Ecology Action Centre final report

Integrated coastal zone management in the Bay of Fundy: Implications for tidal power

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1. Introduction

*1.1. Rationale for proje*ct

The importance of the Bay of Fundy to Nova Scotia transcends its size. The Bay is a highly productive system that supports a range of economic activities in adjacent communities and in the region. Furthermore, the Bay of Fundy exerts a powerful emotion connection on residents and visitors alike. The Bay of Fundy and its enormous tides is integral to Nova Scotia's identify.

Given the ecological, economic, and cultural significance of the Bay of Fundy, the potential for tidal power development is inevitably a catalyst for discussion about what kinds of new activities might be desirable in the Bay of Fundy and how they might co-exist with existing activities and uses. Interest in managing Nova Scotia's coastal lands and waters has only increased since the expert panel conducting an environmental assessment for the proposed White Point quarry and marine terminal recommended the province of Nova Scotia develop a comprehensive coastal management policy as soon as possible.

The Panel recommendation, the emerging tidal power technologies, and the Strategic Environmental Assessment process provide an opportunity to consider how integrated coastal management might look in the Bay of Fundy and how communities can engage meaningfully in this type of decision making. It is an indication of the importance of the Bay of Fundy that there have been many past initiatives by community groups, fishing organizations, and governments to better understand and better manage the Bay of Fundy

Examples of past integrated management initiatives include: Upper Bay of Fundy Pilot Management Plan, Annapolis Basin Clam Management Board, Bay of Fundy Fisheries Council, Southwest New Brunswick Integrated Planning Process, Sustainable Communities Initiative, and the Minas Basin Working Group. Reviewing these past examples can provide insights into what works in integrated management and what are the challenges. It can also help understand how potential new activities such as tidal power can take place within the context of integrated coastal zone management.

After all the Tidal Energy Background Study prepared by Jacques Whitford for the ongoing Fundy Tidal Energy SEA (Strategic Environmental Assessment) concludes that

"Any energy extraction development in the Bay of Fundy needs to be in conformity with an established and comprehensive coastal zone management policy in each province. (In this connection, the contemporary view is that the coastal zone extends landward beyond the high water mark to include estuaries and the rivers that empty directly into the marine environment. This view underlies both Canada's Oceans Act and the former Coastal 2000 policy in Nova Scotia). Where such a policy is lacking or incomplete, completion and implementation should be a high priority in order that a policy vacuum does not impede progress"

1,2. Ecology Action Centre involve*ment*

The Ecology Action Centre (EAC) is a vital and independent voice for environmental sustainability in Nova Scotia. We envision a society in Nova Scotia that respects and protects nature and provides environmentally and economically sustainable solutions for its citizens. The EAC, founded in 1971, grew out of a reading course at Dalhousie University entitled Ecology and Action. In the early days we launched Nova Scotia's first recycling program; now the province boasts one of the highest waste diversion rates in Canada. Today, the EAC has approximately 1,400 members, hundreds of volunteers, project funding valued at $1 million from over 40 different funding agencies, a successful capital campaign, and an excellent media profile.

Some of our Recent Conservation Successes

- Conserving 300 acres of working farm land in Hants County.
- Protecting and restoring over 30 hectares of ecologically significant Bay of Fundy salt marshes at Cheverie Creek.
- Initiating and delivering the Halifax Regional Municipality's by-law program that restricts the cosmetic use of pesticides; cutting the number of pesticide permits by 80% since 2004.
- Successfully advocating for the protection of 25,000 acres of wilderness since 2004.
- Hosting the first International Deep Water Coral Symposium, and advocating for coral protection in Canadian waters.
- Persuading Nova Scotia's Department of Natural Resources to change silviculture regulations to make it easier for woodlot owners to nurture healthy Acadian forests.
- Calling successfully for the province to create an energy efficiency agency, Conserve Nova Scotia.

The EAC's Coastal Issues Committee requested participant funding from the SEA process to explore issues and opportunities around public engagement for integrated management in the Bay of Fundy. We did this through literature review, key informant interview, and focus group discussions. We are also playing an ongoing role sharing information and analysis with the public, media, environmental, coastal, and energy issues networks, and by holding a seat on the Tidal Energy Stakeholder Round Table.

We had initially foreseen that we would play a role in convening public information sessions about tidal power in smaller communities around the Bay of Fundy We quickly realized that other institutions like Clean Annapolis River Project, Bay of Fundy Marine Resource Centre, and Nova Scotia Environmental Network, as well as the SEA process itself are organizing a number of community consultations. We decided instead to collaborate by promoting and attending their workshops, and also to organize teleconference calls and email discussions rather than host public meetings.

1.3 Methodology

The geographic scope of the research and review project is past integrated management/public engagement processes around the entire Bay of Fundy. However, the main emphasis was project on the Nova Scotia side of the Bay of Fundy especially the Minas Basin and Digby area. There have been five stages in the completion of this project.

Step 1: Identifying and leaning more about past integrated management initiatives in Bay of Fundy.

- Reviewed past reports on Integrated Management in Bay of Fundy. Identified key initatives and prepared a list of questions related to success factors and challenges of past integrated management initiatives (mid October 2007).
- Participated in teleconference on community engagement organized by the Bay of Fundy Marine Resource Centre (3rd week of October)

Step 2:

- Interviewed eight representatives of past and ongoing integrated management initiatives (Last two weeks of October/ early November)

Step 3:

- Data Analysis and preparation of Interim report. (Delivered December 2007

Step 4:

- Feedback on interim report. Report was circulated electronically to fishing, environmental and community stakeholders in Digby area and Minas shore.
- Focus group discussion with Fundy Fixed Council Member (February 6th, 2008). Asked specifically about opportunities for using lessons learned from past integrated management to improve process and implementation in the future.

Sep 5

- Preparation of Final Report, (Submitted February 18th, 2008)

2. What is ICZM?

There are as many definitions of ICZM as there are projects that call themselves by this term. It's often easiest to identify a few defining characteristics that come up often when discussing ICZM.

- ICZM seeks a balance between the objectives of stakeholders, For example, Between those dependent on the coastal area for their livelihoods and those with an interest in areas of cultural and archaeological significance, ecology and habitat

- An ICZM plan seeks to involve as many stakeholders and as many issues as possible in the decision process and in formation of policies for equitable distribution of space and resources in the coastal environment.
- Resource development and other coastal zone activities should be based on ecologically sound integrated coastal planning and management
- ICZM is a process of empowerment leading to democratic decision making and better resource management. It is about changing power dynamics and letting local resource users take the lead
- ICZM is a way to incorporate science and sound management principles to provide a guiding framework around resource management decision making
- ICZM is holistic. It's overarching vision is the ecological, economic, cultural and social well being of a particular ecosystem..

3. Why is Bay of Fundy suitable for ICZM?

The Bay of Fundy has long been of great economic, ecological and scientific importance. There have been discussions about how to harness the Bay's tidal flows for generating electricity for decades. There is also a great deal of interest (and many unknowns) about the unique ecological relationships in the Bay its marine and coastal resources. .The Bay of Fundy is a dynamic, highly productive and ecologically diverse coastal ecosystem with an abundance of valuable renewable resources, and many resource dependent communities and users.

Concern about how various uses and activities co-exist within the Bayof Fundy predate discussions about tidal power. Dyer (2005) felt that the spatial isolation, unique ecosystem, and livelihood patterns of the Bay's inhabitants made the upper Bay of Fundy particularly suited for integrated management.

BOFEP (2008) indicate that worrisome downward trends in fish stocks and other wildlife species merit more research and an attempt to manage resources through integrated coastal zone management.

Kearney (2005) thinks that the level of local engagement in resource management as wel as the urgent need to restore depleted fish stocks make the Bay of Fundy a prime stop to integrated coastal zone management.

Aldous (2007) felt that increasing local conflicts between resource users, especially around new resource activities makes it imperative to set up an ICZM body to figure out how to make decisions about potentially competing uses.

4. Past and ongoing ICZM efforts in the Bay of Fundy

All research respondents stated clearly that they do not feel there are any actual examples of genuine integrated coastal zone management in the Bay of Fundy. They all felt that some of the initiatives they have been or are involved with demonstrate some of the

characteristics, opportunities, and difficulties associated with integrated coastal zone management. As such, they help in better understanding the Integrated Coastal Zone management process. In this paper, all the examples, however incomplete, will be referred to as ICZM initiatives for the sake of consistency..

The basic elements of all the examples discussed are similar: and include:

- Bringing stakeholders together in a safe space
- Building relationships between stakeholder and with government
- Sharing information
- Identifying and prioritizing knowledge gaps and research needs
- Data collection and analysis
- Developing a vision
- Education and outreach
- Making management plans

There are differences between the approaches, notably:

- how and why they developed
- who is at the table
- role of government agencies within the process
- resources available to support the process
- level of commitment to the process and its results

The five case studies below are snapshots that illustrate some of the commonalities and differences between ICZM initiatives in the Bay of Fundy. This report will not attempt to describe all ICZM type projects in the Bay of Fundy, but it will refer frequently to these reference sites and a few other examples and provide a list of references for those wanting more information about these and other projects.

4.1. Bay of Fundy Fisheries Council

The Bay of Fundy Fisheries Council was established in 1997 and functioned until around 2000. Despite, its short duration, many consider this a strong step towards integrated coastal management because it was an attempt by many different fishing organizations from around the Bay of Fundy to agree on common principles for fisheries management in the Bay of Fundy. The BFFC brought together representatives from many different gear types and different parts of the Bay of Fundy, including groups that had potential conflicts of interest such as scallop draggers, hook and line associations, and small draggers. It also included scientists from NB, NS and Maine, and environmental organizations such as the Conservation Council of New Brunswick. Although the focus of the FFGC was mainly fisheries, the inclusion of scientists and environmental groups meant that the mandate of the organization went beyond managing (or allocating fish) as many of the groundfish community management board did, towards identifying research priorities, initiating research projects, and prioritizing action items such as habitat and fish stock restoration. The BFFC provided an umbrella organization from which research including tagging groundfish, local knowledge studies, and the development of community-based fisheries management principles could happen.

The BFFC had some project funding through member organization like Conservation Council of New Brunswick, Bay of Fundy Marine Resource Centre,,and Centre for Community-Based Management based out of St. Francis Xavier University, However, the network as a whole never had resources for full time project staff or coordination. Furthermore, the BBFC was initiated by the fishing and environmental organizations and did not bring many other sectors to the table. For example, there was no mechanism to link with government agencies or existing fisheries management. Lastly, the many different types of fishing interests (mobile and other fishing gears) within the Council led conflicts and eventually dwindling membership.

For more information about Fundy Fixed Gear Council:

Graham, J. Charles, A.T, and A. Bull. 2006. Community Fisheries Handbook. Gorsebook Research Institute, Saint Mary's University, Halifax.

Kearney, J. 2005. Community-based fisheries management in the Bay of Fundy. Sustaining Communities through Resistance and Hope. Natural Resources as Community Assets: Lessons from two Continents. B. Child and M.W Lyman (eds). Aspen Institute and Sand County Foundation, Washington.

4.2. Clean Annapolis River Project

The Clean Annapolis River Project (CARP) is a charitable, community-owned corporation created to work with the community and interested organizations to foster the conservation, restoration and sustainable use of the freshwater and marine ecosystems of the Annapolis River and its watershed.

Their vision statement is *"The Annapolis River Watershed will provide habitat capable of supporting a healthy ecosystem, recreational opportunities and a working landscape that supports and is enhanced by the sustainable use of the Watershed's resources."*

CARP is governed by an elected, 15 member Board of Directors. This Board is representative of the various geographic and economic sectors of the watershed. The overall administration of the organization is the responsibility of a paid Executive Director.

CARP is a project site for Environment Canada's Atlantic Coastal Action Program (ACAP) which has supported community-based watershed stewardship imitative at over 20 sites in Atlantic Canada since 1991. CARP has been involved in numerous local, regional, national and international initiatives to support community environmental management. Their funding structure means that they are frequently project driven. CARP has been involved in projects related to volunteer water quality monitoring, fish habitat restoration, public education, coastal zone management, private stewardship initiatives, sustainable agriculture, pollution prevention and many other issues. CARP has played a very important role in data collection around the Annapolis watershed especially

water quality monitoring by trained citizen volunteers. This baseline is being used by CARP and other groups for developing action and management plans.

CARP's consistent efforts have led to a number of environmental, social, and economic improvements to the region. The scale of the impact is primarily at the river basin level, focusing on the Annapolis River watershed. CARP has also been instrumental in developing processes whereby multiple stakeholders can work together following principles they all agree to abide by. Some of their lessons learned are that in any multi stakeholder approach, there must be tradeoffs – no one will get everything they want. Focusing on solutions and avoiding "pointing fingers" and laying blame are also key elements for successful multi-stakeholder approaches.

Like other ACAP sites, CARP has enjoyed a high level of consistent support from Environment Canada from the top and from the bottom up. This level of support is unique – many government institutions apparently have a hard time sharing power and decision making with community organization. Despite CARP's many successes, one respondent noted "*We've captured all the low lying fruit. We've taken this model to its limits. We are missing a policy framework or mechanisms to integrate this approach into institutions"*

For more information about the Clean Annapolis River Project

http://www.annapolisriver.ca

4.3. Bay of Fundy Ecosystem Partnership (BOFEP)

BoFEP is a "Virtual Institute" comprised of a wide range of groups and individuals with an interest in fostering the well-being of the Bay of Fundy Ecosystem

BOFEP evolved from a science workshop organized in 1995 by the Fundy Marine Ecosystem Science Project (FMESP) to assess the state of scientific knowledge about the Bay of Fundy. An outcome of that meeting was recognition of the need for further integrated research on the Bay at an ecosystem scale, as well as for a broader organizaton that could link the scientific researchers to the many other stakeholders, such as coastal communities, resource users, governmental agencies and private sector groups, that share an interest in the Bay and its resources.

BoFEP is an inclusive, flexible and multidimensional organisation for encouraging communication and co-operation among all Fundy stakeholders. Established as a "Virtual Institute", with no physical institutions, its objective is to foster wise conservation and management of the Bay's resources and habitats, by disseminating information, monitoring the state of the ecosystem and encouraging co-operative activities. A website with resources, links, publication and other materials is the main means of exchanging information between members and to the general public.

Membership in BoFEP is open to all interested citizens who share the general Vision,

including community groups, resource harvesters, scientists, resource managers, coastal zone planners, businesses, government agencies, industries, shipping interests and academic institutions.

Over the years, BOFEP has been able to bring together many researchers and stakeholders concerned with the Bay of Fundy through biannual science workshops. The different working groups have been more or less active, however some have generated and supported projects implemented by students, universities and NGOs.

While both Environment Canada and the Gulf of Maine Council have offered some support for BOFEP, the lack of stable funding has been a problem, since it means that activities can only be carried through if there is a dedicated champion within the organization willing to move them forward. Consequently, while scientists affiliated with universities and research institutions continue to do research about the Bay of Fundy, many community stakeholders find it difficult to participate in BOFEP activities. There is also some frustration that lack of resources and real institutional commitment by regulatory agencies mean that BOFEP concentrates on research and information exchnge rather than ecosystem-based planning for the Bay of Fundy.

In October 2006, during a strategic planning session to revitalize the organization, BOFEP reconfirmed its vision as:

The Bay of Fundy Ecosystem Partnership is dedicated to:

- Promoting the ecological integrity, vitality, biodiversity and productivity of the Bay of Fundy ecosystem, in support of the social well-being and economic sustainability of its coastal communities
- Facilitating and enhancing communication and co-operation among all citizens interested in understanding, sustainably using, and conserving the resources, habitats and ecological processes of the Bay of Fundy.

The organization also discussed how to play a stronger role in connecting First Nations into BOFEP and in continuing to engage communities and non-scientist stakeholders in BOFEP activities.

For more information about BOFEP

www.bofep.org

4.4. Upper Bay of Fundy Fisheries Management Project

The Upper Bay of Fundy Integrated Fisheries Pilot Project was a pilot integrated management project implemented by the Upper Bay of Fundy Marine Resource Centre in 2005. The pilot project came from fishermen's long stated desire for fisheries management that reflect the unique ecological characteristics of their region of the Bay of Funy. The project involved a partnership between Acadia University, the Bay of Fundy

Marine Resource Centre, Integrated Coastal Planners (Dalhousie University) and the Saltwater Network. The project received one year of funding from the EJLB foundation, which went to supporting a coordinator/research for the project.

The project intended to pu in place multi-year plan for the development of an ecosystem-based fisheries management approach to fisheries for the Upper Bay of Fundy region. To do so, it commissioned two research projects. The first an overview of the status of resources and fisheries in the Upper Bay done through literature review, interviews with fishermen, and analysis of DFO datasets. The second, a study of catch rates carried out by an Acadia University student.

Both research projects served as useful catalyst for fishermen and other community members to discuss the uses, values and status of marine resources in the Upper Bay. Many individuals who participate in the commercial riverine and estuarine fisheries of the Uppe Bay stated it was the first time anyone had actually asked them anything about their fisheries and livelihoods. The research uncovered significant data gaps in knowledge of, and understanding of the Upper Bay of Fundy fisheries.

Unfortunately, the project was not able to find funding to continue the project beyond the first year. Consequently, the research results, contacts, and enthusiasm generated though the research process have dissipated. Certainly, the sheer size of the potential management area makes integrated management in the Upper Bay a challenge. It is hard to connect people with one another and many resource users feel very isolated from Halifax, Moncton or Ottawa were many management decisions are made.

Another challenge for the pilot integrated management project was the lack of strong local institutions to lead and this ambitious project. TheUpper Bay of Fundy resource Centre was created in 2004 to support place based or ecosystem management for the Upper Bay of Fundy – a region covering the Bay of Fundy coastal communities and ecosystems of Kings, Colchester and Cumberland Counties in Nova Scotia, and Albert and Westmorland Counties in New Brunswick.

The centre planned to provide a range of services to the communities of the Upper Bay of Fundy, including

- Marine-related education
- Public awareness of issues related to the marine economy and economies of the Upper Bay of Fundy
- A "safe" meeting place for community groups, accommodating diverse perspectives
- Technical support for local conservation and community-based fisheries initiatives
- A link between scientists and fishermen, where they can develop collaborative research
- A "one stop shopping " centre for marine-related information and referral

Yet, prior to starting the pilot integrated management project it had not yet secure permanent funding for an office space, staff, or computers. The funding from EJLB supported the research, but was not able to create the permanent, local capacity necessary to create a process for bringing stakeholders together to develop a management plan. Many stronger institutions such as universities were very supportive of the project, but cold not provide consistent capacity building and resources to help the strengthen the organizational capacity of local partners. Eventually, the project stalled and awaits further resources and support to continue moving forward.

For further information:

http://www.saltwaternetwork.org/default.asp?mn=1.27.36

Graham, J. Charles, A.T, and A. Bull. 2006. Community Fisheries Handbook. Gorsebook Research Institute, Saint Mary's University, Halifax.

4.5. Annapolis Watershed Resource Committee

The purpose of the AWRC is to:

> *Provide a balanced and fair opportunity for industry, government, and community to discuss and make well-informed decisions and recommendations on all issues related to the management of soft-shell clams and other resources, and to promote the sustainable use of resources and their surrounding environment in and around the Annapolis River Watershed.*

AWRC membership includes representatives from Fisheries and Oceans Canada, Environment Canada, Canadian Food Inspection Agency, Nova Scotia Fisheries and Aquaculture, Nova Scotia Department of Environment and Labour, Bear River First Nations, Bay of Fundy Marine Resource Centre, clam buyers and processors, as well as municipal governments.

Although municipal, provincial, federal and First Nations government are active on AWRP, the committee was started by two local NGOs and representative of the clam industry. The process began by bringing harvesters, buyers, First Nations and the NGOs together to talk about challenges facing the industry. They formed an association, developed terms of reference, and a code of conducted, registered the association and then started inviting government to join the commitee. The initial focus is clam in the Annapolis Basin, however the idea is to expand to look at other species in a more holistic and ecosystem based manner.

The committee has been very successful at building rapport with government representatives at the local level, such as provincial aquaculture and fisheries, local DFO, Canadian food inspection agency, and municipal government.

The committee developed some research questions, and the Marine Resource Centre was able to support a small research project in which a CARP staff researched the history of

clamming in the area. Committee members are now doing some research on alternatives approaches to clam management.

One respondent said this committee was the perfect vehicle for developing management plans for clam as the combined members had knowledge, credibility, industry connection, science, and regulatory authority.

The AWRC has been successful on a number of fronts. Thanks for water quality testing and shellstock monitoring done by CARP staff and volunteers, the committee has been able to achieve conditional openings in some long closed shellfish harvesting areas. There has been a moratorium of understanding between Fisheries and Oceans, Environment Canada, Canadian Food Inspection Agency, Clean Annapolis River Project, Digby County Clam Harvesters Association and the Area II Clam Harvesters Association for the management of the conditional opening at Goat Island. The MOA allows the opening of over 200 hectares of clam harvesting area, an important source of income for local clam harvesters. CARP staff is responsible for doing associated water and shellstock sampling for the duration of the opening

The AWRC experienced a setback in early 2007 when the federal Department of Fisheries and Oceans and the provincial Department of Fisheries and Aquaculture agreed to lease a large area of closed shellfish areas in the Annapolis Basin to a company with depuration equipment, effectively granting them exclusive harvesting rights to a formerly public resource. This experience was profoundly disenchanting to many committee members who realized hat while there was bottom up support for their efforts, they had never attempted to get higher level buy in within the regularly agencies. Their local process was derailed when the provincial and federal government worked outside the established committee in making their leasing decision.

While respondents said it wouldn't have been right to star with support from higher level of government instead of the community, when things were going smoothly they should have looked at getting official support. However, since AWRC is still in existence, its not too late, and they are continuing to. provide a collaborative environment where all members, including clam harvesters, may respectfully voice concerns and receive timely feedback and work cooperatively with key government agencies to expand water quality monitoring activities for clam harvesting areas.

For more informat**ion:**

Sullivan, Denise. Annapolis Watershed Management Committee, Terms of Reference. February 2007.

4.6. Sustainable Communities Imitative – Annapolis Basin

The Nova Scotia Sustainable Community Initiative (SCI) was a partnership between more than 40 federal, provincial, municipal and First Nations organizations that wanted to work with communities towards improved social, economic, environmental and

cultural well being. They operated in three areas of Nova Scotia: Cape Breton Island, Halifax Regional Municipality and Annapolis-Fundy.

SCI viewed itself as a unique partnership aimed at addressing complex issues through collaboration and shared ownership. SCI activities and administrative costs were funded through federal and provincial in-cash and in-kind contributions.

At the local level, the SCI created Field Teams with representatives from participating federal, provincial, municipal and First Nations organizations. The teams met to share information and to find ways of supporting community priorities in a holistic, sustainable way.

The Annapolis Basin was one such site, and the SCI established a management board composed of representatives of the various agencies with regulatory authority in the area, First Nations, and representatives of different sectors such as clammers, fisheries, tourism. The SCI seems to have allowed different levels of government and government departments a much needed forum to discuss and clarify their respective roles and regulatory responsibilities for coastal management. In a way, given the lack of any clear "go to:' person or department for anything related to the coastal zone, SCI was a way for government agencies to learn more about each other's mandates', roles, and priorities.

A positive outcome from the perspective of a respondent who participated in SCI as a government employee was better knowledge and understanding of who was doing what in other government departments. This was invaluable in finding information for other projects or in directing the public to the right place. SCI was not necessarily intended to provide a forum for community or other stakeholders to help shape priorities, except through special workshops or outreach events. However, some local participants who did not work for government expected the process would be more like CARP or other ACAP sites where with resources for community activities. They experienced frustration since the relationship building never did extent to the local communities and no actual projects were undertaken. Funding for the SCI is in hiatus so the projects are now in limbo and unable to move forward.

For more information about the Sustainable Communities Initiatives
http://ess.nrcan.gc.ca/2002_2006/sci/index_e.php

5. What makes ICZM work

The respondents in the this study were asked their thoughts on what makes ICZM work, as well as to provide examples to support their ideas. The following seemed to be key in creating conditions for ICZM.

5.1. Start with communities

The examples in the previous section of the report illustrate different types of ICZM in the Bay of Fundy. Some of the examples were started by communities, others by government or researchers. Despite the accomplishments that all types of ICZM can lay claim to, everyone interviewed in this study said the most crucial factor in successful ICZM is that it originates with communities who then invite government to participate in the process. This seems to hold true in case studies outside the Bay of Fundy, as the CEPI project, which now involves many levels of government and many different government agencies began with a partnership between the Bras d'Or stewardship association and the Eskasoni First Nation.

All respondents also agreed that ICZM can not just involve community or resource users. Nor can they only involve like minded individuals or organizations. Initiatives such as the Bay of Fundy Fisheries Council and Upper Bay of Fundy Fisheries Management folded partially because government never began involved in the process. The Annapolis Basin working group and the Saint Marys Bay working group were precursors to the Annapolis Basin Resource Committee that folded because without having government and industry at the table, the range of activities that could be undertaken was so limited that community interest in the process dwindled.

5.2, Place based connections

Integrated management is about identifying, recognizing and valuing the unique characteristics of a particular place. ICZM does promote science-based decision making, but it also promotes people's connection to, and dependence on, a particular resource or ecosystem. Many of the principles that govern ICZM initiatives acknowledge connections, interdependence, and holistic approaches to resource management. A number of respondents stated that the ICZM initiatives that involve local people and government participants that live and work in the area are more successful than those in which everyone drives from Halifax to attend the meetings. They attributed this to shared connections to and understanding of a particular place. In some cases, imitative like BOFEP and the community forums supported by its Minas Basin Working group can contribute to the development of a sense of place as they help forge a shared identity as citizens of a particular location. Two respondents who are currently involved in the South West New Brunswick integrated management pilot project note that having a group of committee members from industry, government and other sectors lead visioning exercises for communities in which they do not live or spend much time, feels rather hollow. Place based connections take time to establish.

5.3 Resource the process

Some respondents feel that for ICZM to work there needs to be a full time, well-funded office tasked with leading the process and delivery of the program. ACAP sites, such as CARP have longevity and an outstanding diversity of people and institutions deeply engaged in their activities. In the Bras d'Or lakes, the CEPI process is also moving towards integrated management for the Bras D'Or lakes based on ecological, economic,

cultural and spiritual values. These efforts have been around for a long time, and they have received enough core funding to support their operations for much of this time.

Other respondents are skeptical that the only way to support ICZM is to put all the money into one lead organization. They would like to see many local organizations supported so they can support the process in different ways, for example, secretariat, and research. They point out that the AWRC for example manages to accomplish a lot by leveraging the resources of member organizations and that no one organization dominates the process because they have all the funding.

Everyone agrees that ICZM often collapses because of lack of funding and resources. Initiatives like the Bay of Fundy Fisheries Council were successful at getting projects funded, but were never able to leverage these funds into money or other resources from government. The Upper Bay of Fundy pilot fisheries management project was also unsuccessful because the implementing organization did not have the capacity to sustain itself.

Most respondents felt that if integrated management is to be a new way of doing things, government has to fund the process. This does not mean that projects will not diversify and find other sources of funds, but it does mean that governments need to make a substantial commitment over the long term. Some felt that government funding could be matched by support by industries to allow local resource users to participate in decision making processes. One example suggested is that compensation for fisheries habitat destruction by expansion of an oil refinery in Saint John Harbour could include not only habitat restoration, but a commitment for Irving to sit on a management committee with fishermen on future management for the harbour and to fund the process over the long term.

It does seem some consistent core funding is essential for successful integrated management. Engaging and maintaining volunteers is part of the process, but someone needs to be paid to coordinate \people and activities over the long term. The most successful integrated management processes elsewhere in the world pull in a mix of government funding from all levels, as well as private funding for projects. They also do draw on volunteer efforts. Government needs to see integrated management as an investment not a way of downloading responsibility. Core funding allows for knowledge and expertise to accumulate over time, and not be lost when summer students move on and volunteers burn out.

5.4 *Research is the basis for a shared understanding of issues and solutions*

A few respondents were vehement that integrated coastal zone management is based on solid science. Groups like BOFEP formed specifically to bring together existing knowledge, identify knowledge gaps, and support the necessary research to support planning.

CARP operates on the basis that good data provides a baseline for establishing targets, and for monitoring change. They see research is the basis for decision making. It is also essential for accountability since no meaningful evaluation can be done without data to track progress and reversals.

There is no doubt that research is a powerful tool. The ACAP site in St. Johns, Newfoundland conducted their own water quality testing for the St. Johns harbour and was able to make this the basis of their ultimately successful public campaign to install a sewage treatment facility in the Harbour.

A few respondents felt that while research is crucial in ICZM, not all research really helps move the process forward. They say that too often, not enough attention is paid to the relationship between scientists, government and resource users when designing research. What kind of data is necessary? Who collects it ? Who decides what it means? And what gets done with the data? These questions matter greatly says one respondent who has supported many local research projects that ultimately were disregarded by decision makers or industry as not comprehensive, detailed or accurate enough to use for management planning.

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There needs to be an agreed upon method to incorporate local knowledge and science. Most integrated management initiatives will have to work with a mixture of locally collected data, local knowledge, and conventional science developed by academic or government institutions. A shared understanding of what these mean has to be developed. As BOfEP has discovered, background papers prepared by scientific researchers are not on their own sufficiently engaging to catalyze integrated management.

On the other hand, the data collected by CARP about water quality in the Annapolis River is a good starting place to encourage farmers to modify their livestock grazing practices to protect water quality. This research is participatory and incremental and a good starting place for management. It is also really local and not so applicable for Bay wide management.

At the Bay wide level, BOFEP is a forum for exchanging information and sponsoring research. It cannot incorporate local knowledge or encourage systematic data collection or monitoring at local level. . Nor was the, BFFC ever able to match local questions with fisheries management science. This is recurring problem that led to communities feeling disempowered and frustrated by the research process.

For research to work in ICZM, there needs to be a plan for all stakeholders to prioritize research needs, figure out to collect, analyze and use the information. It has to be at the right level of detail for management decisions to be made, and collected and dissiminated in a transparent process.

5.4. Tackling real issues

Many ICZM are operating in a legal limb with no basis to implement plans so end up talking about issues for long time, while not being able to actually do anything about

them All talk and no action is really frustrating for participants. They need to feel they are achieving something beyond relationship building.

It is frequently difficult to balance holding a broad perspective on complex interconnected issues with the need to accomplish something. Often the tendency is to choose something simple as a starting point and avoid conflicts or anything political.

However, many interviewees felt that starting ICZM in an area with existing conflicts is ideal because it is where it is needed and were the issues are real. People are already engaged. ICZM has the potential to change the way people and activities interact so it should begin with where that is needed most.

ICZM should also not shy away from presenting negative or provocative information. If one of the stakeholders at the table represents farmers whose livestock grazing practices are causing pollution and sedimentation of local water ways, it needs to come out. Hiding information, or avoiding discussing areas of potential disagreement will only make the entire process lose credibility. Good ICZM ensures all the information comes out in a non-threatening manner, but does not seek to obscure or hide information or issues.

In South West NB, there are some ongoing small scale efforts to minimize conflicts between user groups such as whale watching tour boats and weir fishermen; traditional fisheries and aquaculture; and fishing boats and industrial traffic in the Port of Saint John. A combination of building credibility and trust, collecting and sharing information, mapping and comprise has led to some local success at minimizing these conflicts. It has also led to the creation of task forces and advisory groups that could be the basis of a stakeholder forum or management body for integrated management at a larger scale.

In contrast, the ongoing SWNB integrated management project led by a committee of government and community seeks to build a broad vision for the area, as the basis for an integrated management plan. Those leading the initiative explicitly want to start from a blank canvas to avoid the perception of being prescriptive. They also want to avoid starting a pilot project in areas with conflicts and other difficult issues.

The openness of the process is appreciated, but as one respondent remarked: *"Building relationships and a vision for the Bay is all really great - but management is really messy when you talk about industries that have to earn a living and have to interact. If you do it under the premise that we'll do the really easy, feel good stuff first, what's the point?"*

For integrated management to be successful, it does have to address difficult and controversial issues.

5.5. Everybody gains and loses some power

Integrated management goes beyond just sharing information. It requires setting goals and tackling issues. An inclusive process is going to bring together stakeholders with

different perspectives. The areas of divergence can range from competing uses between stakeholders such as mining and fishing or long running disagreements between government and a certain industry over resource management. There are also wide variations in the levels and kinds of power held by different representatives around the table.

As one respondent said about a large industrial interest sitting on a management committee. "*They'll be part of process and string you along. They have alt the power. Government people will say nothing or that they don't have any jurisdiction over anything. Doesn't anyone have jurisdiction over our waters*?"

At some point, the various stakeholders have to move beyond stating their own interests and genuinely commit to the process and its results. This means effectively that everyone at the table is gaining power because their views are really being heard and considered. At the same time, everyone gives up some power because compromise is frequently required.

As another respondent said "*It won't be like you expect. You can't always get everything you want, but you neither can anybody else. If it's not going anywhere. The process is may not be the problems, it might be expectations are too narrow, or too broad or too high. It might be that someone is unwilling to give up real or perceived power*."

Many respondents felt that given up power was most difficult for government used to a model where they control the information and the outcomes. Many agencies find it difficult to give up some authority to other government departments let alone to the public or industry stakeholders.

Furthermore in some cases, some groups may feel they already have so little power that they cannot afford to lose what they have by participating in process where they may lose even more. An example given is that fishing organization in New Brunswick have recently been approached by the aquaculture industry to get involved in the site selection process in one area of the province. Due to a new provincial policy about site rotation and some operations many not have a site for the coming year. Instead of the aquaculture industry picking new sites, the companies have decided to ask the fishing association to select potential sites in the hopes that this will eliminate the usual conflict and disruption.

The timeline and selection criteria are unclear. It is also unclear whether or the companies will abide by the fishing industry recommendations. Some fishing organizations have chosen not to participate as they do not want to see any new aquaculture operations in the area in questions. Other organizations have decided to get involved reasoning that any effort to accommodate existing uses is a step forward that might lead to positive outcomes. As one respondent said "*It's too little. This is not big enough or secure. It could be futile. But it's closer than anything else we've had so far*".

Successful ICZM doesn't avoid difficult power dynamics, but brings them out on the table so that individuals and institutions can transform the way they interact.

5.6. Institutional and individual champions

ICZM needs "champions" people and an institution whose belief in the potential of the process helps the group sticks together and inspires support high up into their institutions and within the wider community. In a way, champions are those who deepen and widen support for ICZM.

Institutionally, ICZM will not function if the representative is dragged kicking and screaming to sit at the decision making table. There has to be interest and commitment. A good mix seems to be a lower level government representative with leadership initiative and good community skills, fully backed by the highest levels of the jurisdiction she/he represents. This is frequently the case with ACAP sites where top-level support from Environment Canada ensures that those representatives sitting at the table can engage and commit.

Inter-jurisdictional or inter-departmental wrangling can lead to agency being willing to champion the process, but instead lead to apathy or deliberately sabotaging the process. Some stakeholders feel this was the case with the Annapolis Basin Clam Management Board and the Annapolis SCI site.

A champion institution willing to take ownership over the process is essential, but ultimately even the lead agency needs individuals willing to promote and support the effort. There have been a few attempts to have a pilot integrated management in the Minas Basin or Upper Bay of Fundy. Some feel they have failed through an absence of both institutional champions (the Bay Fundy is not a priority area for the establishment of Large Scale Ocean Management bodies), but also because whenever individuals with drive and commitment have stepped forward, they have met rapidly been transferred to other programs with the Department.

Ultimately, ICZM is about the people and their commitment to the process and the outcomes. Pragmatically, this kind of initiative requires being where the action is, which is on-site, out of the office, in rural areas and on evenings and weekends. This requires personal dedication on the part of those representing government.

5.7. Binding Agreements

Those involved in ICZM processes, especially community and industry stakeholders want to see real gains from a process to which they have contributed significant amounts of time and energy. In a concrete sense, they want their hard earned compromises, recommendations and management plans to be honored and respected and implemented.

As will be discussed in the following section on recurring challenges, this is particularly difficult since ICZM in Nova Scotia is operating without an overarching policy framework, so there are no guarantees around implementation. There have, however,

been some occasions, where those involved in ICZM processes felt their work mattered and made a difference in how an area or resource is managed.

One respondent specified: *"You can legislate working together without disrupting existing bureaucracies. You can give the body the right to pass bylaws within coastal management plan."* For example, proposed changes to municipal bylaws in Cape Breton and Annapolis Royal are a result of local ICZM initiatives finding ways to insert their management recommendations into existing institutions.

Another respondent noted *"People rely too much on regulations. Regulations and regulators are not much use in dealing with complex environmental and community issues. The strength of the ICZM approach is creating situations where people realize that acting in the best interest of the environment is also their own self interest, so you can prevent someone from waning to build a golf course in an ecologically sensitive area from the outset"*

Both these respondents felt that making ICZM binding meant ensuring there is some way to influence ongoing decision making processes like municipal land use planning. They also believed that the real basis of integrated management was encouraging better decision making through building shared values, understanding, and good will between stakeholders.

Respondents had not experienced any clear consistent mechanism for translation what happens through the ICZM process into binding government decisions. They reiterated that while ICZM does not always lead to changes in how decisions are made, at a minimum ICZM led to the creation of decision making principles, better communication, quicker responses and explanations,.

6. Recurring Challenges with ICZM management

6.1. Shifting Government priorities

Many respondents felt that some of their past involvement in ICZM could be construed as being "busy work" – that is a frenetic expenditure of time and energy that government had no desire to actually support on an ongoing basis. Certainly, hose working on ICZM have experienced many disappointments as pilot projects have started and then collapsed due to lack of funding. A few respondents mentioned that the Minas Basin and Upper Bay of Fundy had been proposed for ICZM long before the Bras d'Or lakes, but since there have been no clear champions or consistent funding from within government for IZCM in the Bay of Fundy, their efforts have stagnated while the Bras d"or team has spend the last decade making clear progress towards ICZM. As one respondent said *"For a while, DFO was investing in the Bay of Fundy, they had someone stationed in an office right at the Marine Resource Centre working with communities. Then, almost overnight, that office closed and all efforts were focused on the Scotian shelf*". Another respondent said "If you're not a candidate LOMA (Large Offshore Marine Area) site

forget it, you won't be on the radar for anything involving integrated management in this part of the world".

6.2. Backroom dealing

A few respondents expressed their frustration at how frequently resource management decisions seemed to be made outside of the ICZM committee even when the industries and government departments involved had representatives sitting at the table and ostensibly part of the process. The Annapolis Watershed Resource Committee is an example since while representative of the clam industry, environmental groups and government departments discussed how to work collaborative to re-open and managed closed clam areas, DFO and the provincial department of aquaculture and fisheries made an arrangement to lease closed clam areas to a private company. This type of "backroom dealing" is disheartening for everyone participating in the ICZM process with the expectations that they are part of the decision making process.

As one respondent said *"Nothing we ever do is binding, so it's piles of work and then it's gone because the political process goes on next to it and always overrules our efforts. Usually, we think the big industrialists are just stringing us along in the hopes that we won't protest publicly while they go ahead and make their arrangements with government. There is just no commitment to participating in a process, especially a binding one:"*

Another respondent said "*Once we actually got them to set up a bloodworm management committee we thought we'd won something. Then, we had to get them to tell us when the meetings were. Then we realized that DFO was meeting privately with the harvesters before the meetings. After that, we realized they didn't' have any science, so we offered to help with that. We went ahead and started collecting information and then realized they had already made their decision and informed industry without even telling us, let along looking at our results. It is really frustrating"*

6.3. Balance does not have to mean neutral

Most respondents said that a downside of multi-stakeholder approaches is that they are committed to "balancing" all views and interests. Some respondents felt that this approach sometimes leads lead to compromises that are not in the best interests of the public or the environment, especially if industrial voices are given equal weight with conservation interests. At the same, some industries feel they might be shut down by government or environmentalists if they are under-represented at the integrated management table.

All respondents noted that government in particular seems to fear stating their broader values in favor of offering a "balanced" perspective. *"It's like they are frightened to show that they personally care since that might mean they are expressing an opinion", said one respondent.*

A few respondents stressed that ICZM will fail if it refuses to take any kind of values based stand. Some perspectives cannot be balanced and trying to do so will destroy the integrity of the entire process. However, it will also fail if it cannot include multiple perspectives. One respondent recommended putting a lot of time into figuring out how decisions will be made by establishing common principles from which to establish shared goals and visions, and also how to deal with divergent information and opinions.

As one respondent said "*The views held by 0.1 % should not dominate nor should they be ignored. They need to be proven to have less merit based on previously agreed upon decision making and information weighting criteria"*.

Another respondent felt that "*Ultimately, it doesn't' really matter if you vote or make a decision in some other way, or even what you decide. Good facilitation and dialogue is usually more important than any actual decision making mechanism*."

6.4. Ignoring past efforts

ICZM efforts are not starting from a blank slate. There are many previous and ongoing government, industry and community commitments and uses for any given management areas. These need to be recognized and incorporated into ICZM efforts. One respondent explained "Communities do not want to be told "it's up to you. Imagine your ideal future" They want to start with real issues, build on what's already happened, and is realistic".

Those embarking on ICZM process need to know about and respect existing management commitments in the area. These might include: wilderness protected areas, land easements, migratory bird sanctuaries, proposed quarries, shipping routes and national historic sites, as well as past management plans created by communities or sectors.

Some respondents felt that sometimes government initiates an integrated management process to scuttle more bottom up and issue driven process started by local groups. For example, government did not become involved in the Bay of Fundy Fisheries Council, but instead proposed a pilot integrated management project for the Bay of Fundy, which in turn never got underway.

6.5. Integration

All respondents felt that integrated management is challenging for governments. Government agencies are not set up to collaborate with each other, and the silos in which different levels of government and different departments are confined are hard to break down. Even if local representatives want to do so, they need support from high up in their departments to really move towards integration.

In Nova Scotia, many departments shared interests and responsibilities for coastal management, but there is no clear lead agency. Some departments may have

contradictory mandates, for example shoreline protection and mining that make wholehearted commitment to integrated management very difficult.

Integrated management can be initiated or endorsed by many different levels of government. In Nova Scotia, similar multi stakeholder ICZM processes are being supported by DFO, Agriculture Canada, Environment Canada, and Department of Environment. One respondent felt that if one department is the lead on one ICZM process, they seem to think this means they should be the lead on all ICZM initiatives.

One respondent thought that integrated management efforts, like the Sustainable Communities Initiative are so caught up in negotiating and clarifying federal and provincial responsibilities that they forget the vital role of municipalities in land use planning in coastal areas. Another said that *"the biggest frustration in the government led ICZM is they spend so much time on their own internal turf wars that by the time they talk to communities a year might have passed"*.

Another noted that "because true integration is difficult, we avoid it altogether, in favor of pilot project after pilot project in the guise of integrated coastal zone management"

6.6. No overarching coastal policy

Many respondents noted that provincially or federally, a policy framework within which to base the integrated management initiatives is lacking. *"There is nothing preventing these efforts, and they are explicitly mentioned in Canada's Oceans Act, but there is no binding requirement to do it and no clear mechanism to incorporate ICZM into management planning and decision making"* explained one respondent.

The absence of a policy framework affects long term projects, such as CARP that successfully engage government and communities, as well the less stable, issue-based initiatives like the Upper Bay of Fundy pilot fisheries management project. Whether the IZCM initiatives are started by communities or by government, the management committee, local management plans, or memorandums of agreements between stakeholders may not have binding legal basis.. One respondent commented about the ACAP program. *"The model has cone as far as it can without a policy framework in which to operate. We've gotten all the low hanging fruit, and we can't take it any further without an integrated coastal watershed policy"*.

In some cases,, this means that ICZM is limited to an exercise in relationship building and sharing information. This is valuable in that it contributes to breaking down some of the silos in the management process. More frequently when management plans are not followed or implemented it leads to an erosion of public trust on the part of those who invested heavily in the process and had high expectations.

In even worse case scenarios, years of efforts in establishing relationships, collecting data, and developing management plans are destroyed when a new and destructive activity is approved within the management area – especially if the regulatory agency responsible for the decision has participated in the integrated management process. It is

hard to overstate the degree of community anger and disillusionment caused by these reversals and betrayals – and their impact on the feasibility of future attempts at integrated management.

Many other jurisdictions actually require integrated management through national or provincial legislation. These policies set clear expectations about principles guiding decision making and also what types of management bodies need to be created for management planning. Usually they specify how government, First Nations and other stakeholders will work together to set local management goals, conduct research, and develop management plans within the overarching context of the integrated management policy.

As it stands now, many stakeholders are confused about whether or not it is worth going through the time and effort of an integrated management process – especially one involving government and industry *"Do we set up our own integrated management committee and formalize it ourselves? What are we going to accomplish that way? Can we achieve anything more concrete than public awareness? Government people will say nothing or that they don' t have any jurisdiction over anything. Doesn't anyone have jurisdiction over our waters? What exactly can we do? Is there any way we can convince government or Irving we should do it? "* wonders one respondent?

6.7. Role of Government

Most respondents felt there are a lot of challenges related to the role of government in integrated coastal zone management. Even within this small study sample, there are a number of contradictory opinions about the role of government within ICZM. Confusion and lack of clarity about what government should and should not do within an ICZM process can lead to the process breaking down acrimoniously.

ICZM requires everyone having an equal place at the table. Yet, ultimately, does someone need to have final authority?

Some respondents see government as a facilitator of an ICZM rather than a regulator. They stress that ICZM does not work unless government is willing to really give up power. They point to the foiled Upper Bay Fisheries Management process as examples of government not really wanting to give communities any real power.

The perspective of a few respondents is reflected in this quote "To take the multidisciplinary approach involving different levels of government. One level must be in charge to embrace the mandate for leading consultations and to take responsibility for planning. They have to be accountable and ultimately that lies with government setting standards, not with community groups".

Some see a shifting role for government. "Ideally, enforcement is not the front end of the ICZM. It's way down the list. But when it comes to needing to do it, the regulatory

agency has to take responsibility, not the local group. That's not our role. Government has to balance sitting at the table like everyone else, with stepping back and enforcing as needed. They can't remove that responsibility"

The most confusion seems to stem from the role of government representatives in visioning, goal setting, and developing and implementing management plans. In the current political context, ICZM plans are supported by good will and mutual agreement. They are not binding, and there is no guarantee they will be followed. Respondents were generally uncertain whether government should sit at the table with the attitude that they will represent only the options that their departments are willing to commit to or whether they should encourage creative option that may not be possible to implement given the priorities and interests of their departments. In the first scenario, reality may stall the process, while in the second dashed expectations and feeling of betrayal may cause ICZM processes to dismantle.

Local stakeholders are not the only ones uncertain how government should be involvd in ICZM. Unclear and conflicting roles and expectations can be confusing and frustrating for government personnel representing their department within an ICZM – especially when they know that local expectations are not likely to be met in certain situations.

6.8. Representation

Just as the government is not a monolith but made of many individuals, and departments and agencies, the community sector is not homogenous or united. No individual can represent the entire fishing industry or a community let alone many communities scattered in a particular geographic area.

Yet as a few respondents noted, multistakeholder processes are often created assuming that those at the table can fully represent a range of interests with no support given to creating democratic, representative, evolving processes that foster public engagement and are accountable to those they represent.

"In the absence of a formal structure under which to place ICZM initiatives, they are all somewhat ad hoc. It is easy to confuse structure with process, and whether those at the table are there to share information, frame issues, be consulted, develop management plans or make decisions about priority issues. It is also unclear how much accountability is required in a non-binding visioning process versus - if such a best exists""

Does showing up grant participating status? Or does ICZM require some kind of selection process? Can a dragger fisherman really represent the clam industry? These issues may not matter much when the stakes are low and it's just about sharing information, but they are critical as soon as the process and results of ICZM starts to matter.

7. Implications for tidal power

7.1 Imbed tidal power in ICZM not the other way round

Everyone interviewed in this study was adamant that tidal power should be treated as another new use proposed for the Bay of Fundy rather than treated as something completely isolated from current uses and ICZM iniatives.*"We can't say, we need integrated management for tidal power. That's backward. We need an integrated management process into which all new uses, including tidal power can be imbedded."*

This seems to be the perspective taken by Jacques Whitford in their background report on tidal power as part of the SEA process.

7.2 Do it well

A few respondents are hopeful that there is an opportunity to improve ICZM and learn from past mistakes. *"There is a real opportunity, if there is the will to do it right. We could try new models, encourage active participation, and bring real benefits to local communities"*

Some respondents suggested that this is a perfect chance for government to partner with industry in sharing the costs associated with ICZM so that a long term process could be established and maintained.

Others talked about using an ICZM process for the Minas Basin as a demonstration of how a space-based management board could operate that could then be replicated elsewhere in the process. The public attention and positive results from this approach could generate real political support for a coastal zone management policy. In this way, the development of integrated coastal management at a provincial scale and rapidly creating a workable process for decision making in the Minas Basion could proceed in parallel without precluding a provincial coastal policy or slowing down the tidal power development process.

7.2 Avoid fast tracking

A few respondents were concerned that despite a SEA process involving extensive public consultation, the actual decisions about tidal power development have already been made behind closed doors. " It's already the same old same old. This is fast tracking. On one hand, they say we won't do anything without consultation, and on the other hand you have all the government Ministers shaking hands in Parrsboro and talking about having these things in the water by next year.. The trust deficit between government and community in this province keep on growing.

7.4 Involve communities in decision making

Most respondent said that in any new ICZM initiatives involving tidal power, community has to be represented in more than just in an advisory role. They need to be formally involved in decision making about the new technology. *"The actual decision about whether to go forward beyond the test stage should not just be left to government and industry. There should be a decision making process with each stakeholder at the table having a vote". Communities need a voting seat at the management table, as should First Nations*".

Some respondents cautioned that real voting power will require real accountability. *"The stakeholder advisory committee was created by nominations, but we need something much more formal if we are talking about a voting body. To be truly representative will require elections and some mechanism so groups discuss amongst themselves and truly represent their sector and their commuity"*

7.5. Set up an adaptive management body

Figuring out how tidal power should be managed will also require figuring out what kind of management body works best for ICZM in the Bay of Fundy or even the Minas Basion. *"The challenge is to design a process and institution that allows for a public, government, First Nations, and industry participation, and balances and prioritizes issues in an ongoing adaptive manner"*

In considering the potential for integrated coastal zone management in Minas Basin, Aldous (2007) identified a number of options. These include:

1) Creating a new agency with a centralized role for coastal management
2) Fostering intergovernmental cooperation with Canada-NS MOU and assign a lead agency
3) Extending the scope of existing agencies\
4) Community based management

Aldous suggests establishing a permanent organization, a Minas Basin ICOM Board with a mandate for developing and coordinating the delivery of policy and new initiatives in the coastal zone of the Minas Basin through existing mandates of existing governing structures. This institution could provide a forum for common commitment at the highest level necessary to a set of common principles of management. The Board would also function as an ongoing forum for discussion .It would also review new initiatives between the government and the community for the policy direction of integrated coastal ocean management.

In Aldous' opinion, the province should that the lead for coordinating the municipalities, through developing an ICOM planning process and by setting standards for the coastal zone of the entire province. The process of setting these standards should be developed collaboratively with other levels of government, citizens and affected parties. A few respondents in this study supported the idea of a provincial process for developing ICZM

processes while simultaneously setting up a working management board to look at tidal power in the Minas Basin.

In reality, the provincial government is unable to implement a planning process by itself since there is a strong federal mandate in the fishery and navigation/. Aldous thinks that one solution is a Memorandum of Understanding between the federal and provincial governments that makes the province the lead in ICZM management.

A federal provincial MOU would show a common commitment to ICOM that states the economic and environmental policy goals, describes the responsibilities of each level of Government; established a funding formula, and creates one or more management Boards to oversee the preparation and implementation of the process. Again, there was enthusiasm from respondents about a formal commitment to ICZM and using the Minas Basin as a working model as the process unfolds.

Some respondents stressed that they don't want local stakeholders to be limited to just serving on management boards. If there is going to be a province wide process to develop an ICZM policy, they want all relevant stakeholders involved. They see a role for community, industry, NGOs at all stages of the process provincially and locally. In othe words, all stakeholders should commit to ICZM, should be consulted, should help draft the policy, should sign it, and eventually implement it.

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