

A youthful look at the future of Nova Scotia's coasts: Towards Inter-generationally
inclusive coastal management

By

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Abstract

Natural resource management initiatives often aim to manage resources for the benefit of future generations; however, the input and perceptions of the youth who make up those future generations are rarely included in the management process. When resource management initiatives fail to consult, engage and solicit the participation of youth, they are subsequently at risk of being inter-generationally blind, unimaginative, and may not meet the needs of the entire community they impact, nor the 'future generations' resources are often managed for. This research explores the extent to which Nova Scotia's coastal management initiatives have involved youth and considers the potential for better and more comprehensive youth engagement and participation moving forward. Youth perceptions of Nova Scotia's coastal management are analyzed for their potential to enhance Nova Scotia's coastal management initiatives, and the feasibility of including these perspectives in provincial coastal management is assessed. Results from this study suggest that youth perceptions have traditionally been overlooked in coastal resource management in Nova Scotia, and this represents a missed opportunity for enhancing Nova Scotia's youth retention, fostering community-youth development and, sourcing creative and youthful solutions to increasingly complex problems.

Keywords: youth engagement; coastal management; participation; decision-making; inter-generational.

“It is well known that, among those who are preoccupied with the future of protected areas, there are a great many grey heads and far too few youthful ones. I am told that under-representation of youth is a widespread phenomenon in many fields... This is, of course, a matter for concern, because without the involvement of youth, the future cannot be secured”

Nelson Mandela, from Bianco, Koss & Zischka, 2016, p. 226

Chapter 1: INTRODUCTION

1.1 Overview & broad context

It is increasingly recognized that addressing complex ecological challenges facing coastal environments will require the active participation of coastal communities and valuing of local input in the management process (Kearney, Berkes, Charles, Pinkerton & Wiber, 2007; Sims & Sinclair, 2008 Weinstein et al. 2014). Indeed, a participatory approach to coastal management is seen to enhance coastal management by recognizing important linkages between humans and the environment, taking into account diverse stakeholders and their uses of coastal areas, and valuing local input in decision-making processes (Kearney et al., 2007; Weinstein et al. 2014; Weiss Reid, 2004).

Due to the fact that participatory approaches include the input of local people and their perceptions of local management needs and opportunities, these approaches are shown to better balance economic, social and environmental concerns (Cash, 2003, Kearney et al. 2007; Weiss Reid, 2004) and inform more effective management and allocation (Cicin-Sain & Knecht, 1998; Kay & Alder, 1999). Ultimately, coastal management initiatives that involve active local participation are more likely to meet objectives, and fulfill goals (Dalton, 2005).

The international importance of local participation in resource management and decision-making is exemplified in the outcomes of the 1992 Earth Summit where alongside 178 other countries, Canada signed an agreement (Agenda 21) that states that “broad public participation in decision making was a fundamental prerequisite for the achievement of sustainable development” (UN, 1992, chapter 23.2).

Canada’s Oceans Strategy is a testament to this dedication and provides a strong

foundation for enhancing participatory governance and incorporating community values in the management of coastal areas. The Ocean Strategy sets out to give Canadians more direct involvement in policy and management decisions and calls for public participation in ocean management decision making:

Canadians have expressed a desire to be more engaged in ocean management. The Strategy offers Canadians the opportunity for greater and more direct involvement in policy and management decisions that affect their lives (...). In this way, there is a more viable planning process, associated actions are relevant to the area, and there is “on the ground” expertise and capacity for implementation, monitoring and compliance promotion (Government of Canada, 2002, p.8).

Fundamentally, the Oceans Strategy enables an ocean management and governance system that gives stakeholders and the public opportunities to take on both advisory and participatory roles in planning and decision-making processes (Government of Canada, 2002).

However, alongside this dedication towards increased public participation and community engagement in coastal decision-making processes, there lies a tendency for participatory processes to overlook and exclude youth (Amsden & VanWynsberghe, 2005; Bianco, Koss, & Zischka, 2016; Neis, Gerrard & Power, 2013; Zurba & Trimble, 2014). Indeed, included in the 1992 Earth Summit is a call for “the active participation of those affected in the decision-making and implementation process, *especially* of groups that have often been excluded such as women, youth, indigenous people and their communities” (UN, 1992, chapter 10.1).

In many cases, youth are overlooked in participatory processes because they are not recognized as users and stakeholders within socio-ecological systems (SES) (Bianco et al., 2016; Neis et al., 2013; Zurba & Trimble, 2014). According to Ostrom (2009)

SEEs are complex systems wherein resource systems, resource units, users, and governance systems are relatively inseparable and where these subsystems interact in ways that produce outcomes for the SEE (Figure 1). Ostrom emphasizes that understanding highly complex SEEs requires learning how to “dissect and harness complexity, rather than eliminate it” (Ostrom, 2009, p. 419). However, when youth are overlooked as active members of the SEE, management initiatives miss out on an entire body of knowledge relating to how young community members experience, use and envision the future of their environments. This is problematic and leads to an incomplete picture of the SEE and thus an impartial understanding of how components of the SEE interact.

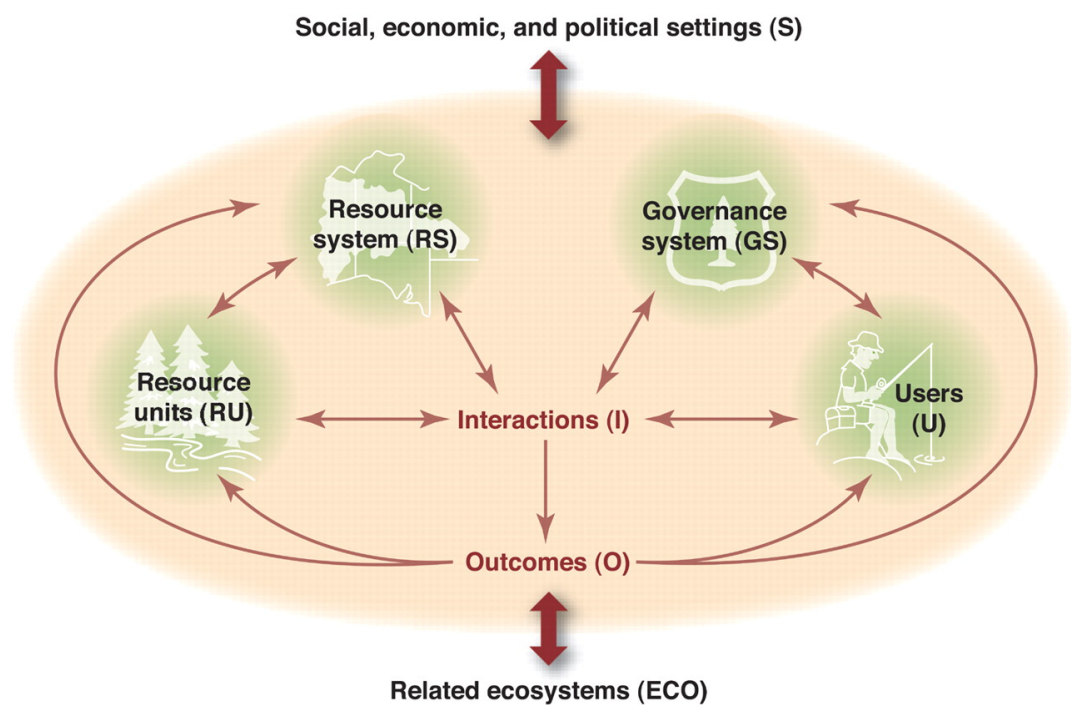


Figure 1: Sub-systems within a SEE (from Ostrom, 2009, p. 419)

In the literature, policy and management initiatives that overlook the role of youth as members of SEEs have been termed ‘inter-generationally blind resource management’

(Neis et al., 2013; Zurba & Trimble, 2014). Specifically, this concept refers to management initiatives that do not consider the ways youth interact with resources, nor monitor impacts of management initiatives on youth populations (Zurba & Trimble, 2014).

Inter-generationally blind resource management carries the risk of producing management initiatives that yield undesirable outcomes and repercussions. These outcomes include: unimaginative/uncreative management approaches (Bianco et al., 2016; Hood et al., 2011), infringing on youth's right to participate (Matthews Limb, 1998), offering youth-oriented services that do not actually meet the needs of youth (Head, 2011; Matthews & Limb, 1998), contributing to community and individual developmental gaps (Sabo, 2001; Sinclair, 2004; Zeldin, Camino & Calvert, 2003; Mohammad & Wheeler, 2001), and contributing to youth out-migration (Government of Nova Scotia 2011, Matthews & Limb, 1998). These factors are elaborated on below.

Creative & Youthful Perspectives:

Youth are often touted for their potential to bring new and creative perspectives and ideas to environmental management (Matthews and Limb 1998; Bianco et al., 2016, Hood et al. 2011). In a world where environmental degradation is happening at alarming rates and where it is increasingly recognized that innovative approaches are needed to address these issues, youthful and creative perspectives, ideas and outlooks are often seen as important tools moving forward (Hood et al. 2011). Moreover, young people are increasingly more aware and educated on environmental issues, as they (more than any other generation before them) are growing up surrounded by the realities of environmental degradation. Information about environmental issues is abundantly

accessible (through myriad forms of media), and youth are increasingly tapping into these resources. Indeed, many scholars maintain that given that youth are growing up engulfed in environmental concerns and accessing information at unprecedented rates, they are more aware and engaged in environmental care than adults tend to give them credit for (Matthews & Limb, 1998; Bianco et al., 2016).

In addition to youth contributing creative and knowledgeable input, they also have the potential to be more forward looking due to the fact that they have a vested interest in the more distant future, as they will be the ones inheriting that future (IUCN, 2014). Indeed, as Nelson Mandela at the 2014 World Parks Congress said; “the future is, after all, in the hands of youth” (IUCN, 2014). This greater stake in the more distant future contributes to youth having a more forward-looking, long-term approach to resource management.

Rights to participate:

The rights of youth to have a say in matters relating to the quality of their lives is embedded within the United Nations Convention on the Rights of the Child (UN, 1990). Article 12 from this convention states that youth are entitled to be active agents in their own lives and makes explicit reference to the rights of youth to share their opinions and to have those opinions taken into account in any matter that has an impact on them (UN, 1990). In the context of natural resource management, where management often has the intent of benefitting ‘future generations’ it is clear that members who make up those future generations (i.e. youth) have the right to have a say in the process.

Efficiency and better services:

Research shows that programs and policies that impact or are intended to benefit youth will be more efficient and effective if young people are engaged in the process (Head, 2011; Sinclair, 2004). This is because youth are the best suited to speak to their needs and desires, whereas adults may be incapable of seeing and understanding youth's realities (Matthews & Limb, 1998). As such, if young people are not engaged in developing programs and policies that are intended to impact or benefit them, those programs are more likely to 'miss the mark' in terms of meeting the needs of youth (Head, 2011). In the context of natural resource management, when initiatives are intended to benefit future generations or to serve younger populations, including youth's perspectives in the process can thus contribute to better and more effective policies and programs.

Developmental concerns:

The developmental benefits of engaging youth in decision-making processes occur at both individual and social levels (Maconachie, 2014; Powers & Tiffany, 2006; Sinclair 2004). On the individual level, youth who are engaged in social processes are shown to be more skilled and better connected to resources and communities (Ho, Clarke & Dougherty, 2015; Wilson, 2000) and to have greater self-esteem (Sabo, 2001; Sinclair, 2004). On the societal level, when youth are engaged as active members of their community, they are more likely to take on civic responsibilities and to contribute to democratic processes within their schools, municipal governments or organizations (Powers & Tiffany, 2006; Sinclair, 2004; Zeldin et al. 2003).

Furthermore, youth who are engaged feel a sense of responsibility towards their local communities, thus producing a stronger, more vibrant community atmosphere (Mohamed & Wheeler, 2001). Indeed, a report released by the Innovation Centre for

Community Youth Development shows that personal and social development of youth are essential conditions for strengthening a community's capacity to respond to problems and build its future (Mohamad & Wheeler, 2001).

Youth Retention:

It has been shown that youth who have a stake in their community are more likely to feel a sense of connection to that place, and are therefore more likely to return to, and establish themselves where they feel connected (Bjarnason & Thorlindsson, 2006; Matthews & Limb, 1998; Zeldin et al., 2007). This is particularly relevant for rural communities in Canada who are facing declining and aging populations and who are thus searching for opportunities to attract and retain youth (Duxbury, 2011). For these reasons, recognizing the role of youth within a community's SES, and thus including youth's input in planning and decision-making for coastal resources, can connect youth to their local communities and serve as a youth retention tool.

1.2 Towards Inter-Generationally inclusive resource management:

Growing awareness of the impacts of overlooking youth has instigated a call from organizations around the globe to strive for increased youth participation and engagement in natural resource management. For example, the 2003 World Youth Report states that youth must become involved in shaping their future, and in fulfilling important roles in natural resource planning and management (UN, 2003). Furthermore, in 2012, Resolution 008 was adopted at the World Conservation Congress calling for "increasing youth engagement and intergenerational partnership across and through the [International Union for the Conservation of Nature (IUCN)]" (IUCN, 2012). This was followed by the

2014 World Parks Congress that called for natural resource management to strive for meaningful youth participation and to actively develop ways for youth to participate in resource management decisions that affect their lives. At this same event, one of the streams was dedicated to “inspiring a new generation,” and was supported by a call to practice ‘reverse mentoring’ (listening to young people) in natural resource management and decision-making contexts (IUCN, 2014).

Despite these assertions and calls for increased youth engagement and participation in natural resource management at the international scale, there appears to be a gap in terms of how the desire to incorporate and value youth’s perspectives in resource management can move beyond rhetoric and can be incorporated into the vision, mission and activities of on the ground resource management initiatives (Mbeva & Mwaura, 2014). Essentially, the importance of engaging youth in natural resource management is known, effective tools and strategies for incorporating youth in management initiatives are not.

1.3 Nova Scotian Context:

Nova Scotia is a maritime province on the Atlantic coast of Canada where the physical and cultural geography is shaped by the ocean. With almost 7,500 kilometers of coastline, Nova Scotia is nearly surrounded by the sea, including the Bay of Fundy to the West, the Northumberland Strait to the North, and the Atlantic Ocean to the East. Given that 70 percent of Nova Scotia’s population lives on or near the coast (Government of Nova Scotia, 2011), it is not surprising that the Nova Scotian identity is inextricably connected to coastal environments.

Furthermore, the coast is an important economic driver for the province. Nova

Scotia's coasts act as a gateway for industries such as tourism, fisheries and aquaculture, and literally connect Nova Scotia with the rest of the world through ports, wharves and shipping routes (Government of Nova Scotia, 2011). For these reasons, it is widely recognized that the sustainable management of Nova Scotia's coastal resources is vital to the economic, environmental and social wellbeing of the province (Government of Nova Scotia, 2011).

Not unlike much of the rest of the world, Nova Scotia's coastal environments continue to face unprecedented ecological challenges and threats to their integrity (Ecology Action Centre, n.d.; Intergovernmental Oceanographic Commission, 2006; Kearney et al. 2007; Sorensen, 1997; United Nations, 1992). These include increases in coastal development, struggling working waterfronts in many coastal communities (due to changes in the provincial economy, declines in fisheries, changes in population characteristics and changes in harbour management), increasing public concern about reductions in coastal access, increases in coastal hazards such as sea level rise and storm events, deteriorating coastal water quality and, poorly understood coastal ecosystems and habitats (CBCL Limited, 2009).

Furthermore, Nova Scotia is facing social and demographic challenges. The province's population is both shrinking and aging, and this is negatively impacting provincial rates of economic growth (ONSC, 2014). Indeed, in the 2014 Report of the Nova Scotia Commission on Building Our New Economy (commonly and hereinafter referred to as the Ivany Report) the aforementioned concerns are identified as underpinnings of a 'crisis' facing the province (ONSC, 2014).

Of particular importance in the context of this study is Nova Scotia's aging

population. This issue is largely due to an increasing number of working-age youth leaving the province in search of opportunities elsewhere (Government of Nova Scotia, 2011; Jacob, 2015). Indeed, over the last twenty years an average of 1,300 more youth have left Nova Scotia than have arrived each year (Jacob, 2015). In response to this, a report from the Halifax Partnership calls youth “Nova Scotia’s defining moment” and states that, “Nova Scotia’s prosperity lies in holding onto our young people and helping them start their future here” (Jacob, 2015, p.2).

Youth retention has thus become a serious concern for the province and the government has called on communities to focus on working collaboratively with young people and integrating youth perspectives within community initiatives and decision-making processes (Jacob, 2015).

1.4 Management Problem:

Given Canada’s policy commitment towards increased participatory approaches to coastal management, the numerous issues associated with inter-generationally blind resource management, and the social (aging and shrinking population) and ecological (complex coastal challenges) context of Nova Scotia, there is strategic value in the province including youth voices in coastal management policies and decision making. In particular, there is value in Nova Scotia ensuring that coastal management policies and initiatives avoid being inter-generationally blind, and instead endeavor to develop inter-generationally inclusive coastal management.

1.5 Research objectives & questions:

This research seeks to identify how Nova Scotia can improve the process of engaging

youth in coastal management by assessing the current context and identifying recommendations for facilitating youth participation. Furthermore, this research seeks to assess how engaging youth in coastal management processes may help to overcome impacts of inter-generationally blind resource management. To address these goals, this study will answer three questions:

- What is the current and historic role of youth in coastal management in Nova Scotia?
- How do Nova Scotian youth perceive the current state and future of their provincial coastline?
- What are the strengths, weaknesses, opportunities and threats of engaging youth in provincial coastal management?

1.6 Scope & approach

This study utilizes a mixed methods approach involving both primary and secondary data. To first understand the degree to which Nova Scotia's coastal management has included youth perceptions this study reviews provincial coastal management policies and guiding documents. These include the Coastal Management Framework, the State of Our Coasts Report and the Draft Coastal Strategy. Next, this study presents a pilot investigation of a 'youthful' approach to coastal management, and considers the ways youth perceive the issues, opportunities and future management strategies of Nova Scotia's coasts. Finally, results from the policy analysis and pilot 'youthful' approach to coastal management are integrated with secondary data to inform a strengths, weaknesses, opportunities and threats (SWOT) analysis for engaging youth in Nova Scotia's coastal management. This study concludes with a set of recommendations for fostering inter-generationally inclusive coastal management in Nova Scotia.

The pilot case study is focused on youth from the South Shore region of Nova Scotia (including Lunenburg, Queens and Shelburne counties) (Figure 2). The reason for this geographic focus is threefold. Firstly, the South Shore region is experiencing demographic challenges, in particular an aging and shrinking population, that clearly showcases the situations experienced by the province as a whole (Government of Nova Scotia, 2008a). For example, in 2016 the percentage of the population above 55 years of age in Lunenburg, Queens and Shelburne County was 45, 46 and 42 percent respectively, while in the province the percentage was a comparable 45 percent (Statistics Canada, 2016). Secondly, the South Shore region is an interesting area for coastal management. Lunenburg County is considered one of the most desirable locations in the province in terms of coastal development, and other counties along Nova Scotia's south shore (Queens and Shelburne) are considered areas where increasing coastal development will occur in the future (CBCL, 2009). And thirdly, the south shore region is home to working waterfronts, has issues with public access and is an area threatened by climate change and sea level rise (CBCL, 2009). Thus, the south shore region of Nova Scotia represents a worthy case study for exploring youth perceptions of coastal management in Nova Scotia.

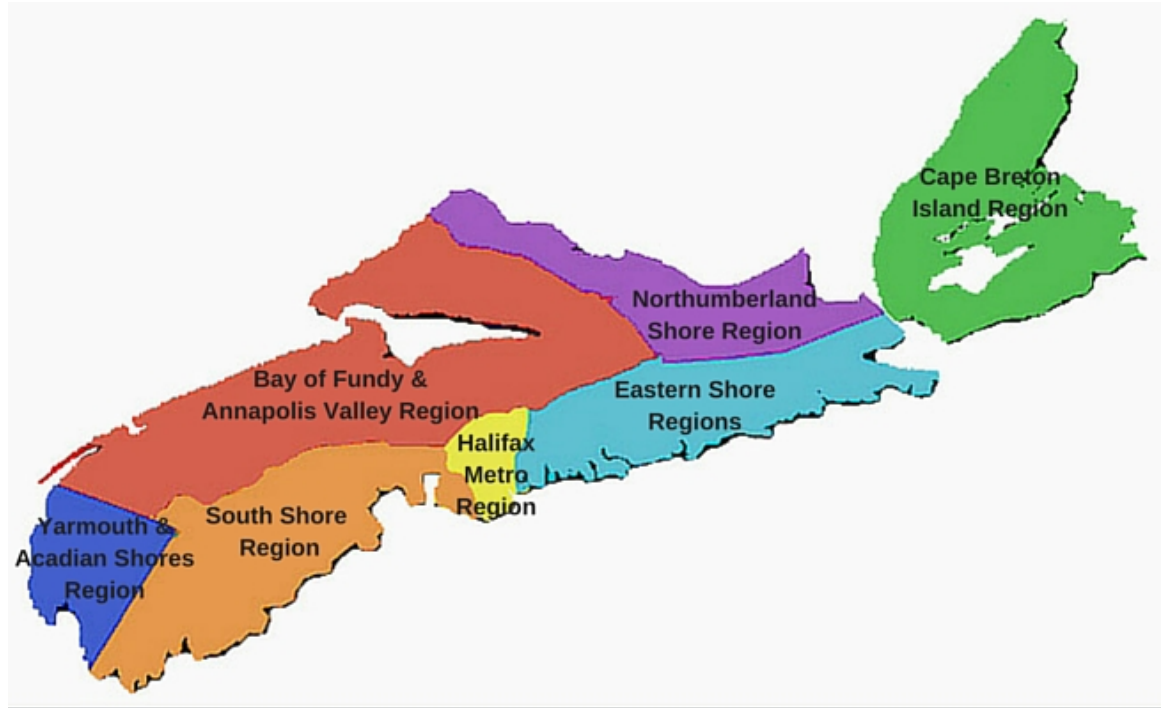


Figure 2: Map of Nova Scotia including South Shore region (includes Lunenburg, Queens and Shelburne counties)

What is meant by youth engagement?

The term ‘youth’ is fairly ambiguous. Broadly, youth can refer to any individual between childhood and adulthood, and even those terms are not particularly well defined. In general, this study takes a broad view of youth, and focuses on engaging young people in general in coastal management. However, the pilot case study focuses specifically on Nova Scotian youth aged 14-18. This age range was chosen because it represents youth who already have some background in coastal and ocean issues, as they would have already gone through some ocean curriculum material. In Nova Scotian schools, “Ocean Sciences” are taught in grade 8, and then the subject becomes an optional course

throughout high school. Nova Scotia's ocean curriculum will be elaborated on in the SWOT section of this study.

This study refers to the process of engaging youth perspectives in coastal management. The Centre of Excellence for Youth Engagement defines youth engagement as “the meaningful participation and sustained involvement of a young person in an activity with a focus outside of him or herself” (Centre of Excellence for Youth Engagement, n.d., p.1). Within this definition there is the notion of meaningful participation. However, participation is not a straightforward concept. It can involve various degrees of power sharing between youth and adults (Sinclair, 2004) and thus it is useful to further qualify the degree of participation this study refers to.

In 1992 Roger Hart adapted Arnstein's well-known ladder of citizen participation (Arnstein, 1969) to be specific to youth. The result is Hart's Ladder of Young People's Participation (Figure 3). Ranging from non-participation (rungs 1-3) to equal decision-making power, Hart describes eight degrees of participation. These include; (1) manipulation, (2) decoration, (3) tokenism, (4) assigned but informed, (5) consulted and informed, (6) adult-initiated, shared decision with young people, (7) young people-initiated and directed and, (8) young-people initiated, shared decisions with adults (Hart, 1992). It is not the intention of Hart to propose a hierarchy in participation and to imply that all participation should strive for the top rung, but rather to consider which level of participation is appropriate given the context of youth participation (Hart, 1992). For the purposes of this study, youth engagement refers to level five of Hart's ladder; consulted and informed. This level of participation seems relevant to this study as it is similar to the process of participation laid out in the Oceans Strategy wherein participation is said to involve “ocean management decisions based on shared information, on consultation with

stakeholders, and on their advisory or management participation in the planning process” (Government of Canada, 2002, p. 19). Similarly, level five of Hart’s Ladder of Young People’s Participation involves young people giving their input and advice on projects and programs, and where their input/advice is taken into consideration in ways made explicit prior to the engagement process (Hart, 1992). Similar to general (non-age specific) participation in coastal management and decision-making, this level of participation involves youth contributing to the planning and decision-making process, but ultimately, adults/coastal managers make the decisions.

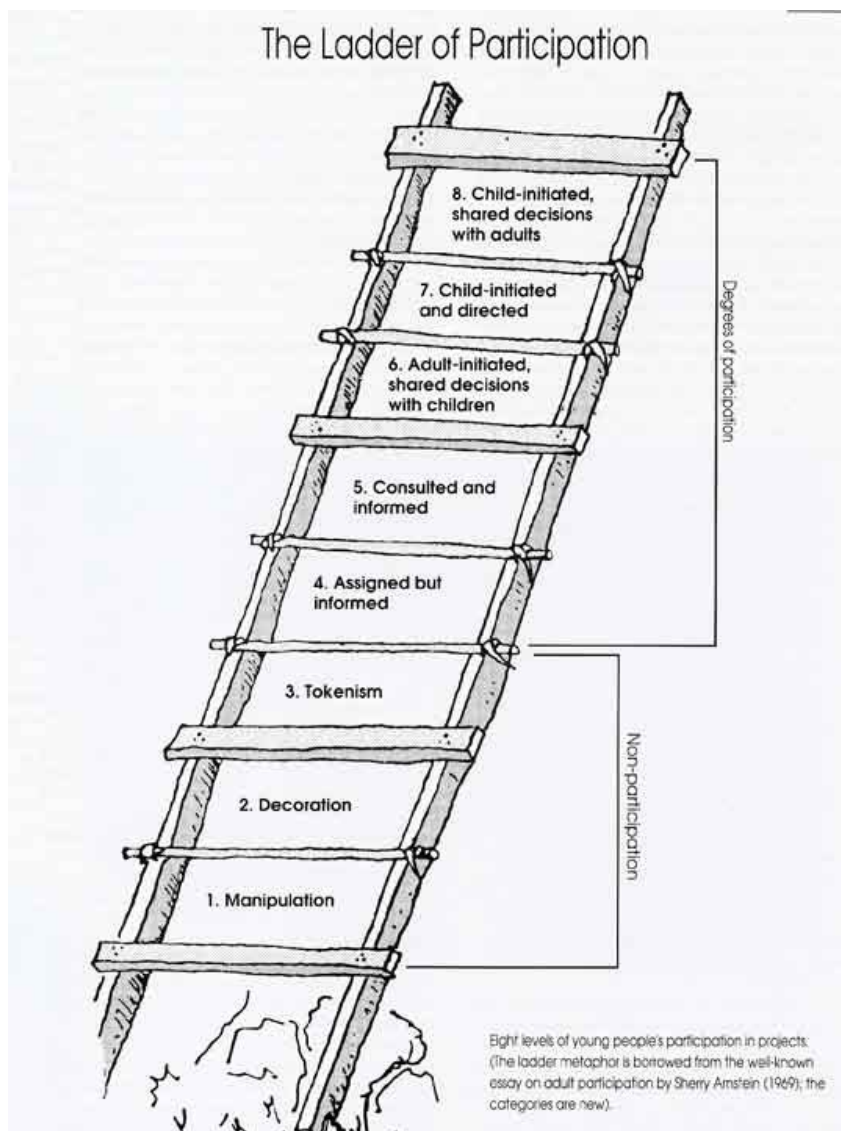


Figure 3: Hart's Ladder of Young People's Participation (1992)

Chapter 2: METHODOLOGY

2.1 Policy Analysis:

To understand the extent to which Nova Scotia's coastal management initiatives have involved youth, this study conducts a review of the three documents and policies that currently have a role in guiding Nova Scotia's coastal management. These include the Coastal Management Framework (2004), the State of our Coasts Report (2009), and the Draft Coastal Strategy (2011).

Within this policy analysis, this study considers three main indicators relating to the degree to which Nova Scotia's coastal policies may be inter-generationally blind:

(1) Does the policy consider how young Nova Scotians interact with coastal resources? In particular, is there evidence to suggest that the ways youth use and value coastal resources have been examined or considered in the policy process?

(2) Does the policy consider how coastal processes and/or coastal management impact youth populations?

(3) Is there evidence of youth participation in the development of the coastal policy? This indicator considers if youth input was solicited or their perceptions included in the development of the policy.

These indicators aid in identifying inter-generational gaps in Nova Scotia's coastal policy and thus highlight areas where coastal policy can be improved with opportunities for youth engagement.

2.2 Pilot 'Youthful' Approach: Focus group

To understand how youth perceive the current state and future of coastal management in Nova Scotia this study conducted a focus group with 14 participants, ages 14-18.

2.2.1 Design:

The focus group in this study was designed and guided by the principles of Youth Participatory Action Research (YPAR). At the core of YPAR design is the principle that youth research is undertaken *with youth* as opposed to *on youth*. This approach allows for youth-led inquiry, local empowerment, transparency, collaboration and shared decision-making (McRuer, 2017). YPAR follows five key principles; (1) the process builds capacity of youth, (2) youth perspectives are respected, (3) youth assets are mobilized, (4) youth have decision-making roles, and (5) the process leads towards community development (Driskell, 2002). In the context of this research, YPAR redefines who has the expertise to produce knowledge and emphasizes that the experiences and perceptions of youth are valuable pieces of the coastal SES, and thus important for successful management and planning as it pertains to Nova Scotia's coastal resources. In a practical sense, this means that, as much as possible, the design of focus group activities facilitated a youth-led approach. Emphasis was placed on harnessing youth's unique perceptions, experiences and ideas on the state (issues and opportunities) and future (management strategies) of Nova Scotia's coasts. In this way, the focus of this study is placed on applying a 'youthful lens' to coastal management in Nova Scotia.

As is true of most focus groups (Nyumba, Wilson, Derrick, Mukherjee, 2017), it is not the intent of this research to engage a representative sample of the broader population. Instead, this study employs a focus group to gain insight into how the experiences and values of a small subset of the population shapes their views of provincial coastal issues, opportunities, and future management strategies. Thus the intent

of this focus group is to provide some insight into how incorporating youthful values and experiences in coastal management can serve to overcome inter-generationally blind resource management.

2.2.2 Recruitment

Ethics approval to proceed with the focus group was obtained from the Dalhousie University Ethics Board (REB-2018-4479). Upon receipt of ethics approval, focus group recruitment began.

Focus group participants were recruited through a combination of online recruitment (social media), recruitment posters posted in communities along Nova Scotia's south shore, and through directly contacting youth-affiliated organizations and asking them to share the opportunity with their members.

The third approach was by far the most effective. This is not particularly surprising and points to an important concept relating to youth engagement. Research shows that young people are more likely to participate when they are supported by a set of community resources (Bianco et al. 2016; HeartWood, 2008). These resources include individuals or groups of people who believe in youth engagement, supportive adults, and a community web (HeartWood, 2008). Thus, the methodology of this study highlights an important element of fostering increased youth engagement and participation in coastal management. The process of engagement needs to be youth-appropriate and youth-focused. The notion of a youth-oriented process will be further elaborated in the SWOT analysis section of this paper.

Interested participants received an information package including an informed consent document as well as a letter to parents with further information about the study. Given that a central tenant of this study is empowering young people to make decisions

about matters impacting their lives, youth participants were able to sign-off on their own participation in the study.

2.2.3 Facilitation

Focus group discussion was organized around three main topics: (1) a youthful look at Nova Scotia's coastal issues; (2) a youthful look at Nova Scotia's coastal opportunities; and (3) a youthful look at the future of Nova Scotia's coasts (management strategies). Though the focus group was designed around the above-mentioned topics, the process was intended to be youth-led and, as such, facilitation was minimal and participants were able to guide the flow of conversation to topics they felt were important and needed to be discussed.

This type of youth-led facilitation approach allows the data to be emblematic of what participants find important, and allows conclusions to be drawn about what is important to youth based on how often a topic is discussed throughout the focus group. For example, if a particular subject is mentioned frequently throughout the focus group, it is possible to surmise that participants find that subject important in the context of coastal management. Furthermore, this type of participant-directed method is part of a YPAR approach to focus groups, wherein youth are empowered to guide the research process (Driskell, 2002; McRuer, 2017).

Throughout the focus group, participants used sticky notes and other drawing materials to doodle, make notes and support the conversation. Besides this allowing for a more active focus group experience, having different engagement methods also permitted youth to inform the data grouping and sorting process. Throughout the focus group, participants frequently used sticky notes to iteratively sort and group discussion topics and ideas. The result is a youth-led understanding of the issues, opportunities and future

management strategies for Nova Scotia's coasts. The participant-led grouping process is further discussed in section 3.2 of this study.

2.2.4 Analysis

The focus group was audio-recorded and transcribed verbatim. This qualitative data was then examined using NVivo software and an inductive content analysis approach wherein themes were identified as they emerged. These themes were then either merged with themes identified by youth during the grouping process or, if necessary, were included as additional themes. Themes were then categorized under one of three categories, issues, opportunities or future management strategies. All of the themes resulting from this analysis are presented in Chapter 3.

2.3 SWOT Analysis

To explore the possibility of engaging youth in coastal management conversations, this study employs a SWOT analysis. The SWOT analysis is informed through results from the policy analysis and focus group, as well as through a review of literature, consisting of both peer-reviewed and grey publications. In the context of this research, strengths and weaknesses are elements that are internal to the youth perspective and are identified based on what youth voices are capable of bringing to the coastal management table. Opportunities and threats are elements external to the youth perspective that indicate support or barriers to the process of engaging youth in coastal management conversations in Nova Scotia.

Chapter 3: RESULTS

3.1 Policy Analysis

Nova Scotia's history of coastal management has involved various attempts at developing a coastal strategy, each with differing degrees of participation and consultation with local communities (CBCL, 2009). Nova Scotia was one of the first provinces to consider the introduction of coastal zone management with the establishment of a Coastal Zone Management Issues Group in 1976 (CBCL, 2009). This was followed-up in the 1990's by a provincial coastal management policy titled Coastal 2000. Coastal 2000 was thought to be an innovative and integrative approach to coastal management and emphasized the role of the Provincial Government as a facilitator and promoter of community-based action (Weiss Reid, 2004). However, Coastal 2000 was never enacted and the initiative lost traction due to a lack of support (CBCL, 2009).

More recently, Nova Scotia's coastal management policies have placed high importance on the 'public policy process' (Government of Nova Scotia, 2011) and they seek to engage local communities and solicit local knowledge. To understand the extent to which youth have been involved or considered in the 'public policy process', this section reviews the documents that currently guide Nova Scotia's coastal management to assess:

(1) Does the policy consider how young Nova Scotians interact with coastal resources? In particular, is there evidence to suggest that the ways youth use and value coastal resources have been examined or considered in the policy process?

(2) Does the policy consider how coastal processes and/or coastal management impact youth populations?

(3) Is there evidence to suggest that youth participated in the development of the coastal policy? Was youth input solicited or their perceptions included in the development of the policy?

As was mentioned above, there have been multiple manifestations of provincial coastal policy. This review focuses on the three documents that are currently relevant to Nova Scotia's coastal management: the Coastal Management Framework, the State of Our Coasts Report, and the Draft Coastal Strategy.

3.1.1 Coastal Management Framework (CMF) (2005)

Nova Scotia's CMF was developed by the Provincial Ocean Network (PON), an inter-governmental organization established under the mandate of developing a long-term "made in Nova Scotia approach to coastal management" (Huston, 2007). In 2005 the PON put forward the CMF, with the intention of guiding Nova Scotia towards developing a coordinated and strategic approach to coastal and ocean management (Huston, 2007).

The CMF has as its vision to achieve "a healthy, safe and vibrant coast that sustains the highest quality of life for current and future generations" (Huston, 2007). This focus on future generations is a common thread throughout most natural resource management initiatives. In fact, although the definition of natural resource management may vary between sources, one consistent element is the focus on managing for the benefit of future generations and future use. If resources are often managed for the benefit and use of future generations, it would seem logical that the populations who make up those generations (i.e. youth) would be considered in the process. However, this is not the case in the CMF. Instead, the CMF disregards youth as active members of the

SES, and overlooks their potential to affect the future of coastal resources.

Interwoven throughout the CMF is the recognition that the successful management of Nova Scotia's coasts will require collaborative and creative approaches. One of the directional thrusts that the CMF lays out for facilitating these types of approaches is to increase the opportunity and capacity of the public to engage in coastal and ocean issues. This dedication towards increasing the opportunities and capacity for the public to engage with coastal management stems from Canada's national Oceans Strategy and from a general recognition that for coastal management to be effective, there is a need to meaningfully engage and value the perceptions of local people (Kearney et al. 2007; Weiss Reid 2004). However, neither the Oceans Strategy nor the CMF identify specific groups or demographics that should be included in engagement efforts, nor do they define who 'the public' in particular means.

This lack of clarity in terms of what is meant by 'the public' is especially important in considering the 'Strategic Activities' identified in the CMF. In that section, the CMF aspires to achieve the short-term objective that "the majority of Nova Scotians are aware of and have an understanding of Nova Scotia's coastal issues" by "identify[ing] and expand[ing] public education and awareness related to priority coastal issues" (Government of Nova Scotia, 2008b). Though it is difficult to track specific governmental activities and their intended outcomes, it would appear that youth have been excluded from this conceptualization of 'the public' and have thus been overlooked in the movement to enhance public education and awareness of coastal issues. This is evidenced by the fact that there have been no changes to ocean curriculum in Nova Scotian schools since 1998 and the current curriculum does not highlight provincial

coastal issues (OCEAN-NS, 2015). Moreover, provincial efforts aimed at enhancing public education and awareness of coastal issues, such as the development of a Coastal Research Network and the online Coast Base web portal (www.coastbase.ca), appear to be adult-focused and include no information on how these initiatives could be integrated with school curriculum or could be used to promote education and awareness of coastal issues with youth (CoastBase, n.d.).

3.1.2 State of Our Coasts Report (2009)

The State of Our Coasts Report (SOCR) is structured to provide both an overview of the current state and expected future trends for Nova Scotia's coastal areas and resources.

The report is focused around “the need to find a balance between economic and social requirements for, and demands on, coastal resources and the need to conserve the natural resources on which the economic and social systems depend” (CBCL, 2009, p.38).

The report details six priority areas for coastal management in Nova Scotia; (1) Coastal Development, (2) Working Waterfronts, (3) Coastal Access, (4) Sea Level Rise and Storm Events, (5) Coastal Water Quality, and (6) Sensitive Coastal Ecosystems and Habitats. Notably, however, young people's relationships with coastal resources are only mentioned in relation to the Coastal Development and Working Waterfronts sections.

The Coastal Development section refers to how changing housing markets and increases in coastal development along Nova Scotia's coasts may disproportionately impact youth;

When there is high demand for coastal property, prices in local markets can increase sharply...Many long-term residents worry about a future where their children can no longer afford to buy or to maintain property that was perceived to be their cultural birthright (Voluntary Planning Task Force, 2001). This

especially affects young people ... who cannot afford to live nearby. Their housing demand moves to the coastal hinterland, or further inland. As a result, the social fabric of local communities deteriorates... (CBCL, 2009, p. 107)

While this recognition of how youth are impacted by coastal management is certainly a step towards addressing the youth issue, the way this information is uncovered is problematic in that it relies on adults to observe and report on the situation of youth. In this situation, adults worry about a situation where their children might not have access to coastal areas, but youth's views of the situation are never considered. Since the 1990 UN Convention on the Rights of the Child there has been a shift away from relying on adults to observe the situation of youth and report on that situation from the adult perspective. Instead, new approaches to collecting youth data wherein youth are given opportunities to report on their own experiences, perceptions and desires have been increasingly utilized (Hart, 1997).

Furthermore, in the context of overcoming inter-generationally blind resource management, approaches that rely on adults to observe and report on the situation of youth fail to capitalize on the opportunities that inter-generationally inclusive coastal management presents. In particular, when adults observe and report on the situation of youth (as opposed to giving youth opportunities to share their own experiences), management initiatives are still at risk of encroaching on youth's right to participate in decisions affecting their lives, of developing youth-oriented services that do not actually meet the needs of youth, perpetuating community and individual developmental gaps, and contributing to youth out-migration. Rather than relying on adults to interpret the impacts of coastal development on youth, a more effective step towards fostering inter-generationally inclusive coastal management would have been to involve and incorporate youth's perspectives of coastal development in the SOCR.

The Working Waterfronts section of the SOCR describes the impacts youth out-migration has on Nova Scotia's communities and workforce. In particular, the SOCR highlights that the demographics of coastal communities are changing, as young people leave rural areas and migrate to urban cores. Importantly, this section of the SOCR highlights the inter-linked nature of youth-retention and coastal management initiatives in Nova Scotia by recognizing how youth out-migration impacts the capacity of coastal communities to maintain and sustain working waterfronts. This part of the SOCR is a clear (though implied) recognition of the fact that youth have a role in the local SES, as coastal communities rely on young people to maintain local coastal economies.

With the exception of the two sections discussed above (Coastal Development and Working Waterfronts), the SOCR does not mention youth in any other section of the report. This oversight is particularly remarkable in the context of the Coastal Access section of the policy. In this section there is specific mention of Nova Scotia's aging demographic and thus the need for management to ensure that coastal areas remain accessible to people with mobility challenges. Interestingly, however, the SOCR does not consider accessibility issues that may be relevant for youth. For example, many youth likely do not have access to a vehicle and thus may not be able to drive to coastal areas. In this situation, when coastal access points that have traditionally been reached via walking are threatened, alternatives that require driving will likely not be accessible or relevant for youth (unless they rely on others who can drive). This is important in that access to coastal areas plays a crucial role in shaping Nova Scotian culture and place-based identity (CBCL, 2009). In this context, given that youth are not taken into consideration in terms of managing coastal access, it is possible that changes in coastal access will impact youth's connection to coastal areas, and thus their place-based

identities. Thus, the lack of planning and foresight for managing youth's access to coastal areas represents a major generational gap in the SOCR.

3.1.3 Nova Scotia Draft Coastal Strategy (2011)

Nova Scotia's Draft Coastal Strategy (DCS) was released in 2011 and is guided by six principles: leadership and collaboration, sustainability, informed decision-making, accountability and transparency, diversity and, stewardship (Government of Nova Scotia, 2011). Touted as a 'public policy process', The DCS is intended to embody the government's commitment to finding new and improved ways to engage with the public. As such, the strategy is informed by the SOCR and public consultations that included input from residents of more than ten municipalities through open houses, workshops, online questionnaires and telephone surveys (Grady, 2018).

Similar to the SOCR, the DCS recognizes the impacts of youth out-migration on the provincial economy. However, unique to the DCS is the idea that coastal job creation may help to address the issue of youth out-migration. The DCS states that 'thriving working waterfronts can help young Nova Scotians stay at home' (Government of Nova Scotia, 2011, p. 11). However, the strategy fails to incorporate young peoples views and perceptions of the provincial coastal economy, and thus excludes youth's values and desires in terms of coastal economic development. This is a prime example of the potential for inter-generationally blind programs or policies to 'miss the mark' in terms of meeting the needs and desires of youth (Matthews & Limb, 1998). In this context, if young people are not engaged in the process and their values and perceptions are not included in coastal job creation, it is possible that the jobs that are intended to employ young Nova Scotians, may not actually align with youthful values and desires.

The potential for youth-focused job creation to ‘miss the mark’ is exemplified in a case study by Zurba and Trimble (2014). In this example, the authors explore the current and future role of Canadian youth in natural resource industries. Zurba and Trimble show that adults perceive forestry related jobs to be a great opportunity for youth, and industry leaders rely heavily on the assumption that youth will someday be motivated, based on the potential for economic benefit, to join the industry. In actuality however, youth have little interest in joining the industry due to the fact that industrial forestry practices do not align with their values and culture (Zurba & Trimble, 2014). This case exemplifies the importance of giving youth agency in determining their future, and in including youth’s input in the development of policies and programs that are intended to impact or benefit them.

3.1.4 Summary of Policy Analysis

This review reveals that over time, the documents guiding Nova Scotia’s coastal management have continuously placed importance on managing coasts for the benefit of future generations. However, there is little evidence to suggest that young people have actually participated or been considered in the process. Instead, youth’s role in coastal issues is seen as a future role; one that is not necessarily useful or influential while they are still youth, but that could be influential someday in the future when they become adults. This approach completely disenfranchises young people, and characterizes youth as passive, non-actors in creating their own futures (Head, 2011; Hart, 1997). In doing so, their rights as active citizens are deferred until adulthood, effectively ignoring the 1990 UN Declaration on the Rights of the Child. Youth thus become a relatively powerless subsection of society with no public voice.

Furthermore, this review finds that youth-retention and employment are recurring themes in the policies guiding provincial coastal management. Despite this, youth are still overlooked in terms of public awareness and education campaigns, and in assessing impacts of coastal management and coastal changes on youth populations. These policies thus miss out on an opportunity to build and sustain youth's place-based identities and foster greater interest and attachment to coastal economies.

In summary, this review finds that in the context of Nova Scotia, the current regime of inter-generationally blind coastal management impacts coastal policy and programs in the following four ways:

- (1) Youth are not considered stakeholders in the coastal management process and are thus not included in public education and awareness campaigns. This has implications for youth's ocean literacy and stewardship. Ultimately, this hinders the Government of Nova Scotia's goal of increasing the opportunity and capacity of the public to engage in coastal and ocean issues as an entire demographic is overlooked.
- (2) In instances where youth are mentioned in coastal policies, their recognition is predominately the result of adults observing the situation of youth, and reporting on that situation from the adult perspective. This in-turn means that any programs or policies that emerge based on these assertions are more likely to 'miss the mark' in terms of meeting the needs of youth (Head, 2011).
- (3) When policies rely on adults to observe and report on the situation of youth, they forego the opportunity for spin-off benefits of youth engagement. Namely, soliciting creative and youthful ideas for addressing coastal issues, individual and community developmental benefits, and, perhaps most

importantly in the context of Nova Scotia, the potential for youth engagement to assist with provincial youth retention goals.

- (4) In overlooking the potential for disruptions in coastal access to influence youth's place-based identities, the SOCR includes a major generational gap. An inter-generationally inclusive approach in this context would produce a more proactive plan for managing coastal access and addressing potential issues and threats to youth's place-based identity.

3.2 Youth Perspectives of the State and Future of Nova Scotia's Coasts

The following section summarizes Nova Scotia's main coastal issues, opportunities and future management strategies as identified through a focus group with 14 young Nova Scotians age 14-18. The focus group took place in Lunenburg County, but participants also travelled from Queens County to attend (Figure 2). The focus group comprised of an even split between male and female participants.

At the beginning of the focus group, the purpose of the event was explained to participants, and what would be asked of them was described. Participants were also reminded they could withdraw their participation at any time.

Flow of focus group conversation was facilitated by the researcher and was guided by three main themes: issues, opportunities and future management strategies. The focus group involved participants working individually and in small groups to share their experiences and connections with Nova Scotia's coastal areas. For example, at one stage of the focus group, participants worked in pairs and small groups to answer the questions "have you noticed any changes to the coast in recent years" and "why do you think these changes have happened". Participants used sticky notes to write down their thoughts and were given an opportunity to share their perspectives with the group. All sticky notes used throughout the focus group session were collected and included in the data analysis process.

As the conversation progressed, participants were asked to group and organize any topics that came up. For example, during the focus group participants talked about how they like to go to the beach for recreation and to relax with friends. They also spoke about how the tourism industry relies on beaches for bringing visitors to Nova Scotia.

When participants were working through the grouping and organization process, they decided to group these two discussion topics together under the theme of ‘beaches.’

After the focus group, themes identified by participants in situ as well as those identified by the researcher during the data coding process were organized under the relevant category. To aid in organizing themes under appropriate categories, the researcher assigned operational definitions for each category (Table 1). This allowed for consistency in the categorization process.

Category	Operational Definition
Issues	Major concerns related to Nova Scotia’s coasts
Opportunities	Existing opportunities for Nova Scotia to capitalize on
Future Management Strategies	Future strategies and focus areas to improve Nova Scotia’s coastal management

Table 1: Focus group categories and operational definitions. Definitions were established such that themes could be consistently organized under each category.

Tables 2 shows the resulting themes organized under each category. Coding frequency in Table 2 refers to the relative frequency that discussion topics were coded under each theme (as a percentage of themes coded in each category). The coding frequency in Table 2 gives an idea of the issues, opportunities and future management strategies that participants find the most important. Topics that participants discussed more frequently highlight potential avenues for piquing youth interest in coastal management. For example, Table 2 shows that the topics of ‘climate change’ and ‘beaches’ covered half of all conversation related to coastal issues and opportunities, respectively. Thus, designing strategies and rallying youth participation around these topics could serve to engage young people in the process. Similarly, in the case of future management strategies, participants overwhelmingly identified education and awareness building as a key avenue for improving provincial coastal management. This implies that

engaging youth in strategies that focus around education and awareness building could be an effective tool for facilitating youth involvement.

Category	Theme	Coding Frequency (% of Category)
Issues	Climate Change	41.1
	Pollution	35.7
	Coastal Development	23.2
Opportunities	Beaches	50
	Biodiversity	36.7
Future Management Strategies	Education and Awareness Building	87.5
	Connecting people and ideas	12.5

Table 2: Focus group themes organized under each category with coding frequency as a percentage of each category

Table 3 shows the frequency of each theme as a percentage of the total conversation organized from themes most frequently mentioned, to least mentioned. Table 3 shows that the two most frequently mentioned themes include education and awareness building and climate change. Indeed education and awareness building and climate change came up as crosscutting themes throughout the focus group. For example, education and awareness building was mentioned in relation to climate change, pollution, coastal development, and community participation and stewardship. Similarly, the topic of climate change was discussed in relation to education and awareness building, beaches, biodiversity, and connecting people and ideas. This result implies that regardless of if a youth engagement strategy were aimed at identifying coastal issues, opportunities, or management strategies, designing the engagement strategy around education and awareness building, or climate change would likely attract youth’s attention, and serve as a gateway towards exploring other coastal management topics.

Focus Group Themes	Coding Frequency (% of total)
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Education and Awareness Building	31.3
Climate Change	17.2
Pollution	14.9
Beaches	11.2
Coastal Development	9.7
Biodiversity	8.2
Connecting people and ideas	4.5

Table 3: Focus group themes and their frequency (percentage of total) Tables 4

(section 3.2.1), 5 (section 3.2.2.) and 5 (section 3.2.3) document the themes, key trends within each theme, and select quotations relating to each theme, that were coded under the issues, opportunities, and future management strategies categories. For each theme, key trends were identified based on all data that was coded under that theme and are intended to give some context to the theme. Select quotations were identified based on statements that capture the essence of focus group conversation or that have specific relevance to this study.

The remainder of this chapter contextualizes the major themes discussed throughout the focus group, first exploring the themes discussed under the issues category (section 3.2.1), next the opportunities category (section 3.2.2) and finally the future management strategies category (section 3.2.3). Contextualization draws on focus group data as well as supporting literature in an attempt to explain how participants and youth in general view each theme in relation to Nova Scotia’s coastal management.

The final section of this chapter strays from the issues, opportunities and future management strategies that were the core of the focus group, and discusses how results also highlight the emotional connections Nova Scotian youth have with coastal areas, and the implications these connections have for engaging youth in coastal management.

3.2.1 Issues

Table 4 demonstrates a youthful view of the issues facing Nova Scotia's coasts. Issues identified by participants in the focus group include:

Climate Change

Participants saw climate change as the main issue affecting Nova Scotia's coasts and as was previously mentioned, they viewed climate change as a crosscutting theme in coastal management. This is not overly surprising given that in Nova Scotia teachers are encouraged to incorporate climate change education into curriculum (Alber, 2018). Thus, it is likely that youth are aware of the impacts of climate change and are able to recognize it as a confounding variable impacting many other facets of Nova Scotia's coastal resources.

Participants identified a need to invest in technologies that will help demystify and mitigate the impacts of climate change as they feel that understanding the breadth of the issue is crucial for effective management. They also saw a need to model the impacts of climate change, and to use those models as a tool to educate and build awareness. One participant said; "maybe in the curriculum you could have something showing what happens if no one cares [about climate change], and then seeing what the effects are in the future" and a second followed-up with; "and maybe that links up with technology, like we can use technology to show what might happen if we don't care." This corroborates research by Wray-Lake, Flanagan & Osgood (2010) who found that in contrast to adults who tend to view technology as something that absolves individuals of their environmental responsibility, young people tend to view technology as an essential tool that goes alongside individual environmental care. Furthermore, participants'

statements show that they are concerned about the future they will inherit, and feel that their concern is not adequately reflected in others. Participants in particular saw a need for increased efforts to rally public awareness of climate change so as to encourage individuals to take responsibility and to change their behaviours.

Pollution

The issue of coastal pollution was mentioned in conjunction with urban development and urban sprawl, coastal construction, lack of proper waste disposal infrastructure, lack of public knowledge of proper waste disposal, and pollution as a deterrent to coastal recreation. Indeed participants identified pollution as a major factor affecting the way they value coastal areas. For example, they emphasized that polluted coastal areas were a major deterrent for them in terms of recreation. This was especially relevant in discussing urban coastal areas, where participants perceived of a clear connection between urban development and increased pollution in coastal waters. They thus felt that the areas they typically visit for coastal recreation would likely move further from urban areas as they felt urban development and urban sprawl would make beaches closer to urban areas more polluted.

Coastal Development

Focus group participants identified coastal development as the third most pressing issue facing Nova Scotia's coasts. Participants perceived that more people desire to live by the water, and this is resulting in increased coastal construction and subsequent erosion. The majority of focus group participants were from Lunenburg County, an area that has experienced the highest rate of coastal development compared with all other counties in Nova Scotia (CBCL, 2009). It is thus not surprising that they identified coastal development as a key issue facing coastal areas.

Participants feared the potential for coastal development to proceed unregulated, and saw a need for increased initiatives, on behalf of the provincial government, to step in and to regulate and control coastal development: “[the government] can’t just [let coastal development continue unregulated], they do have to focus on it...if [the government] steps in, it should be fine, but if we do nothing, and we continued as we are, possibly it could get [over developed].” These statements reveal that participants are concerned about the current trajectory of coastal development and see a real need for interventions to curb Nova Scotia’s current path. For example, one participant said, “I think there should be laws and stuff about being so close to the water. If you own a property that’s right on the water, you should have a duty to protect that part. And make sure, don’t destroy it, don’t build on it, because that’s really important, we don’t want to intrude on the marine life and ecosystems there.” A second participant supported this idea by saying, “maybe there should be a rule against building a certain distance from the water because some people will build too close.”

Participant’s views on the issue of coastal development are in line with other research exploring youth’s views on the environment that find that in general, youth place high priority on the protection of the environment, and on sustainable and thoughtful development (Wray-Lake et al., 2010).

Theme	Key trends	Select Quotations
Climate Change	<ul style="list-style-type: none"> • Invasive species • Impacts on native biodiversity • Impacts on fisheries 	<p>“We’re seeing a lot more green crabs-when I was catching green crab three years ago, we weren’t catching as much as this”</p> <p>“The water is getting warmer which is probably worse for the animals that are living here”</p>

		<p>“In the future with warming waters maybe we’ll have to rethink our economy”</p>
Pollution	<ul style="list-style-type: none"> • Urban sprawl • Coastal construction • Waste disposal infrastructure • Waste disposal knowledge • Deterrent to recreation • Urban vs. rural coastal area management 	<p>“Well, the water’s not really crowded (at Conrad’s Beach) because no one really wants to go swimming in it... it’s so littered with pollution”</p> <p>“(Beaches) are getting really polluted, and dirtier”</p> <p>“The government is choosing which beaches to clean-up and which to not clean up because the arm there are huge initiatives to cleaning it all up...other beaches they are just leaving garbage there...so some beaches get more polluted than others”</p> <p>“I envision a cleaner coast because more young people will come together to clean it”</p>
Coastal Development	<ul style="list-style-type: none"> • Increase in coastal development • Lack of regulations • Urban sprawl • Waste disposal infrastructure • Waste disposal knowledge 	<p>“More people are choosing to live by the water- so more construction by the water”</p> <p>“They (the government) have to focus on it...I think if they step in, it should be fine, but I think if we did nothing, and we continued as we were, possibly it could get (overdeveloped)”</p> <p>“I think there should be laws about being so close to the water. If you own a property that’s right on the water, you should have a duty to protect that part. And make sure, don’t destroy it, don’t build on it, because that’s really important, we don’t want to intrude on the marine life”</p> <p>“They could make the property tax a lot higher so that then people won’t</p>

		<p>want to take the land by the ocean as much. So we should pay higher taxes for a waterfront property”</p> <p>“Maybe there could be a rule against building a certain distance from the water because some people build too close”</p>
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Table 4: Nova Scotia's coastal issues as identified by youth. Key trends and supporting quotations are included for each theme.

3.2.2 Opportunities

Table 5 shows the assets and opportunities identified by focus group participants that Nova Scotia’s coastal management should capitalize on. These include:

Beaches

Focus group participants see Nova Scotia’s beaches as important opportunities and assets for the province. In particular, they thought Nova Scotia should focus conservation and preservation efforts on beaches in order to build and maintain the tourism industry: “I do think making beaches more enjoyable for people is a good investment because tourism is such a huge part of the economy. So if the beaches are better, then more people are going to want to go to the beach, and then more people are going to want to come to Nova Scotia.”

Participants also valued Nova Scotia’s beaches as areas where they go to socialize, for recreation and to appreciate nature. Participants contrasted Nova Scotia’s beaches with those they had visited in other parts of the world, noting that man-made beaches that were over-crowded, polluted and were not easily accessible (you had to drive a long way to get to them) were not the type of environments they thought Nova Scotia should aspire for.

Furthermore, participants recognized that with a growing population and increasing urban sprawl beaches would likely experience increasing stress. Thus, to prevent the de-naturalization of beaches (increasing man-made infrastructure, increasing pollution) there was a need for more preservation and conservation efforts. Indeed, one participant said, “[we need] more protected beaches with more monitoring of shorelines.” This is again in line with research on youth’s views of the environment, which shows that youth in general place high value on environmental protection and conservation (Wray-Lake et al., 2010).

Biodiversity

Focus group results show that participants are proud of Nova Scotia’s marine biodiversity. They compared Nova Scotia’s biodiversity to areas in other parts of the world that they believed have significantly less biodiversity and stressed the importance of ensuring Nova Scotia does not follow a similar path. This was especially emphasized in relation to fishing and the need to regulate the fishing industry so as to protect biodiversity and avoid underfishing/overfishing. One participant stated: “We need to [limit] the amount of fish [that is caught]. And keep track of the amount of fish we catch. So if there’s an abundance of one fish, than we can fish more of that fish.”

Furthermore, participants identified a crucial relationship between biodiversity and climate change. They expressed concerned about the impacts of rising sea surface temperature on native species, and want to focus attention on understanding the impacts of climate change on native biodiversity. In particular, young people in this focus group saw a need for fisheries regulations to be climate-informed and reflective of a changing environment. This corroborates research that shows youth tend to have a more forward-looking approach to resource management, as they have a vested interest in the more

distant future given that they will be the ones inheriting that future (UN, 2003). This result also shows that participants do not feel current management is forward-looking enough, and they see a need to better incorporate climate change into long term coastal management policies.

Themes	Trends	Select Quotations
Beaches	<ul style="list-style-type: none"> • Beaches as a tourism asset • Value of beaches to youth • Beaches for recreation • Beaches needing protection 	<p>“I do think making beaches more enjoyable for people is a good investment because tourism is such a huge part of the economy, right. And yeah, so if the beaches are better, than more people are going to want to go to the beach, and then more people are gonna want to come to Nova Scotia”</p> <p>“(I like our beaches because) just bring able to hang our there, and swim”...”and get fresh air”</p> <p>“(we need) more protected beaches with more monitoring of shorelines”</p>
Biodiversity	<ul style="list-style-type: none"> • Abundance of biodiversity around NS • Need to regulate and monitor fisheries • Potential impacts of climate change 	<p>“I think we should continue fisheries, as long as we’re not like disrupting the ecosystem”</p> <p>“We need to contain the amount of fish. And keep track of the amount of fish we catch. So if there’s an abundance of one fish, than we can fish more of that fish”</p>

Table 5: Nova Scotia’s coastal opportunities as identified by focus group participants. Includes trends identified within each theme, and select quotations coded under each theme.

3.2.3 Future Management Strategies

Focus group participants identified key strategies for advancing and improving Nova Scotia’s coastal management (Table 6). They identified that future management should focus on education and awareness building, and connecting communities and ideas.

Education & Awareness

Focus group participants envisioned a future where there is greater importance placed on educating and building public awareness of coastal issues and opportunities. In fact, education was a central tenant of the focus group, encompassing over 87 percent of conversations about future management strategies, and nearly one third of conversation overall. Fundamentally, participants believed that educating people about coastal issues and opportunities is the first step of the process towards better and more integrated coastal management. In particular, they saw education as a key step towards cultivating a more engaged and activated citizenship who feel responsible and empowered to care for their coastal areas. Importantly, they identified the importance of more accessible, grassroots forms of education and awareness building. For example, one focus group participant suggested “we could have free courses and things for people to educate about conservation... people can teach other people what they know, and [it would be] accessible [to everyone].”

Participants also believed that education initiatives should start earlier and should involve both formal (within the school system) and informal (community-based) forms of education. In particular as it relates to formal education and the school system, participants felt that starting in grade 8 is far too late; one focus group participant said, “That’s too late to change behaviours.” Instead, participants proposed that environmental and coastal education should start “as soon as they are old enough to understand what’s going on... like really young, maybe from the age of 5” and another participant supported this, “just so it becomes like really natural for them to understand it.”

Connecting people and ideas

Youth in this focus group saw value in bringing people together for collaborative action and inspiration. Indeed, participants unanimously agreed that a sustainable future for Nova Scotia's coasts requires communities and individuals taking responsibility and caring for coastal areas. For example, when asked if communities are important for the coasts one participant said, "I think it's good if a community comes together...if there are more people working together, it's better to help Nova Scotia's [coasts]." This notion is in line with research exploring youth's views on the environment that finds that young people tend to view environmental care as a collective responsibility (Wray-Lake et al., 2010) and thus no individual or government is wholly responsible for management, but rather is a shared obligation.

To facilitate community involvement, participants saw a need to not only promote education and awareness through formal and informal ocean education, but also to embed ocean and coastal awareness within the culture and social practices of Nova Scotia. Participants envisioned a future where communities come together for coastal events, and share ideas among diverse stakeholders. They saw this as a way not only to promote awareness and education, but also to embed ocean stewardship within Nova Scotian culture.

Youth participants also commented on what sort of supports young people need to be engaged and to share their voice in the context of coastal management. One participant said that, "currently we aren't given the opportunities to take action, but in the future I think that could be good, like to give us some say in what happens." When asked what sort of opportunities were needed, one participant raised the idea of a youth forum, and the rest of the group was in agreement: "if you could connect a lot of people online it would be better... like a youth forum or something." Focus group participants feel that in

order for an online youth forum to gain traction, they would need support from teachers and other adults “telling kids about it, and getting it into the curriculum.” Participant’s notion that youth engagement needs to be supported by adults is in line with best practices from across the globe in terms of youth engagement. For example, the HeartWood Centre for Community Youth Development (HeartWood), a leading youth engagement organization in Nova Scotia, maintains that youth-adult partnerships and supportive adults are critical for fostering meaningful youth engagement (HeartWood, 2008). In HeartWood’s approach to youth engagement, adults help youth navigate the system and give inspiration, support and guidance (HeartWood, 2008).

Interestingly, a similar ‘youth forum’ as that proposed by focus group participants was recently launched by the WWF and IUCN called Connect2Earth (<http://connect2earth.org/>). According to a statement from the IUCN Director General, connect2earth is an online forum that allows “young people to engage with environmentalists, but also for us to learn from young people. They are the future of our planet and they need a voice in the global debate – in both the corridors of power and on the ground” (IUCN, 2009). Although participants were unfamiliar with the connect2earth platform, they felt that this could be a good model for Nova Scotia to adopt to foster greater youth involvement and participation in coastal management.

The focus group content discussed above implies two important considerations for engaging youth in coastal management in Nova Scotia. Firstly, under current coastal management, participants suggest that youth feel disempowered and disengaged from the process. This supports claims made in the policy analysis section of this study where findings suggest that youth are overlooked and excluded from coastal management policies and processes in the province. Secondly, participants suggest that youth want

opportunities to have a say in what happens with Nova Scotia’s coastal resources. At the same time, participants emphasized that they need adult support in creating opportunities, and facilitating the process.

Table 6: Nova Scotia’s future coastal management strategies as identified by focus group participants. Includes trends identified within each theme, and select quotations coded under each theme.

Themes	Trends	Select Quotations
Education & Awareness Building	<ul style="list-style-type: none"> • Importance of educating at a younger age • Education is key • Embed ocean/coastal education in curriculum • Grassroots education 	<p>“Teaching kids how much they should respect the ocean and how important it is to like not litter and pick up after yourself”</p> <p>“Make it a priority, especially with kids”</p> <p>“Education is step one, to get to people who don’t care”</p> <p>“In the curriculum you could have something showing what happens if no one cares, and then seeing what the effects are in the future”</p> <p>“Teach them at an early age...As soon as they are probably old enough to understand what’s going on...I think really young, probably from the age of 5...Just so it becomes like really natural for them to understand it”</p>
Connecting people and ideas	<ul style="list-style-type: none"> • Importance of communities to coastal management • Grassroots educational and awareness movements • Community events • Online (youth) forum • 	<p>“We could maybe have free courses and things for people to educate about conservation in the water, or maybe that kind of thing. People can teach other people, what they know”</p> <p>“I think if a community comes together to help keep the seaside nice, cause if the more people working together the better to help Nova Scotia’s water”</p> <p>“Maybe online or something. If you ever connected a lot of people online, it would be better”</p> <p>“Like a youth forum or something”</p>

3.2.4 Emotional Connections

Beyond the issues, opportunities and future management strategies that were the concentration of this focus group, results also point to the deep-rooted emotional

connections that youth have to their provincial coastline and coastal resources. When participants were asked what they think of when they contemplate Nova Scotia's coasts, they used words like, vital, fragile, peaceful, calm and home. Youth's emotional connections to ocean and coastal areas is also supported by research conducted by Guest et al. (2015) who find that the majority of Nova Scotian students aged 12-18 highly value oceans and coasts.

The fact that youth place high value and feel strongly connected to coastal areas suggests that youth in Nova Scotia experience a strong sense of attachment to coastal places. Indeed Lin and Lockwood (2014) maintain that, "affective or emotional attachment...involves a deep tie to a place, to the extent that this place becomes important to one's identity" (p.76). Broadly, place attachment and place identity refer to the emotional bond between a person and place (Jorgensen & Stedman, 2001).

Strong place attachment has been shown to have a number of beneficial outcomes for communities that are relevant in the context of engaging youth in coastal management. These include, greater social and political involvement of citizens (Mesch & Manor, 1998), a greater likelihood of working together to achieve a desired outcome (such as protecting the environment) (Brown, Reed & Harris, 2002), and contributing to retention of community members, as those who identify strongly with their local community are less likely to migrate out of that place (Bjarnason & Thorlindsson, 2006).

Youth's connections to coastal areas and the implications this has in relation to engaging youth in coastal management are further discussed in the following chapter.

Chapter 4: DISCUSSION

4.0 SWOT Analysis

The following chapter integrates results from the policy analysis, ‘youthful’ approach to coastal management, and secondary literature to assess the feasibility of engaging youth in Nova Scotia’s coastal management. Results are analyzed using a SWOT analysis so as to integrate where youth’s perspectives may help to fill generational gaps in coastal policy, and to identify elements of Nova Scotia’s context that may serve as opportunities or threats to engaging youth in coastal management. In the context of this study, strengths and weaknesses are internal to the youth perspective and draw predominately on policy analysis and focus group results to determine elements of the youth perspective that may help or hinder coastal management. Opportunities and threats are external to the youth perspective and consider contextual factors that may facilitate or serve as barriers to the process of engaging youth perspectives in coastal management in Nova Scotia.

Table 7 summarizes the strengths, weaknesses, opportunities and threats identified in this study. The remainder of this chapter elaborates on the elements identified in the SWOT analysis.

STRENGTHS	WEAKNESSES
<p>Factors young people bring to the table that could enhance coastal policy and decision-making:</p> <ul style="list-style-type: none"> • Youth have unique perspectives and experiences of coastal areas and resources • Youth have complex view of the role of education as a coastal policy • Youth have strong emotional connections to Nova Scotia’s coastal areas, these connections need to be nurtured to develop a generation of marine citizens • Youth’s emotional connections to coastal areas have implications for youth retention 	<p>Factors young people bring to the table that could weaken coastal policy and decision-making:</p> <ul style="list-style-type: none"> • Ocean curriculum does not start until grade 8 in Nova Scotia curriculum, and then is an optional course in high school. Youth may not grasp the complex nature of coastal environments
OPPORTUNITIES	THREATS
<p>Opportunities for engaging youth in Nova Scotia’s coastal management include...</p> <ul style="list-style-type: none"> • Youth/youth retention is a provincial priority • Province has allocated funding to communities to foster increased youth participation • Support from international community 	<p>Threats/barriers to engaging youth in Nova Scotia’s coastal management include...</p> <ul style="list-style-type: none"> • Lack of clarity for involving communities in coastal management • Lack of capacity to facilitate a youth-oriented process

Table 7: Strengths and weaknesses of the youth perspective in coastal management, opportunities and threats/barriers to youth participation in Nova Scotia's coastal management

4.0.1 Strengths

Youthful experiences and perceptions

Youth have unique and youthful perspectives and experiences with coastal environments, which may be misinterpreted when viewed from the adult perspective. Indeed Matthews and Limb maintain that “adults have different outlooks, and are pursuing different goals, they are often unable to see, much less understand [youth’s] perspectives” (Matthews & Limb, 1998, p. 68). This notion is corroborated by focus group results that imply that youth are more likely to take on an ecocentric (nature oriented) as opposed to anthropocentric (human-oriented) view of coastal issues. For example, focus group participants identified coastal development as a key issue facing Nova Scotia’s coasts;

however, their views on the issue are exclusively related to ecological impacts of coastal development. Conversely, adult views of coastal development identified in the SOCR show that adults, though they also share some ecological concerns, are predominately worried about coastal development taking away their individual access to coastal areas and driving up real estate prices (CBCL, 2009). Results thus show that unique and youthful input in coastal management could provide an alternative point of view in the context of coastal management in Nova Scotia, one that could bring forward a new set of youthful values.

Ocean education & changing values

Focus group participants see a lack of ocean education and awareness as a key factor influencing the issues facing Nova Scotia's coasts, and a key strategy needed to capitalize on opportunities. For these reasons, youth identify ocean education and awareness-building as an important future strategy for managing coastal resources.

Importantly, however, focus group results imply that youth participants do not see ocean education as a sort of information deficit model wherein environmental knowledge leads to environmental attitude, which leads to pro-environmental behaviour (Figure 4) (Kollmus & Agyeman, 2017). Instead, participants envision ocean education and awareness building as a holistic approach, aimed not just at increasing ocean knowledge, but also, and perhaps more importantly, at embedding ocean and environmental values within daily attitudes and behaviours. This is evidenced in the emphasis focus group participants placed on starting ocean and environmental education early as this will be more effective at changing behaviour, and will better seep into everyday values and norms. For example, one participant said coastal and environmental education should

start “as soon as [young people] are old enough to understand what’s going on... so it becomes really natural for them”.



Figure 4: Information deficit model towards pro-environmental behaviour (from Kollmus & Agyeman, 2017). Information deficit models have largely been disproved as effective tools for influencing behaviour.

This notion is supported by the Food and Agriculture Organization of the UN (FAO) who suggest that by the age of 15 young people have more or less established patterns of behaviour and ways of thinking, and thus educational campaigns are much more effective at influencing behaviour and promoting environmental stewardship when they begin at a young age (FAO, 2008; Hood et al. 2011).

Thus, if Nova Scotia aspires to cultivate a culture of stewardship and enabling community action (as is identified in the DCS), there is value in heeding the suggestions of youth, and in listening to their perspectives regarding potential gaps in the education system. In this context, youth’s perspectives on the need for a broader and more encompassing approach to ocean education could play a role in realizing provincial coastal management goals.

Emotional connections and potential for marine citizenship

Marine citizenry is defined as individuals taking “greater personal responsibility for the oceans, as a policy channel to support the delivery of a healthy marine environment and enhance marine governance” (McKinley & Fletcher, 2012, p. 839). Important to the idea of marine citizenry is the notion that individuals who place more value on an environment are more likely to feel a sense of responsibility for that environment, to act as stewards, and to contribute to marine citizenry (McKinley & Fletcher, 2012). For this reason, much policy related to marine citizenry is focused around influencing public values, so as to develop public capacity and desire to become marine citizens.

In conjunction with results from Guest et al. (2015), this study shows that Nova Scotian youth already place high value on ocean and coastal environments, and thus efforts do not need to be focused on influencing youth’s values such that they appreciate coastal areas, but rather on nurturing their pre-existing values. Although nurturing values is certainly not a simple or straightforward process, there is evidence to suggest that meaningful engagement and participation can serve as a tool in this regard (Kenny, 2011). Thus, given youth’s connection to Nova Scotia’s coastal environments, increased opportunities to share their perspectives and values, and to have those perspectives taken into account in meaningful ways (i.e. to be considered in coastal management), can be seen as a tool for nurturing youth’s pre-existing coastal values, and thus nurturing youth’s potential to become a generation of active marine citizens (McKinley & Fletcher, 2012).

Emotional connections and youth retention

As was shown in the section 3.2.3, youth's emotional connections to coastal areas imply that the sense of identity of Nova Scotian youth is closely tied to coastal areas. According to Jacquet & Stedman (2014) place-based identities are important considerations for natural resource management because threats to the spaces, values and experiences that contribute to an individual's place-based identity can result in oppositional behaviour. In the context of youth's connection to Nova Scotia's coastal areas this means that management that does not take into account the ways youth value and experience those areas is at risk of unintentionally infringing on youth's place-based identity. This was the case exposed in the SOCR wherein impacts of changes in coastal access were not considered for youth populations and thus this study hypothesized that changes in coastal access could threaten youth's place-based identities.

Furthermore, youth who identify strongly with their local community are less likely to migrate out of that place (Bjarnason & Thorlindsson, 2006). This means that youth's place-based attachments are important considerations for youth retention. Specifically, there is strategic value in incorporating youth's connections to coastal areas in management processes so as to protect youth's place-based identities and subsequently contribute to province wide goals of fostering increased youth retention. Figure 5 shows how including youth's perspectives of coastal areas within coastal management initiatives can contribute to youth retention.

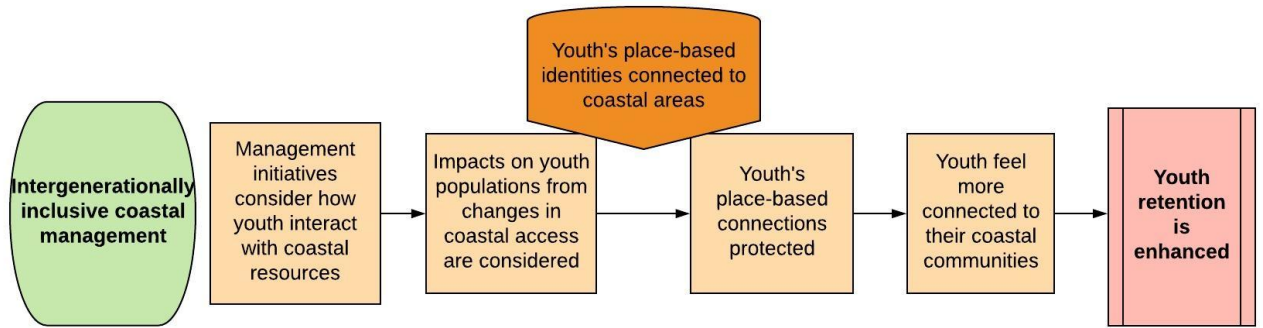


Figure 5: Proposed process of how including youth's perspectives and experiences with coastal areas in coastal management can serve as a youth retention tool.

4.0.2 Weaknesses

Low ocean literacy rates

As was previously mentioned, Nova Scotia's ocean curriculum starts in grade 8 and is an optional course throughout high school. The mandatory grade 8 oceans course focuses specifically on physical ocean processes (basin development, drainage systems), oceans technologies, distribution and productivity of marine species and applying a systems approach to ocean research. The optional high school oceans course (Oceans 11) was first implemented in 1998 and was intended to expose students to ocean-related career opportunities including aquaculture, fish harvesting, fisheries resource and coastal zone management (Government of Nova Scotia, 1998).

Recent research by Guest et al (2015) finds that despite these oceans-based curriculum courses, youth in Nova Scotia still have fairly low rates of ocean literacy. Indeed, results from Guest et al. show that the average Nova Scotian between the ages of 12 and 18 received a failing mark (47.52%) on a quiz testing their ocean knowledge. Furthermore, that same study shows that youth who have lower rates of ocean literacy are less likely to show interest in ocean related employment. This is particularly problematic given that the CMF in its endeavours to "identify and expand public education and

awareness related to priority coastal issues” appears to completely overlook youth as members of the public, and thus fails to target educational and awareness campaigns at young people. This omission has important ramifications for coastal management and represents a serious gap in Nova Scotia’s coastal policy. In particular, this policy gap means that youth’s low ocean literacy rates are perpetuated. This in turn has a negative influence on youth’s interest in ocean-related employment, and creates a disconnect between creating coastal jobs as a youth retention strategy, and youth’s actual interest and attachment to those jobs.

An inter-generationally inclusive approach to coastal management in this context would help bridge this gap, as youth would be considered in the policy process, and would thus be included in efforts to increase public education and awareness. This would subsequently influence youth’s interest in coastal and ocean related jobs, and thus improve the efficacy of coastal management strategies aimed at connecting youth to local coastal economies. As a result, inter-generationally inclusive coastal management would aid in provincial youth-retention strategies. Figure 6 shows a graphical representation of the process discussed above.

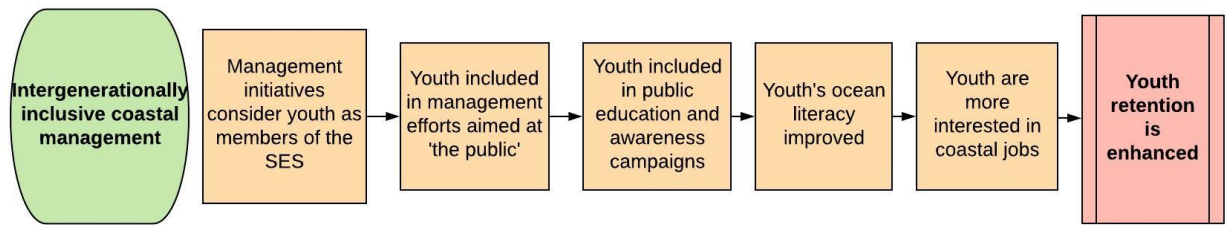


Figure 6: Proposed process of how considering youth as members of the SES in coastal management can serve as a youth retention tool

Though low rates of ocean literacy are identified as a weakness to the youth perspective, it is worthwhile to note that focus group participants want to change this trend. Participants emphasized that they are not satisfied with the current level of ocean education in school curriculum, and they would like ocean education to be incorporated in the school system much sooner than grade 8 and to continue and build over time. Given that this topic was of high priority for focus group participants, it is possible that engaging youth in the design and development of ocean education programs may be an effective engagement tool. The potential efficacy of involving youth in the design and development of educational and awareness campaigns was also proposed by Brondi et al. (2010) who suggest that “it would be useful for adolescents themselves to manage these types of initiatives. Indeed, it is important to invest in [youth] as potential protagonists of participatory processes” (p. 403).

4.0.3 Opportunities

Youth: a provincial priority

Between 2004 and 2014, Nova Scotia’s youth population reduced by on average 1.3 percent annually (ONSC, 2014). As was discussed in the policy analysis section of this

study, this trend has had drastic impacts on Nova Scotia's communities and economy (Government of Nova Scotia, 2011) and has led to an overall provincial recognition that retaining and attracting young people to the province is crucial for the provincial economy, society and culture (Jacob, 2011; ONSC, 2014). As a response to this, the One Nova Scotia Commission (ONSC) developed seven action points for advancing the economic situation of Nova Scotia. 'Our Future is Young' is one of those action points and is focused on three main themes: good careers and entrepreneurship, supporting at risk and disadvantaged youth and local partnerships (ONSC, 2014). The most relevant in terms of opportunities for youth engagement in coastal management is the latter of the identified themes, 'local partnerships'. This dedication embodies the government's commitment to foster collaboration between youth and a broad range of stakeholders and to ultimately connect youth with their local community (ONSC, 2014).

Moreover, and perhaps most importantly, the ONSC details funding mechanisms for supporting youth engagement in community initiatives. Specifically, the ONSC identifies that core funding will come from government, and it will be supported by in-kind contributions from private institutions (ONSC, 2014). More specific details of this financial support were released in the 2017-2018 provincial budget where one of the five priority investment areas includes 'youth and jobs' (Government of Nova Scotia, 2017) and outlines government's commitment towards investing in youth engagement and retention. Nova Scotia's overall recognition of the importance of youth-retention and the

economic support dedicated to facilitating youth engagement represents an opportunity for engaging youth in coastal management.

Support from international community

Engaging youth in natural resource management is widely supported on the international scale, with movements for increased youth engagement, representation and participation stemming from the UN, the IUCN, and World Wildlife Fund (WWF). For example, the UN launched their ‘Youth 2030’ strategy that aims to engage and empower young people to become agents of change in their communities (UN, n.d.). The IUCN and WWF launched an on-line community for youth to share their perceptions of the environment, and to make recommendations for future management (WWF & IUCN, n.d.). Finally, the 2014 World Parks Congress included a dedication towards inspiring the next generation of leaders and including the perceptions and experiences of youth in natural resource management conversations and planning (IUCN, 2014). Thus, Nova Scotia’s efforts to overcome inter-generationally blind resource management are well supported at the international scale. Furthermore, engaging youth in coastal management in the province is a timely topic. Nova Scotia is currently in the process of drafting a new Coastal Protection Act, and thus the opportunity to engage youth in the coastal management process is present.

4.0.4 Threats/barriers

Lack of clarity for involving communities, let alone youth

Coastal management is inherently complex, and involves many different levels of jurisdiction involving federal, provincial and municipal governments. In Nova Scotia,

this jurisdictional complexity has been identified as an impediment to community participation where unclear leadership and government's overlapping roles and responsibilities are identified as key factors influencing the efficacy of public participation in coastal management (Weiss Reid, 2004). More specifically, public participation in coastal management is hindered by government and community capacity to participate (Weiss Reid, 2004, Kearney et al. 2007), poor coordination from local level stakeholders (Weiss Reid, 2004), community advisory groups that are not recognized at the provincial scale (Weiss Reid, 2004), issues with internal community stratification (Kearney et al. 2007), no clear participatory process in coastal policy (Kearney et al. 2007) and lack of funding for sustaining and coordinating participation (Weiss Reid, 2004).

Though these issues are associated with public participation in general, it is likely that within this context, youth may be doubly disadvantaged. This is because without clear guidelines or dedications towards engaging youth at the community level, community-based participatory opportunities are likely to overlook youth as social actors. Essentially, if the process for enabling community participation in decision-making is unclear, the process for enabling youth participation from within those communities is particularly convoluted.

Lack of capacity for facilitating a youth-oriented process

As was alluded to in the methodology section of this study, young people are better able to participate when the process of engagement is intentionally designed for youth (Bagnoli & Clark, 2010; Punch, 2002). Of particular interest and importance are the relationships that support and mobilize youth engagement such as supportive adults and

youth-adult partnerships (HeartWood, 2008). Indeed one study concludes that youth-adult partnerships are critical to empowering young people. They state that “innovation and drive of young [people] to mobilize and inspire purposeful change is most effective when supported by senior marine conservation leaders” (Bianco et al. 2016, p. 235). These supportive adults and youth-adult relationships are needed to help youth navigate the system and to mediate youth access to inspiration, support and guidance (Bianco et al. 2016; HeartWood, 2008). Interestingly, focus group participants seem to be aware of the need for these partnerships. Participants articulated a desire to participate in coastal management conversations, but they felt that without the help of adults facilitating their involvement, they would continue to be ostracised from the process.

Undoubtedly, facilitating a youth-oriented process will require additional resources and investment. This may include dedication from adults to support and mentor youth, monetary contributions to facilitate youth engagement, and capacity building to facilitate youth engagement (Zeldin et al., 2007). This study shows that investment in a youth-oriented process will be necessary if Nova Scotia is to enact meaningful youth engagement in coastal management; however, the capacity needed to support a youth-friendly process may serve as a barrier in this regard.

Chapter 5: RECOMMENDATIONS

Findings from this study show that integrating youth's unique perspectives and experiences into Nova Scotia's coastal management will be a key step in improving and optimizing management initiatives that intend to benefit future generations, and more specifically coastal management policies and programs that are intended to serve or impact youth. Most importantly, inter-generationally inclusive coastal management in Nova Scotia can serve as a youth retention strategy, and thus aid in the province's efforts to rebuild its culture and economy.

Based on results from this study, this chapter provides recommendations for how Nova Scotia can incorporate youth perspectives in the management of provincial coastal areas, as part of decision-making and policy development processes. Recommendations are drawn from key elements identified in the policy analysis, focus group results, and SWOT analysis sections of this study.

5.1 Shifting Paradigms

This study shows that Nova Scotia's current coastal management is inter-generationally blind, in that it does not take into account how youth populations interact with coastal resources, nor monitor impacts of coastal management on youth populations (Zurba & Trimble, 2014). The policy review conducted in this study reveals that youth are occasionally mentioned in Nova Scotia's coastal policies and guiding documents, but their role is only seen as important in the future (when they become adults) and they are given no agency in affecting the decisions that impact them now.

There is thus a need for a shift in the way youth are viewed in Nova Scotia. This shift needs to move away from viewing youth as passive non-actors in creating their

futures, and towards becoming agents with a role in regulating SES (Brondi, Sarrica & Nancini, 2012). As was mentioned in the SWOT section of this study, this shift is happening at the international scale, with many international organizations recognizing the importance of engaging youth in natural resource management and decision-making. For example, the UN recently launched a youth delegate program where youth delegates are now included in a country's official delegation to the UN General Assembly (UN, n.d.).

At the local level, shifting towards viewing youth as important members in coastal management will involve creating public and governmental awareness of the benefits of bringing youth to the table and viewing them as community assets. Notably, by showcasing how excluding youth from coastal policies is problematic, by highlighting where including youth in coastal management could be beneficial, and by demonstrating the strengths and weaknesses of young people's perspectives, this study in part contributes to this paradigm shift.

5.2 Youth-oriented process

Simply inviting youth to participate in decision-making processes will not suffice in facilitating meaningful and effective youth engagement. As Hart (1997) said, "poor participatory methods are very effective at teaching young people how to be non-participants" (Hart, 1997, p.270). Instead, there is a need for a fundamental shift in structures to support youth participation (Bagnoli & Clark, 2010; Punch, 2002; Zeldin et al., 2003). This will require going beyond traditional adult-focused initiatives for engaging the public in coastal management (Blanchet-Cohen, Ragan & Amsden, 2003)

and developing youth-specific engagement methods that serve to harness youths' unique energy and expertise (Amsden & VanWynsberghe, 2005).

This study illuminates three important youth-oriented process considerations and structural shifts that will help ensure the process of youth engagement is effective:

- (1) Fostering youth-adult partnerships to help youth navigate the system
- (2) Focusing engagement strategies around what youth find most important.

According to results from this study these could include climate change, pollution and education and awareness building.

- (3) Engagement opportunities that draw on youth's strengths. According to this study these include; harnessing youth's insights into ocean education gaps, incorporating unique and youthful perspectives and experiences with coastal resources and coastal issues, and nurturing youth's emotional connections to coastal areas.

5.3 Recognize inter-linked and overlapping goals

The importance of youth participation in natural resource management is widely recognized at the international scale with declarations calling for increased youth participation stemming from the UN, IUCN and the World Parks Congress. At the provincial scale, youth are identified as a critical priority, with province wide recognition of the issue of youth out migration and thus the need to focus on youth retention.

This study highlights the overlapping nature of these international and provincial goals and points to the potential for integration and mutual benefit. In particular, this study highlights the potential contributions of youth participation in coastal management towards youth retention. For example, this study shows that including youth perspectives

in coastal management could help protect youth's coastal place-based identities. This in turn means that youth who feel more connected to their local communities are less likely to migrate out of those communities (Bjarnason & Thorlindsson, 2016). Furthermore, this study shows that targeting youth in provincial efforts to 'identify and expand public education and awareness related to priority coastal issues' can serve to enhance youth's ocean literacy, influence their interest in coastal and ocean-sector jobs (Guest et al., 2015), and ultimately encourage youth to stay in Nova Scotia. If these overlapping goals are recognized and acted upon, efforts can be optimized and both youth-retention and inter-generationally inclusive coastal management can be achieved.

5.4 Increase youth-specific ocean education opportunities

Despite Nova Scotian youth's deep emotional connections to ocean and coastal areas, they are still a fairly ocean illiterate subsection of society (Guest et al., 2015). This is compounded by the fact that efforts to increase public education and awareness of coastal issues at the provincial scale (as outlined in the CMF) appear to completely overlook youth. Furthermore, focus group participants were critical of Nova Scotia's ocean education system. They felt it started too late and was not comprehensive enough to enact behavioural change. On this point, participants identified a clear need for ocean and coastal education to be better integrated within both formal and informal education systems.

This study thus highlights the underlying importance of improving youth's ocean literacy in order to improve efficacy of the province's youth-retention and coastal management strategies. As such, this study recommends that the province revisit and

refocus efforts stemming from the CMF to increase public awareness and education of coastal issues such that youth are included in these efforts.

Chapter 6: CONCLUSION

Nova Scotia's coasts are an integral part of the economic, environmental and social well-being of the province. Incorporating local perceptions and values in managing the coast is widely recognized as an essential component of effective coastal management and national and provincial coastal management policies and strategies reflect this. However, this study shows that within Nova Scotia's participatory approaches to coastal management, the role of youth as members of a community's SES is often overlooked. This infringes on the rights of youth to participate in matters that affect their lives and has impacts on the efficacy of coastal management policies and programs that are intended to benefit youth, on community and youth development, and perhaps most importantly, on youth retention. To counter these impacts, this study presents a pilot study of youthful views of Nova Scotia's coasts as a tool for assessing the strengths and weaknesses youth perspectives bring to the coastal management table, as well as the opportunities and threats associated with the process of engaging youth in coastal management in the Nova Scotian context.

In exploring how current coastal policies overlook youth, in conjunction with youth's views on the issues, opportunities and future management strategies for Nova Scotia's coasts, and the associated strengths, weaknesses, opportunities and threats of these perspectives, this study brings to light a set of recommendations for Nova Scotia to effectively engage youth in coastal management. These recommendations highlight how engaging youth in coastal management creates opportunities to advance ocean literacy, improve policy making by promoting the participation of traditionally disenfranchised populations, and to adopt a more holistic approach towards youth retention. Furthermore, recommendations aim to create a system where youth are empowered as 'leaders of

today' as opposed to 'leaders of tomorrow' and where their creative and youthful ideas are mobilized to inform new approaches to dealing with environmental concerns.

While this research yields important results, further research could address several limitations present in this study. Firstly, the focus group in this study does not reflect a representative portion of the youth population in Nova Scotia. While attempts were made to situate participants' perspectives within broader research of youth's views, the relative importance of how youth view the themes identified under each category are only relevant for participants in this focus group. Thus, while this study recommends formulating engagement strategies around what youth find important, what youth find important will be dependent on their local context. As such, youth engagement strategies that target youth's interests will need to be context specific and will need to explore local youth's perspectives.

Furthermore, while the 'youthful' approach to coastal management tested in this study was primarily designed to yield results for this research, the design of the focus group was also intended to serve as a pilot for future youth engagement efforts in Nova Scotia. As such, this methodology can be applied in other contexts and results can be used to compare, for instance, how rural versus urban youth view the state and future of Nova Scotia's coasts. Understanding the perceptions of youth from specific areas of the province will further help to inform context specific inter-generationally inclusive coastal management.

References

- Alber, B. (2018). *A Lesson in Climate Change Education: Examining how Climate Change is taught in the Nova Scotia Public School Curriculum*. Retrieved from https://dalspace.library.dal.ca/bitstream/handle/10222/73871/BAlber_ESSthesis_ClimateChangeEducation_Final.pdf?sequence=2&isAllowed=y
- Amsden, J., & VanWynsberghe, R. (2005). Community mapping as a research tool with youth. *Action Research*, 3(4), 357–381. <https://doi.org/10.1177/1476750305058487>
- Arnstein, S. R. (1969). A Ladder Of Citizen Participation. *Journal of the American Planning Association*, 35(4), 216–224. <https://doi.org/10.1080/01944366908977225>
- Bagnoli, A., Clark, A. 2010. Focus groups with young people: a participatory approach to research planning. *Journal of Youth Studies*. 13(1):101-119. <http://web.b.ebscohost.com.ezproxy.library.dal.ca/ehost/pdfviewer/pdfviewer?vid=1&sid=2742d308-43e6-4d19-b7d2-132210dedaa5%40sessionmgr103>
- Bianco, M., Koss, R., & Zischka, K. (2016). Empowering emerging leaders in marine conservation: the growing swell of inspiration. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 26(S2), 225–236. <https://doi.org/10.1002/aqc.2650>
- Bjarnason, T., & Thorlindsson, T. (2006). Should I stay or should I go? Migration expectations among youth in Icelandic fishing and farming communities. *Journal of Rural Studies*, 22(3), 290–300. <https://doi.org/10.1016/j.jrurstud.2005.09.004>
- Blanchet-Cohen, N., Ragan, D., & Amsden, J. (2003). Children becoming social actors: using visual maps to understand children’s views of environmental change. *Children, Youth and Environments*, 13(2). Retrieved from https://www.colorado.edu/journals/cye/13_2/FieldReports/Mapping/Mapping.htm
- Brondi, S., Sarrica, M., & Nencini, A. (2012). Youth participation in environmental issues: A study with Italian adolescents. *Human Affairs*, 22(3), 390–404. <https://doi.org/10.2478/s13374-012-0032-1>
- Cammarota, J., & Fine, Michelle. (2008). *Revolutionizing education : Youth participatory action research in motion*. New York, NY: Routledge
- Cash, D., Clark, W., Alcock, F., Dickson, N., Eckley, N., Guston, D., Jager, J., Mitchell, R. (2003). Knowledge system for sustainable development. *PNAC*, 100(14):8086–8091.
- CBCL Limited. (2009). *Our Coast. The 2009 State of Nova Scotia’s Coast Technical Report*. Retrieved from www.gov.ns.ca/coast

- Centre of Excellence for Youth Engagement. (n.d.). Youth Engagement Toolkit.
<http://www.jcsh-cces.ca/ye-book/html5/>
- Cicin-Sain, B. & Knecht, R.W. (1998). *Integrated Coastal and Ocean management: Concepts and Practices*. Island Press: Washing, DC: 128.
- CoastBase. (n.d.). Retrieved November 26, 2018, from <http://www.coastbase.ca/>
- Dalton, T. M. (2005). Beyond biogeography: A framework for involving the public in planning of U.S. marine protected areas. *Conservation Biology*. Wiley/Blackwell (10.1111). <https://doi.org/10.1111/j.1523-1739.2005.00116.x>
- Duxbury, N. (2011). *Developing and Revitalizing Rural Communities through Arts and Culture: Creative Tourism Destination Development in Small Cities and Rural Areas*. Retrieved from <https://www.researchgate.net/publication/307631801>
- Driskell, D. (2002). *Creating better cities with children and youth: A manual for participation*. UNESCO Publishing.
- Ecology Action Centre. (n.d.). Coastal Protection Act: Protecting People, Properties, & Coastal Ecosystems. Retrieved October 10, 2018, from <https://ecologyaction.ca/issue-area/coastal-protection-act>
- Farthing, R. (2010). The politics of youthful antipolitics: Representing the “issue” of youth participation in politics. *Journal of Youth Studies*, 13(2), 181–195.
<https://doi.org/10.1080/13676260903233696>
- Food and Agricultural Organization (FAO) (2008). FAO rural youth development.
<http://www.fao.org/ruralyouth/about.html>
- Grady, C. (2018). *Coastal Protection Act: A Future Scenario Analysis of Coastal Policy in Nova Scotia*. Retrieved from [https://dalspace.library.dal.ca/bitstream/handle/10222/73873/Grady_Final Honours Thesis.pdf?sequence=1&isAllowed=y](https://dalspace.library.dal.ca/bitstream/handle/10222/73873/Grady_Final%20Honours%20Thesis.pdf?sequence=1&isAllowed=y)
- Government of Canada. (2002). *Canada's Ocean Strategy: our oceans, our future*.
<http://waves-vagues.dfo-mpo.gc.ca/Library/264675.pdf>
- Government of Nova Scotia. (1998). Oceans 11 Course Offers Opportunities. Retrieved from <https://novascotia.ca/news/release/?id=19980114003>
- Government of Nova Scotia. (2008a). *Overview of Social & Economic Trends*. Retrieved from

<https://novascotia.ca/coms/departement/backgrounders/poverty/SocialTrendsInNovaScotia-2008.pdf>

- Government of Nova Scotia. (2008b). Coastal Management Framework. Retrieved from <https://novascotia.ca/coast/>
- Government of Nova Scotia (2011). Nova Scotia Draft Coastal Strategy. www.gov.ns.ca/ourcoast
- Government of Nova Scotia. (2017). *Opportunities for Growth Government Business Plan*. Retrieved from <https://beta.novascotia.ca/sites/default/files/documents/7-813/budget-2017-2018-government-business-plan.pdf>
- Guest, H., Lotze, H. K., & Wallace, D. (2015). Youth and the sea: Ocean literacy in Nova Scotia, Canada. *Marine Policy*, 58, 98–107. <https://doi.org/10.1016/j.marpol.2015.04.007>
- Hart, R. (1992). Children's Participation: From tokenism to Citizenship. UNICEF Innocenti Essays No. 4. International Child Development Centre of UNICEF
- Hart, R. (1997) *Children's Participation: The Theory and Practice of Involving Young Citizens in Community Development and Environmental Care*. London: Earthscan, 1997. Print.
- Head, B. W. (2011). Why not ask them? Mapping and promoting youth participation. *Children and Youth Services Review*, 33(4), 541–547. <https://doi.org/10.1016/j.childyouth.2010.05.015>
- HeartWood Centre for Community Youth Development. (2008). *HeartWood's Framework for Community Youth Development: The Circle of Awesomeness*. Retrieved from <http://heartwood.ns.ca/wp-content/uploads/2013/07/AFrameworkforCommunityYouthDevelopment.pdf>
- Ho, E., Clarke, A., & Dougherty, I. (2015). Youth-led social change: Topics, engagement types, organizational types, strategies, and impacts. *Futures*, 67, 52–62. <https://doi.org/10.1016/j.futures.2015.01.006>
- Hood, R., Martin, D., McLaren, B., & Jackson, L. A. (2011). Youth views on environmental changes, the future of the environment, and stewardship: The case of a canadian coastal community. *Society and Natural Resources*, 24(6), 616–625. <https://doi.org/10.1080/08941920903484263>
- Huston, J. (2007). Nova Scotia's Proposed Coastal Management Framework. Presentation ACZISC ICOM Working Group, Halifax, Nova Scotia.

- Intergovernmental Oceanographic Commission. 2006. A Handbook for Measuring the Progress and Outcomes of Integrated Coastal and Ocean Management. IOC Manuals and Guides 43. UNESCO, Paris.
- IUCN. (2009). Press Release International Union for Conservation of Nature. Retrieved from www.nokia.com
- IUCN. (2012). *World Conservation Congress: Resolution 008: Increasing youth engagement and intergenerational partnership across and through the Union*. Retrieved from https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2012_RES_8_EN.pdf
- IUCN. (2014). World Parks Congress. Retrieved from <https://www.iucn.org/theme/protected-areas/our-work>
- Jacob, P. (2015). A Generation of Change: Youth as Nova Scotia's Defining Moment. Halifax Partnership Executive Summary. Retrieved from [http://www.halifaxpartnership.com/site/media/Parent/A Generation of Change - Youth as Nova Scotia's Defining Moment - Halifax Partnership Report - October 2015.pdf](http://www.halifaxpartnership.com/site/media/Parent/A%20Generation%20of%20Change%20-%20Youth%20as%20Nova%20Scotia%27s%20Defining%20Moment%20-%20Halifax%20Partnership%20Report%20-%20October%202015.pdf)
- Jacquet, J. B., & Stedman, R. C. (2014). The risk of social-psychological disruption as an impact of energy development and environmental change. *Journal of Environmental Planning and Management*. Routledge. <https://doi.org/10.1080/09640568.2013.820174>
- Jorgensen, B. S., & Stedman, R. C. (2001). Sense of Place as an attitude: Lakeshore owners attitudes toward their properties. *Journal of Environmental Psychology*, 21(3), 233–248. <https://doi.org/10.1006/jevp.2001.0226>
- Kay, R. & Alder, J. (1999). Coastal planning and management. Spon Press: New York, NY: 63.
- Kenny, S. (2011). Towards unsettling community development. *Community Development Journal*, 46(SUPPL. 1), i7–i19. <https://doi.org/10.1093/cdj/bsq050>
- Kearney, J., Berkes, F., Charles, A., Pinkerton, E., & Wiber, M. (2007). The role of participatory governance and community-based management in integrated coastal and ocean management in Canada. *Coastal Management*, 35(1), 79–104. <https://doi.org/10.1080/108008920750600970511>
- Kollmuss, A., & Agyeman, J. (2017). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239–260. <https://doi.org/10.1080/13504620220145401>

- Lin, C. C., & Lockwood, M. (2014). Forms and sources of place attachment: Evidence from two protected areas. *Geoforum*, 53, 74–81.
<https://doi.org/10.1016/j.geoforum.2014.02.008>
- Maconachie, R. (2014). Dispossession, exploitation or employment? Youth livelihoods and extractive industry investment in Sierra Leone. *Futures*, 62(Part A(0)), 75–82. <http://dx.doi.org/10.1016/j.futures.2013.08.003>
- Matthews, H. (2003). Children and Regeneration: Setting an Agenda for Community Participation and Integration. *Children and Society*.
<https://doi.org/10.1002/chi.745>
- Matthews, H., & Limb, M. (1998). The right to say: the development of youth councils/forums within the UK. *Area* 30(1): 66-78.
- Mbeva, K. & Mwaura, G. (2014). Value of Intergenerational Conservation Partnerships. IUCN Commission on Education and Communication. Retrieved on October 16, 2018 from <http://www.cectalksnature.org/thought-leadership-articles/importance-of-intergenerational-partnerships-highlighted-at-world-parks-congress>
- McKinley, E., & Fletcher, S. (2012). Improving marine environmental health through marine citizenship: A call for debate. *Marine Policy*, 36(3), 839–843.
<https://doi.org/10.1016/j.marpol.2011.11.001>
- McRuer, J. K. (2017). Biocultural places for transformative communities and protected areas: critical place inquiry and youth participatory action research in Colombia.. Retrieved from
<https://ecommons.usask.ca/handle/10388/8041>
- Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. *Environment and Behavior*, 30(4), 504–519.
<https://doi.org/10.1177/001391659803000405>
- Mohamed, I., & Wheeler, W. (2001). *Broadening the Bounds of Youth Development: Youth as Engaged Citizens*. Retrieved from
<https://files.eric.ed.gov/fulltext/ED459089.pdf>
- Neis, B., Gerrard, S., & Power, N. G. (2013). Women and children first: The gendered and generational socialecology of smaller-scale fisheries in newfoundland and labrador and northern Norway. *Ecology and Society*, 18(4), art64.
<https://doi.org/10.5751/ES-06010-180464>
- Nyumba, T., Wilson, K., Derrick, C., Mukherjee, N. (2017). The use of focus group discussion methodology: insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9, 20-32. DOI: 10.1111/2041-210X.12860

- Oceans and Coasts Education Awareness Network Society-Nova Scotia (OCEAN-NS). (2015). Exploring Ocean Career Pathways in Nova Scotia. Retrieved from http://iore.ca/wp-content/uploads/2016/11/OCEANS-NS_Exploring-Ocean-Career-Pathways_final_May4.pdf
- One Nova Scotia Commission (ONSC). (2014). *The Report of the Nova Scotia Commission on Building Our New Economy*. Retrieved from <https://onens.ca/img/now-or-never.pdf>
- Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. *Science*. American Association for the Advancement of Science. <https://doi.org/10.1126/science.1172133>
- Powers, J., & Tiffany, J. (2006). Engaging youth in participatory research and evaluation. *Journal of Public Health Management and Practice*, 12(Suppl. 6), S79–S87.
- Punch, S. 2002. Research with Children. *Childhood*, 9(3), 321–341. <https://doi.org/10.1177/0907568202009003005>
- Sabo, K. (2001). The benefits of participatory evaluation for children and youth. *Participatory learning and action (PLA Notes)*. 42:1-4.
- Sims, L., & Sinclair, J. (2008). Learning through participatory resource management programs: Case studies from Costa Rica. *Adult Education Quarterly*, 58(2), 151–168. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.dal.ca/ehost/pdfviewer/pdfviewer?vid=1&sid=ebae0beb-214f-4473-ad97-22d982641068%40pdc-v-sessmgr05>
- Sinclair, R. (2004). Participation in practice: making it meaningful, effective and sustainable. *Children and society*. 18: 106-118. DOI: 10.1002/CHI.817
- Sorensen, J. (1997). National and international efforts at integrated coastal management: Definitions, achievements, and lessons. *Coastal Management*. 25 (1): 3-41.
- Statistics Canada. (2016). *2016 Census Profile*. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2016/dppd/prof/details/page.cfm?Lang=E&Geo1=PR&Code1=12&Geo2=PR&Code2=01&Data=Count&SearchText=NovaScotia&SearchType=Begins&SearchPR=01&B1=All&TABID=>
- United Nations (UN). (1990). Human Rights Commission: Convention on the Rights of the Child. Retrieved October 17, 2018, from <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>

- United Nations (UN). (1992). Agenda 21. UN Division for Sustainable Development. Retrieved on September 1, 2018 from <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.html>
- United Nations (UN). (2003). *World Youth Report 2003: The Global Situation of Young People*. United Nations. [https://doi.org/ISBN 92-1-130228-5](https://doi.org/ISBN%2092-1-130228-5)
- United Nations (UN). (n.d.). Youth 2030: The UN Youth Strategy - Office of the Secretary-General's Envoy on Youth. Retrieved October 30, 2018, from <https://www.un.org/youthenvoy/youth-un/>
- Weinstein, M. P., Baird, R. C., Conover, D. O., Gross, M., Keulartz, J., Loomis, D. K., ... Van Der Windt, H. J. (2007). Managing coastal resources in the 21st century. *Frontiers in Ecology and the Environment*. John Wiley & Sons, Ltd. [https://doi.org/10.1890/1540-9295\(2007\)5\[43:MCRITS\]2.0.CO;2](https://doi.org/10.1890/1540-9295(2007)5[43:MCRITS]2.0.CO;2)
- Weiss Reid, J. (2004). Researching the Role of Communities in Integrated Coastal Management in Nova Scotia. *Coastal Management*, (December).
- Wilson, J. (2000). Volunteering. *Annual Review of Sociology*, 26, 215–240.
- World Wildlife Fund (WWF), & International Union for Conservation of Nature (IUCN). (n.d.). WWF and IUCN launch new green on-line community for youth, supported by Nokia | IUCN. Retrieved October 30, 2018, from <https://www.iucn.org/content/wwf-and-iucn-launch-new-green-line-community-youth-supported-nokia>
- Wray-Lake, L., Flanagan, C. A., & Osgood, D. W. (2010). Examining trends in adolescent environmental attitudes, beliefs, and behaviors across three decades. *Environment and Behavior*, 42(1), 61–85. <https://doi.org/10.1177/0013916509335163>
- Zeldin, S., Camino, L., Calvert, M. (2003). Toward an understanding of youth in community governance: policy priorities and research directions. *Social Policy Report*. 17(3); 1-20
- Zurba, M., & Trimble, M. (2014). Youth as the inheritors of collaboration: Crises and factors that influence participation of the next generation in natural resource management. *Environmental Science and Policy*, 42, 78–87. <https://doi.org/10.1016/j.envsci.2014.05.009>