governance and Management**

Governance has been identified by the IUCN World Commission on Protected Areas as being central to the conservation of protected areas around the world (Borrini-Feyerabend et al., 2013). Broadly, the term governance refers to “the formal and informal processes and structures through which decisions are made” which influence the operation of management systems (Plummer & Fitzgibbon, 2004; Ward et al., 2017, pp. 438). More specifically, governance of protected areas has been defined by the Canadian Institute on Governance as, “the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens and other stakeholders have their say” (Graham, Amos & Plumptre, 2003, pp. 2). Thus, governance is dually associated with both policy and practice (Worboys et al., 2015). Although management and governance are closely related, they are distinct phenomena (Worboys et al., 2015). In the context of protect areas, management involves the means and actions to achieve objectives, whereas governance refers to the principles, policies and rules regarding decision-making (Borrini-Feyerabend et al., 2013; Ward et al., 2017). Good governance of MPAs is promoted through legitimacy, coordination and collaboration, inclusion and fairness, knowledge integration and adaptability, capacity and performance, and transparency and accountability (Burt et al., 2014). According to Berkes (2010), governance is a broad responsibility which should be shared among actors, and emphasises horizontal processes such as collaboration, partnership and community

empowerment.

### **3.2 Historical Overview of Marine Governance**

According to Plummer and Fitzgibbon (2004), co-management is inherently understood as property rights regime because it almost always deals with common pool resources (CPR). The term CPR refers to a natural resource system which, due to its large size or particular characteristics, makes it costly to exclude potential beneficiaries from using it, such as fisheries and forests (Ostrom, 1990). Throughout the world in the 1950s and 1960s, centralized governance regimes of CPR were the dominant paradigm of natural resource management. At the time, resource management was widely considered to be a technical matter and central governments were perceived to have the expertise necessary to carry out the various tasks required (Berkes, 2010). This mindset also aligns with Hardin's (1968) theory on the governance of CPR, in which he contends that external institutions are required to make management decisions for the common benefit of all users. According to Hardin's theory, without external intervention, the collective action of individual users would eventually degrade the resource and individuals act in favour of their own self-interest (Plummer & Fitzgibbon, 2004). Governments managing resources on behalf of the citizens was therefore intended to prevent a "tragedy of the commons" (Plummer & Fitzgibbon, 2004). However, serious concerns began to arise regarding centralized governments ability to sustainably and equitably manage shared resources (Berkes, 2010). Centralized bureaucracies are limited in their ability to respond to change, ill-suited to user participation and blamed for increased vulnerability of resource dependent communities (Armitage, Berkes & Doubleday, 2007).

By the late 1980s, disappointment with the performance of centralized governments had mounted, sparking the trend of devolving previously centralized governance to the level of local

institutions to manage local commons (Berkes, 2010). Since then, there has been a global shift in the decentralization of authority for managing natural resources (Berkes, 2010).

Decentralization, stakeholder participation and community involvement have been celebrated in academic literature and policy forums for increasing legitimacy and effectiveness, and democratizing environmental governance (Berkes, 2010; Pieraccini & Cardwell, 2016).

### **3.3 Marine Governance in Canada**

Canada has a Federal Marine Protected Area Strategy (GOC, 2005), which identifies three federal agencies and legislative tools for creating MPAs: the *Oceans Act* by DFO, the *National Marine Conservation Act* by Parks Canada, and the *Migratory Birds Convention Act* and the *Canada Wildlife Act* by Environment and Climate Change Canada. Each department has its own specific, but complementary mandate for establishing MPAs (GOC, 2011). MPAs have mostly been created on an individual basis with allowable activities tailored to the specific management objectives of each site (Bujold et al., 2018). This strategy was useful up to 2015, when the number and coverage of MPAs was relatively low, however, as the protected area coverage continues to increase so does the potential for inconsistency between sites (Bujold et al., 2018). This has led to public confusion and calls for consistent marine protection measures (Bujold et al., 2018).

Canada's MPA network commitments also includes OECMs, which refers to protection that is achieved regardless of specific recognition or dedication, such as stewardship agreements or management plans owned or managed by non-government organizations (Worboys et al., 2015; GOC, 2011). The key difference between protected areas and OECMs is that conservation must be the main priority for protected areas (IUCN WCPA, 2018).

Although there are many ways in which MPAs can be established, the *Oceans Act* has been

the primary mechanism through which the federal government delivers on its goal of sustainable use of Canada's oceans (Enette & Alder, 2007). It should be noted however that, in an effort to reach Aichi Target 11 in a timely manner, 4.7% of Canada's current MPAs are OECMs which have been established under the *Fisheries Act* (Bujold et al., 2018). Through the passing of the *Oceans Act* in 1996, the minister of DFO was tasked with leading and coordinating the federal MPA network on behalf of the government of Canada (Dehens & Fanning, 2018). Since DFO is the agency leading the implementation of an MPA on the Eastern Shore of Nova Scotia, its processes and mandate will be the focus of this report.

Under the *Oceans Act*, the roles of MPAs includes "conservation and protection of unique habitats and marine areas of high biodiversity or biological productivity, fishery resources and their habitats including marine mammals, and endangered or threatened marine species" (Enette & Alder, 2007, pp. 53). The dual mandate of DFO is inclusive of these conservation priorities, but also includes a goal to sustainably use Canada's fisheries resources, while continuing to provide safe, effective and environmentally sound marine services that are responsive to the needs of Canadians in a global economy (Enette & Alder, 2007).

DFO employs a five-step process to establish *Oceans Act* Marine Protected Areas (Figure 3). This process is based on three foundational principles: science-based decision-making; transparency with regard to consultations with various parties; and advancing reconciliation with Indigenous peoples by respecting existing treaties and progressing toward the completion of modern treaties (DFO, 2018a). The selection of an Area of Interest (AOI) marks the beginning of the establishment process, identifying areas that contain ecologically and sensitive habitat or species that need extra protection (DFO, 2018a). However, "identifying an area as an AOI does not necessarily lead to it ultimately being designated as an MPA. Through science and

consultation, the Department determines whether an Oceans Act MPA is the right tool for protecting that area” (Standing Committee on Fisheries and Oceans, 2018, pp. 21). In circumstances where an MPA is not the right tool, there are alternative legal instruments (e.g. OECMs and provincial/territorial protection) which can be used to achieve conservation objectives (Standing Committee on Fisheries and Oceans, 2018). If designation as an MPA is determined to be the best course of action for a particular AOI, DFO will then begin consultation processes with governments and stakeholders to develop regulations for the MPA.

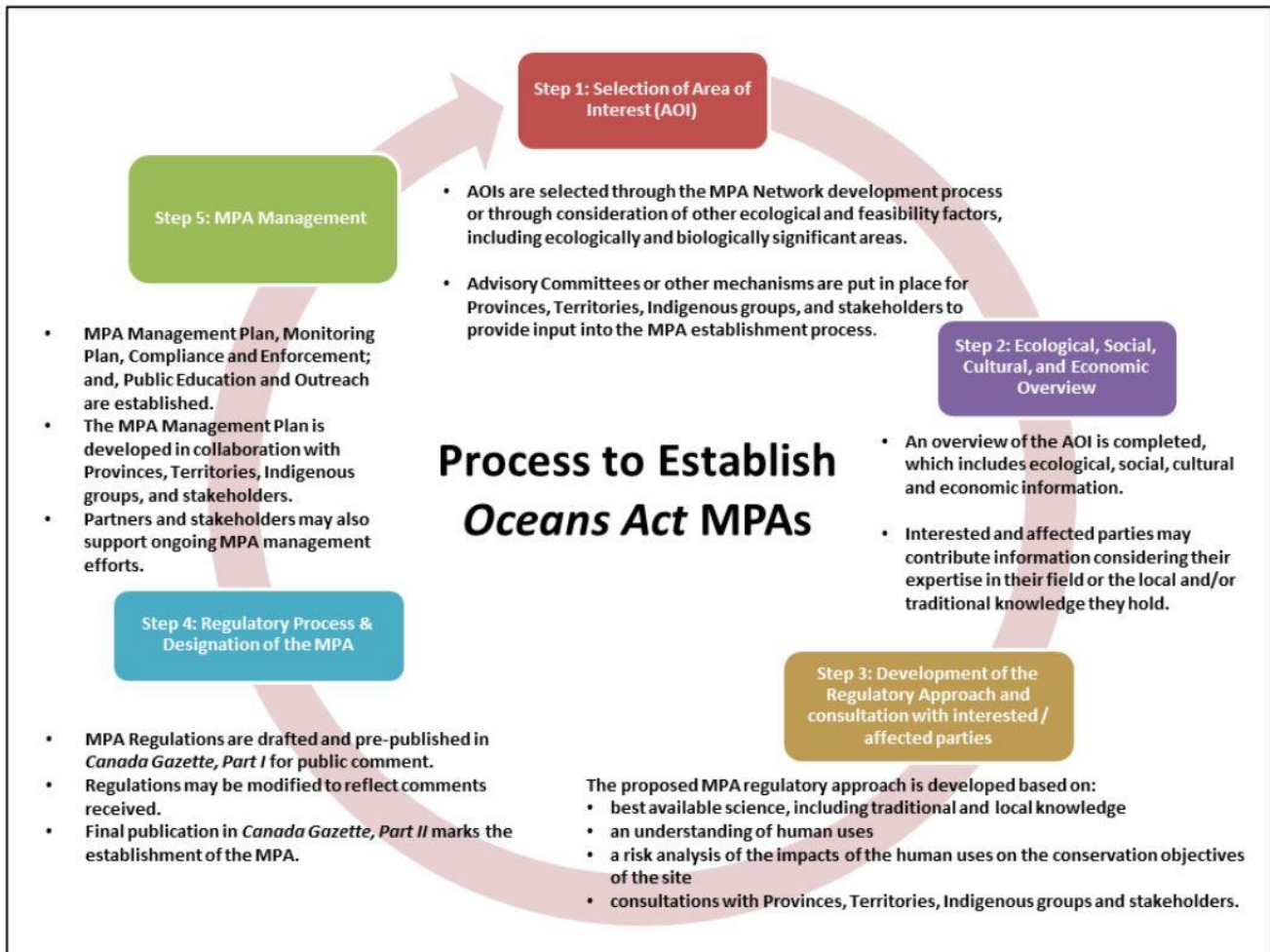


Figure 3. Summary of the five-step process that Fisheries and Oceans Canada employs to implement MPAs in Canada (Standing Committee on Fisheries and Oceans, 2018)

## **Eastern Shore Islands Description**

### **3.4 Regional Characteristics**

The Eastern Shore is a region in the Canadian province of Nova Scotia, running Northeast along the Atlantic coast from Halifax Harbour to the eastern edge of the peninsula at the Strait of Canso. Although most of the shoreline of the AOI falls within the boundaries of the Halifax Regional Municipality, the coastal populations adjacent to the marine area are best characterized as rural communities (Nova Scotia Nature Trust (NSNT), 2017). The AOI lies within the Scotian Shelf bioregion, which is part of the North American continental shelf. The coastal AOI includes approximately 2,000 km<sup>2</sup> of nearshore waters that surround a dense archipelago composed of more than 100 islands, ranging from minute rocky ledges to islands greater than 3.5 km<sup>2</sup> (Hastings et al., 2014). The boundaries of the site stretch from Clam Bay to Barren Island (near Liscomb Point) and extend 25 km from the mainland into the Atlantic Ocean (DFO, 2018a; Figure 4).

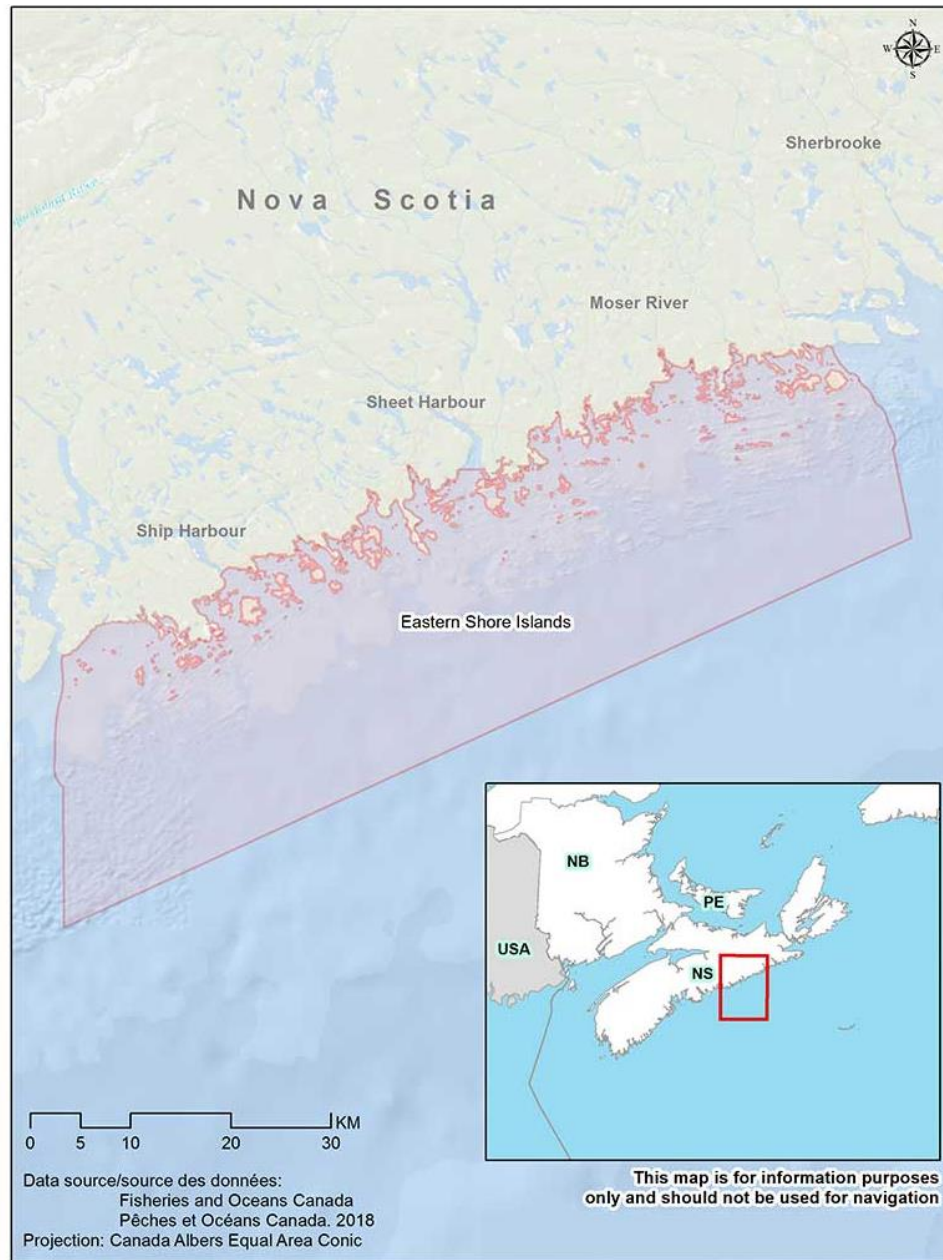


Figure 4. The Eastern Shore Islands Area of Interest (DFO, 2018a)

### 3.5 Ecological and Biological Characteristics

The Eastern Shore Islands AOI is considered to be highly natural area with a unique coastal and marine habitat that is associated with the regionally unique archipelago (DFO, 2018a). The marine environment contains rich beds of eelgrass, kelp and saltmarsh that provide habitat for

many species, including commercially valuable species that use the habitat as juveniles (DFO, 2018a). Atlantic salmon, listed as endangered under the Canadian *Species at Risk Act*, rely on the estuaries that are associated with several rivers that drain into the site (DFO, 2018a). The high number and concentration of islands in the archipelago provides a large amount of important nesting and foraging grounds for many colonial seabirds and shorebirds, including at-risk species such as harlequin duck and roseate tern (Hastings, King, & Allard, 2014) The islands are critical habitat for waterfowl and host significant and globally significant numbers of multiple species throughout nesting, breeding and migratory seasons (Hastings et al., 2014). The inshore waters serve as a spawning area for Atlantic herring as well as habitat for groundfish and Atlantic Salmon (Gunn, 2018). Prior to its designation as an AOI, the Eastern Shore Islands had previously been identified by DFO as an Ecologically and Biologically Significant Area (EBSA), which are areas identified for their unique combination of exceptional features (Hastings et al., 2014). DFO’s stated overarching goal for the Eastern Shore Islands AOI is “to conserve and protect the ecological integrity of the area, including biodiversity, productivity, ecosystem components, and special natural features” (DFO, 2018a).

### **3.6 Community History**

#### *Early Occupation*

The Eastern Shore has been inhabited by humans for thousands of years. Prior to European contact, populations from the Indigenous Mi’kmaq Nation were distributed through the region, concentrating in estuarine areas nearby present day Musquodoboit, Ship Harbour and Sheet Harbour (Rainville, Beaton, Graham & Burns, 2016). In the 17<sup>th</sup> century, early Acadian settlers arrived and many communities still remain in the region (Rainville et al., 2016). The arrival of English and German Protestants displaced most Mi’kmaq populations through the



granting of land tracts for the colonizing nations. Many of the Acadian settlers were also deported during this period. The European settlers survived by developing the natural resources on the Eastern Shore, and by the early 1990s, a number of fish plants, shipyards, lumber mills and gold mines had been established (Rainville et al., 2016). This created a boom and bust economy which, by the 1990s, had largely collapsed (Rainville et al., 2016).

### *Today*

Today, the Eastern Shore region is comprised of many communities, and supports a largely rural population of 15,720 (Rainville et al., 2016). The regional demographics are characterized by a declining population, due to young people migrating closer to the city or elsewhere to find employment, which has also led an aging population structure (Rainville et al., 2016). The commercial lobster fishery is presently one of the key contributors to the local economy (Rainville et al., 2016). The Nova Scotia lobster fishery is an owner-operator industry, characterised by the participation of fishermen in the management and decision-making processes implemented by DFO (Baker, 2015). The coastal fishing area is spatially divided into lobster fishing areas (LFAs), that specify which individuals can fish, where and how, in order to manage the fishery more effectively based on the specifics of the area (Baker, 2015). There are 12 LFAs in the Maritimes inshore fishery and two within Eastern Shore region, LFA 32 and LFA 31B (DFO, 2011). Lobster fishermen participate in shared stewardship arrangements with DFO, where elected representatives from each individual LFA take part in multi-interest advisory committees to advise DFO on issues such as conservation, protection, science and fisheries management (DFO, 2011). According to Baker (2015), there are fishermen representatives from each port or community, making the level of consultation more localized to the community comparative to other fishing industries. Fishermen in both Eastern Shore LFAs engage in the

practice of voluntary v-notching to help conserve stocks (Baker, 2015). The lobster fishery also supports multiple local exporter businesses, as well as buyers from outside of the Eastern Shore region.

In addition to fishing, there are other marine-based industries in the region. There is a mussel ranch in the region, in operation for 23 years, which farms mussels in Ship Harbour and processes them in a plant located on the adjacent shore (AquaPrime Mussel Ranch Ltd., n.d.). There is also a rockweed harvesting operation which is located in the intertidal zone on the Eastern Shore and falls within the boundaries of the AOI site (Acadian Seaplants Ltd., n.d.). This is a recent industry in the region, with leases granted by the provincial government in 2017 (Department of Fisheries and Aquaculture, n.d.). Immediately following the announcement of the AOI, there was uncertainty as to whether a potential MPA would affect the rockweed harvesting industry. DFO has since clarified that the rockweed harvesting and recreational clam gathering activities will not be affected by an MPA as they occur in the intertidal area which is under provincial jurisdiction (DFO, 2018a).

The Eastern Shore also has many nature-focused activities. Since the region is an important site for birds, there is an active duck-hunting industry. Hunters have also been assured that an MPA will not impact hunting, as this is managed by the province. There are also many tourism activities in the region, including recreational boating and kayaking, recreational fishing, seaside camping, surfing and sailing.

## **4. Eastern Shore Regional Case Studies**

### **4.1 Ship Harbor National Park**

#### *Description*

Although some stakeholders from the Eastern Shore have expressed interest in the

participating in a collaborative planning process with DFO, there is a marred history of the federal government attempting and failing to implement a terrestrial National Park in the region. In short, the failure of the park is a “story of contrasting visions of preserved spaces and of conflicts over an appropriate consultative process” (Froese-Stoddard, 2013, p. 131). By the late 1960s, Parks Canada had already recognized the ecological and biological significance of the Eastern Shore, and had begun discussions with the province to plan a National Park. Citizens of the area were aware that a new park was being developed, but had difficulties finding government officials who could answer their questions and substantiate rumours (Froese-Stoddard, 2013). At that time the local government for the Eastern Shore however, publicly promised that most residents would be allowed to remain in their homes (Froese-Stoddard, 2013). After seven years of planning and negotiations, the federal and provincial governments signed a Memorandum of Intent in 1972 to develop a National Park in Ship Harbour. After residents had spent years searching for answers, the formal announcement of the agreement and a new map of the park was delivered to the affected communities by way of a newspaper article. Although local industries, environmental groups and the majority of citizens were initially in favour of the park, support quickly eroded as it soon became clear that the park that was being delivered was not what had been promised (Froese-Stoddard, 2013). The final design of the National Park was six-times larger than original proposals and would have caused 90 permanent residents and 167 summer residents to be expropriated from their homes (Froese-Stoddard, 2013).

Although the federal government promised that “most of the homeowners could remain on their properties for their lifetime, or until they wanted to sell to the park”, opposition from the public was swift (Froese-Stoddard, 2013, pp. 140). The federal government had made no direct

contact with the people who would be directly affected by the park. A public group called the Association for the Preservation of the Eastern Shore (APES) was formed, and they petitioned to the government against the development of the park. Federal and provincial governments belatedly tried to remediate the situation by holding public meetings to solicit community involvement in the final plans. It was too late, however, as hostility towards officials and resentment for the exclusionary processes meant that the public's perception of the National Park was beyond repair. Resistance from the public, coupled with deteriorating relations between the two levels of government, eventually led to the cancellation of the park plans, replaced instead by a provincial park system that is much smaller than the original proposal (Froese-Stoddard, 2013).

### *Lessons Learned*

The successful public campaign to cancel the plans for Ship Harbour National Park demonstrates the ability of the coastal communities on the Eastern Shore to organize in the face of a perceived crisis. Although the initiative was primarily driven by the federal government, the province and the majority of the public initially supported the park proposal (Rainville et al., 2016). The threat of expropriation, however, caused public interest groups to revoke their support and served as the primary motivator for APES. APES is prime example of local leadership driving collective action, and was instrumental in unifying citizens of the area to make their voices heard. To drive public pressure, APES organized public protests, petitions opposing the park, and continued to advocate for a non-intrusive provincial park system in place of the national park (Froese-Stoddard, 2013). A lack of coordination and communication between the federal and provincial government was a critical weakness, and it was public pressure on the provincial government which eventually led to the cancellation of the park plans (Froese-

Stoddard, 2013; Rainville et al., 2016).

A purely state-led process, the design and establishment processes of the proposed Ship Harbour National Park were deeply flawed and poorly executed. Many of the conflicts that occurred throughout this process were the result of federal policy being developed without input or collaboration from the province or the public, and it was not an appropriate solution to protect what were largely privately-owned lands (Froese-Stoddard, 2013). Only when it became clear that the public was not going to accept the proposal did Parks Canada retroactively try to engage in public consultations, and by then it was too late. The decision by Parks Canada to abandon the park reflected the need for greater citizen participation and greater transparency in the designation of protected areas (Froese-Stoddard, 2013). Parks Canada has never recovered from the reputational damage that the National Park caused with Eastern Shore residents. This continues to permeate discussions and perceptions of the proposed MPA.

#### **4.2 Eastern Scotian Shelf Integrated Management (ESSIM) initiative**

##### *Description*

The Eastern Scotian Shelf Integrated Management (ESSIM) initiative was a collaborative and stakeholder-driven ocean planning process in the Maritimes Region of Canada. Although the plan was never implemented, the process provides valuable lessons about stakeholder participation and collaboration for this region (Mccuaig & Herbert, 2013). Much has already been written about the ESSIM planning process (Flannery & Cinnéide, 2012; Kearney et al., 2007; Mccuaig & Herbert, 2013; Sander, 2018); the purpose of this passage is not a comprehensive analysis, but to provide a brief overview of the project and to identify the relevant lessons that may be useful to inform current planning for the Eastern Shore MPA.

The *Oceans Act* made Canada the first country in the world to adopt comprehensive

legislation for integrated ocean management (Marine Spatial Planning Programme, n.d.). The aim of integrated management is to support the sustainable development of economic activity while simultaneously protecting and conserving marine ecosystems (Mccuaig & Herbert, 2013). The act made DFO responsible for leading the coordination and implementation of a national network of large ocean management areas (LOMAs), of which the Eastern Scotian Shelf is one (Sander, 2018). The ESSIM initiative was facilitated by DFO (Maritimes Region) and announced in 1998 as Canada's first integrated management initiative (Mccuaig & Herbert, 2013). During the planning stage (1998-2006), the ESSIM initiative was considered to be the flagship for the Canadian government's integrated ocean management strategy (Kearney et al., 2007).

The boundaries of the Eastern Scotian Shelf planning area spanned the eastern shore of Nova Scotia out into the Scotian Slope, encompassing approximately 325,000 km<sup>2</sup> of coastal, nearshore and offshore waters (ESSIM Planning Office, 2007). The focus of the initiative was intended to be primarily offshore beyond the 12-nautical mile limit, although the coastline boundary ended up changing repeatedly throughout the process. This was to avoid jurisdictional issues and complicated coastal conflicts (Sander, 2018). It was decided that complementary integrated management plans for coastal and nearshore waters would follow. Stakeholders involved in the planning process included representatives from fisheries, offshore oil and gas, marine transportation, scientific research, recreational and tourism, coastal communities and environmental interest groups (Flannery & Cinnéide, 2012).

The collaborative model for ESSIM planning included a structure for provincial and federal collaboration, and a committee by which government representatives and stakeholders could meet (Sander, 2018). It took 10 years (1998-2008) to develop and publicly release the ESSIM plan, which was based on a multi-stakeholder planning approach, involving all ocean users,

interest and regulators (Marine Spatial Planning Programme, n.d.). The plan was organized around three key goals; collaborative governance and integrated management, sustainable human use and healthy ecosystems (ESSIM Planning Office, 2007). After the release of the plan, the focus of the initiative was to implement each of these key phases. The plan however, was never endorsed by the Minister of Fisheries and Oceans (Mccuaig & Herbert, 2013). This was mainly due to issues of overlapping jurisdiction with the Canada-Newfoundland and Labrador Offshore Petroleum Board who had not been a part of the planning process, although their Nova Scotian counterpart had (Flannery & Cinnéide, 2012). After years of stalled progress, never reaching the implementation phase, the ESSIM initiative was ended by the Minister of Fisheries and Oceans on May 23, 2012 during the final meeting of the ESSIM Stakeholder Advisory Council (Mccuaig & Herbert, 2013).

### *Lessons Learned*

The underlying premise of the ESSIM initiative was that a “plan developed through collaboration will be broadly accepted and used by all” (ESSIM Planning Office, 2007, pp. 21). ESSIM contained most of the criteria for collaborative decision making (Flannery & Cinnéide, 2012; Kearney et al., 2007), some of which also contributed to some of its major criticisms. For instance, consensus based decision-making ensured broad user buy-in, but also delayed the planning progress and led to general objectives (Flannery & Cinnéide, 2012). The long duration of the process (14 years total) coupled with little progress was exhausting for committee members, as evidenced by one of Sander’s (2018) interviewees describing herself as an “ESSIM survivor”. The refusal of DFO to endorse the plan also hurt morale, and caused people to stop attending meetings (Sander, 2018). The ESSIM initiative was a sectoral based planning approach, which didn’t foster a sense of connectedness between stakeholders and was also

hindered by governance jurisdiction. The lack of pre-defined national boundaries for LOMAs caused uncertainty and conflict through the ESSIM planning process; particularly the boundary and jurisdictional dispute with Newfoundland and Labrador (Sander, 2018). This demonstrated the need to define bioregional boundaries early in the process, between ocean, nearshore and coastal areas (Sander, 2018). While flexibility is often considered to be a key element of collaborative decision-making, the ability of planners to alter their geographical scope weakened the link between stakeholders and decision-makers, and made it difficult for the process to be championed at the government level (Flannery & Cinnéide, 2012).

### **4.3 Community-led Opposition to Finfish Aquaculture in Nova Scotia**

#### *Description*

The Association for the Preservation of the Eastern Shore (APES), the community organization that was instrumental in cancelling the plans for the proposed Ship Harbour National Park, was also a key player in the province-wide opposition to finfish aquaculture in Nova Scotia. The association was reconstituted in February 2012, following a disastrous public meeting which was held by representatives from the provincial Department of Fisheries and Aquaculture and managers of the Scottish aquaculture company, Loch Duart, and its Nova Scotia subsidiary Snow Islands Salmon (APES, n.d.-a). The purpose of the meeting was to present to the community plans to install three new open pen salmon feedlots on the Eastern Shore, fulfilling the mandated community consultation meeting for all three licenses. More than 300 residents attended the meeting, asking for a vote to call for the halt to the granting of the licenses, to which the moderator denied (APES, n.d.-a). Two weeks later, APES reformed as a means to organize the community, with more than 300 participants/members from multiple sectors, including residents, members of the Chamber of Commerce, tourism operators, fishermen and



fish marketers, as well as representatives from parks and conservation groups (APES, n.d.-b).

APES was concerned about the environmental, economic and democratic processes of finfish aquaculture. Citing peer-reviewed literature, the organization raised concerns about the potential environmental impacts of open-pen aquaculture to the surrounding waters and coastal ecosystems, threats to wild populations of salmon and thus to the tourism and recreational and commercial fishing industries (APES, n.d.-c). APES stated that the province has failed to enforce proper licensing processes, specifically with regard to the Environment Impact Assessment and the approval of sites that seemed to disregard federal and provincial guidelines for site suitability. These criticisms were linked to concerns regarding the democratic public and community stakeholder consultation processes, including “the lack of opportunity for citizen input and true public consultation in this process” (APES, n.d.-b). Stating that the province had failed to abide by the precautionary principle in approving the finfish licenses, APES joined over 100 other organizations (in the Atlantic Coalition for Aquaculture Reform) across Nova Scotia in calling for a five-year moratorium on granting new finfish aquaculture licenses until an independent scientific and economic analysis had been conducted (APES, n.d.-b).

This message was promoted by means of public education, through informative community meetings and door-to-door campaigns, and spreading awareness by writing letters to newspaper editors, commissioning bus ads and billboards in Halifax criticizing open-pen fish farms, all in an effort to bring the debate to the larger community (APES, n.d.-a). Funding to support the opposition was raised by the community at public meetings through individual contributions, and local businesses and artists offered their services to promote awareness (APES, n.d.). There were several protests held as well, one such incident involving a road block by fishermen and community members of the then provincial Fisheries and Aquaculture Minister (APES, n.d.-a).

Petitions were circulated and sent to the provincial government with over 9,000 signatures, and representatives continued to protest at political gatherings, distributing pamphlets and fact sheets to lawmakers (APES, n.d.-a)

The controversy generated by coastal communities and the provincial organization led the provincial government to impose a moratorium in May of 2013 on new licences for fin fish and shellfish aquaculture, as well as to call for a public inquiry whereby two independent experts were to conduct public hearings to create a new regulatory framework for aquaculture in Nova Scotia, what was to be called the Doelle-Lahey report (Doelle and Lahey, 2014). The comprehensive report, released in December of 2014, called for an overhaul of aquaculture regulations and addressed the concerns regarding transparency and openness in decision-making processes. The report also pointed out that the aquaculture industry currently lacked a social licence to operate in Nova Scotia. The recommendations were supported by the groups involved in the opposition to aquaculture, on the grounds that the new regulations were fully implemented (East Coast Environmental Law, 2015)

The new aquaculture regulations were implemented in 2015 and the moratorium lifted. A legal analysis of the new regulations concluded that the changes were a step in the right direction but ultimately failed to implement the recommendations for openness and transparency needed to restore public confidence in aquaculture (Mitchell and Ward, 2015). Regardless of this assessment, APES contributed to an effective and successful public campaign to keep finfish aquaculture out of the region. The organization has slowed down since 2013 but has pledged to remain active with developmental interests in the Eastern Shore, supporting Nova Scotia Nature Trust's "100 Wild Islands" conservation campaign (see below) and remaining open and active participants in the Eastern Shore Islands AOI discussions (APES, n.d.-a).

### *Lessons Learned*

The campaign against open pen finfish aquaculture in Nova Scotia once again demonstrates the collective power of Eastern Shore communities. It was a community-led initiative that was supported by local groups and ENGOs. Once again, the campaign was driven by the perception of a crisis, where feedlots for salmon aquaculture were perceived as a legitimate threat to fisheries livelihoods and the ‘pristine’ condition of the Eastern Shore. The community rapidly organized itself, delegating tasks to appropriate members, and pursued a clear goal – halt the implementation of aquaculture until due process was conducted. The community felt that the new sites were being imposed on them, and that the process had lacked transparency; the provincial government and the aquaculture businesses had only engaged in the minimum amount of required public consultation. There was also strong willingness for local resource users and community members to contribute to the cause, whether that be volunteering their time or contributing donations. There was also facilitation by bridging organizations, over 100 had joined together to rally against the government. Lastly, there was a certain level of interdependency between all of the organizations opposing aquaculture, their strength was their numbers and it allowed them to put adequate pressure on the provincial government.

#### **4.4 The Nova Scotia Nature Trust’s “100 Wild Islands Legacy Campaign” and the Wild Islands Tourism Advancement Partnership (WITAP)**

##### *Description*

Many of the islands in the Eastern Shore archipelago are already protected through private conservation efforts led by a provincial ENGO. In 2014, the Nova Scotia Nature Trust (NSNT) publicly launched a campaign to protect the coastal islands within the Eastern Shore archipelago. Still ongoing, the “100 Wild Islands Legacy Campaign” aims to protect over 280 coastal islands

between Clam Harbour Beach and Taylor Head Provincial Park (NSNT, 2017). Prior to the campaign, the islands were found by researchers at NSNT to contain exceptional biodiversity, supported by previously undiscovered pristine boreal forests, wetlands, as well as some of Eastern North America's only temperate rainforest (NSNT, 2017). Although largely untouched, the majority of the coastal lands were privately owned, and there were growing fears that the region would be impacted by increasing developmental pressures.

To protect the islands, NSNT has raised over \$7 M to protect 11 km<sup>2</sup> of private land through conservation agreements with islands owners, land donations and land purchases (Gardner Pinfold Consultant (G.P.C) Inc., 2017). The organization has committed to protecting the land that is entrusted to them forever, maintaining an active stewardship program in partnership with scientists, conservation partners, neighboring landowners and volunteers (100 Wild Islands, n.d.-a). This work is happening alongside provincial terrestrial protected areas progress to protect 12% of the land by 2015, and it directly led the provincial government to protect an additional 16.2 km<sup>2</sup> by designating all Crown lands within the archipelago as a Wilderness Area (NSNT, 2017). Halifax Council also supported the endeavor, contributing \$300,000 and 3.2 km<sup>2</sup> of island land to NSNT (100 Wild Islands, 2017). To date, the organization has protected over 85% of the islands (100 Wild Islands, n.d.-b). NSNT claims that community-based, private land conservation complementing government-led conservation efforts is crucial to conservation success (NSNT, 2017). The success of the campaign is largely attributed to local leadership by a wealthy donor, who challenged and pushed NSNT in 2007 to protect all of the islands. It was this donor's initial contribution of \$3.5 M which launched the campaign (NSNT, 2017).

Beyond its conservation value, the Eastern Shore has also been recognized as a potential area for research, educational and economic opportunities (WITAP, 2017). In 2014, the 100 Wild

Islands Legacy Campaign was identified by the Atlantic Canada Opportunities Agency's as a candidate for the Strategic Tourism Expansion Program (WITAP, 2017). This program was developed to provide communities with an "understanding of destination development, industry trends, and experiential tourism development" (WITAP, 2017). This partnership, between the NSNT, Nova Scotia Environment and the local community, has manifested into the Wild Islands Tourism Advancement Partnership (WITAP). This initiative aims to build off NSNT's land conservation initiative to develop ecotourism and community development opportunities on the Eastern Shore (100 Wild Islands, 2017).

### *Lessons Learned*

The 100 Wild Islands campaign was a private initiative with collaboration from the provincial government. The push to protect the islands was driven by the perception of a crisis, to conserve the boreal rainforest. There was a strong willingness for local users to contribute to the process, through land donations or property stipulations (e.g. an agreement not to develop portions of privately-owned land known as conservation easements). Without this support, it is unlikely that the initiative would have been so successful. There was also strong community leadership driving the process, particularly evidenced by the local donor who is frequently cited by NSNT as having been essential to the initiation and facilitation of the campaign. The WITAP initiative is still in the early phases. They have set clear goals and timelines, with information and public meeting times available online. Since the initiative is still in its early phases of implementation, it is yet unclear how the general public perceives the work.

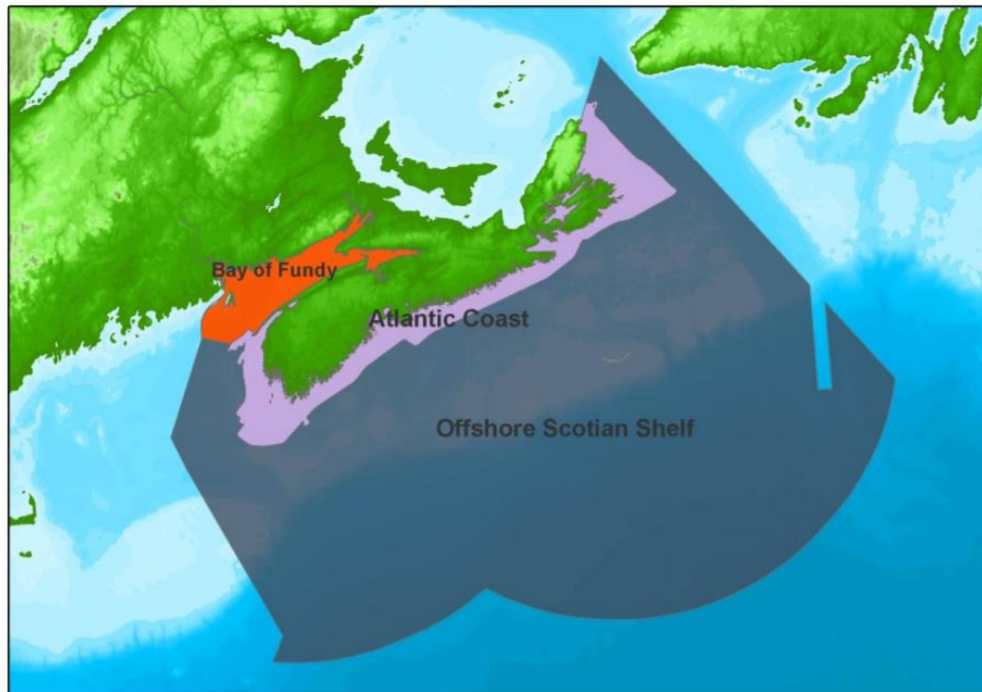
## **5. Eastern Shore Islands AOI**

### **5.1 The Consultative Processes Prior to and Following the Establishment of the AOI**

The Eastern Shore Islands AOI was selected as a potential site for an MPA as part of a larger MPA network plan for Scotian Shelf Bioregion, which encompasses three distinct planning areas: 1) the offshore Scotian Shelf; 2) the Atlantic coast of Nova Scotia; and 3) the Bay of Fundy (Figure 5; Westhead, King & Herbert, 2013). DFO Maritimes has led network planning for this bioregion, which began in the mid-2000s with technical design work (Koropatnick, 2018). Science and industry groups have been consulted since 2014, and there have been three formal science review processes from 2012-2016 (Koropatnick, 2018).

DFO has held over 150 meetings since October 2015 to discuss network development (process, data and objectives) with Indigenous groups, various industry groups and other interest groups, such as conservation and local community groups (DFO, 2017; Koropatnick, 2018). Industries that were consulted prior to the announcement in March include the Eastern Shore Fisherman's Protective Association (ESFPA), the Rockweed Advisory Committee, WITAP, the Halifax Regional Municipality and Lobster Fishing Area 31B and 32 Advisory Committees (T. Koropatnick, Pers. Comm., Oct. 17, 2018). There have also been 10 public open houses held throughout DFO Maritimes Region (Koropatnick, 2018). Parts I and II of the Science Advisory Process for the Maritimes Region were completed in July 2016 and November 2016, respectively (DFO, 2017). The draft MPA network plans were completed and made available for consultation with provinces and First Nations in the spring of 2017, and were set to be publicly released in the fall of 2017 (DFO, 2017). After the public release, a full year of consultation was planned for the draft network design (DFO, 2017). At the time of writing, the full network plans have still not been released but are expected to be made available for public consultation once senior level

discussions with the provinces and First Nations are completed (T. Koropatnick, Pers. Comm., Oct. 17, 2018).



*Figure 5. Map showing the approximate planning areas for the Eastern Scotian Shelf (Westhead et al., 2013).*

DFO is now in the second stage of the current *Oceans Act* MPA designation process. The department is collecting and analyzing ecological and socio-economic data for the Eastern Shore region and is in the midst of completing a risk assessment to determine which activities that occur within the AOI may pose a risk to the natural features (DFO, 2018a). According to DFO, the information gathered during this process, in combination with consultation with an Advisory Committee, will inform the conservation objectives for the AOI, as well as the boundaries and zones, and will help to determine the management measures and regulations for the future MPA (DFO, 2018a). The Eastern Shore Islands Advisory Committee now includes representatives from federal and provincial departments, First Nations groups, fisheries groups, aquaculture,

ENGOS, academia and various community groups (T. Koropatnick, Pers. Comm., Oct. 17, 2018). The first Advisory Committee meeting was held in late September 2018 (Bell, 2018). DFO has provided funding to the ESFPA to host the Fisheries Working Group for the AOI, to ensure that the fishing industry will have a strong influence on the process (DFO, 2018a).

Since the public announcement of the Eastern Shore Islands AOI by DFO in March 2018, there have been two public meetings hosted by local community groups<sup>1</sup>. The first public community meeting was hosted by APES at Tangier Fire Hall in July 2018. The decision to hold the meeting in July was based on the lobster fishing season, which runs for two months from May to June. Representatives from APES opened the meeting by clarifying that the association was not promoting the establishment of an MPA, and that the purpose of the meeting was simply to share information. There were three formal presenters at the meeting, including a senior biologist from DFO who provided information and answered questions about the AOI selection process and plans for the future MPA. Additionally, two ENGO representatives spoke, one specifically detailing a community-led MPA in New Brunswick, the Musquash Estuary MPA, to provide more information about the benefits and difficulties of community collaboration. During the meeting, which was attended by residents, fishermen, business owners, government employees and ENGO representatives, most community members expressed a willingness to engage in dialogue but made it clear that they want traditional use to continue in the marine area. Some attendees expressed feelings of mistrust, fear and confusion regarding the reasons for and implications of an MPA. There were also fears expressed in regard to this process being similar to or continuing on from the Ship Harbour National Park process, and that DFO was working

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<sup>1</sup> At the time of writing, the author was aware that DFO had held additional public meetings on October 30 and November 7, but was unable to include information on those due to time constraints.



with NSNT to push residents out of their lands. Some community members did agree however, that an MPA could be a way to support sustainable tourism in the area, further promoting WITAP initiatives.

The second public meeting was held in August 2018 at Tangier Fire Hall, this time hosted by a new community group which had formed following the first meeting, the Association of Eastern Shore Communities Protecting Environment and Historical Access (AESC-PEHA). The group is comprised of concerned residents and landowners who believe that the entire process of “an imposed AOI and a DFO Chaired supporting Advisory Committee to counsel DFO on a designated MPA is completely flawed” (Jones, 2018). According to AESC-PEHA, DFO’s consultation processes for an AOI should have begun with broad-based community consultations to determine whether there was “unanimous support throughout the Eastern Shore for an AOI” (Jones, 2018). The group also takes issue with the role of the Advisory Committee in decision-making processes, stating that they are not required to accept advice from other groups. AESC-PEHA has called for the AOI designation to be reversed and the consultation processes to be redone, in a more transparent and broad-based manner (Jones, 2018). The association has since gathered hundreds of petition signatures calling for there to be no MPA at all (Bell, 2018). Echoing the views expressed by AESC-PEHA, some Eastern Shore residents began displaying anti-MPA yard signs on their front lawns in September (Figure 6). Representatives from AESC-PEHA have been added to the Eastern Shore Islands Advisory committee.



*Figure 6. Photo of an anti-MPA sign on the Eastern Shore, courtesy of Sarah Saunders.*

## **5.2 Barriers and facilitators to co-management of the Eastern Shore Islands MPA**

### *I. Prehistory of Cooperation or Conflict (initial trust level)*

Ansell and Gash (2008) explain that a prehistory of conflict is likely to manifest as low levels of trust, which leads to low levels of commitment, strategies of manipulation and dishonest communications. There is a long history of conflict between the community and the federal government, dating back the failed implementation of Ship Harbour National Park. The repercussions from this failed initiative continue to this day, leading community members to perceive that all branches of the federal government are the same and that MPAs are similar to National Parks in that they can expropriate land. Although the Eastern Shore Islands MPA would not have a terrestrial component, some residents have expressed fears of expropriation, believing

that the MPA and 100 Wild Islands campaign are a targeted effort to push local landowners out from the coast. Additionally, there is a deep history of distrust between inshore fishermen on the Eastern Shore with DFO. Much of this stems from the perception that DFO previously allowed the vertical integration of a number of inshore fleets, favouring the larger players in the industry while letting the inshore fishery fade away (Standing Committee on Resources, 2007).

In addition to mistrust between Eastern Shore residents and the federal government, there is also a history of conflict between the residents on the Eastern Shore and the provincial government, concerning the fight against finfish aquaculture. This is still an ongoing point of contention, as the current Minister of Fisheries and Aquaculture has been an open and strong supporter of developing and expanding finfish feedlots in the aquaculture industry in Nova Scotia (Withers, 2018b). The pro-aquaculture position of the Minister is related to contrasting visions between the federal and provincial governments; where the federal government is looking to protect, the provincial government would like to open up for economic development. This perspective is evidenced by a testimony made by the premier of Nova Scotia to the National Advisory Panel on Marine Protected Area Standards, which emphasized the importance of maximizing marine-based industries and activities to grow the economy (McNeil, 2018). It is likely that the Eastern Shore Islands MPA proposal has invoked images of previous management experiences that were unsuccessful and/or negatively affected the community (Chuenpagdee et al., 2013). In this circumstance, it is possible that communities view DFOs actions to implement an MPA as just another effort to exert social control and repression (Chuenpagdee et al., 2013).

## *II. Facilitative Leadership*

Collaborative governance may demand or create multiple roles and opportunities for leadership, including the roles of a sponsor, convener, facilitator, representative of an

organization, technologist and public advocator (Ansell & Gash, 2008; Emerson et al., 2012). According to Emerson et al. (2012), certain roles may be required from the outset of the process, others more crucial during moments of negotiation or conflict, and still others in supporting collaborative planning through to implementation. The initial idea to create an MPA on the Eastern Shore came from the federal government, and thus far, DFO has been the central agency leading the implementation process. DFO has served the role of a facilitator, bringing stakeholders together and getting them to engage in a collaborative manner (Ansell & Gash, 2008). This has involved organizing multi-stakeholder meeting and workshops, assembling an advisory committee and working group, and providing tools to facilitate planning and design.

Internally, there is not strong community-leadership driving widespread support for establishment of an Eastern Shore Islands MPA. While the main purpose of APES is to oppose finfish aquaculture, something that an MPA may be able to achieve, they have not publicly declared support for an MPA; rather they will conditionally support its implementation if it meets six requirements (APES, n.d.-d). Principally, the association requires the process to be community driven, and if an MPA is to be established then it must be managed in partnership with the community. Other conditions for an MPA include that it supports and protects the livelihoods of fishermen on the Eastern Shore, supports the work of eco-tourism businesses, and that it protects the region from high impact industrial activities (e.g. open pen aquaculture, oil and gas development and marine based windfarms) (APES, n.d.-d). The association has urged Eastern Shore communities to remain open-minded and participate in ongoing conversations, so as not to miss out on opportunities for sustainable development (APES, n.d.-d).

In spite of APES position, there has not yet been broad support for the MPA at the community-level. At best, community members on the Eastern Shore may hold divided opinions

on whether an MPA should be established on the Eastern Shore. At worst, there is now strong leadership driving the opposition to the proposed MPA. AESC-PEHA are in the process of building doubt and opposition to the MPA, on the grounds that the designation process for the MPA is completely flawed (Jones, 2018). As Chuenpagdee et al. (2013, pp. 293) notes for the early phases of MPA implementation, “a divided community is not a good breeding ground for success”.

### *III. Incentives for and Constraints on Participation*

Although collaborative approaches may be legally mandated, since stakeholder participation is usually voluntary, for co-management to be successful there must be incentives for governments and communities to participate in management (Ansell & Gash, 2008). Incentives to participate in collaborative governance depends on whether stakeholders perceive that the process will yield meaningful results (Ansell & Gash, 2008). There are multiple incentives categories (e.g. economic, interpretive, knowledge, legal and participative incentives), and a high diversity of incentives increases the resilience of governance systems and increases marine governance effectiveness (Worboys et al., 2015).

The strongest incentive for community collaboration in the proposed Eastern Shore Islands MPA planning process is likely participatory incentives. Still in the early phases of implementation, DFO has created opportunities for stakeholders and the broader public to participate in discussions. There are also possible economic incentives associated with the establishment of an MPA, with opportunities to promote sustainable development in the region. Some Eastern Shore MPA proponents view the MPA as a way to enhance the inshore lobster fishery, by marketing MPA “pristine lobster”, and supporting sustainable ecotourism in the area by promoting WITAP initiatives. However, there are also economic constraints on participation,

associated with potential impacts to the fishery. MPA opposers fear that no-take regions will hurt their livelihoods, and worry about potentially losing access to fishing areas in place of finfish aquaculture, mining, marine renewables, etc. (Richardson, 2018). These fears are both understandable and legitimate, as DFO has not yet provided confirmative answers as to whether fishermen would be affected by no-take zones or whether industrial development would be allowed in an Eastern Shore Islands MPA (Hammond, 2018; Richard, 2018). The issue of incorporating permissible activities from multiple interest groups while still achieving conservation objectives is at the forefront of MPA discussions across Canada. For instance, the proposed regulations for the Laurentian Channel AOI sparked public backlash after it was revealed that oil and gas exploration and exploitation will be allowed in the majority of the marine area (World Wildlife Fund, 2017). Although DFO has pledged to work with fishermen in the Eastern Shore to design socially acceptable use zones, the department has not eliminated the possibility of a no-take zone in the MPA. This speaks to the difficulty of the current situation; the government is attempting to engage in meaningful consultation, yet is still being asked to provide explicit answers in advance of that consultation (Richardson, 2018).

*IV. Institutional Design (participatory inclusiveness, forum exclusiveness, clear ground rules, process transparency)*

Institution design refers to the basic protocols and ground rules for collaboration (Ansell & Gash, 2008). There is no national framework guiding the implementation of co-managed MPAs in Canada, and there is no legislation mandating early collaboration beyond consultation (Lloyd-Smith, 2017). However, under the *Oceans Act*, there are no barriers inhibiting potential co-governance arrangements (Lloyd-Smith, 2017). As evidenced by MPAs described earlier, co-governance arrangements can be created for *Oceans Act* MPAs through agreements,

management bodies or regulations (Lloyd-Smith, 2017). The act allows the Minister of Fisheries, Oceans and the Canadian Coast Guard to enter into agreements with any person or body (Lloyd-Smith, 2017). The government is legally required to consult with First Nations when considering implementing a protected area, and co-management arrangements have been adopted, as in the case of the Gwaii Haanas NMCAR (Enette & Alder, 2007). While there is no mandating legislation requiring governing bodies to consult affected non-indigenous communities, it is part of DFO's MPA establishment process to consult with interested and affected stakeholders on the regulatory approach and management plan.

There is a general consensus in the literature that for collaborative processes to be successful they must be open and inclusive, including a broad enough spectrum of stakeholders to mirror the issue at hand (Ansell & Gash, 2008). Weak or non-inclusive representation of stakeholders can delegitimize the process and jeopardize collaborative outcomes (Ansell & Gash, 2008). Since the announcement of the AOI, DFO has actively sought out broad participation in consultation and planning process. In forming the Eastern Shore Islands Advisory Committee, DFO offered seats to Representatives from various community organizations, including AESC-PEHA, who might be considered a troublesome stakeholder. The department has open-houses and community workshops planned for the fall and new year, to get feedback from the community on the design and eventual management of the MPA (T. Koropatnick, Pers. Comm., Oct. 25, 2018). These open meetings are to give communities a voice in discussions, and the public workshops will allow community members to provide input into the design of the MPA and reflect on potential management strategies (T. Koropatnick, Pers. Comm., Oct. 25, 2018). Broad-based inclusion is at the heart of collaborative governance, providing the opportunity for stakeholders to deliberate with one another and building policy ownership, support and

compliance (Ansell & Gash, 2008; Sale et al., 2014).

Participatory inclusiveness is also linked to the exclusiveness of the collaborative forum (Ansell & Gash, 2008). If there are not strong incentives for stakeholders to participate in collaborative planning, they may seek alternative pathways or venues to achieve their agenda (Ansell & Gash, 2008). As it stands, the most effective way for stakeholders to have a say in AOI discussions is to participate in forums designed and set-up by DFO. The MPA opposition group AESC-PEHA has done so, and APES has encouraged residents on the Eastern Shore to follow suit, framing participation as a way to make their voices heard (APES, n.d. a). DFO is leading a process that promotes participatory inclusiveness and forum exclusiveness.

Clear ground rules and transparent processes are also important design features of collaborative planning. How and why decision are made needs to be made clear to stakeholders (Sale et al., 2014). There is confusion at the level of the community about DFO's role and responsibility in the MPA implementation process. During the APES hosted community meeting, members expressed uncertainty as to who was leading the MPA establishment process, confusing DFO with Parks Canada, and relating the process to provincial protection efforts and the 100 Wild Islands campaign. There was also initial misunderstanding about the potential impact of the MPA on activities in the intertidal zone. Although DFO has since clarified that the intertidal zone is under the jurisdiction of the province, this was not immediately clarified following the announcement of the AOI, as evidenced by a speculative article published on CBC News (Withers, 2018a). It is evident that community members are unclear about the MPA implementation process and the intended outcomes of the initiative.

Transparency in the information provided and purpose of engagement is an essential design feature to facilitate trust building with stakeholders and communities (Gaymer et al.,



2014). Since the announcement of the AOI, DFO has been transparent with its objectives for the MPA implementation process. At the APES hosted community meeting, representatives from DFO distributed informational pamphlets to attendees, outlining the designation process for *Oceans Act* MPAs as well as the proposed timeline. Additionally, DFO has completed an informational newsletter to distribute at open-house events, transferring knowledge to the community. In the spirit of transparency, the department has tried to keep information on their website as up-to-date as possible, for instance, posting the dates of the upcoming open-houses (DFO, 2018b). Moreover, the ESI Advisory Committee meetings will now be open to observers, including media, as agreed upon by the Advisory Committee. Summaries and presentations from the meetings will also be posted on the federal website (T. Koropatnick, Pers. Comm., Oct. 25, 2018). Specific industry groups, such as ESFPA, have experience with DFO's fisheries consultation processes, which have been in place for several decades (Baker, 2015). However, the community at large is not accustomed to this consultative approach, and some individuals perceive that DFO, by not providing answers to no-take zones and boundaries, is not being transparent and will do what they want regardless of public opinion.

#### V. *Perceived Crisis (real or imagined)*

The perception of a crisis has been an instrumental element of previous community-led initiatives on the Eastern Shore. The threat of expropriation, loss of access, and the potential environmental and socio-economic risks associated with open pen aquaculture were all perceived by Eastern Shore communities to be crises that required urgent attention. Community members often have a greater interest in participating in conservation initiatives if they perceive there to be a deterioration in environmental conditions or a reduction in the provision of goods and services (Sale et al., 2014). Currently however, there is not a perceived crisis driving collective action to

implement an MPA on the Eastern Shore. During the APES hosted community meeting, participants were confused as to why the Eastern Shore area had been selected as a potential MPA. According to community members, since this highly natural area has already been safeguarded from aquaculture, there is no reason to implement a protected area. It also possible that the community does perceive there to be a crisis, which is that DFO is going to negatively impact livelihoods by imposing a no-take MPA in their traditional fishing areas. AESC-PEHA are now rallying Eastern Shore citizens and stakeholders to fight that crisis, and are actively opposing the proposed MPA. Co-management should emerge from a genuine problem at the community level, not as some directive or issue conceived at the national level (Chuenpagdee & Jentoft, 2007). If resource users and stakeholders need to be convinced to participate by an outsider, co-management is unlikely to be successful (Chuenpagdee & Jentoft, 2007).

#### *VI. Opportunity for Negotiation*

DFO is currently engaged in the second stage of the five-step *Oceans Act* MPA establishment process - gathering and assessing ecological and human use information and assessing the potential risk of human activities to the ecosystem (DFO, 2018a). At this early stage, there are still opportunities for negotiation on the design, implementation and management of an Eastern Shore Islands MPA. DFO has been clear that boundaries, zoning and allowable activities for the MPA have not yet been decided, and that the map published on the federal website only indicates the boundaries of the AOI study site, not the MPA, were one to be established. According to DFO, the Eastern Shore Islands Advisory Committee, the working group and public consultations will all aim to inform the design of the MPA prior to designation (T. Koropatnick, Pers. Comm., Oct. 25, 2018). The department maintains that there are no expectations for size or percentage of total area for a no-take zone, and that the department is working with the fishing

industry to minimize economic impacts while contributing to meaningful conservation (DFO, 2018a). Use of the proposed MPA by fish harvesters is being mapped out to help inform boundaries and management of the area. This process is being facilitated through SeaSketch, a web-based decision support tool for marine spatial planning that was specifically designed for non-technical users (SeaSketch, n.d.). While DFO has provided funding (via a contribution agreement) to ESFPA to support a fishermen's knowledge and use study, the project has been set up so that the association will conduct the mapping project with SeaSketch assisting with data analysis, with the intent that the association has power and control over the outputs (T. Koropatnick, Pers. Comm., Oct. 25, 2018).

It is also possible that, based on advisory processes and community consultation, an MPA in the Eastern Shore Islands would not happen. Although DFO has already invested significant time and resources into the process, the AOI is still just an MPA candidate site and no final decisions have been made (T. Koropatnick, Pers. Comm., Oct. 25, 2018). AOIs do not always become MPAs; one example of this is the Race Rocks AOI, located on the southern tip of Vancouver Island in British Columbia, which has remained dormant since its identification as an AOI in 1999 (Bailey et al., 2016).

## *VII. Common Vision*

There is currently not a common vision between Eastern Shore communities, the provincial government and the federal government for the management of the coastal and inshore waters. This may partially be attributed to contrasting visions of coastal use. For instance, the provincial government has raised concerns regarding the potential negative impacts that an MPA could have on the lobster fishery as well as future coastal economic development opportunities (Smith, 2018). The Nova Scotia Government has repeatedly warned that MPAs could harm commercial

fishing, while still strongly supporting the expansion of open pen aquaculture (McNeil, 2018; Withers, 2018b). The Premier of Nova Scotia also believes that MPAs should not restrict resource development, recently stating that he supports offshore oil and gas exploration within MPAs (McNeil, 2018). These objectives to promote industrial development do not appear to align with the values of Eastern Shore communities, given their past actions to safeguard the inshore fishery and the marine environment. Although there has not been any new open pen license granted, APES remain active on this front, staying up to date with the latest news and developments. The organization has criticized the pro-industry position of the province on these issues, insinuating the provinces' wilful misunderstanding of the relationship between the health of the marine environment and the economic industries currently supporting the region (Smith, 2018).

This issue of contrasting visions relates to the dichotomy between conservation and stewardship approaches to management (Rainville et al., 2016). The current discourse around MPAs tend to classify oceans as either being “protected” or “unprotected”, with the assumption that areas without MPAs are unprotected (Voyer, Gladstone, & Goodall, 2014). In many cases this is untrue, as is the case with the Nova Scotia inshore lobster fishery, which has taken on an active stewardship role in management of ocean resources. With regard to the impacts on fisheries, DFO expressed confidence that “lobster and other traditional fixed-gear fishing (herring gillnet, groundfish longline), dive fisheries, recreational fisheries, and Food, Social and Ceremonial (FSC) fisheries will be allowed to continue within a future Eastern Shore Islands MPA” (DFO, 2018a). In spite of this position, DFO has not yet provided reassurances to fishermen that there would not be a no-take zone in an Eastern Shore Islands MPA.

The potential loss of access to marine resources has widened the divide between coastal users

and the government. In a letter to the editor for the Chronicle Herald, a resident from Spry Harbour described feeling “insulted” by the imposition of an AOI and potential MPA on the Eastern Shores, arguing that the private landowners had been effective stewards of the islands and shorelines for generations (Gerrard, 2018). Unlike government-led conservation efforts, which tend towards protective actions, community conservation on the Eastern Shore favours stewardship approaches (Rainville, 2016).

## **6. Discussion**

### **6.1 Is a community-based co-managed MPA in the Eastern Shore Islands feasible?**

The Eastern Shores Islands AOI has been a state-driven process. Although there are opportunities for community engagement and participation, the initial stages of the process, prior to the announcement of the AOI, were not community-led. DFO has been late to engage in broad public consultation with Eastern Shore communities on the possibility of an MPA and what it could mean for them. At least some citizens, their views made clear at meetings and through local groups, seem to feel as though the MPA is being imposed on them. Even though the AOI boundaries are flexible, the public release of the regional map with proposed boundary lines mistakenly gave the impression that decisions have already been made without consulting those that would be affected by them. The basis of AESC-PEHA’s position is that DFO did not engage in adequate consultation processes, similar to APES reasoning for finfish aquaculture. As stated in AESC-PEHA’s public announcement, members in this community group perceive that the AOI has been imposed on the Eastern Shore by DFO in “preparation for an equally imposed MPA” (Jones, 2018). However, AESC-PEHA’s statement that DFO should have received “unanimous support” throughout the Eastern Shore for an AOI is not a realistic position, or even one that is mandated by MPA legislation. As DFO representatives stated in the first public

meeting, the AOI is currently just a study site and a potential location for an MPA. Yet the manner in which the department delivered this news to communities on the Eastern Shore was not indicative of an open process. Perhaps if DFO had engaged in more participatory consultations prior to the announcement of the AOI, community members would not have felt so blindsided by the announcement.

However, following the AOI designation, DFO has incorporated more elements of collaborative planning into the implementation process. In recognition of the unique coastal location of the AOI study site, DFO has taken a slightly different approach compared to other Atlantic MPAs. New to this particular site is DFO's broad community engagement strategy (T. Koropatnick, Pers. Comm., Oct. 25, 2018). This involves more open-houses and public workshops with average citizens, community groups, land owners, etc. DFO has also tried to clarify points of confusion throughout Eastern Shore communities since the announcement of the AOI. The federal website has recently been updated with a "Frequently Asked Questions" section, addressing some of the concerns expressed by community members regarding the MPA implementation process (DFO, 2018a).

DFO is open to alternative management models for an Eastern Shore Islands MPA, if there is strong interest from the community to do so (T. Koropatnick, Pers. Comm., Oct. 25, 2018). The current structure which features an Advisory Committee is not a true co-management arrangement as there is no devolution of power. However, Ansell and Gash (2008) state that advisory committees, such as the one formed by DFO, may be a form of collaborative governance if their recommendations are closely linked with outcomes of decision-making. While this could be the case for an Eastern Shore MPA, as the Advisory Committee will have a say in include proposed boundaries, zoning, and allowable activities within the MPA, it would

only be considered collaborative governance if those recommendations are actually implemented.

There are multiple preconditions on the Eastern Shore which currently facilitate a collaborative planning process. DFO has taken steps to increase participation and inclusiveness into the forum, creating multiple opportunities for stakeholders and the broader public to be involved in discussions and planning. The decision to open up the Advisory Committee meetings to observers and publicly post the minutes of the meetings on the government website will significantly increase process transparency once implemented. As it is in the early phases of planning, there is still opportunity for negotiation on the design and management of an MPA. The site is still just an AOI, and if the community overwhelmingly decides that they do not want an MPA, it seems unlikely that DFO will impose one based on its commitment to a good process coupled with the ability of Eastern Shore residents to block unwanted projects. As the federal government rolls out its MPA network planning, which will include new coastal sites across the country, it is important to get the implementation process right on the Eastern Shore.

There are also indications that co-management may already be taking place, evidenced by the use of SeaSketch as a planning tool. SeaSketch promotes cooperative science by enabling participants to add their own geo-referenced information by drawing sketches, upload their own datasets, and engage and consult with other members on discussion forums (SeaSketch, n.d.). Although it is too early to know how fishermen on the Eastern Shore have experienced the tool, there are other instances where this type of collaborative technology has effectively been used in environmental decision-making (Cravens, 2016). The precursor to SeaSketch, MarineMap, was used to aid the collaborative planning process for California's MPA network (Cravens, 2016). Participants involved in this process reported that MarineMap facilitated communication and

joint problem solving, allowed users to understand where interests were shared or diverging, and helped them to understand science criteria by which their proposals would be evaluated (Cravens, 2016). Although using SeaSketch has the potential to empower fishermen on the Eastern Shore, in order for this initiative to be successful the information provided must influence the decision-making process.

In addition to these facilitators, the analysis did indicate that there are several key barriers to be overcome to help ensure that collaborative planning for an Eastern Shore Islands MPA is successful.

## **6.2 Recommendations to overcome current barriers**

### *Trust*

First and foremost, trust must be rebuilt between the community and the federal government. The deep-seated mistrust of the government dates back 50 years, and continues to influence perceptions on current processes. The failed implementation of Ship Harbour National Park demonstrates that a flawed process can do years of lasting damage between agencies. However well intended an MPA may be, it may invoke memories of previous experiences that were unsuccessful or had repercussions for the community (Chuenpagdee et al., 2013). Stakeholders and community members must be confident that the procedure of deliberation and negotiation had integrity before committing to an unpredictable process (Ansell & Gash, 2008). Similar to the ESSIM process, DFO needs to establish trust with communities that have little or no experience engaging with them, or have only engaged with them on specific issues such as fisheries regulation. To overcome this obstacle for ESSIM, DFO developed a sense of trust through early, meaningful engagement regarding the design of the planning, and was facilitated over time through face-to-face dialogue (Flannery & Cinnéide, 2012).



Community-based conservation is a long-term process, and time is required to develop trust with communities (Kothari et al., 2013). DFO should be prepared to extend the current timeline beyond 2020 target for the MPA implementation process, in order to build trust within the community. While DFO does not want to draw out the designation process, as there is momentum to move forward, it has also maintained that a good process will not be sacrificed in order to meet national targets (T. Koropatnick, Pers. Comm., Oct. 25, 2018). Extending the designation process beyond the 2020 aspirational target could allow time to build relationships and develop trust, and could alleviate concerns that the process is moving too fast.

If it is not possible to rebuild trust, the role of bridging organizations as external facilitators becomes even more important. ENGOs have served as important bridging organizations on the Eastern Shore in the past, helping the community to organize towards a common goal. In collaborative settings, the role of these organizations cannot be over emphasized, building institutional capacity, providing funding and connecting governing authorities to other actors (e.g. community members and informal institutions) (Ramirez, 2016; Yeboah-Assiamah, Muller, & Domfeh, 2016). Similarly, ENGOs often have the experience and resources necessary to help build the capacity of local organizations, such as APES, to act as a bridging organization in planning processes.

### *Common Vision*

Emerson et al. (2012) refutes the notion of a “common vision”, whereby participants all share a set of goals or values, and suggests that a mutual understanding between participants is a more realistic element of co-management. When participants share a mutual understanding, they demonstrate the ability to “understand and respect others’ position and interests even when one might not agree” (Emerson et al., 2012, pp.14). In their current form, MPAs still represent an

inflexible concept that poses a potential barrier to successful integration with communities marine resource use patterns (Ferse et al., 2010).

In recent years, there has been considerable effort around the globe from governments and ENGOs to achieve MPA targets within the specified time frame set under the CBD (Voyer et al., 2014). Embedded in these efforts is the notion that no-take zones within MPAs are considered to be best practice for achieving protection of biological diversity (Voyer et al., 2014). That said, non-industrial extractive activities may still have their place in MPAs, providing these activities are not compromising the conservation objectives of the site. One of the greatest concerns from Eastern Shore fishermen however, is the potential loss of access to traditional fishing areas through the establishment of a no-take zone, which would prohibit all extractive activities. Although DFO has stated that the inshore lobster fishery is sustainable and is likely to continue unhindered in the MPA, an ecological risk analysis must be completed before the department will take the concept of no-take off the table. In the interim, DFO is working with fishermen to decide on the location and extent of a possible no-take zone that will deliver ecological benefits with minimal socio-economic impacts were one to be needed. At this time, discussions concerning the possibility of a no-take zone are seemingly at odds with public statements made by DFO about the sustainability of the inshore lobster fishery.

Building support within local communities for a coastal MPA requires incorporating both biological and social objectives into MPA planning. In the case of the proposed Eastern Shore Islands MPA, this may require DFO to revisit the concept of incorporating a no-take zone and acknowledge that they are not the only means of addressing issues that are of concern to communities (Voyer et al., 2014; Withers, 2018c). Incorporating both fisheries management and biodiversity protection objectives into MPA planning could result in outcomes that are more

supported by local communities. According to Voyer et al. (2014), it is often the case that opposition to MPAs is not “born out of a lack of concern for the marine environment or disregard towards the future health of marine resources but rather a different view over management priorities and the best means of achieving conservation outcomes” (Voyer et al., 2014, pp. 457). Marine planning should thus encourage synergies between biodiversity conservation and sustainable use practices; an MPA that can claim to do both may help to build local economies while promoting tourism expansion (Voyer et al., 2014).

### *Perception of a Crisis and Incentives for Participation*

Unlike previous community-initiatives on the Eastern Shore, there is no perception of a crisis to drive collective action to implement an MPA. In other instances of community-rallied movements (e.g. opposition to finfish aquaculture and Ship Harbour National Park), the community organized to fight the crisis. In this instance, there is no immediate threat to community well-being or the environment. People must first recognize that there is a problem before any solution can be accepted (Worboys et al., 2015). In the absence of a crisis, external incentives may be required to encourage community members to participate in collaborative processes. For instance, WITAP has successfully aligned conservation with economic growth with plans to develop a unique tourist destination centered around protected areas (G.P.C. Inc, 2017). A recent report regarding the commercial benefits of protected areas in Nova Scotia demonstrated that many small businesses are thriving as visitations to protected areas and surrounding communities increases (G.P.C. Inc, 2017). Although promoting economic growth alongside marine protection is not the responsibility of DFO, ENGOs could take on this role in communicating with the community that the MPA could contribute to goals beyond protection of biodiversity, such as supporting WITAPs goals as well as marketing of sustainable fisheries

products.

### *Local Leadership*

When incentives to participate are weak, prior antagonisms are high and power and resources are not equally distributed, then leadership becomes even more important (Ansell & Gash, 2008). APES has encouraged dialogue and participation; however, they are not openly in support of or in opposition to an MPA. As a member of the Eastern Shore Islands Advisory Committee, APES has stated that they will support an MPA only if the process is community driven and managed in partnership with the community (APES, n.d.-d). It may be that there is a significant portion of the community that supports the increased level of protection, but will not overtly speak their views (Worboys et al., 2015). According to Worboys et al. (2015, pp. 637), the “silent majority can often be ‘drowned out’ by the vocal minority who are highly motivated to voice their concerns”. Either DFO or ENGOs should investigate and invest in leadership potential and management capacity within the community, and encourage supporters to make an effort to voice their approval (Sale et al., 2014; Worboys et al., 2015).

## **7. Conclusions**

The Eastern Shore has a diverse history of conservation initiatives, primarily motivated by protective actions or stewardship approaches. Eastern Shore communities have proven their ability to organize and rally towards a common goal, particularly in the face of a crisis. Since the announcement of the AOI, DFO has taken some key steps to facilitate collaborative management. The broad-based public consultation approach that they have begun to put into action should help increase Eastern Shore communities’ participation in planning and decision-making. The department has also been more transparent with planning processes than has been

seen with previous planning processes, posting the dates and locations of public open-houses and workshops on the federal website. The decision to open up Advisory Committee meetings to the observers is another step which facilitated inclusivity, and should promote transparency and open-communication.

Although a community-supported MPA is possible, there are still key barriers to be overcome. These include a history of mistrust, contrasting visions for coastal management, and a lack of leadership. As the initiator of the MPA, DFO must assume responsibility in addressing these barriers, including taking time to mend past relations and build trust and communicating with communities more effectively. It would also help to have strong leadership from bridging organizations, to build capacity within the community and serve as a mediator between DFO and other agencies.

This research is particularly timely in light of the recent recommendations made to the Minister of Fisheries, Oceans and the Canadian Coast Guard to strengthen and expand collaborative governance approaches for MPAs. The Eastern Shore Islands AOI is still in the early phases of the MPA implementation process, and the dynamics of community groups and perspectives of stakeholders are constantly evolving (Appendix 1). Without addressing these barriers to co-management, it is unlikely that the MPA will have broad community support which will influence the success of its implementation or subsequent effectiveness of achieving its management goals. An MPA on the Eastern Shore, if implemented to maximize ecological benefits and minimize socio-economic costs, could greatly benefit communities. If communities were to outright reject the MPA, they may miss out on opportunities, such as keeping out unwanted industries such as finfish aquaculture, and developing ecotourism, which is much needed to revitalize the economy and incentivize younger generations to stay in the region.

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## **Appendix 1 - Additional Information**

In late October 2018, amidst growing concerns about the potential impacts of an MPA on the lobster fishery, ESFPA declared that it will not support an MPA on the Eastern Shore (ESFPA, 2018). The fishing association has now joined calls for starting the entire MPA consultation process over again (Debating the Eastern Shore Islands, 2018). ESFPA has provided four key reasons for their opposition to an MPA: (1) the process has been driven by politics and not legitimate concerns for protection, (2) the Eastern Shore marine area is already protected as a result of sustainable fishing practices, (3) the effectiveness of MPA to address environmental threats is questionable, and (4) DFO has engaged in a one-sided consultation process (ESFPA, 2018). The association has received a motion from its members to attend the next Advisory Committee meeting in opposition (ESFPA, 2018). Though this information could not be included in the main body of the paper due to time constraints, ESFPA's reasoning for their opposition to an Eastern Shore Islands MPA is consistent with the key barriers identified in the report.