Community Fisheries Management Handbook

By Jennifer Graham with Anthony Charles and Arthur Bull

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Published By:
Gorsebrook Research Institute, Saint Mary's University, 2006

This publication has been made possible through the financial support of the Pew Institute for Ocean Science and the Pew Fellows Program in Marine Conservation

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Library and Archives Canada Cataloguing in Publication

Graham, Jennifer, 1971-
Community fisheries management handbook / by Jennifer Graham ; with Anthony Charles and Arthur Bull.

ISBN 0-9694095-6-7

1. Fishery management--Atlantic Provinces--Citizen participation.
2. Fishery management--New England--Citizen participation. I. Charles, Anthony, 1956- II. Bull, Arthur, 1950- III. Gorsebrook Research Institute for Atlantic Canada Studies IV. Title.

SH328.G73 2006 333.95'6'09715
C2006-900569-9

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Foreword

This handbook is a unique product. It is the first "field guide" to community-based fisheries management focused specifically on fisheries, such as those of the Northwest Atlantic, that are already highly regulated by governmental authorities, with licensing and other requirements that limit access and effort. While a variety of resource materials are available on community-based natural resource management, almost all of these are written by practitioners working in the South (developing countries) and rely on case studies and techniques that have been tested in less industrialized tropical fisheries. Therefore, this handbook is one of the few publications about community-based management in 'Northern' fisheries.

The need for this handbook was identified by participants working on an initiative on the Atlantic coast of Canada, "Turning the Tide: Communities Managing Fisheries Together" (www.turningthetide.ca). Turning the Tide works for improved fisheries management through community-based approaches, and through cooperative efforts among aboriginal and non-aboriginal communities. To that end, it has brought together fishermen and their communities to share information and ideas on community-based management, through events such as community forums and study tours. Participants recognized the need for a handbook on community-based fisheries management that is relevant to their own fisheries and that can be used as a tool to provide information and support for practitioners, as well as to document current practices and insights obtained, and to promote and raise public awareness about community-based fisheries management.

The stories and insights in the handbook are those of Turning the Tide participants and their allies from around the Atlantic Region – the Atlantic coast of Canada and the north-eastern United States – who shared this information during Turning the Tide activities, and in individual and group interviews, and who reviewed the materials used in producing this handbook. The various tools and ideas explored here are currently being applied in the region, and so the handbook demonstrates how community-based approaches to fisheries management are working today. The information should also be relevant, and potentially adaptable, to community-based fisheries management situations in other locations.

Acknowledgements

Throughout this handbook, conversation – the simple act of asking and listening – is repeatedly mentioned as a powerful tool in community-based fisheries management. We obtain new information, share what we learn, and reflect on our experiences through conversations with our friends and colleagues. This handbook was inspired and shaped by many conversations.

The authors would like to thank participants on Turning the Tide's Gulf of Maine tour, for taking part in the ongoing conversations that provided much of the information in this handbook: Martin Kaye, Wayne Spinney, Glanville Travis, Mary Kenneally, Robert McEwan, Patricia Melanson, Elena Frost, Curtis Falls, John Kearney, Maria Recchia, Parzival Copes, Hubert Saulnier, Holly MacDonald, Mona Madill, Wilf Caron, Ted Hoskins, and Scott Milsom. We are also grateful to the many individuals who shared their stories with us at stops along the way, or participated in some portion of the tour: Terry Farnsworth, Sherry Pictou, Norma Brown, Will Hopkins, Heidi Leighton, Ted Ames, Craig Pendleton, Robin Alden, Paul Parker, Melissa Roberts Weidman, Greg Thompson, Hugh Akagi, Chris Hudson, Pam Comeau, and more.

We would also like to thank Laura Loucks, John Kearney and Chris Milley for helpful comments they provided in conversations during the production of this handbook.

Bill Whitman and Mary Keneally deserve a special thanks for reading and reviewing the entire handbook and providing excellent suggestions and improvements. Of course, any remaining omissions or errors remain our own.

Finally, we are grateful to the Pew Fellows Program in Marine Conservation for providing the funding that made Turning the Tide, the Gulf of Maine tour, and this Handbook possible.

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About the Handbook

This handbook is an introduction to the range of ideas and management activities that form part of community-based fisheries management. It is meant to provide a "how to" guide for local fishery managers and management bodies – a guide in which the specific management tasks are related back to the underlying values and principles of community-based management.

The handbook is designed to present existing knowledge in a straightforward manner that can be useful for those actually implementing community-based fisheries management, as well as to those who just want to learn more about it. Readers can adapt the management approaches or tools to their own context, their own fisheries, or even for management of non-marine resources.

Purpose

There are three main reasons for producing this handbook.

1) Providing information - This handbook is a resource kit with information, ideas, and examples of people doing community-based fisheries management. It is designed as an easily accessible "field guide' about the main community-based fisheries management activities and approaches to accomplishing them.

2) Raising awareness – Community-based fisheries management works. This handbook documents some innovative examples of community-based fisheries management, experiences that are paving the way for this management approach to become more common in the future.

3) Providing inspiration - This handbook shows how practitioners of community-based fisheries management are making a difference. Changing the way fisheries management is carried out can be a long, slow process. The handbook can help remind those who are doing this work of what they have accomplished, and of the fact that they are not alone in their efforts.

Audience

This handbook is aimed at all those interested in how to do community-based fisheries management in the context of fisheries, such as those of the Northwest Atlantic, that are already highly regulated by local and national governmental authorities, with licensing and other requirements that limit

access and effort in the fishery. This handbook should be of relevance to fish harvesters (fishermen), community groups, First Nations, aboriginal organizations, fisheries managers, government managers, scientists, and many others.

Indeed, within the above context, many local organizations are creating a space for more community-based approaches to fisheries management. However doing community-based fisheries management in these situations is very different from working in less regulated, more decentralized fisheries, such as those that are more common in the South (developing countries). While the underlying principles and values that guide community-based management are similar whether in India or in Maine, the on-the-ground application may be completely different due to the differing local context.

A further key feature of this handbook is its grounding in the particular fisheries of what we refer to as 'the Atlantic Region' – the Atlantic coast of Canada and of New England in the United States. All case studies and examples of community-based fisheries management are drawn from that region, and largely from the inshore fisheries of four jurisdictions – Nova Scotia, New Brunswick, Maine and Massachusetts. Indeed, the handbook's regular use of this rich collection of real-world examples is fundamental to what is provided here – by drawing on the insights and lessons of these concrete examples, those engaged in community-based fisheries management both in the Atlantic Region and elsewhere in the world will be able to obtain ideas and approaches that may be relevant to their own local context.

The handbook is for those who need basic, concise 'how-to' information about the many different aspects and approaches of community-based fisheries management. As community-based management cannot be considered an easy process, the handbook is for those looking for ideas to help them address the challenges and complexities involved.

[A note on words: In the first paragraph of this section, you will see the terms 'fisherman' and 'fish harvester' appearing together. These two terms for someone who goes fishing (along with another, 'fisher', which is not used here) are all found often in English language writings on fisheries, with the choice among them depending on the author and the type of publication. In this Handbook, we have avoided choosing a single term, but instead have used the two terms 'fisherman' and 'fish harvester' (or simply 'harvester') interchangeably throughout. In reading the handbook, one must simply keep in mind that these terms are used here with exactly the same meaning.]

Using the Handbook

The handbook is divided into three major parts as follows:

Part 1: Community-based Fisheries Management (CBM)

Part 1 provides an introduction to the general ideas behind community-based fisheries management, and gives a general overview of community-based fisheries management within three sections on "Basic Concepts", "Setting the Context" and "Fisheries Managers".

Part 2: Management Activities in Community-Based Fisheries Management

Part 2 is the core of the handbook. It can be used as a stand-alone reference on the "how to" of specific fisheries management activities. It is divided into ten chapters, each covering a key community-based fisheries management activity. The intent is to provide the information and approaches that community fishery practitioners need to do their work. Thus, each chapter has a brief introduction and some key points, often in bullet form, plus real life experiences presented in text boxes. Part 2 can be used as a reference guide as needed, with the chapters written in such a way that they can be read in any order. Readers can go directly to any chapter to learn more about that particular topic, or how to approach a particular management activity. A Resources section at the end of each chapter lists other useful materials for each topic.

Part 3: Concluding Remarks

Part 3 briefly explores three key underlying themes that have reoccurred throughout this handbook, and that underlie many of the issues and decisions community-based fisheries managers struggle with regularly. It can be considered the "what now?" section of the handbook, as it ties together some of the many ideas presented throughout the handbook.

At the end of the handbook is a collection of "questions for fisheries managers", arranged chapter by chapter, to help those engaged in this work reflect on their own experiences. There is also a set of references – guiding readers to a range of publications, websites and other materials that supplement the 'Resources' listings provided at the end of each chapter in the Handbook.

The table of contents at the beginning can help in locating information quickly, and provides a more detailed outline of the content of each chapter.

PART ONE: Community-based Fisheries Management

Basic Concepts

This section is a general introduction to some key ideas about community-based fisheries management.

WHAT IS COMMUNITY-BASED FISHERIES MANAGEMENT?

Fundamentally, community-based fisheries management is a very simple idea, arising out of a key reality: fishermen and coastal communities, being the most dependent on coastal and marine resources, should have a large role in deciding how these resources should be managed. This idea fits within an emerging understanding that management decisions of all sorts are often best made at the most local level possible.

The idea that resource users and resource-based communities should have primary responsibility for managing their resources is what makes community-based fisheries management different from other resource management approaches that tend to have much less involvement of the most resource dependent people and communities.

Inherent in the idea that resource users should be primary resource managers is the assumption that they have the willingness and capacity to do so. Community-based management requires that individuals work together for the collective good, and that they consider the implications of their individual actions on the wider community and on the resources.

Along with the notion of collective responsibility for self-governance, community-based fisheries management implies a conservation or stewardship ethic on the part of resource users. Community-based fisheries cannot be only about maximizing harvest or profits – they must strive to achieve ecosystem health, and promote conservation and sustainable use of the resources and ecosystems.

While the above points provide a basic definition of community-based fisheries management, things gets more complicated in real life situations. Some of the complications come when trying to define who is managing

and what they are managing. If community-based fisheries management reflects a holistic framework within which local people can participate in solving complex and interconnected issues affecting coastal communities, who decides which people are the community and which issues they are addressing?

Community-based fisheries management can be seen from two perspectives. One sees it as being as much about political empowerment as resource management – with community-based fisheries management a process of empowering coastal communities and resource users so they can gain access and management control over coastal resources. This process can be considered part of larger movements for communities to achieve greater economic and political power.

Another perspective on community-based fisheries management sees it as being about the capacity of the community to carry out specific management activities like research or developing management plans. Community-based management in this sense is considered a set of skills to be held or activities to be carried out by local people instead of government. Within this view of community-based fisheries management, as a series of defined management activities, it becomes easier to actually pinpoint when those goals have been "achieved".

Within this handbook, we repeatedly state that values and principles are the most important elements of community-based fisheries management. Perhaps it does not matter whether CBM is seen as a process or a tangible goal. What separates community-based management from other resource management is that the specific management activities are intrinsically linked to clear principles and values at the community level.

WHY IS IT IMPORTANT?

- Centralized management systems have often failed to conserve fish stocks and protect vital habitat, and to support the residents of coastal communities that depend on them. Therefore it is important to have alternatives.

- Community-based fisheries management can work well. Interest is growing in it because many people are frustrated and angry by the current status of their fisheries and coastal communities, and this approach offers a notable opportunity for reversing the decline.

- Community-based fisheries management is an alternative not only to entirely centralized management, but also to current trends towards privatization of fishery resources, and corporate control of the fishery.

- Community-based management can be a more holistic approach to fisheries management. It offers an opportunity to develop conservation approaches at a local level, and shift towards more sustainable fisheries and coastal communities.

PRINCIPLES

- Community-based fisheries management looks a little bit different everywhere because it evolves to fit the local conditions. There is no one set of agreed-upon principles just as there is no one agreed-upon definition. Yet the same general ideas emerge from discussions of community-based management, even though sometimes different words and terms are used to describe them.

Local Example

In 1998, a grass-roots project known as 'Writing the Rules' spoke with fishermen around the Bay of Fundy about how the fishery should be managed. The project developed two fundamental fisheries management principles and a number of sub-principles.

- Fishermen must hold authority in management. This is the essence of community-based fisheries management, with fishermen, through their associations, playing the primary role in the stewardship and management of their fisheries and fishing grounds.

- Management decisions must be made at the most local level possible. In a word, power should be located close to the people, and then regional

decision–making structures can be built on that base.

The Stonington Fisheries Alliance in Stonington, Maine later added two additional principles:

- Authority comes with participation. The privilege and opportunity of authority in fisheries management is dependent upon, and exists to the extent of our willingness for participation and decision-making at every level.

- Rules must protect both the resource and the community. A sound and healthy fishery is based in a sound and healthy community.

WHERE DOES COMMUNITY-BASED FISHERIES MANAGEMENT COME FROM?

Around the world, there are many groups involved in community-based approaches to management of natural resources. Resource users and their communities manage forests, watersheds, fisheries, and communal irrigation systems through a group of approaches often called "community-based natural resource management" or CBNRM.

Communities have been protecting and managing their resources for hundreds of years – CBNRM is not a new idea. But its modern form has become particularly popular in developing countries, where communities have organized themselves to fight for their collective rights to the resources on which they depend. These communities have formed organizations to deal with local resources, e.g., by protecting their land and forests from large-scale forestry operations, or working to keep industrial fishing vessels away from their traditional fishing grounds.

This popular movement is seen as well in more industrialized countries where communities also want more control over resource management decisions. Coastal communities involved in community-based fisheries management are thus part of this global movement for change.

An example of community-based fisheries management developing on the northwest Atlantic coast of North America took place in 1996, when the first community management boards for the inshore fixed-gear groundfish fishery were established on the Scotian Shelf and in the Bay of Fundy. At this time, inshore fishermen were facing a crisis. Fisheries management was pushing for a shift in the fishery toward individual transferable quotas (ITQs) which, in conjunction with new licensing fees and regulations, was starting to squeeze small scale and part-time fishermen out of the fishery (Kearney, 2005).

In response, the inshore small-boat sector held massive protests. This strong show of unity, and the public support it generated, eventually forced the government to negotiate with the inshore sector. Two positive results were the establishment of the community management boards and a moratorium on ITQs in the inshore fleet. This allowed community-based management approaches to start to flourish in the region (Charles et al, 2006).

At the same time, in many fisheries, two emerging trends are creating opportunities for fishermen to become more involved in harvest management... First, regulatory agencies are downloading many management responsibilities onto fishing as a cost-recovery measure. Second, in some cases, local groups are wanting to develop community-based management systems, and perceive the downloading as an opportunity to take control of the fisheries.

Experience in the Atlantic Region shows that sometimes a movement for change starts out as a single project or action. Often, community-based management starts with a group of people seeing an opportunity to make change in management or regain control of local resources for their communities, and seizing the chance to do so. After a few years, outsiders might celebrate a successful example of community-based management while those involved might say "we just did what we had to do to".

THE NON-FISHING COMMUNITY IN COMMUNITY-BASED FISHERIES MANAGEMENT

This handbook will use the word "community" many times. The next two chapters will discuss more fully what community can mean in communi-

ty-based fisheries management. At this point, it is important to note that since a fishing community involves more than just those doing the fishing, community-based fisheries management should involve more than just the fishermen.

- Fishermen and others who earn their living directly from the sea are typically considered to be the primary participants in community-based fisheries management, but there is still an important place for the non-fishing part of the community.

- The principles of community-based fisheries management reflect a commitment to community, participation, and inclusiveness. Fishermen need their communities, and coastal communities need fishermen. It works both ways.

- Many community-based fisheries management systems have ways for non-fishing members of the community to be involved in resource management. Sometimes community members sit on management boards, are members of advisory committees, or attend meetings. In many First Nations communities, the community as a whole sets the overall direction for the fishery, as the fishery is seen as benefit to the full community.

- Community-based fisheries management systems with non-fishing community participation will typically get more understanding and support from the wider community. They may well be more sustainable, and can have a stronger voice with governments.

ROLE OF GOVERNMENT IN COMMUNITY-BASED FISHERIES MANAGEMENT

In some parts of the world, community-based fisheries management might take place without government involvement, but this is not likely the case in intensively-managed Northern fisheries, such as those in Canada, where management functions and control are constantly being negotiated between resource users, communities and government. Indeed, community-based fisheries management can offer an opportunity for government and community to build new working relationship and discover shared interests.

- In Northern fisheries, government has generally been involved in management for a long time, and may be unaccustomed (or even reluctant) to sharing power and responsibility with fishermen or communities. This makes it challenging to create meaningful community involvement within the context of many current fisheries management systems. Community-based fisheries management seeks to produce this greater community involvement, but not to eliminate government entirely.

- The fishery management component of government likely contains a diversity of parts, and individuals with varying perspectives. All centralized regulatory agencies have many different departments, divisions, sections, offices, and people. Some of these units (and people) will likely be more receptive to community-based management; others may be uninterested or opposed. It is often helpful to get more involvement at the local government level.

- Some government agencies feel threatened by community-based fisheries management. They wonder: "What is the role of government if we adopt a community-based approach?" It is important to highlight that there will still be a role for government within community-based fisheries management, which is in fact about partnership and relationship building.

- Indeed, community-based institutions are willing to work with government and find ways to share management responsibilities. Even in the longest running examples of community-based fisheries management, there are some management functions done by communities, some by government, and still others that are shared by both the community and the government.

- While some government departments will feel threatened, others may see an opportunity to improve fisheries management. It is best not too assume either support or hostility until you get to know the people involved.

- Scaling up the impacts of community-based fisheries management beyond the local level will require collaboration from many different partners. Often government is the only stakeholder that is able to bridge shared resources, jurisdictions, access, and help bring together many different user groups.

Table 1: General principles of community-based fisheries management.
Adapted from IIRR (1998)

Empowerment: In community-based fisheries management, empowerment is the ability of local people to exercise management control over resources and institutions on which they depend.
Equity: Community-based fisheries management is concerned about equity. This usually means equal opportunity and fair access to the fishery among the various users and between different user groups.
Ecosystem-based management: Community-based fisheries management promotes the importance of protecting and managing not only commercial species, but also other species and a whole range of habitat and ecosystem functions.
Respect for local knowledge: Local knowledge is the body of information developed by those with a local connection to the ocean, whether through living by the sea or through earning a living from the sea. Community-based fisheries management seeks to recognize this wealth of knowledge and incorporate it into fisheries decision making and management.
Inclusiveness: Community-based fisheries management recognizes the unique roles and contributions of many different resource users and community members, including youth, women, fish plant workers and others with a stake in the future of coastal communities and their resources. Community-based fisheries management makes room for appropriate involvement from all.

It is informative to see how these basic principles are expressed in different locations and different contexts.

- Sometimes, some parts of government become even more involved in certain fisheries management activities under community-based management systems than otherwise. Well-organized community organizations are often attractive partners for government research, economic development, or marketing projects.

POWER AND POWER SHARING

Community-based fisheries managers have already taken on a variety of management responsibilities, and over time, they will have to do even more to maintain existing gains, and to revitalize depleted fisheries and communities. They will need more authority over the many things that impact on community fisheries, such as habitat protection, markets, and policies.

- Many fishery associations want more power over the range of their current management activities, especially in designing the kind of fishery they want, in terms of management and conservation measures.

- Some fishermen are ready to assume far more responsibilities than they currently hold. Many organizations have already drafted comprehensive management plans for how to run their fishery. Examples in the Atlantic Region include the Gulf of Maine fishery plan, and the Upper Bay of Fundy ecosystem-based management proposal. They have the vision, the ideas, the commitment and now need the authority to carry them out.

- Community-based organizations want to share power with government, when the relationship is that of a partnership. They do not want to feel as though management responsibilities are being downloaded with no increase in the authority they hold in management.

- Typically, power is something that is not simply given away by government. Community organizations need to recognize the importance of showing a commitment to claiming, or re-claiming, power. For example, if a community develops its own management plans and then states clearly: "This is how we will manage our fishery. This is what we will do."– this can help make the government listen.

- Demonstrating to government an interest in working with other stakeholders and with the broader community is also helpful. Otherwise, governments may use the "wedge of division" to keep people apart.

- Power sharing does imply sharing. It means that community groups and government must help each other meet their individual and shared objectives.

A Note on Terminology: Imposters to Community-based Management

Note that while there may be reluctance within government to share power in a community-based management approach, they may nevertheless use similar-sounding words to describe a quite different approach. However, terms like "co-management", "user management", or "partnership" might not necessarily mean community-based management. Regulatory agencies may even say they are 'doing community-based management', but fundamentally that is not something governments can do by themselves because it involves:

- A grass roots involvement, that is driven by local interests and concerns
- A focus on localized, unique, flexible, and adaptable approaches
- A basis in principles of local participation, decision making and community.

Therefore while communities can and must partner with government, the latter cannot "do community-based fisheries management". Management initiatives of government may be helpful to fishermen and communities, despite any confusing or misleading use of terms, but it is important to guard against government-sponsored "community-based management" that downloads management responsibilities onto communities without a real transfer of control or decision-making power. In such cases, words do matter.

The table on the next page is an example of how some fisheries management functions are shared between a First Nations community and Canada's Department of Fisheries and Oceans.

Table 2: Example of Management Functions currently shared between government and community.

Management Function	DFO	Shared	Acadia First Nation
Access	▫ Issues Commercial and Food Fishery licenses ▫ Sets training and safety requirements ▫ Licenses other commercial fisheries users in area	▫ Negotiating Fisheries Agreement	▫ License allocation and distribution ▫ Membership eligibility ▫ Training and mentorship
Harvest Management	▫ Stock assessment ▫ Setting TAC	▫ Harvest planning	▫ Allocation and distribution
Compliance and Enforcement	▫ Law enforcement ▫ Set conservation rules		▫ Mentorship and encouraging good fishing practices ▫ Relationship building with non-Native fishers ▫ Can deny individuals licenses or fishing rights
Research	▫ Stock assessment ▫ Data analysis ▫ Management planning	▫ Data collection ▫ Data ownership	
Building and Maintaining Community-based Organizations	▫ Funding support for training programs		▫ Capacity building, training, mentorship ▫ Implementing organizational management practices ▫ Awareness building and community processes
Economic Development			▫ Job creation and economic diversification ▫ Marketing ▫ Product development
Collaboration and Building Supporting Institutions		▫ Fisheries advisory board	▫ Networking ▫ Alliance building
Policy	▫ Develop and implement overall First Nations fishery policy ▫ Initiate policy consultation processes		▫ Articulate policy alternatives ▫ Lobby for policy change

Setting the Context

Community fisheries management is not a one-size-fits-all approach. Context – the very unique local situation in which community-based management is being done – is crucial. The management system, or its individual steps, cannot be simply copied and applied somewhere else. For example, some practitioners are working in a context where tradition, customs, interests and laws support community-based fisheries management, while others work in conditions that make it very difficult to implement community-based management

This section explores some of the ways in which local conditions shape what community-based management can look like. The goal of this discussion is to help those involved in community-based fisheries management to think about and to better understand the context in which they are working.

Some factors that create the local conditions that support or work against community-based fisheries management include:

- National legislation and policy towards community-based management;
- Provincial, state, or band rules and regulations regarding the fishery;
- Existing licensing and training requirements for participating in the fishery;
- The types of fisheries existing in the area and the composition of the fleets;
- The interest, skills, customs, traditions and experience of local fishing organizations relating to fisheries management;
- The financial and human resources available for management;
- The interests, values and "sense of community" of the people involved;
- The relative power held by harvesters and other resource users.

Those working towards community-based fisheries management need to understand the context of the fishery they are working in, so that they can make plans and decisions that are right for their local situation. Even though it is sometimes difficult to know, they should try to understand what they can influence or change, and what cannot.

UNDERSTANDING CONTEXT

Managing people is at the heart of fisheries management. Those involved in community-based management need to know who they are working with. Who has access to the fishery? Who is allowed to fish? Who do the fishermen consider part of their "community"? Context is also about understanding the situation inside the management area.

In community-based fisheries management, understanding comes from asking questions to help clarify who and what is involved.

- What is the community?
- What is the resource?
- What are the management boundaries?
- What are the management activities?

The answers to these questions will likely be more questions. The back and forth of asking, answering, thinking, and asking more questions is what helps fishery practitioners clarify where they are now and what they are working towards.

Community-based fisheries management is necessarily about change. It is not about the status quo. The "community", the "resources', the "boundaries", "the management activities" will all evolve over time.

DEFINING COMMUNITY

There is no set definition of what a "community" is for fisheries management, but the following are a few ideas that help identify what a community is and is not, in community-based fisheries management.

In community-based fisheries management, the direct users of the resource – those most dependent for their livelihood on the resources – are typically seen as having primary management responsibility. So, the "community" must include fish harvesters.

However, participation is both a right and a responsibility. The community in community-based management includes those harvesters committed to becoming engaged in a long term process, willing to spend the time and

the energy required to think, to learn, to be open minded, to participate, and to strive to achieve short and long term management goals.

Community-based fisheries management involves a commitment to local governance by building strong democratic organizations. Only harvesters that are organized can succeed in community-based fisheries management. Not all active harvesters identify with a 'community' doing community-based fisheries management.

Fisheries management has to involve more than the fish harvesters. Though fish harvesters and their families should benefit from community-based fisheries management, the fishery also collectively benefits the wider community. Community-based fisheries management has to support, and be supported by, coastal communities.

There is generally seen to be a geographic dimension to community. Those who fish and manage fisheries have to be from somewhere. An important part of community-based fisheries management is a commitment to a particular place. Membership is determined by where people live, where their wharf is, and where they fish. Indeed, community-based management is sometimes referred to as 'place-based management' – this is a powerful concept.

Local Example

The Cobscook Bay Resource Center in Eastport, Maine created a sense of place when they began using the term "Cobscook Bay" to describe their area. This region had historically been considered part of "Down East, Maine" or "Passamaquoddy Bay". The new term created a new local identify for the shores of Cobscook Bay and its resources. This sense of place remains vital to organizing efforts relating to the community-based fisheries of the area.

The Atlantic Region has many examples of how communities can be defined for community-based fisheries management.

Fleet-based community management: A fleet is a grouping of fishing vessels with similar characteristics. In itself, this does not constitute a community, and fleets such as this do not form a community just because they have a portion of the fish quota or because they want to manage a resource. However, if, for example, we are referring to a fleet fishing out of a certain location, this can be considered a geographically-based community of interest under the governmental definition of community for the purpose of fisheries management. Examples of fleet-based community-based management discussed in this book include the Fundy Fixed Gear Council and the LFA 34 Management Board (both from Nova Scotia) and the Cobscook Bay scallop fleet in Maine. These groups each became a management community by working according to principles of community-based fisheries management such as equity, transparency, accountability, and bringing benefits back to the broader community within their home area.

Community economic development: Some communities try to spread the benefits of the fishery throughout the entire community by developing businesses and creating jobs around the fishery. In these cases, fisheries management is not only about the access to and harvesting of fish, but also the distribution, processing, and marketing of fisheries products that benefits a wider geographic or cultural community.

In a community economic development approach, the community itself is broader than just the fishermen or those directly involved in managing the fishery. The community is the people who live in an area, such as a town, county, or reserve. Sometimes a community economic development approach focuses on creating jobs or opportunities for certain sectors of the community, for example, single mothers, youth, minority groups, or those that have lost their jobs in other economic sectors.

Many First Nations communities are examples of using fisheries management as an engine of community economic development. Acadia First Nation is a Nova Scotia example that is discussed in this handbook, as are the two First Nation communities in the Mi'kmaq Confederacy of PEI (Prince Edward Island). Some non-native communities, such as Eastport, Maine, have also had broader economic benefits from their fisheries management activities.

Place-based management: Any community-based fisheries management that is based in a particular community or other geographical location fits within the definition of place-based management. However, place-based management can also be seen more broadly as managing an entire local system to maintain the health and integrity of the ecosystem, its ecological functions and processes, to protect habitat, and to use marine and terrestrial resources sustainably. In this broader view of place-based management – which government typically calls 'integrated management' when it takes place on a large geographical scale – fishermen are participating in a process that involves many more sectors than just the fisheries. Many industries and interests manage the uses of a shared ecosystem – these can include First Nations, sectors such as forestry, mining, tourism, recreation, and scientists.

This form of place-based management may start from grassroots efforts to organize around a bay or watershed, but it does eventually require collaboration and partnership with multiple levels of government. The management area usually crosses many different political boundaries (municipal, county, provincial, federal) and involves resources that fall under the jurisdiction of many government agencies and levels of government. The Upper Bay of Fundy Integrated Management Pilot Project and the West Coast Vancouver Island Aquatic Resource Management Board are examples of place-based management discussed in this handbook.

DEFINING THE RESOURCE

There is no set definition of what resources can be included under community-based fisheries management. Including the word "fisheries" implies that the main focus is on marine or coastal fishery resources, but in many parts of the world, community-based coastal resource management means taking responsibility for terrestrial resources as well, such as the intertidal zone and watersheds, as well as resource processing, manufacturing and storage.

Like the ambiguity around the word "community", what is included within the fishery resources will depend on the context. Community-based management is opportunistic, and may start with a local organization taking more management responsibility for a single resource, but that can then expand into many others.

Usually, the starting point is a resource that the community is already heavily dependent on or involved with. For example, a community organization might initiate more involvement in research on a key species, which might lead to developing a subsequent management plan. Other groups might be obliged to take on management responsibilities due to government requirements, even before they undertake research or monitoring. Either way, community-based fisheries management starts with looking more closely at one of many potential resources and may then expand to include a wider range.

In the Atlantic Region, the range of resources managed in community-based management is as varied as the management systems being used:

- The Fundy Fixed Gear Council manages their allocations of groundfish such as cod, pollock, haddock, hake, halibut, and dogfish.
- Acadia First Nation has licenses for a range of species including gaspereau, herring, mackerel, lobster, ground fish, and swordfish.
- The LFA 34 Management Board is developing a management plan for lobster conservation that includes taking on more fisheries management responsibilities that the government is downloading.
- Fundy North Fishermen's Association is part of a groundfish and a scallop management board.
- Bear River First Nation is gradually entering the fishery beginning with lobster harvesting.
- The Upper Bay of Fundy Integrated Management Plan will cover a wide range of resources, including flounder and other groundfish, river fish, and shore line harvesting for species such as bloodworms.
- The Mi'kmaq Confederacy of PEI has developed comprehensive fisheries management plans for groundfish, scallop, lobster and other commercial species. Their activities include aquaculture development, habitat restoration, tourism, marketing, job creation and training, and new business ventures.

Most of the above examples do not reflect a 'complete' form of commu-

nity-based management, because the latter would require empowerment of the organization to make decisions concerning sustainable harvesting practices, such as limiting gear type or vessel size. This is slow to happen in the Atlantic Region. However, each of the above represents an initial move to community-based management.

DEFINING MANAGEMENT BOUNDARIES

Determining the management boundaries for community-based fisheries management is another major challenge.

Government management in industrialized fisheries usually starts with the management of individual 'stocks', i.e. the fish of a certain species located in a certain ocean area. This view of management may or may not match up with a geographically-defined group of fishermen or a certain community (and nor does it necessarily match up with natural boundaries of the marine ecosystems).

On the other hand, community-based fisheries management starts with a group of people, or a community, with an attachment to fishing and to a place. This may or may not match the government management boundaries for the resources the community is harvesting.

This difference in perspective can be a challenge for community-based fisheries management, the success of which requires a suitable and clearly defined area that the community can relate to. In countries with informal and decentralized fisheries management, it is possible for a fishing organization or a coastal community itself to define a natural unit like a bay or estuary that reasonably matches their fishing area and where they can make enforceable management regulations. This is more difficult in fisheries with centralized management and laws. The boundaries for community-based fisheries management will not be completely clear, will require negotiation, and will not likely end up matching the community's own idea of its "management area".

The actual management area will depend on the context of the community and the resource. Some aspects to take into consideration are:

- Political boundaries
- Ecosystems and habitat
- Geological considerations
- Biological and fishery considerations
- Socio-political realities
- Resource users interaction and communications
- Norms and values of the different resource users
- Cost-benefit considerations
- Access to financial and technical skills
- Legal basis of the management unit

Like everything else in community-based fisheries management, the boundaries and what they mean will evolve over time. Starting with a manageable and functional area that roughly matches the scope of involvement of the organization is a good way to begin.

FISHERIES MANAGEMENT ACTIVITIES

Management activities are what communities, harvesters and their organizations are actually doing when they do community-based management. These are the activities that help keep the fishery running in a way that provides benefits to the community while keeping the fishery sustainable.

As noted earlier, most cases of community-based fisheries management will start with only a few management activities. The participants may eventually see a need to expand their scope of activities to meet their own changing goals.

The following categories of activities are fairly typical within community-based fisheries management, in the Atlantic region and beyond. A full chapter is devoted to each of these topics in Part 2 of this handbook.

- Access to the Fishery
- Fisheries Management Planning
- Harvest Management
- Compliance and Enforcement
- Research
- Building and Sustaining Community Organizations

- Economic development
- Managing Conflict
- Collaboration and Building Supportive Institutions
- Influencing Policy

UNIQUE CONTEXT: FIRST NATIONS FISHERIES

This discussion focuses on the particularities of First Nations communities in Atlantic Canada that are becoming increasingly involved in the commercial fisheries of the region, since a Supreme Court of Canada decision in 1999. That "Marshall Decision" recognized the traditional involvement of First Nations in the fishery, and indeed their strong historical reliance on marine and coastal resources. In recent times, however, Atlantic Canadian First Nations had very little access to the commercial fishery – and have been without gear, boats, training and facilities. They are only now re-entering the modern commercial fishery with newly-recognized collective access rights, following the "Marshall Decision". Yet while First Nations are new entrants in the regulated fishery, they bring with them a tradition in which community-based fisheries management fits well with aboriginal approaches to governance and communal decision making.

There are a variety of perspectives within First Nations about how their communities should participate in commercial fisheries. As a result, a wide spectrum of approaches have evolved, ranging from Bands that choose to focus exclusively on small-scale inshore fisheries, to corporate fishery models where the fishery is managed very much like any other Canadian offshore fleet. There are also a variety of ways in which federal fisheries staff are involved in First Nations fisheries, with some communities receiving technical and financial information from DFO, while others remain more autonomous, and still others partner with DFO while still maintaining ultimate decision-making authority.
Of major significance in any First Nation fisheries model is the fact that when First Nations enter the commercial fishery, it is through communal fishing licenses they hold when their communities sign fisheries agreements with the Federal government. Communal licenses, whether issued for the 'food fishery' or the commercial fishery, are not provided to individual fishers, but rather to the Band, which then has to decide who fishes and how benefits are distributed. Communal licenses force the band to manage for the community, to consider the interests of those who are fishing as well as other members of the community, and to consider how benefits are distributed. This requirement leads to a deeper consideration of questions of equity and fairness.

TRENDS IN "OWNER-OPERATOR" FISHERIES

In contrast, to the First Nations fisheries described above, others in the Atlantic Region's commercial fisheries are not operating under communal licenses, but rather as individual license holders. Historically, most of these license holders are in 'owner-operator' fleets – ones in which each fishing enterprise is owned and operated by an individual fish harvester. Many studies show that the owner-operator fleets are the economic, social, and cultural backbone and lifeline of coastal communities in the region. The benefits from the money spent running the owner-operator enterprises enable local businesses within coastal communities to thrive, and crew members of owner-operator fleets have stable jobs and moderate incomes, which bring further benefits to their communities.

Most such fisheries are managed through partnership or fishery management agreements between DFO and species-specific or gear-type-based harvesting groups. Typically, the latter organizations, representing owner-operator fleets, consult with their members to develop sustainable management plans. Working together, owner-operator fishery groups across Canada are trying to protect and to maintain an inshore fishery for the future of their communities.

The owner-operator fleets are threatened by a trend in many of the inshore fisheries, where a few larger companies stockpile licenses until they control a specific fleet. These corporate-owned fleets may harvest more intensively than the inshore fleets and may operate under an Individual Transferable Quota (ITQ) management system which consolidates vessels and jobs. Furthermore, crew on these vessels most often have low incomes and unstable jobs. There are also concerns that fishing practices by these fleets can be detrimental to fish habitat, spawning grounds, and health and safety.

WHAT CAN BE LEARNED FROM THESE MODELS?

There are similarities between the way community-based management of fisheries happens in First Nations and in the owner-operator fisheries in other communities, where the broader community both supports the fishery and benefits from the fishery. While a difference in perspectives, conditions and approaches has the potential to lead to misunderstandings and conflict, it can equally serve to illuminate new possibilities for how community fisheries can develop, and perhaps create opportunities for mutual learning and support. In particular, the First Nation model of community-run fisheries may be of interest to inshore fishermen who, over the past decade, have seen their individual access rights eroded, making fishing a less secure occupation. Indeed, the threat of losing their livelihoods and the health of their communities has inspired many individuals to work more closely within organizations and community to manage their fishery. Thus there is value in residents of all communities working together to strengthen community-based management and support the needs of coastal communities. The different approaches to community-based management can each learn from one another. There is value in looking at what can be learned from the experience of First Nations participating in fisheries as a community and from non-native fishing communities participating as a collection of individuals. And there are benefits that First Nation communities and inshore owner-operator fleets can reap from working together to manage the inshore fisheries to benefit their communities and ensure a sustainable healthy fishery for future generations.

Fisheries Managers

"In community fisheries, everyone is the manager. Everyone has responsibilities" - John Kearney

This handbook uses many words to describe the people involved in community fisheries. As discussed earlier, it is sometimes assumed that fish harvesters form "the community" in community-based fisheries management, and that these fish harvesters, through their fishing organizations, constitute the direct "managers" of their fisheries.

It is not always so straightforward, and some approaches to community-based management give a greater role to non-fishing community members than others. Sometimes, a community organization, a community group, or a grassroots organization is very involved in fisheries management activities and is considered the "fisheries manager".

Many First Nations communities strive to create management structures in which fish harvesters can have input into fisheries management decisions, but not overall management control. In these cases, a paid manager or other staff provides technical advice, and management plans must be approved by the elected Band Council.

All of the kinds of people or organizations described above may be part of fishery management boards, or other formal or informal institutions that may or may not be recognized by government as "fisheries managers".

It is clearly no easy task to clarify exactly who in the community is a "manager" in a system that involves so many people and organizations. This section approaches the question by describing some of the ways the role of "fisheries manager" is being defined in the Atlantic Region. The rest of this section talks in broad terms about the role of local fisheries managers in community-based fisheries management – much more detail follows in Part 2 of the Handbook.

FISHERIES MANAGEMENT

Commercial fisheries in more industrialized countries (e.g., in North America and Europe) are complex and often difficult to understand. It is hard for individual fishermen to navigate the maze of regulations governing harvesting, licensing, safety, and conservation, as well as financial issues and bureaucratic requirements, in order to be able to harvest fish responsibly.

Fishermen may not have the time, resources, or capacity to do this entirely on their own. Yet in Canada, for example, the federal Department of Fisheries and Oceans (DFO) is increasingly downloading administrative requirements to fishermen and their associations. Fishermen now pay an

increasing share of the costs associated with managing a fishery, including monitoring, scientific research, and the salaries of administrators and researchers. At the same time, fishing associations are taking on many of the tasks once done by government fisheries managers, such as issuing licenses, collecting user fees, planning and designing research, and tracking fishing and industry trends.

In this context, who is actually managing fisheries? Those involved in fisheries management vary, from place to place, and across the various management activities. Management involving fishermen and their associations remains a key to community-based management, and in many cases, community groups, fishing associations, and local management boards take on certain of the management activities.

WHO IS THE FISHERIES MANAGER?

Community-based fisheries management is not a one-person job. By definition, there are always a number of people with a role in the management process, if it is truly community-based. Some of these are paid while others are volunteers. Some are fishermen and others not. The range of those who might be involved in management in a community fishery may include any, or all, of the following:

- The Chief and Council members of a First Nations community
- Individual fishermen and their elected representatives
- A paid full-time fisheries manager and their staff
- Representatives of the non-fishing community, including local schools, fish processing workers, and environmental sector representatives
- A fishing organization representative on behalf of its members
- A community management board
- An advisory committee made up of representatives of a number of local institutions
- A paid office manager
- An Aboriginal fisheries officer
- A government employee acting as management board representative

TYPES OF FISHERIES MANAGERS

Fishermen as managers

Community-based fisheries management involves putting more decision-making in the hands of the fishermen and communities. Certainly, in community-based fisheries management, the fishermen themselves are involved in management, in making the decisions about who harvests, about when and how species are harvested, and about how resources are conserved.

Local Example

The Fundy Fixed Gear Council (FFGC) is the community management board for the handline, longline, and gillnet fishermen on the Nova Scotian side of the Bay of Fundy, from Digby County to the New Brunswick border. Each of the three gear types are represented by a gear committee of fishermen who develop a fishing plan for their sector each season.

Each gear committee brings their management plan to the Fundy Fixed Gear Council, which has three members from each of its participating associations, the Maritime Fisheries Union (MFU) and the Bay of Fundy Inshore Fishermen's Association. The Council examines each gear committee's plans, to make sure overall community and conservation goals are being met. It also suggests changes to reduce conflict or over-harvesting. The combined plan is then submitted to DFO and once it is accepted, each fisherman signs a contract stating they will fish under their board's management plan and under the FFGC's rules.

In the FFGC, the fishermen make decisions about the kind of fishery they want, they make fisheries plans and they sit on enforcement committees. So in this case, they are 'doing fisheries management'.

Many community management boards are not run exclusively by fishermen. Fishermen often cannot attend every meeting during the fishing season, so they need to have representatives working for them.

Fishermen may also need support in:

- Internal communication, and communications with government.
- Tracking fish landings and how the fishery is progressing in terms of conservation and harvesting plans (e.g. the percentage of total quota caught).
- Keeping records and convening meetings of the membership or committees.
- Attending consultation meetings with government and various hearings.
- Marketing development, organizational strengthening, strategic planning, and public relations.

Many management boards hire administrative personnel to help with those types of management activities.

Office Managers

Many management boards have a full or part-time office manager to help with the day-to-day running of the fishery. The salary and other costs of office managers usually come from fishermen's dues. Many organizations also access government funding to hire office staff.

Local Example

During the fishing season, the Fundy Fixed Gear Council hires an office manager who prepares contracts, tracks landings, acts as a liaison between the government and the fishermen, organizes and attends committee and Council meetings, makes sure information on the weekly allowable catch is up-to-date and accessible to the fishermen, and does all the book keeping. The Office Manager also acts as a sounding board for fishermen and tries to help out in answering questions about license conditions and regulations.

Students and Interns

Many fishing associations or management boards hire summer students or interns to work in the office for a period of a few months at a time. They are usually hired through summer employment programs or research projects at affiliated academic institutions. These positions often allow the association to conduct research projects they would not otherwise have the resources or funds to complete.

Professional or full time managers

Ensuring that fishermen and their organizations are well served is a key aspect of community-based fisheries management. Some organizations fulfill this by hiring professional/full-time managers to carry out some of the management activities on behalf of the fishermen. The management authority that rests with full time managers varies greatly.

In some communities, professional managers will implement major decisions made by a fishermen-led management board or a Band Council, and may be authorized as well to make certain more minor management decisions themselves.

In other settings, very experienced managers provide technical advice, draft management plans, represent fishermen and the community in advisory bodies, lobby for greater access or benefits, supervise staff, and train fishermen, community members and staff.

Local Example

At Acadia First Nation, professional fisheries managers:

- Implement the decisions made by the Chief, the Council, and their fisheries advisory committee
- Represent the interests of the fishermen and the broader community
- Arrange for fishermen and community participation in fisheries decision making
- Issue licenses and tags
- Coordinate the commercial, food, and communal licenses
- Assist in capacity building (getting people on the water, organizing training courses, and taking care of documentation)
- Monitor and report landings and catches
- Ensure good communication between the fishermen, the community, the Band council, and the federal government

- Work on building relationships between Native and Non-Native fishermen

Having a paid manager does not remove the responsibility of involving fishermen and community in the management process. For example, Acadia First Nation in southwestern Nova Scotia does this through a harvester committee, and through formal and informal consultations with the wider community.

Community members in fisheries management

While some community-based fisheries management is limited to involvement only of fishermen, others – such as those of First Nation and aboriginal fisheries – involve the broader community, and indeed focus on serving the community. They often deliberately create decision making bodies that are arms-length from the actual fishery and require the wider community as well as the Band Council to approve the fishing plans and management measures.

Even a fishery managed primarily by fishermen needs input from the non-fishing community because community-based fisheries management extends beyond the fishermen themselves. Involving non-fishermen in fisheries management helps build community interest and support. It also brings in people with different skills and different schedules who can work on new tasks. Finally, involving non-fishermen helps build networks or alliances that can work together on common issues that affect the whole community.

Supporting Institutions

Fishing associations and management boards often have collaborative relationships with community-based institutions or academic and scientific institutions. These partnerships provide the group with better access to community resources, research and information, as well as support in developing broader linkages and necessary research projects. Sometimes these collaborations can be important in involving outside people in conflict resolution, fundraising, proposal development, or building relationships with potential allies. These outside supporters are not the managers, but they can be an important support system for community-fisheries managers.

Issue: There is no "right" model

The kind of manager that is appropriate for a particular fishery may change over time, as the management organization evolves. In the early years of the community management board system, both the Fundy Fixed Gear Council and the Fundy North Fishermen's Association relied heavily on committed, non-fishermen managers who were advocates of community-based management and strong organizers. Their role was to motivate people, to guide visioning exercises, to help fishermen start to plan the kinds of fishery they wanted, to negotiate with the government, to lobby, and to support the development of democratic decision making structures and processes. These organizers/managers played a key role at particular stages in the development of the local management system.

In recent years, roles have evolved. The FFGC, as a management board, is now led completely by fishermen with a paid office manager. On the other hand, Fundy North now has part time paid staff that attend meetings, help build the membership, communicate with members, support organizational development, provide a contact with government, and keep track of issues.

These examples show that there is no one form of 'manager' position within CBM. The "right" kind of manager depends on many factors including timing, local capacity, interests, funding, and organizational development stage.

MANAGEMENT BODIES

Given the complexity of the job and the many tasks involved in community-based fisheries management, it is more realistic to say that the 'fisheries manager' may actually be a management body. The main function of the fisheries management body is to make sure the organization's vision of community-based fisheries management is implemented, i.e. to do the work needed to meet this goal.

For larger, legally recognized management units, the management body may include community and government representatives. The make-up of the management body must be carefully selected for certain key qualities:

- Representation
- Accountability
- Legitimacy

People can be selected as members of the management body in various way including:

- Election by constituent associations
- Appointment by their associations
- Self-selection
- Elected by another community group
- Participation in the management body as part of their job

Perhaps the most challenging and important requirement for an effective management body is that harvesters trust the people on the management board and feel that they represent their interests.

SUMMARY

All of the above shows how complex it is to actually identify who is the "manager" in community-based fisheries management. The meaning of that term will keep changing as activities grow and change. A small group doing research on salmon habitat may not call themselves managers, but five years later when they are doing habitat restoration work, sitting on advisory committees and monitoring an experimental fishery, they may feel that they are "managing" their fishery.

For this reason, this handbook frequently use words like: community group, local people, community members, management boards, and fishing association to describe all the many kinds of people and groups involved in community-based fisheries management, in addition to the term "fisheries manager".

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PART TWO: Management Activities In Community-based Fisheries Management

Introduction

"My first year on the job, I felt I was constantly dodging bullets because I was always having to react to new issues being thrown my way."
-Curtis Falls, Fisheries Manager, Acadia First Nation, 10 September 2003

As explained in Part 1, there are many professional and volunteer managers involved in community-based fisheries management. Many have not previously with the range of skills that are part of the job. They are learning "on the job" as they face the day-to-day challenges and opportunities.

Part 2 of the handbook is about the management activities done by fisheries managers (i.e. including fishing associations, management boards, office managers, and professional managers) within the context of the various forms of 'northern' fisheries that are the focus of the handbook. Each chapter in Part 2 focuses on a specific management activity and the knowledge and skills needed to do it effectively.

Most organizations will not become involved in every activity discussed in this handbook. Community-based fisheries will usually start with a few such activities, and perhaps eventually take on new management responsibilities over time.

Though the fisheries management activities in this handbook are presented sequentially, involvement in community-based fisheries management does not always happen in any particular order, nor are the activities always easily separated from one another. Management activities in community-based fisheries management reinforce each other, as they should be integrated, complementary, ongoing, and simultaneous. This is especially important for activities such as monitoring and evaluation which can help organizations assess their progress, reflect on their experiences and make changes as needed.

The table of fisheries management activities presented below lists some management functions that do happen as part of community-based fisheries management. It is based on a similar table in "Fisheries that Work: Sustainability Through Community-based Management" (Pinkerton and Weinstein, 1995)

Table 3: Management Activities in Community-based Fisheries Management.

Management Activity		Description
1. Access	a. Community Access b. Collective Attachment c. Membership Criteria d. Exclusion e. Maintaining and Increasing Access f. Equity	Ensuring community can access fisheries resources Recognizing past, and current resource use Determining who belongs to the group, setting membership conditions Determining who can and cannot fish Acquiring new fishing rights Distributing benefits, including access, within community
2. Fisheries Management Planning	a. Management Plans b. Community Visioning c. Management Objectives d. Management Measures e. Conservation and Rehabilitation f. Monitoring and Evaluation	Creating a plan for all aspects of fishery, agreeing upon indicators for success Articulating a guiding vision for fishery and the community Setting conservation, cultural, social, economic objectives for the fishery Selecting strategies to meet management objectives Actively protecting and restoring fish stocks, habitat and ecosystems Assessing system to see if the objectives are met and making changes if necessary
3. Harvest Management	a. Harvest Management b. Stock Assessment c. Harvest Planning d. Allocation e. Implementation f. Fisheries Monitoring	Planning and overseeing the capture of all marine species Assessing status of stocks in order to set harvest levels Establishing the who, when, where, and how much of the fishery Arranging internal distribution of catch and effort Implementing the plan; keeping harvesters fishing Tracking and documenting catches and landings, modifying plans
4. Compliance and Enforcement	a. Developing Rules b. Education and Awareness Building c. Enforcement d. Penalties and sanctions	Creating fishing rules to support management objectives Educating members about rules to improve compliance Catching violators Carrying out agreed upon infractions process, Penalizing violators
5. Research	a. Developing a Research plan b. Data Collection and Analysis c. Data Ownership and Control d. Using Research Results e. Collaborative Research Partnerships	Identifying research questions and projects and developing an action plan. Collecting data, community participating in analysis Maintaining access and ownership over data and research results Applying findings to support fisheries management Entering into long term equal research partnerships with other institutions

Table 3: Management Activities in Community-based Fisheries Management.

Management Activity		Description
6. Building & Maintaining Community-based Organizations	a. Leadership and Facilitation b. Starting an Organization c. Maintaining an Organization d. Community Involvement	Identifying potential leaders and helping develop leadership skills Establishing an organization and recruiting members Ensuring financial and organizational sustainability, keeping members engaged Getting the wider community to support and participate
7. Economic Development	a. Managing Fish Supply b. Improving Product Quality c. Market Development d. Job creation e. Keeping Wealth in the Community	Timing harvest for maximum product value Increasing fish prices by better handling and storage "Branding", developing new markets, improving prices for harvesters Maximizing employment opportunity from fishery and related industries Finding ways to keep wealth from fishery circulating within community
8. Managing Conflict	a. Collaborative Conflict Management b. Internal Conflict c. Conflicts with Outside Interests d. Mediation	Using appropriate conflict management strategies Establishing mechanisms for dealing with internal conflicts Having a process for addressing conflicts with outside interests Supporting other organizations' dispute resolution
9. Collaboration and Building Supporting Institutions	a. Linking and Networking b. Forming Alliances c. Participating in Advisory Bodies d. Building Supporting Institutions e. Scaling Up	Building relationships with allies Involvement in issue-based alliances Sitting at the table during government led consultative processes Working with capacity-building institutions, creating new support mechanisms Expanding the impact from CBM
10. Policy	a. Problem Identification and Analysis b. Setting Policy Objectives c. Identifying Policy Alternatives c. Advocacy and Lobbying e. Public Support	Understanding issues and analyzing root causes Defining what should be achieved Articulating desired policies and alternatives Convicting decision makers and the public Building public support for CBM issues

Chapter One: Access

The management table can help practitioners understand current and potential activities their organization may be involved with. It should not be considered as a checklist as to whether or not an organization is doing community-fisheries management. As discussed in Part 1, community-based fisheries management should be seen as being as much about the process of empowerment through participation in fisheries management, as about the activities themselves.

Obtaining and maintaining access to the fishery is fundamental in community-based fisheries management because harvesters need secure fishing rights for long term survival in the industry. This chapter addresses:

- Community access
- Recognition of community access (collective attachment)
- Membership and access
- Exclusion
- Maintaining and increasing access
- Equity

Community Access

WHAT IS COMMUNITY ACCESS?

Having access to a fishery means having the necessary recognition, permits, licenses and resources to participate in that fishery. Community access requires that a group (the community) can participate in the fishery, and that their collective attachment to this fishery is acknowledged.

Community access is about ensuring local fishermen have 'use rights' e.g. fishing licenses and fish quota allocations to keep them fishing. In community-based fisheries management, discussions of access frequently touch on questions of equity and distribution of benefits.

WHY IS COMMUNITY ACCESS IMPORTANT?

Community-based management is about more than individual fishermen; community-based fisheries management tries to support the survival of coastal communities. A loss of access leads to a reduction of fishermen and eventually the decline of the community's economic, social and cultural base.

Indeed, conventional fisheries management policies have often led to consolidation and loss of community access. Securing and preserving fishery access is a constant challenge because of these pressures.

Residents of coastal communities may not always be able to fish near their communities. Most fisheries management systems (based on such regulations as licenses, quotas, trap limits, days at sea, limited entry, and 'catch history') do not incorporate local connections to a particular area or long time dependence on coastal fisheries.

Fishing access can bring social and economic benefits for the community, while inequitable access can lead to conflicts. Community-based management should consider how the wider community can benefit from the fishing industry.

HOW TO SECURE COMMUNITY ACCESS

Community access to the fishery is a crucial need. The rest of this chapter talks about how to secure and maintain community access through:

- Recognition of collective attachment
- Membership and access
- Exclusion
- Maintaining and increasing access / community attachment
- Equity

Recognition of Collective Attachment

WHAT IS COLLECTIVE ATTACHMENT?

A collective attachment is a long-standing association between a community and a fishery. It means a community, or a component of the com-

munity, has a history of fishing a particular fishing area, or species, and recognizes the relationship and the dependency.

There are many different kinds of community attachment to a fishery. Some are historic and some relatively recent. Most involve a relationship with fishing places adjacent (or very close to) the communities where they actually live. But fish (and fishermen) are mobile and a fishing livelihood cannot always depend solely on species in adjacent waters. Inshore fishermen may also have a history of fishing further from shore or on offshore banks. They may have collective attachment to fisheries for which they share access with many other fishermen and many different gear types.

A community can have a collective attachment to:
- A certain fishing area
- A particular species
- A bay or watershed
- A geographical region

Collective attachment is something that always has to first be acknowledged within a community. However, in order to secure access from regulatory agencies that govern licenses and other aspects of fisheries management, governmental or external recognition of collective attachment is often important.

WHY IS IT IMPORTANT?

A powerful first step towards community-based management comes from articulating local attachment to community fisheries. A group has to consider itself as a "community" before claiming a collective attachment to a fishery (See Part 1 – Understanding Context).

Communities can (and always have) recognized their dependency on their fishing areas and protected them from other users. Under most fisheries management systems, formal government recognition is necessary to community access. Usually, this process begins when the government recognizes the community's collective attachment.

HOW TO DO IT

The following sections discuss some ways for communities to get recognition of their collective attachment.

Internal Recognition

Community recognition of collective attachment to the fishery starts with people talking about and documenting their community's participation in the fishery. Some ways to do this include:
- Collecting stories from retired and active fish harvesters
- Presenting and displaying stories, plays, poems, photos about the fishery at community events and in local newspapers
- Producing videos documenting their life in a fishing community
- Mapping exercises asking people to draw the boundaries of "their" fishery
- Bringing retired fish harvesters to schools to talk to children about the fishery
- Annual Ocean Day celebrations
- Placing displays of old fishing boats and equipment in public spaces
- Researching the economic history of the community, especially fishing and related industries
- Looking through old log books, maps, local archives

It is helpful to document and publicize information about the community's fishery, and its fishing history. Keep in mind that talking about fishing means talking about more than fish harvesting. For example, what role did women play? How have young people been involved? What businesses developed because of the fishing industry? What are the songs and traditions related to the sea?

Talking about community access also involves realities of inclusion and equity. Who was never involved in the fishery? What groups were denied access? How did people from other places participate in the local fishery? Who got wealthy from the fishery? Where did the benefits go?

What's happening now? Who is the fishing community? How are they contributing to the well being of the wider community? Who has access and who does not?

External Recognition

The community's collective attachment legitimizes claims for any special status or recognition, which is why it is the basis for more formal recognition of collective attachment.

Fishing organizations, aboriginal Band Councils, or similar institutions often take the lead in trying to obtain recognition of a collective attachment to a fishery. Some strategies used:

- Court challenges to existing management systems
- Rallies, protests, civil disobedience
- Mediation, negotiation, and compromise
- Developing management plans and presenting them to the government
- Advocacy, networking, media campaigns

Legal instruments

Legal instruments are ways in which government agencies can recognize and legalize collective attachment to a fishery. This gives communities the security necessary to invest in community-based management. Legal recognition can also help communities in enforcing their own fisheries rules (see Chapter 4: Enforcement and Compliance).

Some communities decide to proceed with community-based fisheries management without any legal instruments to back them up because:

- they are impatient with the slow pace of working through a government process
- they do not believe government will do anything for them
- they do not recognize federal or state authority to regulate their fishery (this may be often the case in aboriginal communities)

The means by which governments recognize (and legalize) collective attachment to a fishery will vary from place to place. In fisheries management regimes with centralized management, community access has to be negotiated in creative ways.

There are more options for formally recognizing community access in jurisdictions with decentralized fisheries management. Local regulatory agencies can often be more flexible in granting long term access to a community than a centralized agency.

Legal tools that can be used to formally recognize collective access include:

- Aboriginal Treaty Rights
- Joint Partnership Agreements
- Legal Contracts
- Communal Licenses
- Management Boards
- Terms of Reference
- Sectoral Allocations

Some legal tools used to formalize collective attachment:

- Treaty Rights: Treaties are legal contracts between sovereign nations. The early European settlers negotiated Treaties between many of the Indigenous People's of North America and the European nations. These Treaties remain valid today and are increasingly being recognized by Federal courts. The Treaties typically specified that aboriginal people have the right to access the natural resources on which they traditionally relied. Over the centuries, many Treaties have been ignored and aboriginal people have often been denied access to natural resource activities. Since the late 1980s, however, Canadian Supreme Court judges have been ruling in favour of First Nations that bring the Federal and Provincial governments to Court for recognition of their Treaty Rights. The 1999 Marshall decision, which recognizes the Treaty right of the members of the Mi'kmaq, Passamaquoddy, and Maliseet First Nations to participate in commercial fisheries in the Maritimes, legitimizes collective access.

- Joint Partnership Agreements: Joint Partnership Agreements (JPAs) are long term agreements between the Canadian Minister of Fisheries and Oceans and a particular sector or fleet. These agreements outline the roles and responsibilities of each party to achieve mutually agreed upon management activities. They often give a great deal of responsibility for research, harvest planning, compliance, and self-governance to a fishing fleet. JPAs can be a powerful tool for getting long-term exclusive access, and management responsibility over a particular resource.

- Legal Contracts: Legal contracts between a regional office of the Federal Department of Fisheries and Oceans and a fishing association are usually shorter term and less formal than Joint Project Agreements. They are generally signed by the Regional Director General rather than the Minister of Fisheries and Oceans. Legal contracts usually outline the roles and responsibilities of a fishing association in administering certain fisheries activities.

- Establishment of Management Boards: Management boards are community-based institutions that provide a structure for users to participate in fisheries management. Some management boards bring together representatives of the main gear types in an area, while other management boards include both fishermen and government fisheries managers. Some management boards represent many different interests in an area including logging, recreational fisheries, clam harvesting, and tourism. Management boards usually play a role in developing management plans and regulating and implementing certain aspects of the fishery. The legal basis and long-term security of access of management boards depends on the context. Groundfish Management Boards in Atlantic Canada are backed by yearly contracts between the management board and the Department of Fisheries and Oceans.

- Maine Lobster Councils: In 2000, the State of Maine was divided into a number of lobster management zones. Fish harvesters from each zone sit on lobster councils that create conservation and harvesting regulations for their zone. The lobster councils can make rules about trap limits, length of the fishing season, conservation measures, and even negotiate the boundaries with adjacent councils. Fish harvesters in each zone vote on all management measures, and the locally designed and approved rules are passed by the Maine State Legislature.

- Lobster licensing policies in Nova Scotia along the Northumberland Strait use license criteria that stipulate the location of fishing and home port. These regulatory measures are one attempt to secure the access to and supply of lobsters at the community scale. The enforcement is conducted by government, but the interests of the government and the local communities are compatible. Government regulation done in collaboration with community interests can assist in protecting community assets and exclude outsiders

- Exclusive Sector Allocation: An exclusive sector allocation grants a certain percentage of the total allowable catch to a group, sector, or fleet. In November 2003, the New England Fisheries Management Council agreed to an exclusive hook and line sector allocation to the Cape Cod hook and line fleet. This pilot project became part of Amendment 13 to the Fisheries Act.

- Communal Licenses: Most fisheries management systems are based on issuing individual fishing licenses to fish harvesters. Collective licenses are an alternative whereby an entire community receive the licenses. The Canadian Department of Fisheries and Oceans issues collective licenses to First Nation communities after a fishing agreement is signed between the Department and a Band.

The examples above offer a starting point for community-based management. They are tools to help with the formal recognition of a community's collective attachment to a fishery so they can then access that fishery. Each of the tools included in the text box has some advantages and some drawbacks, and few can guarantee long-term fishing access.

Membership Criteria

Once collective attachment has been established, the next step in protecting access is to figure out who is included in this access.

WHAT ARE MEMBERSHIP CRITERIA?

Membership criteria are guidelines about who is eligible to be a member of a group. In community-based management, membership criteria make it clear who will have access to the fishery.

Defining "who belongs" can be difficult and may lead to conflicts. Some people would prefer to let everyone fish, while others want to restrict access – e.g., to only residents of their community, or to existing fish harvesters, or to those with historical connection to the fishery.

In most situations, community-based management is taking place within

a variety of existing legal and jurisdictional contexts. Community groups can set membership criteria, e.g., "must be a dues paying member of a fishing organization," or "must have attended an orientation on community-based management". However, some criteria for participating in the fishery are set by regulatory agencies or government, e.g., "must be a licensed fish harvester", "must have taken certain safety courses".

Local Example

On Mohegan Island, Maine (U.S.), there is a tight knit, traditional fishing community with long established fishing practices that maintain the lobster stock and the social ties within the community. In response to concerns about outside fishermen laying traps on traditional Mohegan fishing grounds, the fishermen lobbied the Maine legislature until it approved the "Mohegan Traditional Fishing Zone". To fish in this zone, potential fishermen require a three-year apprenticeship program with a Mohegan fisherman to learn the traditional fishing practices and community rules. At the end of that time, a fisherman who is deemed to be "Mohegan material" can get a lobster license for Mohegan grounds. This system respects the fishing traditions and gradually integrates newcomers into the community.

WHY ARE MEMBERSHIP CRITERIA IMPORTANT?

- Community-based management is based on a shared understanding of the vision, mission, and goals. This means the people involved have similar ideas about the kind of fishery they want. Membership criteria for potential participants ensures that the group maintains similar values and beliefs

- Individuals who have worked hard to develop a community-based management system need some protection from other potential users who will want to benefit from their hard work and investment "free riders". Membership criteria determine who is allowed to fish and who is not, but they also establish who will share the benefits from the fishery. It is important to be clear about this early on in the process to avoid confusion and resentment.

- Regulatory agencies that are starting to share management responsibility with community institutions want to know with whom they are working. They usually insist the community group be clearly defined.

- Underlying the above considerations is the fact that community-based fisheries management is often taking place in a context of depleted resources and increasing harvesting efficiency. There are no longer enough resources to guarantee that everyone can fish, so access has to be limited to protect the resource.

HOW TO SET MEMBERSHIP CRITERIA

Membership criteria need to balance inclusiveness with protection against people that will work against the system. They also must balance the "ideal" of a community fishery in which everyone participates, and the reality of limited access and resources.

A community-based management institution can establish membership criteria that reflect these tensions by working through a series of questions:

Question 1

Who are we? As individuals working towards community-based management, who are we representing?

- Responses might include (a) those fishing for a certain species, (b) long term residents of the coastal area, (c) displaced fishermen from certain fisheries, with or without fishing licenses, etc.

Question 2

What existing institutions reflect this group? What are we members of?

- Responses might include (a) a fishermen's association or management board, (b) a community development organization, (c) an aboriginal Band etc.
- Note that a new institution or organization may need to be created if none exists that reflects the intent and purpose of the group.

Question 3

What are the common principles that bind this group? How can we de-

scribe ourselves?
- Responses might include: sustainable harvest, equity, value-based jobs, inshore (small boat) focused, fixed gear, owner-operated.

Question 4
What collective access has been recognized?
- Responses might include: (a) "Band has signed fishing agreement with fisheries minister", (b) "legislature has recognized a fixed gear only zone near our area", (c) "all harvesters who have fished from these ports for at least 5 of the last 7 years", etc.

Question 5
Based on question 3 and 4, who is allowed to fish with this community?

- Responses might include (a) Long term residents, (b) All existing license holders, (c) Individuals who have demonstrated commitment to conservation, (d) Members of this organization, and (e) Those who live on the reserve.

The answers to Question 5 establish the criteria for fishing as a member of a community-based fishery. They reflect the reality of what has already been defined by agreements between the community group and the regulatory agency, as well as a mix of practical and value-based criteria.

Membership criteria should be written down and be part of any contract signed between an individual harvester and the management body. They will also be referred to when any new harvesters wants to join the organization or fish under its management plan.

The process of setting membership criteria should not end there; there are still questions to be asked:

Question 6
Do the criteria about who can fish match the boundaries of the community? Who is missing? Who else do we want to include?
We can imagine a wide variety of issues:
- "Not all members of our association have lobster licenses"
- "People who do not live in the community cannot participate in the food fishery"
- "We want to obtain access for youth so they do not leave the community"
- "All residents should be allowed to fish"
- "Recognition of fishing rights for First Nations living off-reserve"

Question 7
Who cannot fish, but should still be getting benefits from the fishery?
- Responses might include: unemployed community members, single mothers, owners of small businesses, everyone involved in a food fishery.

The discussions surrounding Questions 6 and 7 are relevant in the context of trying to maintain access and community equity discussed later in this chapter.

Exclusion

WHAT IS EXCLUSION?

Exclusion means keeping people out. In community-based management, exclusion can mean not allowing fishermen who continuously break the rules to fish under the community management plan. Exclusion can also mean banning certain gear types, or fishing activities, or outsiders from a local fishery. It can also refer to seasonal exclusion zones where all fishing activity might be banned at certain times of the year.

WHY IS EXCLUSION IMPORTANT?

There are many reasons community management institutions might want to exclude other users, including:
- Limiting the number of people fishing in area
- Reducing gear conflicts
- Limiting catches to maintain high prices
- Limiting catches to conserve the resource
- Banning certain fishing practices from an area
- Preserving access and resources for people from "their" community

- Preserving the system by removing members who do not respect group rules

HOW TO EXCLUDE

- Community-based management strives to be inclusive, equitable, and transparent. Exclusion measures have to reflect the principles and overall objectives of the organization and must follow procedures and guidelines established by the association or management board.
- There may be valid reasons for excluding certain users, but an organization should be very clear on "why" and "who" they want to exclude from their fishery.
- When a management institution has a written contract with individual harvesters it has a basis for refusing membership to individuals who refuse to comply with regulations. Written contracts are a good tool for excluding people who will not cooperate.
- All exclusion measures need to be perceived as fair, objective, and beyond reproach in order to maintain credibility.
- The management institution needs to establish a process for excluding repeat offenders. Some examples include graduated sanctions for violators, culminating in permanent exclusion, and establishing a membership review committee.
- In many community-based management systems, it is difficult to exclude outsiders. There is often no legal basis for excluding a specific gear type or fishing activity from a particular fishing area. In Chapter 4, on Compliance and Enforcement, some creative strategies are presented for making outsiders follow local rules or stay out of particular areas.

Maintaining and Increasing Access

WHAT IS MAINTAINING AND INCREASING ACCESS?

Maintaining and increasing access is the struggle to keep people fishing, while continuing to explore new opportunities. Many North Atlantic fisheries have experienced downturns and closures in recent years leading to lower catches and fewer people fishing. Most management bodies hope to maintain or even expand the number of people fishing, and get access to new resources or fisheries. This is especially important for most Aboriginal communities which are new entrants to the commercial fisheries and often have explicit job creation objectives in their fisheries plans.

It can be a struggle to create, maintain and increase long term access to the fishery for the entire community, especially as the criteria for access or membership in a fishery do not always match local definitions of "community".

WHY IS IT IMPORTANT?

It is often difficult for communities to maintain access to a fishery. Access is constantly threatened e.g. by privatization, exclusive fishing rights, corporate control, license consolidation. Community management bodies have to be constantly vigilant to protect and increase their existing access.

Institutions supporting community-based management are working with very limited resources, including access to fish. In many cases, the majority of marine resources in fisheries may already have been allocated to large-scale fleets and away from the inshore or community sector. Improving access is important for the sustainability of community-based fisheries.

There are more community members who want access to the fishery than there are currently licenses or resources to support them. It is important to keep increasing membership and participation in the fishery. A fishery with long term viability is going to require younger participants, crew, and other services and supplies.

HOW TO MAINTAIN AND INCREASE ACCESS

There are a number of strategies that can help communities maintain access to their local fisheries. These include:
- Resisting the imposition of privatized quotas and developing alternative management options, such as community quotas and management boards.

- Obtaining community and government recognition for traditional fisheries areas and management systems.
- Developing legal mechanisms that prevent fishermen from taking fishing rights and licenses with them if they transfer to another management board.
- Producing research on the economic benefits of keeping access for numerous small boats in the fishery.
- Lobbying to improve fishing eligibility criteria
- Building relationships between First Nations and non-Native communities so that Aboriginal access cannot be used as a leverage point or source of conflict by regulatory agencies
- Over the longer term, participating in fishery and habitat restoration activities may lead to improved stock health, higher catches, and a fishery able to support more entrants.

EQUITY

WHAT IS EQUITY?

Equity is usually defined as "fairness": or an even playing field where everyone plays by the same rules and no one has an unfair advantage. In community-based management equity requires considering how fisheries management activities impact harvesters and the non-fishing community, and trying to increase positive impacts and minimize the negative ones.

Community-based management should try to promote equity within the community. This is difficult in communities where some people have access to the fishery and others do not. Real differences in access lead to conflicts. Perhaps in community-based fisheries management, equity does not involve treating everyone exactly the same, but finding ways to change unfair situations and distribute benefits more widely.

WHY IS EQUITY IMPORTANT?

- There are situations that are unfair in fisheries management. For example, high prices of licenses for some species are creating inequity within communities and between generations.
- Individual transferable quotas, especially in high value species are creating "communities" where a minority has access and managerial control over a valuable resource and the majority of community members are excluded.

- Community-based management tries to distribute benefits more fairly by proposing alternatives that create more access for everyone.

- There are certain community responsibilities that come with greater involvement in management. If community-based organizations do not constantly work towards equity within the fishery, who will?

HOW TO DO IT

Some strategies that help p broader based community equity in community-based management:
- An Association signs an agreement with local processors to land all catches in the local community in order to create jobs at the fish plant
- New licenses and access are granted to people from many different parts and sectors of the community
- The harvest from the food fishery is distributed to all households in the community.
- Changing capital gains tax policy to make it easier to sell fishing licenses to family members or within the community
- Lottery systems to ensure fairness of access to new licenses
- A seniority list of eligible crew members wanting access to fishing licenses
- A community based licensing review board, credible to community members, fish harvesters, and government representatives.
- Keep equity on the table. Define equity and incorporate in fisheries plans. Bring it up frequently at meetings, planning sessions, and informal discussions.

Summary

- Community access is continuously being threatened by management approaches that disconnect fishing access from coastal communities.
- Access is about more than individual fishing rights; it is based on collective attachment and collective access.
- An organization should take the necessary time to define who is in the group or who is not. Sometimes exclusion is necessary to protect the community's interest, but all exclusion decisions must be transparent and clearly documented.
- When working to gain fishing access for members, consider how to implement principles of equity and inclusiveness.
- Be vigilant; the lack of long-term security should not prevent developing community-based fisheries management systems. There are opportunities in uncertainty. Be aware of the legal status of your management system.

Resources

Pinkerton, E. and M. Weinstein. 1995. Fisheries That Work: Sustainability through Community-Based Management. David Suzuki Foundation, Vancouver. 199 pages. 1995. http://www.davidsuzuki.org/Publications/Order_Publications/default.asp

Chapter Two:
Fisheries Management Planning

Developing a fisheries management plan is the basis for community-based fisheries management. A management plan is useful whether the organization is a First Nation community involved in multiple commercial fisheries activities, marketing and the food fishery or a smaller group trying to restore salmon habitat. This chapter discusses:

- Fisheries Management Plans
- Community Visioning
- Management Objectives
- Selecting Management Measures
- Conservation and Rehabilitation
- Monitoring and Evaluation

Fisheries Management Plans

WHAT IS IT?

A fisheries management plan is a written document that describes how a fishery will be managed in the long-term. It is a document that outlines a community's vision for their fishery and describes the management activities required to achieve this vision.

A management plan outlines specific harvesting activities that are consistent with the overall vision for the fishery and activities which are not. The management plan can also include non-harvesting activities such as habitat restoration, research, public education, marketing, and enforcing which are important elements in community-based fisheries management.

WHY DO WE NEED IT?

A fisheries management plan can serve many different purposes in community-based fisheries management:

- basis of action plan
- source of inspiration for community members
- internal decision making document for managers
- a formal management agreement between a community management group and a regulatory agency
- legal contract signed by all members fishing under the plan
- basis for monitoring and evaluating impacts of management activities
- starting point for dialogue with adjacent groups and communities

Table 4: Basic Elements of a Management Plan
(Source; Heinen, 2002)

- Executive Summary
- Introduction (defining the purpose and the scope of the plan and its legal basis)
- Map of the management unit
- Present status and history of the fishery
- Management efforts to date, as taken by government and other stakeholders
- The vision of the membership of the management unit
- Principles of the membership
- Management Objectives
- Management Strategies
- Organizational Structure including the role of regulatory agencies
- Specific rules and management measures
- Projected short term and long term effects of the management measures (positive and negative)
- Possible mitigating measures for those who will be negatively affected
- Projected long term sustainability of the management system
- Objectives over the next few years, phased annually, and an estimated budget
- Action plan with indicators, persons responsible, and budgets

HOW TO DRAFT A MANAGEMENT PLAN

Developing a management plan is an important part of community-based fisheries management. Management planning for community-based fisheries management is not a top down process so the vision and content of the plan have to come out of community priorities and knowledge.

Some of the ways to prepare a management plan:
- A core group of community leaders prepares the first draft
- An outside facilitator helps a fishing association go through a planning process
- A professional manager develops a plan with inputs from the group
- A plan is developed through a series of kitchen table meetings and community discussions
- A technical work group made up of staff from regulatory agencies, representatives of fishing organizations and scientists develop a plan that is then approved by the associations and government
- The fisheries management team prepares a draft plan, obtains input from harvesters, and facilitates an open community meeting to approve the plan. The final plan is approved by Band Council

Regardless of who starts the process or writes the first draft, there must be many chances for membership and the wider community to comment on the management plan as it is being developed.

The final management plan must also be approved by the appropriate community management body e.g. membership assembly, board of directors, band council or local government unit. In almost all cases, a government regulatory agency also reviews and gives approval for the management plan proposed by the community, and is often quite involved in the development of certain components of the plan.

Local Example

The Mi'kmaq Confederacy of PEI (Prince Edward Island) has set up a comprehensive planning and management structure for each of its constituent communities, to ensure that all agreed upon management activities are incorporated in the fishery management plan. The annual fisheries management plans include the rules for the commercial, food, social and ceremonial fisheries, and are developed by a Fisheries Management Planning Committee made up of members selected from the community and appointed by the Band Council. The Band's fisheries administrator and MCPEI staff facilitate the discussions of the committee. A Harvesters Committee reviews the proposed plans and regulations, especially those regarding sharing arrangements, marketing and day to day fishing activities. This allows meaningful input by harvesters without given them full control over the decision making. The Band Council reviews and approves management and fishing plans after they have been discussed at open community meetings.

The rest of this chapter discussed 5 key parts of the management planning process:
- Developing a Community Vision
- Setting Management Objectives
- Selecting Management Measures
- Conservation and Restoration
- Monitoring and Evaluation

Community Visioning

WHAT IS IT?

A community vision is an expression of peoples' collective dreams and aspirations. Community visioning is done as part of the process of developing a fisheries management plan. A community vision does not come from only one person, but integrates individual aspirations into a common and shared dream for the future. A vision can be expressed through drawings, symbols, or a vision statement. It can be highly abstract or very detailed. A community vision seeks to express emotional and spiritual values.

WHY IT IMPORTANT?

Having a community vision is like having a shared road map or navigational aid. The shared vision is what draws a group together to work towards a common goal. Community visioning helps a group articulate their values and dreams, so that management plans can be developed that reflects these ideals.

HOW TO DO IT?

Community dialogue is the basis for developing a collective vision for the future of the fishery and the community. A good facilitator is usually essential in starting these conversations.

Community visioning can take place
- during community meetings
- during household visits
- on a day long retreat for leaders of an organization
- at a school or during a community celebration

Some questions to ask during community visioning:
- Who will be making the decisions ten years from now? Will it be the harvesters, the government, or the fisheries managers hired by the harvesters, or the community?
- Will fishing be mainly a full time or part time occupation?
- How will government and community work together in managing the fishery?
- What will be the role of non-fishers and youth in the decision making?
- Will there be more, fewer, or the same number of fish harvesters in the management unit?
- What will be the status of the resource in ten years? Do we want a more diverse, multi-species fishery, or one concentrated on only a few species?
- What will be the condition of the marine and coastal environments? What will be the quality of life in our communities?
- Who will be marketing the fish in ten years? Who will be buying?
- What role will this organization play in fisheries management in the future?

Community visions should be as specific as possible. Words like "sustainable" and "equitable" should be discussed and clarified. Examples are very helpful.

Be visual. Drawing, paintings, and photos can help make the vision more concrete and more real.

Keep sharing the vision. Let other people join the conversation and contribute their ideas.

Management Objectives

WHAT ARE THEY?

Management objectives are the goals that will be accomplished through a fisheries management plan. They describe the specific and measurable outcomes from management activities. While the community vision is the ultimate dream for the fishery, the management objectives are the signposts that measure progress along the way.

Management objectives in community-based fisheries management:
- are clear and specific
- reflect local priorities for their fishery and community
- are consistent with the community vision
- can be used as indicators to measure progress

WHY DO WE NEED THEM?

Fisheries management objectives clearly explain where the fishery is going and allows progress to be measured and assessed. Reporting progress against objectives can help an organization identify reasons to celebrate successes and victories. It can also spur reflection about what is not working well and lead to changes in management measures.

HOW TO SET MANAGEMENT OBJECTIVES

1) Develop a broad, general objective statement that reflects the Community Vision, which is the starting point for developing management objectives.

For example:
"To undertake a community-led pilot project which will plan, implement, manage, document and evaluate ecosystem-based fisheries management in the Upper Bay of Fundy, as part of the integrated management process for the region in total." - From Upper Bay of Fundy Integrated Management pilot proposal (2003).

2) Identify specific kinds of objectives within the general objectives.

For example:
- biological
- social
- economic
- cultural
- political
- fisheries management

3) For each of the above aspects, ask questions about what exactly is to be achieved.

For example:
- Fisheries management: who will be managing this fishery in 5 years?
- Cultural: what traditional aboriginal fisheries practices do we want to reinstate?
- Political: Which fisheries policies do we want to change?

4) Use these answers to develop clear, descriptive objectives

For example:
Fisheries Management Objectives
- Maximize harmony in the industry and within communities through an orderly, productive fishery
- Allow fishermen to make long term business plans
- Develop good fishing practices

Biological Objectives
- Reproductive health of the stock
- Conserve marine biodiversity
- Maximize protection of spawning areas

Some organizations develop management objectives using the fishery as a springboard for other community development activities. For example, long term goals for the Mi'kmaq Confederacy of PEI include (from Charles et al, 2006):
1) Protection of Mi'kmaq Treaty and aboriginal rights to access natural resources for the benefit of their communities.
2) Establishment of secure systems for food production to meet the needs of local Band members.
3) Development of commercial fishing ventures that will provide Band members with stable and effective employment.
4) Establishment of local government and administrative structures and mechanisms regarding fisheries decision making,
5) Establishment of harmonious relationships with adjacent communities.

Selecting Management Measures

WHAT ARE THEY?

Management measures are the 'tools' (approaches and procedures) established to meet the management objectives of the fishery. The management measures within a management plan specify how the fishery is accessed, how harvesting activities are done, and other relevant aspects.

Management measures are often grouped into several main categories: those that deal with fishing effort, those limiting catches, and those limiting the 'how', 'where' and 'when' of fishing.

Examples of effort management measures:
- Limiting entry and licensing procedures (limiting the number of boats)
- Limiting the capacity of each vessel (limiting on-board catch storage)
- Limiting the effort per vessel (e.g., number of traps)
- Limiting the time fishing (e.g., days at sea)

Examples of catch limitations:
- Total allowable catch allocated to the community or organization as a whole
- Individual (fisherman) or community quotas.

Examples of management measures limiting 'how', 'where' and 'when':
- Seasonal exclusion (closed seasons)
- Limiting the location of fishing (closing spawning areas)
- Prohibitions on certain gear types, e.g. bottom trawling.

Example – Closed areas and closed seasons: Community-based organizations are frequently keen to protect sensitive habitat - such as known spawning or nursery grounds – from fishing activities. Fishermen in the Upper Bay of Fundy were able to impose a closed season during the flounder spawning season in order to protect the stock.

Example – Fishing Inefficiencies: Some fishermen organizations choose to deliberately build inefficiencies into their fishing practices to limit their impact on the resource. Fishermen for groundfish around the American portion of the Gulf of Maine designed a management plan that includes smaller roller sizes, shorter trawl chains, larger mesh sizes and banning of night dragging. All these measures are intended to reduce the impact of fishing effort by making each unit of fishing activity have less impact on the resource.

Example – A Management Plan: A package of management measures proposed by the Fundy Fixed Gear Council, a community groundfish management board in Nova Scotia, included the following: (a) an effort-based fishery for the handline fleet, (b) establishment of a new and separate dogfish fishery, (c) a gillnet gear conservation project, (d) a community-based licensing review board, and (e) a process to review members' licensing conditions.

WHY ARE THEY IMPORTANT?

- The community vision and the objectives set the general direction, but management measures are the instruments for reaching those goals. They determine how fishing takes place, so they have a real impact on the resource and on the harvesters.
- Trying different management measures can be a useful experimentation. Every management measure should be related to one or more of the management objectives to ensure a good match between objective and activity. If a specific management measure is not working as planned, new approaches should be tried. It is important not to be locked into a flawed system.

HOW TO SET MANAGEMENT MEASURES

Fish harvesters know the most about what management measures will work best for their fishery. The best management measures are those which:
- will be supported by harvesters
- help achieve more than one objective
- are simple to implement and enforce
- apply to all harvesters in an area

In 'northern' fisheries, management measures generally need to be accepted by the government regulatory body. Special measures can be developed through:
- consultation with fish harvesters
- input from a professional manager
- adopting management measures used in other places.

Conservation and Rehabilitation

WHAT IS IT?

Conservation is the action of actively protecting fish stocks, habitat, and

ecosystem functions in order to ensure a healthy, sustainable fishery for the future. In community-based fisheries management, fishermen often consider themselves as stewards of the resource, and care about its survival and well-being. Conservation also recognizes that the marine ecosystem holds an importance far beyond just providing fish for human consumption. The ocean holds many other values for people (and other species), which are intrinsically important in their own right.

Rehabilitation or restoration is the process of reversing damage to a natural system to restore its productivity and ecosystem functions. For example, salmon enhancement projects are trying to rehabilitate wild Atlantic Salmon stocks that have been severely depleted. Sometimes rehabilitation occurs merely by preventing an activity that has negative impact on a species e.g. closing spawning areas to fishing. In other circumstances, direct intervention is required for the damage to be reversed, e.g., stock enhancement, habitat restoration, removal of marine debris.

WHY IS IT IMPORTANT?

- Community-based organizations are starting to gain control over resource management at a time when many stocks are already severely degraded. Resource conservation and rehabilitation are essential elements of any management planning.

- Fishing associations, community groups, and environmental organizations may feel that regulatory agencies have not done enough to protect marine and coastal habitat, or have even supported fishing activities that have led to habitat destruction.

- Many grassroots community and environmental organizations take part in local stream or estuarine restoration projects. Partnering for habitat protection and restoration can strengthen community relationships.

- Riverine and coastal areas provide important sources of food, and shelter to many commercially important species. Efforts to rebuild degraded stocks, and enhance the productivity of coastal and nearshore habitat will directly benefit the fishery.

- In many cases,, even though it is a management function long ignored by most regulatory agencies, stock conservation and rehabilitation have become the responsibility of community-based management bodies

HOW TO DO IT

Conservation and rehabilitation should be integrated into overall fisheries management plans. This requires setting specific management objectives around conservation and rehabilitation and identifying the kinds of management measures that will help to achieve them. Many management measures discussed above, such as closed seasons, will also support conservation objectives. For conservation measures to become intrinsic to community-based management, harvesters must receive benefit from the effort.

For example, the Fundy North Fishermen's Association past scallop enhancement activities were difficult because they were unable to protect the re-seeded area from other harvesters. There was no incentive for the membership to continue to invest time and effort into the project. Current reseeding will only proceed within the context of an overall scallop management plan supported by the appropriate regulatory agencies.

The following are some other activities that go beyond managing for conservation by actively engaging in restoration and rehabilitation:

- Ecosystem-based Management. Many community-based institutions are trying to incorporate ecosystem-based management into their management plans. This is getting increasing support from regulatory agencies. At a larger scale, fishing organizations in Nova Scotia participate as stakeholders in government initiated ecosystem management processes such as the Eastern Scotian Shelf Integrated Management Initiative (ESSIM).

- Protected Areas. The Fundy North Fishermen's Organization, in partnership with the Conservation Council of New Brunswick, initiated the process to establish a Marine Protected Area in Musquash Estuary to protect the area from future industrial development that might damage important lobster habitat.

- Partnership. A number of fixed gear fishing associations have supported the Halifax-based environmental group, the Ecology Action Centre, in its campaign against dragging (bottom trawling) in sensitive habitat. One component of the campaign involved the EAC taking DFO to court for its failure to protect sensitive fish habitat by re-opening George's Bank to draggers.

- Protect Spawning Stock and Juveniles. Fishing organizations have frequently been more proactive than government in trying to identify spawning and nursery areas and protecting these areas from fishing activity, because they realize the importance of maximizing the reproductive capacity of the stock. For example, the Upper Bay of Fundy Dragger's Association, a group of under 45-foot draggers, which target mainly flounder in the Upper Bay of Fundy, managed to convince DFO to establish a seasonal closure in the Upper Bay to protect spawning flounder.

- Research. It is vital for conservation and restoration efforts to be based on sound information. Unfortunately, there is seldom information available about species interactions, and the impacts of different management measures on the ecosystem, to make informed management decisions. Many community based organizations are leading the way in collecting information so they can more effectively manage local resources.

For example, Ted Ames, a fisherman from Maine, has done extensive local knowledge research into former cod and haddock spawning grounds in the Gulf of Maine. He has used archival data to explore the links between coastal cod spawning and the spring spawning runs of prey species like herring and alewives. This research will be fundamental in any efforts to restore coastal groundfish fisheries in the Gulf of Maine.

- Advocacy. A large coalition of Bay of Fundy fishermen fought successfully to prevent exploratory licenses being issued to harvest krill to use for aquaculture feed. They realized that fishing so low on the food chain would have serious consequences for the entire ecosystem.

- Participating in Restoration Projects. Bear River First Nation has been involved with many kinds of stream rehabilitation activities through the Clean Annapolis River Project.

Monitoring and Evaluation

WHAT IS IT?

Monitoring and evaluation is the process of comparing what has been planned (objectives) with what has actually been accomplished so that progress can be measured, results assessed and changes made if necessary. Monitoring and evaluation can be a valuable learning opportunity for fisheries management organizations.

WHY DO WE NEED IT?

There are many reasons for an organization to incorporate regular monitoring and evaluation into their fisheries management plans...

- Fisheries management planning is not a one-time activity. The original management plan must be revisited to see if anything has to be changed. Monitoring and evaluation gives managers and members the information necessary to make changes so that the system will function better.

- Monitoring and evaluation is a tool for collective learning. The individuals involved in community-based fisheries management have insights and knowledge about the system. Bringing people together to share information and talk about how things are working is crucial to good community-based fisheries management. It allows lessons learned from fishing experience to be applied to management decisions.

- Monitoring and evaluation demonstrates that community-based management works. It is difficult to convince regulatory agencies about the benefits of community-based fisheries management based on anecdotal evidence alone. Collecting data that indicates positive impacts demonstrates community-based fisheries management's potential to bring about change.

- Monitoring and evaluation can be a mechanism for managers to be accountable to membership.

HOW TO DO IT

Monitoring and evaluation should not be an afterthought or happen on an ad hoc basis. Therefore, a fisheries management plan must address such questions as:
- Who will initiate the monitoring and evaluation?
- How often?
- What methods will be used?
- Who will be involved?
- How will the results be incorporated into management?

The two key components of monitoring and evaluation are (1) selecting performance indicators and (2) reflection.

Performance indicators
Indicators are the agreed-upon criteria for measuring and recording accomplishments. They are used to assess how well the system has achieved its objectives. Managers select indicators by looking at their management objectives and management measures and asking themselves "How will we know if we have achieved this?".

Indicators must be:
- Related to the management objectives and management measures
- Relevant and acceptable to the community
- Specific and measurable
- Based on simple and easily collected data
- Provide a baseline against which to measure change

The most common indicators used for monitoring are quantifiable, i.e. easily counted or measured, such as:
- Number of people
- Weight of catch
- Distance travelled
- Value of landings.

However, not all achievements can be counted or measured. Qualitative indicators – for example, ones that record feelings and perceptions – are useful in understanding some aspects of community-based management. Examples of these could include:
- increased job satisfaction
- more pride in work
- better maintained boats
- satisfaction with the management board.

Local Example

The Cobscook Bay Clam Flat Restoration Project used the following indicators to measure success:
- Increase in number of acres open to clamming
- Increase in total landings
- Increase in number of commercial clam licenses issues in towns around the Bay
- Increase in dollars from within local industry invested in management and restoration efforts
- Increase in number of acres of flats under intensive clam management, public or private
- Decrease in the number of pollution sources (straight pipes, leaking septic systems)
- Increase in the number of people involved in water quality monitoring and shoreline surveys
- Decrease in fecal coliform counts in water samples
- Decrease in area covered by green macroalgae

Reflection

Reflection is a process of looking back on what has been done to learn as much as possible from the experience. Reflection does not have to be a formal process. It is looser, more fluid and more creative than a formal "assessment" or "review". Reflection can highlight feelings, impressions, and

other intangible results, and helps capture the less concrete aspects of the community-based fisheries experiences, especially the process. It can help people reconnect with each other and with the core values and principles that unite the group.

Reflection can be a part of a regular meeting, or can take place in an informal setting such as a group dinner or at a coffee shop. Some groups set aside one day every year for a reflection session on the past year's activity. Three useful questions for reflection:

- What happened? (What have we done?)
- How did I feel about it?
- What next? (What will we change?)

Like community visioning exercises, reflection activities benefit from some creativity. Asking people to sketch on paper the highlights of the last year, or illustrate a particular difficult event can sometimes help a group understand an issue in new ways.

Summary

- Fisheries management planning helps a community envision and plan for the future. A management planning process can foster community dialogue, build group cohesion, and produce a tangible action plan with measurable objectives and outcomes.
- A management plan can connect fisheries management activities to broader community development goals. The vision (and the plan) can be as elaborate or simple as needed for the task at hand.
- Management planning is dynamic. A management plan evolves and changes over time. New ideas can be added as they are developed.
- Every management plan does not need to include all possible elements. It is a work in progress, and new elements can be gradually added as the plan evolves from year to year. Other important ideas can be written into manuals, institutional policies, 'terms of reference', contracts, or implementation rules.
- Developing a management plan cannot happen in isolation from the other organizational activities. All management activities in community-based management reinforce and build upon one another, so developing a management plan will be connected to the results of research projects and stock rehabilitation activities, for example.
- Build monitoring and evaluation into the plan. Revising the original plan to assess the work to date, and to find out how everyone is feeling about the process, is an important element in the management planning process. It is part of a cycle of planning, doing, learning and changing, necessary for long term organizational survival.

Resources

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Chapter Three: Harvest Management

This chapter covers what fisheries managers need to know about managing a harvesting process. The chapter is divided into the following sections:

- Harvest Management
- Stock assessment
- Harvest planning
- Allocation
- Implementation
- Monitoring

Harvest Management

WHAT IS IT?

Harvest management is about planning and overseeing the capture of fish and other marine species. It involves planning how, when, and how much is harvested, as well as monitoring the fishery. Harvest management is more concerned with the ongoing questions surrounding how the fishery is run than with the larger management goals established in the fisheries management planning process (Discussed in Chapter 3 – Fisheries Management Planning). However, harvest management does directly support the goals set out in the fisheries management plan.

In most fisheries management systems, the harvest is managed by professional managers employed by regulatory agencies. But as discussed in Part 1, fisheries managers can be fishermen, local leaders, fishing organizations, local management bodies, Band councils, community institutions, or professional managers.

WHY IS HARVEST MANAGEMENT IMPORTANT?

Community-based fisheries management is about fishing. That is, after all, how fishermen earn a living. Harvest management directly affects how and when people fish, so it can have a direct impact on local incomes and livelihoods.

Harvest management is fundamental to achieving conservation and proper stewardship of the fish resources. There are consequences to poor harvest management. Mismanagement can lead to harvest overruns that can cause closures, stock collapse, loss of access, or result in penalties and sanctions for individual fishermen and their association.

Community-based management has the potential to achieve different outcomes than other management systems. Good harvest management can try to achieve:

- A longer and more predictable fishing season
- Fewer gear conflicts
- A fair and transparent allocation process
- New conservation practices
- Higher incomes for fishing families
- More local jobs

HOW TO DO IT

In order to do harvest management, managers need to know about the status of the fish, so they can make decisions about how it should be harvested. The remainder of the chapter discusses how this can be done through:

- Stock assessment
- Harvest Planning
- Allocation
- Implementation
- Monitoring

Stock Assessment

WHAT IS STOCK ASSESSMENT?

- Harvesters target particular fish stocks (distinct management units) of a fish population. Stock assessment is the process of doing an inventory or study to find out the status of commercial species.

- Fisheries scientists use the results of research vessel surveys, catch and landing data from commercial fisheries, and computer-based simulations

(modelling) to estimate the status of a population. This estimate is used to recommend harvest management measures or total allowable catch (TAC) levels for each species.

- Managers take scientific recommendations into consideration along with other economic and political factors when they develop fisheries management targets.

WHY IS STOCK ASSESSMENT IMPORTANT?

- In most fisheries management systems, stock assessments are the basis for setting catch or effort limits. The institutions that control the stock assessment process control the harvest.

- Most regulatory agencies are not jointly doing stock assessment with harvesters. As a result, harvesters frequently mistrust the information produced by scientists and are suspicious of management measures.

HOW TO DO STOCK ASSESSMENT

- Stock assessments should be included in an organization's research plan (See Chapter 5 – Research). The research plan should outline how and when the data will be collected and analyzed, and how the research projects are determined.

- Stock assessment is a long term process because it requires data collected over a number of years. It may take even longer for the information to be accepted and used by conventional fisheries managers. For this reason, it is important to collect, record, and maintain a data base of stock assessments.

- Supporting institutions like marine resource centres or universities and colleges can provide technical support for data collection and analysis, especially for multi-year projects.

ISSUE: Obstacles for fishermen doing stock assessment

- Limited funds and access to research vessels: Most stock assessment methods rely on collecting information that is difficult and expensive to replicate on a small scale. To a certain extent, even regulatory agencies cannot afford many research vessels surveys, and rely heavily on computer models to predict large-scale patterns and trends.

- Difficulty in analyzing fisheries data: Fishermen's associations that do collect their own data often have to rely on scientists or supporting institutions for data analysis and interpretation.

- Problems with having fishermen's data recognized and used: Some fishing associations have spent time collecting data about their local fisheries, only to find that scientists claim the data was not collected or documented properly and cannot be used for management planning. It is helpful to obtain a documented acknowledgement upfront from regulatory agencies that your stock assessment method is sound.

Some strategies for stock assessment:

- Data Collection: Many fishermen and communities donate time, boats and expertise to collect data for fisheries scientists or university researchers, as well as for community projects. In return they expect to receive the results when the study is completed.

- Independent Research: Some community organizations hire scientists and interns to help with the design and data analysis for their own stock assessment projects. The results can be presented to scientific advisory committees or incorporated into local management plans

- Science Advisory Boards: Many fishing organizations or community representatives obtain seats on scientific advisory boards. This provides an opportunity to review and comment on scientific information and stock assessment reports and participate in establishing management goals for the fishing season.

- Local Knowledge Studies: Many fishing organizations have conducted local knowledge studies to collect and document fishermen's knowledge about fish stocks and their status. This information can help generate support for, or opposition to, proposed management measures.

Local Example

The Area 19 Snow Crab Association in Cheticamp, Cape Breton is an organization that has a great deal of influence in determining fishing limits for their fishery. Their management plan includes provisions that the Association can set harvest limits within a certain range recommended by the Science Advisory Committee. The Association considers the stock status, predicted market price, and its seasonal management objectives when establishing catch limits.

Harvest Planning

WHAT IS HARVEST PLANNING?

Harvest planning is a process taking place each fishing season that involves determining how to implement the management measures decided upon in the community's fisheries management plan (Chapter 2 – Fisheries Management Planning), using information produced in the stock assessment process. This leads to final decisions about how much harvest or harvesting activity will be allowed, and how and when fishing will take place. Harvest planning involves the pursuit of long-term management objectives, taking into account biological, economic, social and political considerations to fine-tune the management measures so as to achieve certain management goals.

As discussed in the previous section, most regulatory agencies like to keep ultimate control over what and how much is harvested, so harvest planning takes place within the context of certain pre-determined catch and/or effort limits that are often applied to a wider geographical or fishery area.

Harvest planning requires operating the fishery to comply with regulatory agency requirements and meet longer term community-based management objectives.

WHY IS IT IMPORTANT?

Harvest planning can achieve some of the following objectives:
- Avoid gear conflicts
- Allow maximum number of fishermen to participate in the fishery
- Harvest marine species when they are in the best condition or/and when prices are highest
- Keep landings stable and consistent
- Improve fishing efficiency and reduce costs to fishermen
- Reduce by-catch and minimize catches of juvenile or under-sized fish
- Protect spawning stocks
- Avoid over-fishing a local stock or spawning aggregation
- Avoid over-harvesting
- Keep boats fishing longer
- Maximize fisheries employment (direct and indirect)

HOW TO DO HARVEST PLANNING

Within the overall framework of management measures previously adopted by the fishing community or organization (Chapter 2 – Fisheries Management Planning) and authorized by the regulatory authorities, community-based managers regulate the harvest within a fishing season using a 'toolkit' of management methods, notably a variety of fishing effort controls and catch controls...

Effort controls are those that restrict the amount of fishing, the location of fishing, or the effectiveness of each day of fishing. Some of these are typically long-term measures that were discussed under Fisheries Management Planning (Chapter 2), such as limiting entry (number of boats), or limiting the capacity of each vessel (limiting on-board storage).

Other effort controls are easily adjustable from one season to the next, and thus are part of harvest planning. These include:

- Limiting the amount of effort per fisherman (e.g. number of traps)
- Limiting the time fishing (e.g. days at sea)
- Seasonal exclusion (closed periods).

For example, the first of these – trap limits – is standard practice in the Canadian lobster fishery. It is also used in Maine, where the State has been divided into local lobster management zones, in each of which the management council can choose to set trap limits. So far, five of the seven zones have chosen to set trap limits for their membership.

Similarly, a straightforward example of a seasonal exclusion or closed season, designed to achieve social, ecological, and economic aims, would be the timing of fishery opening and closing to avoid gear conflicts.

Catch controls focus on limiting how much is caught, i.e. the 'output' from the fishery. Catch controls discussed under Fisheries Management Planning (Chapter 2) include the Total allowable catch and individual or community quotas.

Harvest planning can involve setting some forms of catch controls within a fishing season, when those controls are of the sort that is adjustable from one season to the next. Typical of these are catch limits set per fishing trip or per day of fishing.

For example, a fishermen's organization in Cobscook Bay, Maine, lobbied the State Legislature to establish daily catch limits for the scallop fleet in the bay. The daily catch limit put in place has helped keep larger boats out of the Bay (by making it uneconomical to fish there), has extended the effective length of the fishing season, and has improved prices for local fishermen.

Harvest planning can also involve management tools that are focused on biological considerations. These include:
- Limiting the allowable mesh size or hook size, to reduce catch of juveniles.
- Limiting the location of the fishing, e.g., by closing spawning areas.

Allocation

WHAT IS IT?

Allocation is the division of the resource or access to it (e.g. fishing time, catch of certain species) among the resource users in a group. It involves putting in place systems for deciding who, how, and when members of a group will harvest the resource.

In community-based management, the allocation system should benefit individual fishermen and fulfill the group's management objectives, but also support principles such as equity, inclusiveness and transparency.

The resources to be allocated can include:
- portions of fish catch
- fishing spots
- fishing hours
- number of traps or other gear

WHY IS ALLOCATION IMPORTANT?

- Fair allocation can reduce conflicts and ensure equity within the community.
- Good allocation can lengthen and stabilize the fishing season.
- Allocation can allow individual harvesters and gear sectors to get access to an appropriate amount and combination of fish that will benefit them the most.
- Allocation processes demonstrate to regulatory agencies that the community fishery is well-managed and monitored.

HOW TO DO IT

Fishing organizations have been very creative in the systems they create to allocate the harvest:

- Lottery systems: The Canadian Department of Fisheries and Oceans imple-

ments a lottery system for new licenses into certain fisheries. Guysborough County Inshore Fishermen's Association in Canso, Nova Scotia participates in this as an association and then holds an internal lottery to allocate access to new and emerging fisheries. Eligible harvesters draw lots for the chance to purchase exploratory licenses for new fisheries from DFO.

- Sharing Mechanisms: The Area 19 Crab Fishermen's Association in Cheticamp, Cape Breton has a management plan that includes an elaborate allocation system for sharing the crab harvest between the permanent and temporary license holders.

- Long term allocation of fishing spots: The lobster fishery in Little Harbour, Cape Breton has had a community management system in place for over a hundred years. Harvesters set their traps on individually allocated coastal grounds year after year, while the lobster traps are placed on a "first come first serve" basis on the lobster grounds further from shore. One coastal lobster area is left free every year so that the community can allocate it to a community member who is not having good catches in their usual grounds. An individual's coastal grounds are only re-allocated to other community members when he or she is no longer active in the fishery.

- Sharing Catch: In Bear River First Nation, allocation means spreading the benefits of the fishery amongst the non-fishing community. This requires allocating a portion of the catch to community events and to households where no one is fishing.

For internal allocation to be effective, a management system requires:
- Good rules, and strong systems for enforcing them
- Members who understand the principles and overall goals of community-based fisheries management
- Representatives aware that they do not represent only their gear type, or their homeport, but also the whole community when making allocation decisions.
- An allocation process with checks and balances. The system needs to be monitored to make sure it is working for everyone and that no one is abusing the system
- Support of government regulations
- Long term commitment to work out the problems that are inevitable with any allocation system.

Implementation

WHAT IS IT?

Implementation is putting the harvest plan into action This is when fish harvesters get to catch fish, and managers oversee the day-to-day fishery operations to make sure everything is going as planned.

WHY IS IT IMPORTANT?

- Harvesters are going to judge the success of community-based management based on how it impacts their individual fishing activities. Getting to fish is the whole reason they participate in the management planning process.
- Regulatory agencies also look at who, when, and how much harvesters are fishing when they assess how well community-based fisheries management is working. In their minds, a fishery that is operating smoothly and predictably is working.
- Catching fish pays for fishery management. Community-based fisheries management needs a portion of the revenue from the fishery to pay the costs of managing the fishery, just as each harvester needs a reasonable revenue from the fishery to cover the costs of participating in it.

HOW TO DO IT

- Be prepared. Anticipate what will be needed during the fishing season. Make sure all paperwork is completed, all fishermen have licenses and contracts, and all financial arrangements are clear before the season starts. Have an operational budget and all resources in place before the season starts
- Support Staff. The fishing season is extremely busy for fishermen. It is difficult for those who sit on management boards or committees to take care of management activities while fishing themselves. If possible, hire support

staff to work in the office and support fishing operations, especially communications.

- Communicate. Even in the midst of the fishing season, fishermen need to know what is happening, especially if the catch and effort limits are likely to change during the fishing season. Have a communication plan to keep members up to date and let them know about changes in management measures.

- Live up to expectations. Members put their trust in their managers to make the right decisions about the fishery over the course of the season. Track effort and landings; be vigilant about overruns and violations. In short, make every effort to keep members fishing for the season and for the future.

- Be prepared to adapt. The harvest plan may have to change to reflect the realities of the fishing season. Unexpected high catches, by-catch issues, or other unpredicted events are to be expected. Make changes as necessary in order to meet the overall management objectives.

Fisheries Monitoring

WHAT IS FISHERIES MONITORING?

Fisheries monitoring is the process of supervising a harvest to track fishing activity and the landings. Fisheries monitoring is important to make sure there are no violations of government or community rules and that the stock is not over-harvested. Monitoring the system also allows for adaptation and changes to be made, including re-allocation.

Many regulatory agencies now require extensive fisheries monitoring to prevent cheating and over-harvesting. Fish harvesters often pay the costs of mandatory monitoring through their membership dues, license fees, or as a landing fee when they bring their catch ashore.

WHY IS IT IMPORTANT?

- To find out if members are complying with fishing rules.
- To have the information to make changes to a harvesting plan or close a fishery if necessary.
- To protect the stocks from over-harvesting.
- To collect data for research purposes.

HOW TO DO MONITORING?

- In most jurisdictions, tracking fishing activity and landings remains the overall responsibility of the regulatory agencies. However, in Canada these agencies have given the responsibility for collecting catch data to private companies and the costs are paid by fishermen.
- The mandatory monitoring and reporting in modern fisheries management systems can work in favour of organizations needing to keep track of their membership's fishing activities so they can enforce their own fishing rules.
- Reliable catch data is essential for accurate and timely monitoring. A good relationship with a monitoring agency or company can ensure regular updates on overall catches, as well as the fishing activity of individual members
- Some management bodies establish local monitoring companies to meet regulatory requirements, create local non-fishing jobs, and offer affordable monitoring services to fishermen.
- A management body has to set "triggers" for what will result in slowing down of fishing effort or closure of the fishery. These have to be identified in the harvesting plan. For example, the Area 19 Crab Fishermen Association starts to reduce fishing effort when daily catches start to contain in excess of a certain percentage of undersized, white (moulting) or female crabs.
- Good communications are part of good monitoring. It needs to be clear in a harvesting plan who receives fisheries data and what they do with it. Who should they inform? What are the next steps? Who is authorized to slow down or close a fishery? The fishing season is a busy time so decisions about process and communication channels need to be made before people get on the water.

Local Example

During the fishing season, the Fundy Fixed Gear Council receives individual landing data for fishermen fishing under their management plan from the Department of Fisheries and Oceans. There is generally a delay of two to three weeks between the fishing trip and the arrival of the data. This can lead to catch overruns, since there is no accurate record of how much of the quota has actually already been caught. To compensate, the FFGC office manager relies heavily on information collected by a dockside monitoring company. Each fisherman calls the monitoring company before a fishing trip and then calls in their hail (estimate of catch size and species caught) before arrival in port. The company sends the office manager the hail estimates on a weekly basis. The data obtained this way is only an estimate of catch and species and not what is actually landed. But, until the official landing data arrives from DFO, the office manager uses this information to keep an eye on catch trends. The information gives the manager a relatively accurate idea of when the fishermen are close to catch limits. She informs the gear committees by fax weekly and they can make the decision to change catch limits.

Summary

Community management bodies have been successful and innovative at planning and managing their harvest to meet their members' needs as well as management objectives, including conservation and sustainable use.

Community-based fisheries management is most successful when harvesters and their management bodies have some control over how, when, and how much is harvested, and can set up allocation mechanisms for fishing activity and catches.

A badly managed harvest can have severe consequences for an organization and a community. People and systems need to be in place before the fishing season starts so that managers can adapt to the changing situations, make decisions quickly, and ensure communication between the management body and the membership

Resources

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Chapter Four:
Compliance and Enforcement

This chapter is divided into the following sections:
- Compliance and Enforcement
- Developing Rules
- Education and Awareness Building
- Enforcement
- Penalties and Sanctions

Compliance and Enforcement

WHAT IS IT?

Compliance is about fishermen accepting and following fishing rules and regulations. In contrast, enforcement is catching and penalizing the rule breakers. Community-based fisheries management balances the two approaches, encouraging compliance, while ensuring effective enforcement so that people who do not comply are penalized.

Ensuring compliance and enforcement builds an organization's capacity for self-governance, since they require taking ownership and responsibility for functions and services that previously may have been done by a regulatory agency. The success of compliance and enforcement models is directly related to organizational capacity.

WHY IS IT IMPORTANT?

Community-based management systems design rules to support their management measures. These include rules that:
- Promote sustainable fisheries management.
- Encourage conservation.
- Protect habitat and ecosystem functions.
- Ensure full participation and democratic, transparent decision making.
- Support equity and increase economic benefits to the community.

If fishing rules are repeatedly broken, especially if that leads to over-harvesting or illegal fishing practices, regulatory agencies may shut down the entire fishery. On the other hand, a well-run fishery, in which members comply fully with community and government rules, shows that community-based management does work. Fishermen can manage themselves. So when fishermen enforce their own rules, they show the willingness to govern themselves, rather than leaving difficult decisions for others. Self-governance requires taking on a range of tasks in managing a fishery, even the unpleasant ones.

HOW TO DO IT

The foundation of community-based management is a belief in people's capacity to make decisions for the collective good. There is an underlying assumption that fish harvesters can and will behave ethically and honestly in a locally managed fishery. In this context, compliance involves both creating the conditions for people to behave appropriately, and developing mechanisms to catch and punish violators. Managers should use a variety of strategies - enforcement is only one part of building compliance.

The rest of this chapter presents ideas on how to balance the use of "carrots" (incentives) and "sticks" (punishment) by:
- Developing Rules
- Education and Awareness Building
- Enforcement
- Setting Penalties

Developing Rules

WHAT IS IT?

Rules are the specific implementation of long-term management measures and in-season harvest plans (see Chapters 2 and 3, respec-

tively – Fisheries Management Planning and Harvest Management). It is the fishing rules that all members of a fishery group must commit to follow within a given fishing season. For example, one specific rule might state what days fishing is allowed on, and another might state the amount that can be caught on each fishing trip. Fishing rules should be clearly related to meeting the management objectives outlined in the fisheries management plan.

WHY IS IT IMPORTANT?

- The best approach to compliance is making sure the fishing rules are right in the first place. Legitimate rules receive more good will, support, and voluntary compliance than those that fish harvesters think are unfair, impractical, useless or wrong.
- Management objectives will only be achieved if there are clear rules limiting potentially destructive fishing practices or behaviours.
- Agreeing to follow community rules makes individual harvesters accountable to their management body and their community. It creates accepted standards for group behaviour and moral pressure to comply.

HOW DO YOU DEVELOP FISHING RULES?

- Community-based fisheries in 'northern' situations typically are operating within a larger context of State control over resource management. Very few management systems allow local organizations to design completely new management measures, but specific fishing rules can be adapted to fit local needs within community-based fisheries, as long as they also fit within the same basic regulatory framework as other fisheries.
- However, within this context, community-based management should set its standards at least as high as those of conventional fisheries management. Most community management bodies establish at least some regulations that are more stringent than those required by government.
- Developing fishing rules in a given fishing season starts with reviewing the broad management measures in the management plan, which were selected to achieve longer-term management objectives, as well as the shorter-term harvest plans.
- To develop rules that support agreed-upon management measures, consider "What specific activities will help achieve this management measure?" and "What specific activities will interfere with this desired management measure?"
- Fishermen have to be involved in the rule-making process and clearly understand how the rules will be implemented and enforced. The rules should be determined by consensus or voted on by the membership or a management body.
- There should be specific rules and regulations attached to each management measure in the management plan, and each part of the harvesting plan. By having a variety of different kinds of rules, each intended to achieve different ends, a more complete and 'safe' management system can be achieved.
- The rules should be enforceable, otherwise they will be ignored. Developing and implementing rules can be a mechanism to build closer collaboration between fishermen and law enforcement and regulatory agencies, especially if they partner in compliance and enforcement.

The following are some examples of the types of fishing rules set within a fishing season by community-based fisheries management bodies:

Conservation Rules: The Guysborough County lobster fishermen (LFA 31A) have voluntarily adopted all the suggested management rules presented as conservation options by the Department of Fisheries and Oceans.

Setting Gear: Fundy Fixed Gear Council gillnetters work closely with the World Wildlife Fund and the Canadian Whale Institute to avoid endangered species such as Right Whales and Leatherback turtles.

They move their gear during the season if there are reports of endangered species heading towards their nets. They also experiment with gear modifications such as weak links, breakaway knots and modified gill nets.

Size Limits: To demonstrate their commitment to conservation, Bear River First Nation, an aboriginal community on the Nova Scotia side of the Bay of Fundy, decided to set minimum carapace lengths stricter than those required by the Department of Fisheries and Oceans (DFO).

Local fishing rules should emphasize sustainability of the fish stocks. Supportive scientists can play an important oversight role by checking that management rules and regulations are sound and feasible, and by providing technical advice.

Education and Awareness Building

WHAT IS IT?

Education and awareness building are the primary means for getting agreement and understanding of fisheries rules. This involves making sure the membership is fully aware of, and supportive of, the fishing regulations developed by the management body.

Education and awareness building requires two-way communication. It involves creating time and space for questions and discussions that may lead to changes and updates in the rules.

WHY IS IT IMPORTANT?

- To strengthen shared values about the reasons for and importance of community-based fisheries management, and of fish resource conservation, that will lead to voluntary compliance with new fishing practices.
- To increase understanding and support for management measures and fishing rules, and thereby improve compliance
- To foster dialogue and discussion that may lead to changes and improvements in the rules
- To provide useful information and education opportunities for members and the general public.

HOW TO DO EDUCATION AND AWARENESS BUILDING

Education and awareness building about fishing rules is one part of a larger process of building understanding and support for community-based fisheries management. The process of setting up a community-based management system and developing a management plan will have begun to create the values, attitudes and trust necessary for individual fish harvesters to voluntarily follow fishing rules.

Education and awareness building about fishing rules will use many of the same outreach and communication tools, and will reinforce many of the earlier messages about “why we are doing community-based management”. It will also provide new information about specific fishing rules, enforcement methods and penalties.

Some of the methods that work well to educate fish harvesters about fishing rules include:

- Community Dialogue: Bringing fish harvesters and the wider community together to talk about fishing rules and how they should be enforced.
- Port Meetings: Bringing together everyone who fishes from the same port to review, comment on, and approve fishing rules.
- Educational Materials: Fact sheets, posters, brochures, newsletters and articles in local newspapers or trade papers, to provide information about fishing rules and their enforcement.

- Ongoing Education: Periodic training sessions for members, to review the why, what, and how of fishing rules and their enforcement.

Enforcement

WHAT IS IT?

Enforcement is catching and penalizing those who break the rules.

WHY IS IT IMPORTANT?

- Fishing rules exist to protect the fishery. People who violate the rules are hurting the fishery and their community. Strict enforcement is a way of protecting the gains achieved through community-based management.

- Every fishery will have violators. Cheating cannot totally be eliminated. Even having fishermen making their own rules will not ensure one hundred percent compliance. Individuals who do not follow the rules have to be penalized for the good of everyone else.

- Free riders are people who want to receive the benefits of community-based management without having to obey its rules. Too many free riders can cause the whole system to collapse because it sends the message to other members that they can break the rules without consequences.

HOW TO DO ENFORCEMENT

There are three important aspects of enforcement in community-based fisheries management:
- Law enforcement
- Regulating the organization's members
- Regulating non-members (outsiders)

Law Enforcement

Law enforcement is the enforcement of existing fisheries laws. Just like police on the highway, someone needs to apprehend those violating community rules. This can be done by government, fisheries officers or the community. In some countries, fishermen can become "sea wardens" with the power to enforce local and national fisheries regulations. This is an effective way to reduce illegal and destructive fishing activities. However, law enforcement is not generally part of community-based fisheries management in other locations, like North America. Therefore, community-based organizations have to be strategic and creative in their approach.

Some strategies to ensure fisheries laws are enforced:
- Know the laws: Fisheries managers and management bodies should be familiar with all the laws related to their fishery, including laws related to fish habitat protection, marine pollution and storage and disposal of toxic wastes.
- Publicize the laws: Distribute materials to let members and the public know the laws that affect their fishery.
- Build relationships with enforcement personnel: Get to know the fisheries officers and law enforcement personnel, so they know and trust the organization and respond in a timely fashion to reports of violations.
- Document: Video, photos, interviews - have proof of violations.
- Aboriginal fisheries: In North America, First Nations fisheries may have the most power to enforce fisheries laws within their jurisdiction. Some Canadian First Nations communities have aboriginal fisheries officers.

Regulating Members

Members are the harvesters that have agreed to fish under a community-based management system and its rules. In order to enforce these rules, the following conditions must exist:
- Definition of and criteria for membership

- Legitimate fishing rules approved and agreed to by the membership
- Mechanisms to identify violators
- Fair process to determine whether someone has broken the rules
- An agreed upon procedure for setting penalties for violators
- An appeal procedure for those who feel they have been treated unfairly.

Some points to keep in mind on internal compliance and enforcement are as follows:

- Legally binding contracts between individual members and their management body are an important tool for holding members accountable if they break the terms of their contract.

- Written records are essential for good enforcement. Fish harvesters should keep logbooks of daily trips, catches, and landings. The fishery manager is there to keep an eye on the overall functioning of the fishery. He/she will reconcile individual harvester records with landing data from regulatory agencies or monitoring companies.

- It is usually the fishery manager who will notice when individual harvesters are not complying with the terms of their contracts. The fishery manager must alert whoever within the management body is responsible for enforcement.

- In some situations, other fish harvesters will report violators to the manager or other representative of the management body. In these cases, the management body may have to appoint some members to investigate the claim. Again, written or photo evidence is helpful in catching violators.

- Some communities rely on informal enforcement systems, in which the fishery manager, a respected Elder, or a fishing leader talks informally with someone who does not respect the rules. In some communities, there may be social consequences for people who do not follow community rules.

- One of the challenges of compliance and enforcement is that some harvesters do not report rule breaking because they do not wish to turn in friends and neighbours. Some communities deal with this by allowing anonymous complaints to be made.

- Many harvesters are accustomed to mistrusting all enforcement personnel. It takes a while for people to realize that in community-based management, they themselves are responsible for making the system work. In a sense, they are the enforcers. Adjusting to this role can take some time.

Regulating Non-members (outsiders)

Non-members are harvesters who fish within an area managed under a community-based fisheries management system but are not bound by the same rules as the members. They are not officially part of the "management community".

It is extremely difficult for a community management board to enforce its fishing rules on people from outside of the community, because in most 'northern' fisheries, access-related decisions, about who can fish where, are made by regulatory agencies and not fishing organizations or community management bodies. Most regulatory agencies are not yet ready to recognize that fishermen can manage other fishermen or regulate non-fishing activities in their area.

There are some strategies that have been used by fishermen to regulate fishing activities in their communities.

- Gear Removal: Although it has the risk of making the situation worse, fishermen in some communities have a long tradition of damaging gear belonging to outsiders. These practices, e.g. cutting the

lines of lobster traps, persist today in some communities.

- Local fisheries areas: There are a few examples in Atlantic Canada and the Eastern United States where traditional lobster fishing grounds have been legally recognized as "for local use only". Only residents of these communities can fish in these areas.

- Partnerships with regulatory agencies: Government regulation done in collaboration with community interests can assist in protecting community assets and excluding outsiders. In the Gulf region of Nova Scotia, government wants to encourage compliance in the lobster fishery as well as to provide incentives for fishermen to invest in conservations strategies – such as increasing the minimum carapace size for legal harvesting, protecting egg bearing females and increasing trap escapement widths. Since both government and community reinforce each others' efforts around their shared interests, the system works well.

- Changing fisheries laws: Some fishing organizations in the United States have successfully changed existing national and state fishing laws so they are in compliance with local conservation rules. As a result, local and outside fishermen fish by the same rules.

The strategies above (except removing or destroying gear) are long term approaches to enforcement. In the short term, fishermen may be voluntarily agreeing to abide by rules that they cannot make outsiders follow. In this situation, a community-based management approach is based on the hope that fishermen will make the right choices, even if others do not always follow their example. Community-based fisheries management is as much about values and principles as rules and regulations – following the right values and principles, fishermen should not ignore their own rules, even if outsiders do.

Penalties and Sanctions

WHAT IS IT?

Penalties and sanctions are punishments for individual harvesters who violate harvesting rules. They are intended to ensure compliance by providing a deterrent for potential rule breakers.

WHY DO IT?

- The management system will fall apart if the management body cannot penalize people who violate the rules.
- A management body that can make the decision to penalize members who break the rules is demonstrating capacity for self-governance.
- Some rule breaking can cost the management body money or even lead to the closure of a fishery. The individuals responsible for this should bear some of the consequences.

HOW TO DO IT

As a starting point, the members have to fully understand and agree to the appropriate penalties for specific infractions. Everyone must realize that it is not easy for managers or harvesters to penalize their friends and neighbours. Having regular reviews of the 'why' and 'how' of the rules and the infractions process will help managers and members come to terms with this responsibility.

The management body must also establish a legal basis for imposing penalties on its membership. For example, a legal fishing contract signed between a fish harvester and a management body gives the organization the right to punish rule breakers. And it is important to keep records. The fisheries manager must maintain written records of

what penalties have been issued to members and when and how the process was completed.

Some management systems try to find a role for the non-fishing community in the infractions process, so that individuals without a vested interest are making decisions on penalties for violators. An arms-length committee may have more credibility than one involving just fish harvesters.

It is important that the membership trusts that penalties are imposed in ways that are:

- Impartial
- Fair / Equitable
- Transparent (based on clear rules)
- Appropriate (suitable for the situation)
- Consistent (applied the same for everyone)
- Neutral

Some penalties imposed in enforcement are as follows:

- Keeping violators off the water for a few weeks during the fishing season is a common penalty used by management bodies. This makes rule breakers take a direct economic penalty as a consequence of breaking the rules.

- Associations sometimes fine violators and put the revenue back into supporting management activities.

- Some clam management bodies assign community service activities like beach clean ups, or clam reseeding as penalties.

- Repeat violators are sometimes asked to leave the management body. They are then no longer fishing under the organization's management plan and must make other arrangements to access the fishery.

The decision to ask someone to leave the management body should always be made in a transparent, impartial and open manner, and only when it is necessary for the integrity of the management system.

Local Example

The Fundy Fixed Gear Council finds that compliance is improving as members realize that there are repercussions for breaking the rules. However, there are still individuals who break the rules, generally by deliberately over-fishing their weekly catch limit.

The FFGC has an infractions committee to deal with these violations. The FFGC keeps strict records of landings based on the unofficial updates from the monitoring company and the official landing slips issued by DFO. At the end of the season, the office manager will ask four members to sit on the Infractions Committee. The committee sometimes meets during the season if it is perceived to be in the interest of meeting overall management goals. The committee receives a file about the violation with all personal information, such as the fisher's or boat's name, crossed out.

Based on the evidence, the committee decides on a suitable penalty, usually a fine or restrictions on participating in the fishery for a certain period. Violators are notified by letter, and if they have evidence to prove they have been penalized unfairly, they can appeal to the Council, which can overturn the penalty.

The violator has the right to an appeal hearing. At this point the anonymity of the Infraction Committee is repealed as the Infraction Committee becomes an Appeal Committee.

The FFGC's system is effective, but members still find issuing penalties difficult and are reluctant to sit on the committee even though the identity of everyone involved remains anonymous.

Summary

- Compliance and enforcement build the capacity for self-governance. Creating and enforcing rules is an indicator of a mature organization capable of carrying out its vision and plans.

- Education and awareness building is sometimes the most useful way to encourage member compliance. Fisheries managers have to find creative ways to deter violators since no one enjoys enforcing rules and penalizing rule breakers.

- Effective enforcement requires strong systems. Fishing rules should be perceived as fair and reasonable. Acceptable penalties and how they should be implemented have to be decided democratically and transparently.

- Setting a good example is also part of self-governance. Sometimes there is nothing community-minded fishermen can do to ensure outsiders follow their rules except act as a role model for responsible fisheries and work to change attitudes and values.

Resources

Charles, A.T. 2001. Sustainable Fishery Systems. Fish and Aquatic Resources Series 5. Blackwell Science. Oxford. 370p.

Cochrane, K. 2002. A fishery manager's guidebook: Management Measures and their application. FAO Fisheries Technical Paper 424. Rome.230 p.

Key, R. and J. Alder. 1999. Coastal Planning and Management. Spon Press, London.

Chapter Five: Research

This chapter covers the following topics about research for community-based fisheries management:

- Developing a research plan
- Data collection and Analysis
- Data Ownership and Control
- Using Research Results
- Collaborative Research Partnerships

The Resources section at the end of this chapter lists some suggested resources for learning more about specific research methods and tools.

WHAT IS RESEARCH?

Research is the process of generating new knowledge by collecting information and thinking systematically about it. In most fisheries management systems, research is done by a governmental scientific system that decides what is to be studied. Local people may often be (and/or feel) excluded from the research process.

Research is a big part of community-based fisheries management. A great deal of information about many topics is needed for it to succeed. It is not unusual for community groups to start trying to learn more about an issue and suddenly realize they have initiated an entire research project to generate new information about a local problem. Most long term community fisheries managers have been involved in numerous research projects related to local fisheries.

Participatory Research

Participatory research is a research approach that strives to reverse the top-down relationship established in conventional research. In participatory research, local people decide on the research priorities and research questions, collect and own the information, and decide how it will be used. Local people become the researchers, although often working in conjunction with government or academic researchers.

Participatory research is often considered to be happening when community members provide information or data during workshops, using tools such as maps, focus group discussions and story telling. However, participatory research is not only about the tools used. It is about the transfer of power and control between researchers and community. A participatory research philosophy can be applied to many different kinds of research projects, including collecting scientific data that are usually associated mainly with science-driven research projects. Conversely, informal "community mapping" workshops may not empower people if the researchers are only there to extract information from the community.

Participatory research is not only about acquiring information – it is also about empowerment, transformation and changing the status quo. Its potential for change makes participatory research such a powerful approach in community-based fisheries management.

WHY IS RESEARCH IMPORTANT?

- Research lets fish harvesters ask and answer questions which are important for them, their industry, and their communities, and that are not being addressed adequately by government institutions.

- Research can demonstrate that local knowledge and experiences matter. Many fish harvesters feel that conventional scientific studies ignore their wealth of knowledge acquired from years of working at sea.

- Being actively involved in research ensures that local communities retain access to information they collect, since data collecting for scientific studies is now a common activity for fish harvesters.

- Harvester involvement in research builds closer and faster links between research and management, which will help community-based management bodies make resource management decisions based on appropriate and accurate information.

- Most regulatory agencies do not know much about research outside their very specific mandates, so it is especially important for community-based management practitioners to take the lead in research projects outside the governmental mandate.

- Participating in research is a good way to build relationships between fish harvesters and scientists, managers and regulatory agencies. Harvesters can consider inviting these potential supporters to assist them in their activities.

HOW TO DO IT

The research process starts with people asking questions, then developing a plan to find explanations and answers. Like almost everything else in community-based management, people talking together and asking themselves "why?", "how?" and "what if?" questions is the basis of good participatory research.

The rest of this chapter reviews some important elements of the research process.

Developing a Research Plan

WHAT IS A RESEACH PLAN?

A research plan outlines research priorities and how they will be addressed. It lists specific research projects and identifies by whom, how, and when they will be completed.

WHY IS IT IMPORTANT?

- A research plan helps in allocating resources to research and in identifying gaps, such as lack of funds or lack of trained people, which need to be filled before research can begin.

- A research plan makes sure that research is not forgotten in the midst of the ongoing demands on an organization's time and resources.

- A research plan is a roadmap for action; without clearly focused research priorities, an organization can get involved with too many research projects and/or ones that might not strengthen community-based management efforts and may never be completed.

HOW TO DEVELOP A RESEARCH PLAN

1) Figure out what you need to know. The first step in developing a research plan is to figure out what the organization really wants to know. Some questions to ask include:
- What information do we need to manage our fisheries?
- Why do we want to know this?
- What do we already know about this topic?

The answers to these questions will likely produce a long list of potential research topics. These are the basic building blocks of a research plan that help in identifying research priorities to meet the organizations' immediate and long term needs.

2) Divide research needs into categories. It is easier to identify specific research priorities when a list of research topics is divided into research categories. Some examples of categories of research include:
- Biological or scientific (e.g. the status of fish stocks and their distribution)
- Marketing and economic (e.g. the community economic value of local fishing activity)
- Policy research (e.g. alternatives to current management approach)
- Local knowledge studies (e.g. local spawning ground identification)

Many organizations do a research plan as part of their overall fisheries management plan (Chapter. 3 – Fisheries Management Planning) with research being one element of the larger plan. The types of research are then matched to the different management goals they are to support. For example:
- information about groundfish catch limits can support a goal to develop an effort-based management alternative.
- research into fisheries enforcement in other jurisdictions can support a goal of setting up a local infractions committee.

- traditional use studies can support a goal of increasing aboriginal access to the fishery.

After identifying different research categories, an organization should decide how to approach its priority research needs. For example, an organization that wants to learn more about aboriginal use rights in the fishery might want to focus on building its capacity and resources for traditional use studies, legal studies or policy work rather than hiring a science student to collect water samples.

3) Clarify research questions and projects: Research questions describe what you are trying to find out about a particular topic.

For example, "What proportion of lobster eggs spawned in Guysborough county grow to maturity in the areas fished by Guysborough county fishermen?"

Or "Where are local groundfish spawning grounds now and have these locations changed over the last 100 years?"

Research projects are the activities that help generate answers to research questions. Addressing a research question may require more than one project, but conversely, a single project may address more than one research question.

To clarify research questions, ask:
- WHY we are asking this question?
- HOW will we collect the necessary information?
- WHAT kind of information will we get (what will the answers look like?)
- WHO will collect the information?
- WHEN will it be done?
- HOW will we use the information?

4) Finalize the Research Plan. A research plan is really a summary of the discussions and decisions outlined above to answer the 'what', 'why', 'who', 'when' and 'with what?' of the research itself. A research plan should identify the timeline and resources needed for each research category and project, and assign responsibility for taking the work forward.

Data Collection and Analysis

WHAT IS IT?

- Data collection is the act of gathering the necessary information (or data) to answer a research question.

- Data analysis is the process of organizing the data to observe patterns and trends, and interpreting what it means.

WHY IS IT IMPORTANT?

- Fishermen are more likely to trust the quality of the information if they have collected it themselves. Participating in data collection can improve the relationship between scientists and community.

- Many fishermen are required to collect samples as part of their licensing conditions from the government. This can help build capacity to carry out other community-based research projects in the future.

- Data analysis is how researchers develop answers to the questions they asked initially. The real power in research comes from how the information collected is interpreted, which happens during the analysis phase.

- For many community-based organizations, data analysis is the most intimidating aspect of the research process. Therefore, a lot of data collected by community groups either does not get analyzed or the results are not shared with the community. Local people have to be involved in data analysis if they want their knowledge, opinions, and concerns to be part of the interpretation.

HOW TO DO DATA COLLECTION AND ANALYSIS

The basis of good data collection is making sure that information is:
- Collected properly

Table 5: Sample Research Plan.
From: FFGC (1999)

Research Area	Research project	Description	Resources required	Timeline	Person responsible
Groundfish - Local stocks	DNA testing of cod	Genetic sampling of winter cod	University proposal accepted, funding, researchers	Immediate	University staff, and fishermen will collect data
	Local knowledge project	Interview fishermen about spawning grounds	Researcher (summer student?)	When person available (summer)	MRC to write proposal for student
Lobster mortality	Study impacts of scallop dragging on lobster	Lobster traps in control and experimental locations to compare	Test sites, scallop dragger cooperation	Lobster season	Fishermen, with Marine Resource Centre support

- Collected in the right locations
- Documented clearly and systematically
- Handled carefully and not damaged or lost

Some strategies for community involvement in data analysis:

1) Hiring outside researchers (students, interns, contractors, consultants, retired government employees).

Advantages:
- Hiring students can be relatively low cost.
- Can provide summer jobs or internships for local youth
- The organization can keep all data and final reports.
- The organization maintains direct control of the data.
- Some consultants offer reduced rates for non-profit organizations.
- Can strengthen the relationship between the fishing sector and other community members.

Disadvantages:
- Relying on student researchers only works well if the project is clearly defined and the students are well supervised.
- Not all community organizations have facilities and expertise for data analysis.
- Does not increase the community capacity for data analysis.

Example: The Guysborough County Fishermen's Association hires student interns every summer for small research projects around lobster recruitment or other priorities for the organizations. The research reports are published by the organization.

2) Community members work with outside researchers

A research team composed of local and outside researchers can be a great way for community members to experience all aspects of the research process including data analysis. Some groups have one or two designated local researchers who are the primary organizational contacts for their organization.

Advantages:
- Local skills and confidence are built through actually doing research.
- Only a few members of the organization have to be directly involved in the whole research process.
- Research partnerships can provide resources, skills, and credibility to a community group.
- It is possible to gain access to facilities, support and a wider audience for the findings.

Disadvantages:
- Local research programs may collapse when funding for local research ends.
- Research within academic partnerships is slow and may not lead to immediate results useful for the community.
- Research fatigue may occur for local researchers and organizations.
- Different priorities, interests and communication styles can lead to frustration and disagreements.

Example: Through the Social Research for Sustainable Fisheries project, researchers at St. Francis Xavier University (Antigonish, Nova Scotia) worked closely with fishermen's organizations on mutually determined social science research projects. The project supported and trained local research partners including at the Guysborough County Inshore Fishermen's Association for 5 years. Research included academic, technical and community projects and papers relevant to the partners involved.

3) 'Do it yourself' Data Analysis

Some organizations have had bad experiences of outside researchers imposing their own ideas of what the research should look like and what their reports should say. They want to present information in a way that makes sense for their organizations and their communities. Alternatively, they want to do a project that no one else is interested in being involved with. These groups sometimes decide to do their own research from start to finish, including analyzing and presenting their findings.

Advantages:
- Total control of the research process and ultimate ownership of data.
- Opportunity to tell their story in their own words.
- Independence can lead to a flexible innovative approach.
- Opportunity for the organization to learn together.
- Can tap into local resources and skills.

Disadvantages:
- Can lead to feelings of isolation and frustration if the group gets stuck.
- The process can take a long time.
- May encounter difficulty accessing resources, funds, expertise.
- The local researchers and their results might not be considered credible by those they are trying to influence.

Example: The Harbourville Wharf Association is a community group along the Minas Basin, Nova Scotia. They are trying to keep the local wharf open for commercial fisheries, and in order to make their case to various regulatory and funding agencies, they have had to conduct research into the ownership of the wharf and various management options. As the research unfolded, it became evident that the wharf's ownership had passed between government levels, to community, back to government. It became unclear whether the government levels involved had completed the paper transaction required at that time. The ongoing research process has since evolved to include several levels of government as well as various departments within each level.

Data Ownership and Control

WHAT IS IT?

Data ownership and control means that any data collected by a local organization is owned by that group, and that they have access to the information, analysis and results.

WHY IS IT IMPORTANT?

Local control of data is part of overall community ownership of the research process. Many organizations have collected samples and other data, but have never seen any research results arising from that data. Maintaining community ownership of research results can prevent surprises such as the research findings being used by regulatory agencies to close an important fishing area.

HOW TO DO IT

- A data sharing agreement should be developed between research partners clarifying how information will be stored, shared, used, and attributed. The agreement should be signed by all partners in a research project, and by any outside party wanting access to the data at a later date.

- Data sharing agreements are best negotiated before the research starts. It is difficult to retrieve data already stored in other locations if the community organization has not previously arranged access.

Using Research Results

WHAT IS IT?

Using research results means using the information generated through a research project to make decisions, or for education, lobbying or other activities. For example, an organization might use the results of a membership survey to plan new services, or the results of a bird migration study to have the local government re-open a clam flat that has been closed for years.

WHY IS IT IMPORTANT?

- Community-based fisheries management is about change. Those doing research should ensure their work is part of this change. Even in conventional fisheries management, scientists feel their recommendations are of-

ten ignored, so unless there is a real effort to incorporate local research it may not influence management planning or decision making.

- Community-based fisheries management is about empowerment. Most groups start doing research to convince regulatory agencies of the benefits of doing things differently or to obtain the information to do it themselves. If the new knowledge is not used, people feel the process was a waste of time.

HOW TO DO IT

- Take a long term view: Collecting, analyzing and using enough information (especially biological information) to change management practices can be a long-term process. It is simply not something that happens as quickly as would be desired.
- Start small and build up. Build on the results of early small scale research projects and gradually take on more complex research.
- Work with scientists and managers. Build relationships so they will be more likely to support the findings and recommendations. Scientists and managers will be more receptive to a research report if they have been involved in its evolution over time.
- Get exposure: The more public and media attention given to research findings, the more eager government will be to do something about it. Use the media, make presentations, and work with allies to get the message out.

Local Example

The Guysborough County Inshore Fishermen's Association has submitted a ten-year lobster management plan for their fishing area to the government. This plan incorporates management measures developed through research on lobster larval drift and survival they have been doing since 1999. The management plan also outlines planned research for the next ten years.

The Area 19 Crab Fishermen's Association collects many kinds of data during their fishery. The organization's representatives participate in data analysis while sitting on the Regional Snow Crab Science Advisory board. The results of this research feed directly into yearly management plans. Fishermen are also doing research on crab mortality in different types of crab traps. The findings from this study will determine the fishing practices allowed or forbidden in the yearly management plan.

Collaborative Research Partnerships

WHAT IS IT?

This chapter has provided an overview of some essential elements of research in community-based fisheries management. For many organizations, developing the skills and finding the time to do research is challenging. Collaborative research partnerships can help community groups meet their research needs while building their long term capacity to plan and carry out research.

Collaborative research is a relationship between equal partners in a research process. It usually involves a partnership between a more traditional research institution like a university and one or more community partners.

WHY IS IT IMPORTANT?

Collaborative research has many advantages for participants. Participating in a collaborative research project can give smaller community-based groups benefits such as:

- Resources, including funds, materials, equipment, and training.
- Credibility and legitimacy, since it is easier to convince outsiders that your data and analysis is suitable if professional researchers are involved.
- Exposure through publications, seminars, presentations, and conferences.

- Better understanding and relationships with scientists, academics, government, students, and others working on the project.

HOW TO DO IT

- A collaborative research partnership is like any other relationship. It takes time for trust and mutual understanding to build. It is important for the community-based group to be empowered though the partnership, so research protocols and data sharing agreements ensure everyone understands the relationship.

- A research protocol is a formal agreement negotiated between all parties involved in a research project. Those initiating the research negotiate the terms and conditions of the proposed research with the appropriate representatives of the partner institutions.

- The research protocol can be developed into a legal contract that binds signatories to its specific terms and conditions. This can offer community groups protection and leverage if their institutional partner fails to keep its end of the bargain.

- A research protocol can also include conditions not related to a specific research project but that outline the roles and obligations of each partner. Mentorship, training, and assistance in proposal writing can all be written into the research protocol commitments the partners have with one another.

Summary

- The importance of research to community-based fisheries management is clear from the number of organizations involved in research projects. Research can be an empowering experience, especially if it contributes to the organization's capacity to do management.

- Research should be integrated into the overall management plan. Research should not be ad hoc, but should always include a plan of by whom, when, what, and why the research is being done.

- Many community groups conduct research with scientists, academics or supporting institutions with which they have negotiated partnership agreements. These relationships can provide community groups with resources, support, and credibility as well as improve relationship with researchers.

- In community-based fisheries management, research should lead to results that can be used in management planning, education, or support other community activities.

Resources

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Wadsworth, Yolanda. 2001. 'Do It Yourself Social Research', Victorian Council of Social Service, Allen & Unwin, Melbourne, Victoria, Australia, 1984 Eighth Impression 1991.

Table 6: Terms and conditions usually included in a research protocol
From: SRSF Fact Sheet #2, August 2001

- The issues being researched
- The purpose of the research
- The methodologies being employed
- Procedures for obtaining informed consent and for assuring confidentiality
- The timeframe in which the research is to be conducted
- The physical and human sites where the research is to be conducted
- Sharing of information
- Archival arrangements for the storage of information
- Participation in data analyses and other interpretive uses of the information
- Participation in the review of outcomes from the research including reports, media articles, scholarly papers, and monographs prior to their public release and circulation
- Obligations to circulate and to provide copies of final draft research outcomes among protocol signatories
- Specification of the conditions wherein the relationships and understandings documented within the protocol may be terminated
- Development of research funding proposals
- Arrangements under which a portion of research funds would be used to provide training, employment opportunities, and equipment for participants, their communities or representative associations

Chapter Six: Building and Maintaining Community-Based Management Organizations

Strong, democratic, sustainable local organizations are essential for the development of community-based fisheries management. How to build strong organizations for community-based management was the topic most discussed during the Turning the Tide Gulf of Maine Tour. This chapter summarizes many of the ideas shared by experienced organizers who participated in that tour.

This chapter is divided into sections on:
- Community-based organizations
- Leadership and Facilitation
- Starting an Organization
- Organizational Sustainability
- Community Involvement

WHAT ARE COMMUNITY-BASED MANAGEMENT ORGANIZATIONS?

Community-based management organizations are local organizations that are involved in community-based fisheries management. They can be harvester organizations, management boards, or community groups. The information presented in this chapter can also be used to strengthen local government, municipal or Band Councils, or any other group engaged in collective decision making and management.

WHY ARE COMMUNITY-BASED ORGANIZATIONS IMPORTANT?

- Strong, democratic, local organizations give harvesters a voice. They represent the interest of fish harvesters locally and regionally.
- Participation in an organization makes people more aware of their situation and their collective abilities to manage themselves and their fisheries.
- They provide people with an opportunity to be involved in the decision making and management activities that affect their lives
- They increase capacity to access funds to support necessary projects and activities
- They enable a community to form alliances and networks for joint actions, information sharing and advocacy
- They create permanent organizational structures for resource management

Table 7: Range of Tasks Performed by Fishermen's Organizations
From: SRSF Fact Sheet # 10

- Assist members in renewing or applying for licenses and determining license conditions
- Provide members with fisheries information through mail-outs, faxes, phone calls, emails, etc.
- Organize regular meetings to discuss fishery issues
- Develop species-based fishery management plans
- Communicate regularly with government regarding new regulations, policies, etc.
- Communicate regularly with the Department of Transport regarding vessel regulations
- Act as a co-management agency for certain fisheries (negotiate and administer the quota, contracts and joint project agreements, buy gear, set up and administer a monitoring program, collect science fees, organize science log sheets, collect the association's share of sales and distribute sales income to members)
- Organize mandatory training programs
- Undertake research projects on issues of importance to members that are not given a high priority by government agencies
- Ensure that the association sends representatives to all advisory board meetings for all fisheries
- Continually work at strengthening the capacity of the association to provide all of the above services
- Secure and manage the funds necessary to carry out all of the above tasks

HOW TO BUILD A STRONG ORGANIZATION

At an early stage, define what is envisioned as a "strong" organization. Members should ask themselves: What is a strong organization? How will we know when we get there? These questions can help develop indicators of organizational strength or success.

Some signs of a strong organization:
- Transparent and democratic.
- Effective planning including having terms of reference and organizational structure.
- Recognition from the community.
- Agreed-upon structure to deal with conflicts.
- Effective communication with members.
- Leadership is responsive and attentive.
- Members are able to share responsibilities.
- Ability to accommodate differences of opinions.
- Organization can act effectively on behalf of members.

The rest of this chapter presents some ideas to help organizations reach their goal of a strong organization.

Leadership and Facilitation

"The President provides leadership for the whole organization. He is known to be scrupulously fair and concerned with the good of whole organization." (Ginny Boudreau, GCIFA, March 2004)

WHAT IS A LEADER?

A leader is someone who makes things happen by stepping forward to offer time, energy, and ideas. Leaders are champions for their organization and for community-based management. A leader should not be the person doing all the work, but instead should inspire others to get involved.

WHY ARE LEADERS IMPORTANT?

Leaders are essential to any organization because they:
- Provide enthusiasm, energy, and moral guidance
- Represent and speak up for membership
- Keep the organization on track financially
- Help manage people and projects
- Are accountable to membership
- Work to promote the well being and best interests of the entire organization

WHAT IS A FACILITATOR?

- A facilitator is a person who helps support a group process.
- A facilitator guides a group in working together effectively.
- A facilitator can be a member of the organization, a harvester, a teacher, or any other trusted individual within the community.

A facilitator can also be someone from outside the community, such as a professional organizer working for a rural development agency, university, or other institution.

WHY ARE FACILITATORS IMPORTANT?

Good facilitation is important in starting and maintaining any community-based organization. A facilitator can help:
- Ensure full participation
- Minimize conflict
- Keep a group on track
- Develop group rules and processes
- Support leadership development and capacity building.

Outside versus local facilitators:

Some local groups are organized exclusively by people from within the community. Outside or professional facilitators are not always necessary. Fishermen and other community members can facilitate their own organizational process using the skills they already have and developing new ones as needed.

Other groups find that outside or professional facilitators are helpful in building a new community-based organization. Outside facilitators often have access to materials and resources not available inside a community. Their institutions can support them when they spend time talking to people and organizing meetings. It is, after all, their job.

There is no right or wrong approach. Organizing a group is a long term process. It cannot be tied to any institutional program or agenda. It is often more effective and sustainable for community members to think of themselves as the organizers and facilitators and to consider outsiders as resource people that are there to support the process and offer their experience and expertise when requested. Good leaders recognize when it is time to bring in outside help for organizing, facilitation, or conflict resolution.

HOW TO BUILD LEADERSHIP

Identifying Potential Leaders:

- A natural leader is not always someone who is very vocal and speaks up in meetings. There are many potential leaders who may not be recognized at first and who may not even realize their own leadership potential.

- A facilitator or organizer can help uncover hidden leadership potential within the community.

"The way to develop leaders is first to get fishermen talking. Listen when they talk about their lives, their concerns, their fishery. Next start sharing information and updates about the fishery and the organization - if there is one - and what other communities are doing. Eventually, start inviting them to come to a meeting or attend an event. Keep on listening and talking but keep on asking as well. Eventually, they will come and then you can start asking them to take on certain tasks until next thing you know, you have an active community leader". (Ted Hoskins September 2003)

The first step for anyone who wants to identify potential leaders is to look and listen. Listen to who is talking about what issues, and how they are speaking. Observe who speaks, who listens, and who is well respected.

Look for people within the community who show:
- A high level of self-understanding
- A commitment to life long learning and ethical principled action
- An awareness of, and ability to talk about, personal values
- Wisdom, perception, and the ability to predict future needs and directions.

An organization will need many different people in leadership roles and they will all have different abilities and different leadership styles. An organization needs to identify people who can:
- Help make social change
- Collaborate well with others
- Stay informed about relevant issues
- Remain focused on the organization's mission
- Think creatively and strategically
- Work towards change carefully and ethically
- Manage effectively
- Care for themselves and be aware of limits, and be flexible and open-minded
- Mentor, care for, trust, and delegate to others.

Identifying leaders requires those already involved in the group to be aware of their own strengths and weaknesses, and help identify people who might complement existing skills within the group.

Leadership Skills

Leadership is not only about knowledge and skills. Leadership has a strong moral component. A good leader has a combination of knowledge, skills, abilities, and values in a variety of areas.

The four core leadership areas (adapted from National Volunteer Leadership Initiative, 2003) are:

1) Values and Principle Building Skills

A leader with skills in values and principle building makes sure their leadership is community-based, includes representatives of many sectors of society, and comes from clear vision and principles. A leader with skills in values and principle building:

- Develops widespread commitment to the organization's vision
- Provides leadership to the organization in dealing with ethical issues
- Nurtures an organizational environment where learning is ongoing

2) Strategic and Resource Management Skills

The skills in this area relate to effectively managing the day-to-day operations of an organization through management practices that are effective, ethical, and in the best practices of the organization. They include:

- Ensuring the wise use of funds and resources.
- Effectively using the tools of information technology and research to achieve goals and mission.
- Providing leadership in developing plans and evaluating effectiveness of programs.

3) Relationship Skills

Relationship skills are those that allow leaders to work effectively with many different people to achieve a common vision. They allow a leader to develop and maintain good relationships, build collaboration, and gain trust and commitment. This includes:

- Maximizing potential of all human resources.
- Representing the organization effectively in public.
- Written and oral communication.
- Linking and networking.

4) Skills for Dealing with Complexity

Skills in this area help leaders to deal with complexity and with situations in which change is constant, including:

- Responding and being accountable to multiple individuals, organizations, and partners.
- Assessing how economic and political systems relate to the organization and its mission.
- Nurturing an environment where innovation, creativity, and adaptability are valued.

All these skills are vital for an organization to grow and thrive. Leadership within an organization has a responsibility to help individual members develop their competency in various leadership areas.

Starting an Organization

WHAT IS IT?

Starting any kind of local group is an example of community organizing. "Community organizing is a process by which a community empowers itself by working to identify its needs and to resolve its problems in a collective manner". (IIRR, 1998)

Community organizing is happening when people move from only thinking and talking about a local problem as individuals, and begin to discuss, plan and act together to bring about change.

WHY IS IT IMPORTANT?

- Organizations are built one member at a time. Organizing is required to move people from being concerned about an issue to taking action to change the situation.
- The only credibility an organization has to speak about an issue comes from having a strong and involved membership. Organizing is not only about getting membership, it is about giving people a voice.
- Building an organization takes effort. People come together in times of crisis, but without a strong organization, they will drift away when the crisis is past. Organizing is about attracting and retaining members.,

HOW DO YOU START AN ORGANIZATION?

Many people search for a step-by-step guide to organizing communities. There is no such guide because organizing is an ongoing process that has to be adapted for every context. There is no recipe!

Nevertheless, there are some common elements in every organizing process:

- Starting with values and principles
- Getting people to talk to one another
- Building trust and relationships
- Developing organizational principles
- Deciding to act and getting started.

The following section talks about some ways to get started on organizing a group. They are presented from number 1 to 7, but organizing does not really happen sequentially. Often, the activities are happening at the same time and help to reinforce each other. Defining the scope of the organization helps to shape its guiding principles and vice-versa.

1) Talking and Listening

- The first task is to learn to listen, and to create opportunities where people listen to one another.
- Kitchen table meetings are informal meetings in someone's home where community members gather to talk about issues of common concern. Other good places for meetings are at community halls, schools, or at the wharf.
- People really need to be personally invited to go to a meeting. A poster is not enough. Personal contact, e.g. phone calls, is the best method.
- A group needs a common agenda in order to come together. Start with common questions and then add issues.
- The organizing process has to build the morale of fishermen who may already be feeling discouraged.
- At the beginning, the structure of the group will be flexible... some decisions can be very informal, such as where and when to have the next meeting. Over time, more formal decision making structures will be required and they will evolve as needed.
- Facilitators can be helpful to make a new group more effective, but they should be there respecting community decisions and not imposing their own agenda.

2) Core Group Formation

- A core group is a small group of like-minded people who share similar analysis of the current management problem and share common ideas or vision for the future.
- The members of the core group are the potential leaders who showed up at the initial meetings and who are motivated individuals. The members of the core group may eventually become the elected officials of the organization or management body.
- The core group will work together very closely and will set the tone and the atmosphere for whatever kind of management organization will eventually be established.
- The role of the core group is to get an organization or community-based management unit started and help it to grow.
- The core group should meet regularly to discuss and reflect. In this way, they develop unity in their analysis of problems and solutions. This unity is built from education and information sessions and from shared visions and values.

3) Setting Guiding Principles

- A strong organization rests on the shared values and attitudes of its members. These attitudes and beliefs should be articulated as the group's principles.
- These principles are an organization's foundation. They are used as a basis for setting goals and planning management activities, and as a basis to shape an organization's position on any given issue. Referring back to guiding principles makes decision making easier around management questions and ethical issues.
- Some organizations articulate their principles into a Constitution.
- "The basis for organizational development is a principled Constitution. It can take a long time to create, but it's an investment, a first step. You can borrow principles from other groups, but you have to talk them over until they are "yours." (Wilf Caron, West Vancouver Island Aquatic Management Board, 2003)
- All the activities discussed earlier such as kitchen table meetings, community meetings, informal discussions, and study sessions are part of the process of developing organizational principles. This is not something that can be rushed.
- Principles should be discussed until the members understand, agree with, and feel ownership of the organization's principles. Then, they should be written down and revisited regularly by the group.

4) Defining the Scope of the Organization

- There are many, many community organizations – there are often multiple organizations within one community. The reason for so many organizations is that they each have a purpose. A key step in starting an organization is defining its purpose or mandate.
- An organization has to be able to identify "Who are we? What are our common problems?"

- This means that defining the organization's scope is also about defining its membership. Who is going to be involved? Who will this organization represent?
- An organization's mandate comes from a sense of community.

"To be a community-based organization, you have to have a geographic area that you care about and cover all the resources. You have to be somewhere". (Robin Alden, Stonington Fisheries Alliance)

To define its organization, a group has to ask itself:
- What does it mean to be a local organization?
- Who will we represent? Who will not be involved?
- What do we do to get a voice?

How inclusive is "all inclusive"?
Trying to define the scope of the organization in terms of membership, geographic area, and mandate often illustrates some of the tensions in defining the "community" in community-based management.

An organization draws its strength and sense of purpose locally, yet needs to get bigger to have an impact on larger scale government processes. To address larger issues, the organization has to look outside itself at issues and resources outside the community, while still achieving its aim as a voice for local fishermen and local resource management.

Similarly, a community-based organization has to think about representation and inclusiveness. Everyone should be at the table. Yet, this is often very difficult when there are existing conflicts and competing interests within the organization and within the community. Who is included or not included in a community-based organization really determines how representative and legitimate an organization is in the eyes of the wider community. But inviting too many different people can make it hard to find a common agenda, given the tensions and divisions that exist inside all communities - racial, economic, linguistic, political, or social.

Many experienced organizers say to "start small". Begin with like minded, committed individuals, and gradually work outwards. A group with too many different kinds of people may find it difficult to move forward.

However, expanding beyond the core group of like-minded people is also important. A group that does not reach out to other constituencies will eventually stagnate. Energy and new ideas come from expanding the circle not from closing it.

5) Formalizing and Planning

At some point, informal groups evolve into more formalized organizations. Some organizations want to be legally recognized in their jurisdiction. This can be helpful for applying for funds, hiring people and other official and administrative purposes.

Groups that become legally registered or incorporated must create the governance and management structures required in their jurisdiction. This usually means a Board of Directors, officers, and setting up appropriate accounting and record keeping systems. The core group has a responsibility to guide this transition and assure the organization can manage its new legal and financial responsibilities.

Formalizing an organization is not only about getting legal status. It is about starting to make plans to carry out the grand vision shared by leaders and members. As a group starts to define its principles and purpose, it is important to clearly identify some goals to work towards. Many other chapters in this handbook talk in more detail about planning certain types of activities including fisheries management planning (Chapter 2) and developing a research plan (Chapter 5).

6) Increasing Membership

It is important for an organization to increase its membership beyond the original core group because:
- More members mean a stronger voice for the fishermen. There is strength and credibility in numbers.
- More members can bring in more revenue from membership dues, or government programmes.
- More members gives an organization more legitimacy in the eyes of the community and government.

- More membership is more fun, less work, there being more people to sit on committees and go to meetings.
- More membership can mean more quota or more access in some fisheries.

At the same time, leaders should not become obsessed with membership numbers. They should never apologize for low numbers. It is easy to focus only on that, but numbers are not the only indicator of organizational strength.

Before starting to recruit new members, membership criteria have to be defined. Is this organization open to anyone who pays dues or is membership only for certain pre-determined user groups? For example, only fishermen participating in the fishery in Guysborough County can become members of the Guysborough County Inshore Fishermen's Association.

Organizations set membership criteria based on the purpose and goals of the organizations and also on what is required by law where they are operating. In Canada, some accredited fishermen's organizations cannot have non-fishermen members, but in other jurisdictions it is illegal to refuse membership in any organization based on occupation.

Mandatory Membership – boom or bust?

"There's a fine line between providing a service to fishermen and forcing them to join the organization so they can go fish. We don't want to force, but need the power for decision making and that requires the numbers." (Greg Thompson, Fundy North Fishermen's Association)

In some places, fishery organizations have worked to ensure that membership in an accredited organization is mandatory for all active fishermen. In Nova Scotia, for example, this can be accomplished by the majority of fishermen in an area voting "Yes" for mandatory membership, in a referendum.

Mandatory membership legislation benefits some fishermen's organizations by increasing revenue from membership dues, access to new funding sources, and of course, new members. In some places, mandatory membership has caused conflicts as organizations compete for members. Some organizations do not feel that they have been strengthened by new members who were forced to join the organization but do not want to support any of its activities.

7) Principled Decision Making

Principled decision making is not a separate step in organizing a group; it is part of the ongoing process. It is good general housekeeping. It is listed here as the last step in the organizing process as a reminder that even once a group is set up and its constitution formalized, there is still work to be done in strengthening the organization, especially when it comes to making principled decisions.

"Well, you have principles to help you make difficult decisions. Who would object to having principles? To saying: we can't do this because it is against our principles." (Ted Ames, Stonington Fisheries Alliance, September 2003)

All organizations face many tough decisions as they work towards community-based management. There are many difficult ethical, financial, management decisions to be made about a range of issues. A strong organization goes back to its principles whenever difficult decisions need to happen.

Principles take some of the 'personal' away, and make it easier to refuse the requests of some members if such requests would negatively affect the entire fishery. Making decisions based on principles is also a good mechanism against corruption or abuse of power.

"When you do CBM, you don't go with the flow, you don't look only at personal good, but how it will help your community. You ask: How will this decision affect the community? How will it affect the fish? How, when, where should we fish?" (Craig Pendleton, NAMA)

Principled decision making is learned by practicing it – by writing down, talking about, and regularly referring to the values and principles that created the organization in the first place.

Maintaining an Organization

WHAT IS IT?

- Maintaining an organization is keeping an organization strong and effective over the long term. This requires considering the financial, human and organizational aspects of fishery sustainability.

- Maintaining an organization should be more than the status quo. It also involves improving its ability to carry out existing and future management tasks, and expanding the impact of its activities.

- The distinction between starting an organization (described earlier in this chapter) and organizational maintenance is not always very clear, since many activities will still be starting at the same time as others will be being sustained and maintained.

WHY IS IT IMPORTANT?

- For many groups, starting the organization is the easy part. Members have more energy and more enthusiasm. There is often a sense of urgency. There is generally a lot of discussion during the start up phase, communication is frequent and everyone is working together towards a common cause.

- Organizational maintenance is often neglected because leaders believe that once an organization is up and running, the really difficult part of the job has been done. Yet, ongoing maintenance is what keeps an organization strong, effective and united year after year.

- Maintaining an organization is difficult because leaders are busy and sometimes 'burn out' altogether. A successful community-based organization takes on more tasks over time, and this means the active members have more and more responsibility and less and less time.

- A sustainable organization needs to consider leadership succession. It also frequently needs to bring in new skills and resources. Planning for sustainability is important so that an organization can weather changes in internal leadership as well as in the external context.

HOW TO MAINTAIN AN ORGANIZATION

The following sections present some important aspects of strengthening and maintaining community-based organizations:

Finances

Any experienced organizer knows that money is a key part of organizational sustainability. Community-based organizations need funds to:

- Hire managers or office staff.
- Send representatives to meetings or conferences.
- Prepare and distribute communication materials.
- Host regular membership meetings.
- Stay in touch with each other and other organizations.
- Maintain an office.
- Carry out organizing, research, monitoring, and other management activities.

Getting adequate funds will always be a struggle. Organizations doing community-based fisheries management are taking on new activities, and there is insufficient government support to fund the required tasks, let alone those that are on the "wish list" of potential activities. There is no easy solution or magic recipe. The following ideas can help with building financial sustainability:

Membership Dues.

Most fishing organizations collect yearly dues from members to meet their operating costs. The organization encourages full payment by:

- Only issuing fishing contracts when members have paid their dues
- Providing full financial statements to members in their newsletter so that the members know where their money is going
- Creating a different fee structure for boat owners and crew.

Financial Planning.

Many community-based organizations develop a financial plan for their organization, identifying all potential sources of revenues and costs. They then make a yearly budget and revenue generating plan to be approved by the membership annually. A financial plan helps clearly identify financial gaps that need to be filled in order to carry out certain activities.

Levies and fees for services.

Fishing organizations provide a wide range of services to their members as well as to other organizations, the government, and the general public. Many organizations are starting to charge for these services. For example, they might take a portion of the value of the catch of their members to support the cost of representing harvesters, or helping to market the product. Organizations are also levying fees on academic institutions or government for data collection and the use of fishing boats for research or monitoring.

Starting businesses.

Some organizations create business opportunities that help their membership and provide funds for the organization. Some examples include running monitoring and sampling stations, or fuel stations and waste management services. A portion of the cost paid by the individual user goes directly to the fishing organization.

Community Support.

Some organizations rally the larger community around supporting the fishing organization. The Cape Cod Commercial Hook Fishermen's Organization hosts an annual ball to raise funds for the organization. They are also the beneficiaries of donations from local businesses. The organization also has "community" memberships for non-fishers who want to show their support by becoming a member.

Grants.

Some organizations support their research or other activities (such as education) by hiring staff through grants from government or foundations.

Supporting Institutions.

Partnerships with supporting institutions like resource centres and universities can yield access to funds, office space, or other organizational support that can reduce operational costs.

Communication.

- Good communication is essential to building and maintaining a strong organization. For many long-time organizations, communication sometimes becomes only about routine or business matters. This is not desirable, as it is important for discussing principles and ideas to remain a priority, so the organization remains strong and cohesive.
- Many organizations use talk mail, phone trees, email and newsletters to inform the membership about important issues and upcoming meetings.
- Disseminating information is not enough. Fishermen joined the organization because they wanted a voice. They want to give their input, talk about issues in advance and inform decision-making.
- A good organization provides a space and the mechanisms for members to talk to each other and to the leaders of the organization. There should be regular opportunities for socializing outside of formal meetings to encourage conversation and relationship-building.

Local Example

The LFA 34 Lobster Management Board is structured through a system of board representatives who are the elected representatives of a port cluster or a fishery organization that is recognized in the organization's bylaws. These Directors who go to all the management board meetings and are the decision-makers between membership meetings. The role of the port rep is to share information with fishermen in their homeport, but also to start discussions and hold local meetings and bring those ideas back to the management board, so that the ideas and opinions of all fishermen are heard.

Meetings

Meetings are often considered as the main indicator of whether or not an organization is working. Many leaders are frustrated that it is difficult to

get members to come to meetings. People attend when a group first starts, or when there is an immediate crisis or concern, but once that has passed, attendance drops down.

Yet to a certain extent, low turn-out can indicate that things are going well. It can mean that the organization has been successful and people are just too busy fishing and earning a living to attend meetings.

"The group is organized now, and recognized, but that doesn't mean a lot of people come to meetings. There is always a dedicated core, and even if fewer fishermen come to meetings, others do come like Maine Department of Marine Resource managers, researchers, scientists. Even if we do nothing as an organization, they are empowering us by their recognition. They give us greater force than we are feeling". (Will Hopkins, Cobscook Bay Resource Center)

On the other hand, poor attendance at meetings can be a sign of trouble. It can mean that the organization is not meeting the members' needs and that people are angry and disgruntled. It could also be a sign of conflict or breakdown in key relationships.

There has to be a reason for people to come to meetings. Members need to feel that they will gain valuable information, hear about changes in the fisheries regulations, or participate in key decision making for it to be worthwhile for them to show up.

Keep decision making with the membership. The members of the Guysborough County Inshore Fishermen's Association make all fisheries management decisions during their monthly meetings. The Executive committee cannot make any fisheries decisions without a vote from the membership. Knowing that at each meeting, they will be voting on the decisions that affect their livelihoods is a strong incentive for most members to attend every meeting.

Leaders have to find out WHY people aren't coming to meetings, to assess whether or not low attendance is a real problem. Some tools to help figure out what members are feeling include:

- Membership surveys
- Casual conversations
- Focus group discussions
- Open meetings and voting.

Retaining Members

An organization that is going to be around for a long time has to have a stable and expanding membership. This requires keeping existing members satisfied and avoiding burnout.

Membership in agreement versus disgruntled members is the difference between a strong, sustainable organization and one that is floundering. Leaders need to find out whether or not members are getting what they need.

- Members will be satisfied if the organization can deliver on its promises to the membership and to the wider community.
- Membership satisfaction comes with feeling valued and respected. A good leader takes the time to find out how people are doing and what they are thinking.
- The membership also needs to know how decisions are being made and how their money is being spent. A satisfied membership sees their dues as an investment in their fishery and their organization.
- Membership needs to know how their investment will be returned to them. They have to have trust in the leadership and decision making process. A strong organization must develop fail-safe mechanisms against corruption or misuse of funds or resources.

A sustainable organization is one where the membership and leaders avoid burnout. Burnout leads to losing good people and more work for others.

- There is no easy way to prevent burnout. The best way to deal with the problem is for membership and leaders to talk about it openly and honestly.
- Leaders and members need to learn to take care of themselves and each other so they can sustain their efforts for the long term.
- Good leaders can be role models that can show other members that sometimes it is okay to say 'no' to new tasks.

Continuity and New Leadership

A key element in organizational sustainability is continuity. A lot of information is lost when long-term members leave and what they know is not shared with new members.

An organization can be back to 'square one' if someone leaves in the middle of a complicated project or negotiation, or when an entire executive committee finishes their term of office at the same time.

There are some ways to maintain organizational continuity:

- Write down all policies, procedures, and other relevant information on how things are done.
- Keep minutes of all meetings and decisions made.
- Write a history of the organization and its major accomplishments and challenges to date.
- Have long-time members mentor new members.
- Replace officers and committees on a staggered basis, i.e. it might be decided that no more than half should be new at any given time.
- Consider electing officers and committees for a minimum two-year term, and not on a yearly basis.

Developing new leadership is essential for the success of any organization. Fisheries organizations are taking on an ever greater role in management at a time when there are fewer people entering or remaining in the fisheries. Fishing organizations need all the active members and leaders they can get if they are to survive and continue serving fishermen.

It is sometimes difficult to get new people to take on leadership roles within an organization, especially in a well-established organization with existing active and competent leaders. New members may be unsure how to get involved, and the younger ones may be quite overwhelmed with house and boat payments and family matters.

Every organization should have a plan to identify and support new leaders. This requires thinking of what skills need to be developed and offering opportunities, training, mentoring, and support to develop potential leaders.

Local Example

The GCIFA pairs an older, more experienced member with a new member who is just beginning to serve on committees or go to advisory board meetings. The two share the position until the younger member has the confidence and experience to represent the organization effectively.

Becoming a Learning Organization

Sustainable organizations are those that can learn from their experiences and adapt themselves to fit new circumstances. Leadership with the skills to help a group reflect and make changes is vital in creating a learning organization.

- Monitoring and evaluation are very important in helping organizations reflect on past experiences and make any necessary changes.
- Capacity building is the process of building organizational and individual competencies to take on responsibilities within the organization.
- Capacity building begins with a needs assessment about training needs, either for individuals within the organization or the organization itself.
- Some organizations send key leaders or staff to leadership training programs to improve their managerial skills. Other organizations have their own less formal practices like mentoring or giving feedback to new members.

It is good to set individual or organizational indicators to track the effectiveness of capacity building practices. But even if initial goals are achieved, capacity building is an ongoing process and is never completely done. There will always be new members and new skills to learn. Capacity building should be built into institutional structures and discussed regularly.

Community Involvement

WHAT IS IT?

Community involvement means getting the wider community interested in, and supportive of, fishing organizations. In some cases, community in-

volvement requires getting non-fishermen actively participating in community-based fisheries management activities.

WHY IS IT IMPORTANT?

Community-based fisheries management is not just about fishermen. In many cases, fishermen are most closely involved in fisheries management within a community, but they are never the only stakeholders. Their families and others in their communities also depend on the well-being of the fisheries. Considering the community impact of all fishery decisions is important, as is involving the non-fishing community in decision making whenever possible.

Community-based institutions are rooted in a sense of place; they are concerned with the well being of a territory. There is no such thing as just a "fishing" issue or just a "health" or a "school" issue – all are connected, and fishing organizations should support their community by getting involved whenever they can.

HOW TO DO IT

Non-fishermen as members: Some community-based fisheries management organizations find a way to involve non-fishing community members by having them join the organization.

Local Examples

- Organizations such as the Cape Cod Commercial Hook Fishermen's Association have different types of membership. Most members are fishermen, but there are a large number of local residents and tourists who buy a non-fisherman membership and receive the newsletter and regular updates.

- The Fundy Fixed Gear Council has seats on its management board for community representatives. Over the years, representatives of local environmental groups and an individual from the Nova Scotia Women's Fishnet organization have filled this seat.

- The Stonington Fisheries Alliance is a community-based alliance that actively seeks membership from non-fishing members of the community who have skills and commitment to offer, including teachers and scientists. The only requirement is that they live in the local area.

Join local initiatives

Many fishing organizations get involved in local issues like fighting against an activity that would harm the local marine ecosystem. Working with other concerned groups or citizens strengthens a sense of community, and is the foundation of a real community-based alliance for sustainable coastal communities.

Shared Celebrations

It is important to celebrate victories, small and large, and to make the wider community part of the celebration. In the hard work of community-based fisheries management, it is easy to forget the many victories and the gains already accomplished, including good relationships and a strong and viable organization. Sharing food, music, and laughter is part of building community. This will make both the organization and the community stronger, more cohesive and more sustainable.

Local Example

Bear River First Nation fishermen provide lobster for the community and invited guests during the yearly Saint Anne's Day celebration. This event is enjoyed by fishermen and non-fishermen alike, and by people living on or off the reserve. It is a chance to be thankful for the bounty of the land and sea.

Summary

- Community-based organizations are the foundation of community-based fisheries management. They create a mechanism for individuals to participle in the management process.

- Community-based organizations are by nature multi-purpose. They are carrying out management activities, while building their members' capacity to bring about change. Community-based organizations are not only about the functions they carry out; they are also about representation, direct democracy, and empowerment.
- There is a wide variety of leadership skills necessary in a community-based organization. Being able to support principled and ethical decision making is a key part of the leadership challenge.
- Sustaining an organization over the long term is a challenge. Being vigilant about finances, developing new leadership, and communications are critical factors for maintaining an organization.
- Relationships remain crucial in starting and keeping an organization going. Take the time to encourage real conversations and discussions.
- The non-fishing community is a resource that can sustain fishing organizations. Reach out and ask for participation and understanding.

Resources

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Chapter Seven: Economic Development

Much has been written about economic development in countries, in regions, and in communities, but little about the connection between community-based fisheries management and economic development. This chapter presents some ideas about the relationship between economic development and community fisheries management, drawing on experiences from the Atlantic Region.

This chapter discusses:
- Managing fish supply
- Improving product quality
- Market development
- Job creation
- Keeping wealth in the community.

WHAT IS ECONOMIC DEVELOPMENT?

- For the purposes of this handbook, economic development is a way to increase the economic benefits that community-based fisheries management brings to harvesters, their families and the community.

- In community-based fisheries, economic development is based on principles of local involvement and control, equity, and inclusiveness.

- While conventional approaches to economic development emphasize growth and industrialization, economic development in community-based fisheries management promotes sustainability for communities and resources.

WHY IS ECONOMIC DEVELOPMENT IMPORTANT?

- First, fishermen and their communities are often starting to manage fisheries from a position of scarcity. Stocks are low and inshore fishermen have limited allocation of available harvests. Maximizing the value of the available fisheries landings to the fishermen and the community can keep more people in the fishery.

- Second, community-based fisheries management costs money. Economic development efforts can complement and support local fisheries management efforts, especially in relation to keeping wealth, jobs, and income in the community, as well as paying some of the management costs.

- Third, the fishing industry needs more than just fish to survive. Viable fishing communities rely on a network of services in their community and in the region. Job creation in marine and non-marine related fields is good for the community and in return, good for the fishery.

- Fourth, community-based fisheries management needs to happen in a context of sustainable coastal communities. This means the need for economically viable communities with job opportunities for non-fishing residents and a range of community services available.

- Fifth, many fishing organizations have been involved in economic development activities through cooperatives, extension departments, marketing boards, development authorities or other similar agencies. This has usually been separate from their participation in fisheries management activities administered by completely different regulatory agencies.

In community fisheries management, fish harvesting and resource management can be more closely connected to community economic needs and priorities. Two approaches of note are: (1) to increase economic benefits to the community by maximizing the value of the fishery, whatever the sustainable catch level (e.g., through product supply, quality improvement and marketing), and (2) creating jobs and services that increase economic benefits to the wider community.

Managing Fish Supply

WHAT IS IT?

Managing supply is controlling the harvest and its timing to maximize the product value. For example, community-based institutions can choose management measures such as closed seasons to control the quality or quantity of fish landed.

WHY IS IT IMPORTANT?

Inshore fisheries are typically extremely vulnerable for many smaller harvesters. Making inshore fishing economically viable for harvesters is a good indicator of the long term success of community-based management.

HOW TO DO IT

The capacity of community-based fisheries to manage supply will depend on whether they have the management authority to decide on fishing seasons or catch limits.

Some ideas based on experiences from the Atlantic Region include:

Have Realistic Expectations: The small scale inshore fisheries involved in community-based management are significant locally, so the opportunities to influence supply and pricing will also mostly be small-scale and local. Small shifts in the length and timing of the fishing season can have an enormous influence on the prices received by individual harvesters, but this will not affect the pricing and availability of fish on national and international markets.

Identify Your Objectives: Determine what the organization is trying to achieve through managing fish supply. Is the main objective better prices? Or new markets? Or a longer fishing season? Or local jobs? For example, the Fundy Fixed Gear Council tries to create as many local jobs as possible with their raw product. Even though selling round fish (largely unprocessed) to the U.S. is attractive, they try to prepare the landed product locally, which means work for fish plant employees that split, debone, clean and package the fish.

Link Economics with Conservation: Any management measure that directly links improved conservation with higher economic returns will receive greater support and be easier to implement. Try to find situations where conservation behaviour is rewarded. The fishermen of Mohegan Island, Maine close their lobster season in the summer months to avoid harvesting molting or spawning lobster. This is good for stock health, and it also means that Mohegan fishermen only harvest when they will get optimum prices for their catch. Mohegan has become known for high quality lobster, and they obtain a higher price than fishermen from other communities.

Work Together: It is difficult to control supply when each fisherman is marketing his or her catch individually. In Atlantic Canada, there is a long history of fishery marketing cooperatives. These organizations work well when the supply of fish is harvested by a cohesive group that is willing to work together for greater collective market benefits. Cooperatives encourage fishermen to stagger their catches to maintain prices and supply throughout the season. Most organizations work with support organizations or local universities when initially trying to get a cooperative started.

Exclusive Harvesting Rights - Managing Supply

The inshore snow crab fishery in Area 19 (Nova Scotia) offers an interesting example of a community-level association managing fish supply through exclusive use arrangements. The Association's management plan with DFO allows the harvesters a great deal of control over the timing and amount of the snow crab harvest. The Association works from the total harvestable biomass estimates of the scientists and selects a Total Allowable Catch (TAC) based on projected crab landed values. Their management plan specifies that they must select a TAC within 20% of the amount suggested by the advisory committee. This system allows the Association to choose a seasonal harvesting strategy (e.g. maximizing allowable landings, or maximizing the value, by limiting supply so as to receive a higher price for their catch).

There are several economic benefits to the system:

- The Association receives a share of the profits, which is used for research, conservation and to manage the fishery.
- The fishery creates stable jobs in the community. The Association follows a policy of landing and processing the catch locally to maximize local employment and keep benefits in the community.
- The Association is committed to keeping fishing rights in the community. The management plan specifies that this is an owner-operator fleet.

Improving Product Quality

WHAT IS IT?

Improving product quality means making sure fish is fresher, in better condition, handled correctly and otherwise more attractive to buyers and consumers so that it can be sold for a higher price.

Typical strategies to increase the quality of the catch include:
- Encouraging the use of fishing practices that produce a higher quality catch; for example, checking gear in the water regularly to ensure good quality fish.
- Waiting to harvest and market marine resources when they are in the best condition; for example not targeting pollock that has just spawned.
- Promoting better post-harvest handling, for example, only storing scallops on board the fishing vessels for one day before landing and sale.

WHY IS IT IMPORTANT?

Building a reputation for superior quality fish through improving product quality is important in helping fishermen get a fair price for their catch. While many fishermen choose to handle and store their catch carefully, simply out of a sense of pride as professional fishermen, clearly it would be preferable for this desired behaviour to be rewarded. Unfortunately, under many marketing conditions at present, fish buyers or processors pay the same amount for fish no matter how it is caught or stored, so the extra care by individual fishermen may not bring any benefit to those fishermen. Thus, improving product quality must happen in conjunction with other marketing initiatives (see below) to create a monetary incentive for extra care in fish handling.

The whole industry benefits when fresh seafood is considered a high quality, high value product and an important contributor to the regional economy. Fishing associations can directly influence product quality by encouraging good practices and offering training and learning opportunities for improving product quality. They can also seek certification and improve marketing opportunities through this recognition.

Helping fishermen improve the quality of their catch can have important implications for developing new and more profitable markets for seafood products. Local institutions that begin to actively market seafood products are supporting and strengthening community-based fisheries management. These organizations may find allies within government or local marketing boards or economic development offices.

HOW TO IMPROVE PRODUCT QUALITY

Fishing organizations are the key in encouraging real and consistent improvements in product quality. They can connect individual fishermen with resources, contacts, and training opportunities. Some examples include:
- Encouraging good fishing practices that result in high quality fish.
- Offering trainings on post-harvest care and handlings to members.
- Inviting speakers from the processing or fish buying sector to talk about market trends and demands.
- Connecting with resource people from extension departments or fisheries marketing boards.
- Building relationships with specialized buyers who can explain what their industry needs.
- Recognizing individuals who have demonstrated high personal standards for fish handling and storage.
- Providing access to cold storage and other facilities and equipment.
- Setting management measures that encourage high quality catch (daily catch limits, no overnight onboard storage, closing spawning areas).

Market Development

WHAT IS IT?

In community-based management, organizations want to find new markets for their members' products. The emphasis is on finding markets

where high quality, small volume fisheries have an advantage over their larger competitors and where the characteristics of inshore fisheries (small volume, freshness, quality, and proximity to port) can be properly valued.

This is a relatively new aspect of community-based management in some locations, but it has been very successful in other parts of the world. Many of the approaches below are only beginning to be explored.

WHY IS DEVELOPING NEW MARKETS IMPORTANT?

- Community fisheries are in direct competition with larger scale fleets selling their catch to existing fish buyers and fish plants. Finding new markets for community-based fisheries is essential for their survival.

- Marketing is part of the process of educating the public about the importance of seafood, fisheries, and coastal communities, and thereby improving the well-being and even survival of community fisheries.

HOW TO DO IT

The sections below discuss some ideas about market development...

Local Markets
Local markets allow fishermen to sell fish directly to people who live in and around their own community. Marketing locally can be as direct as selling fish at the wharf to locals and visitors, or it can be a more general approach to raising awareness locally about the importance of fisheries to the communities.

The fishing industry needs local supporters who are aware of the value and importance of a local fishery. Raising the profile of the local fishery is part of promoting and celebrating the traditional lifestyle, culture, and foods of coastal communities and keeping them viable into the future.

As fewer residents of coastal communities are directly active in the fishery, awareness of quality seafood is declining. It is harder to find local fish in supermarkets when large grocery chains centralize buying and selling for everything in their stores. Even in fishing communities, the fish for sale is not always fresh. Helping the local community access good quality seafood products at a fair price can become an important economic goal in community-based fisheries management.

Community-based fisheries management encourages managers to look for sustainable options. Minimizing the environmental costs of transporting fish out of town is a good choice for truly sustainable fisheries.

Building local markets requires creativity and enthusiastic promoters. The following are some ideas for accomplishing this:
- Conducting socio-economic studies demonstrating the overall contribution of the fishery to the local economy
- Encouraging tourists and locals to visit the wharf and buy seafood directly from harvesters.
- Having recipe cards and demonstrations for seafood meals in the grocery stores.
- Providing seafood chowder and other samples at community events.
- Working with store managers and restaurants to set up a local fish section.
- Selling at farmers markets and health food stores.

Local Example:

The Cape Cod Commercial Hook Fishermen's Association has been very active in promoting local fisheries. They celebrate Cape Cod line fisheries as a vital part of the community's culture and lifestyle, and encourage local residents and businesses to celebrate them as well. One of their very successful local marketing initiatives is a partnership with a local restaurant chain. Not only did the restaurant donate a portion of their sales to CCCHFA, the Association was also able to train all restaurant staff to promote and answer questions about locally caught fresh fish. This has raised the profile and awareness of local residents and visitors alike about the importance of supporting local fisheries.

Branding and Increasing Product Recognition

Branding is the process of creating a market identity for a product, in this case local sustainably-caught fish. It involves making sure the public knows what makes fish from local community-managed fisheries unique so that they recognize and ask for these products in the stores.

Shoppers heading to buy fish usually go to grocery stores filled with products from around the world. Unless they know the benefits of buying local seafood, they may well choose other alternatives. Branding helps establish a reputation and a product that consumers can return to again and again. Branding is easiest when dealing with local stores but can be a big task beyond the local market. Then branding must take place within large volume, highly competitive, national and even global marketing channels.

The first step is to clearly identify the characteristics you want to promote:

- Is the attraction that this is locally caught and landed?
- Is this a better quality product?
- Does it directly support a community group?
- Are you promoting a particular kind of fishing gear or management style (e.g., hook and line caught fish)?

These questions will help in identifying a potential branding strategy and the necessary allies to put it in place.

Many organizations rely on partnerships to brand and market their products effectively. Provincial or state marketing agencies sometimes help promote a particular segment of the fishing industry to local or international markets (Digby scallops for example). Processing companies also target certain products for specific marketing promotions.

However, while these efforts might benefit the industry as a whole, they do not necessarily recognize or reward the specific qualities of the local fishing fleet or provide incentives for those involved in community-managed fisheries. For the most part, at present, small local groups wanting to develop brand or product identification for their fisheries have to rely on their own efforts and some strategic alliances.

Successful Branding

One of the best-known seafood branding strategies is that of the Gloucester Fishermen's Wives Association. While this is not strictly a community-based management organization, it is one that actively seeks to promote the fishing livelihoods in Gloucester, Massachusetts and increase the well being of fishermen and their families.

The Gloucester Fishermen's Wives Association promotes the fish caught by the local fleet in many creative ways. They have a popular cookbook and a seafood recipe contest. They also market a wide variety of value-added products in their gift shop and over the internet. The Gloucester fishing fleet has become known around the world as a family owned, traditional, and high quality fishery due to the successful branding and marketing strategy of the Association.

However, most community-based management bodies do not have access to either the volume of catch or the marketing capacities of the Gloucester Fishermen's Wives Association. They need to find marketing opportunities for smaller volumes of fish.

Eco-labelling or Certification

Eco-labelling is a type of branding that emphasizes environmental benefits and sustainability. Typically, a credible certification body establishes some criteria for being certified under their system and producers are examined to see it they meet the criteria. Those that meet the standard can use a label that says they are "certified" by that certifying body. Well known examples are "certified organic" or "Forest Stewardship Council" certified wood.

The recent interest in eco-labelling in the forestry and agricultural industries is leading to a similar movement in seafood marketing. If environmentally minded customers are willing to pay higher prices for wood produced in a sustainable way, then a similar demand can be created for sustainably caught seafood. These higher prices may be enough incentive to keep people fishing in sustainable ways.

The Marine Stewardship Council certification process is gaining recognition and popularity especially in Europe. There are also many other small-

er, local efforts designed to get environmentally minded people to support the local fisheries in their area.

Eco-labelling is emerging as a marketing tool to get higher prices for sustainably caught seafood, a branding program for consumers to know what to ask for, and as a tool for public education and awareness building.

Community-based fisheries need allies outside the fishing world. Eco-labelling is a good way to partner with health groups, environmentalists and other sectors.

The challenge in any eco-labelling project lies in designing a certification system that is acceptable to environmental interests, consumers, and the fishing industry. For those involved with community-based fisheries management, there is the added challenge of finding a certification system that recognizes the unique characteristics of these fisheries.

The following are some points to consider:

1. Decide what you want to promote.
What makes the fishery sustainable?
- Gear type?
- Fishing practices?
- Selectivity?
- Local Management?

2. Explore Existing Initiatives
There are large-scale efforts like the Marine Stewardship Council MSC), which has established global standards for sustainable fisheries. This label is starting to be recognized in mainstream markets like the UK supermarket chain Sainsbury. However, the MSC certification does not consider social standards or equity in its certification criteria, so large scale fisheries can be certified. This may not be considered an acceptable standard for many community-based fisheries. There is also a question of whether a local fishery produces high enough volumes or values of fish to be able to participate in this certification approach.

Wallet cards and fact sheets produced by groups like the Monterey Bay Aquarium are another eco-labelling approach. These cards educate consumers about fishing practices and encourage them not to buy seafood coming from certain fisheries, and to support other more sustainable fisheries. This approach is good for raising public awareness, but the species and fisheries listed are not necessarily locally relevant.

These large scale initiatives play a role on the global fisheries scene, but may not be the most suitable for any given community fishery situation.

3. Create a Certification System
Many community-based fisheries are not a good match with existing national or internal certification programs. Instead, they are partnering with local allies to create local criteria for sustainably caught seafood and to promote these efforts. This requires defining "sustainability" and identifying particular fisheries or gear types that should be promoted.

Local Examples

The Ecology Action Centre, an environmental organization in Halifax, Nova Scotia, started a small fish buying cooperative for local environmentally minded consumers. The cooperative purchases hook and line caught fish from a local processing plant and delivers it to customers around the city. The business venture was accompanied by a campaign to raise consumer awareness of sustainable fisheries and fishing gears. The eco-fish business is now being run by a local organic food wholesaler. The EAC also hosts an annual Harvest Festival at which hook and line fish is actively promoted and where the public can meet and talk with hook and line fishers.

The Bay of Fundy Inshore Fishermen's Association (a member of the Fundy Fixed Gear Council) is working with the Marine Resource Centre to try to develop local and regional markets for hook and line fisheries, especially in health food stores, high end restaurants, and with some fish exporters. This initiative will offer direct benefit to hook and line fishermen by working with local buyers and processors to find markets that will pay higher prices for high quality sustainably caught fish. The project is gaining the interest of the provincial fishery agency's marketing department.

Job Creation

WHAT IS IT?

In community-based management, job creation is an effort to create (and maintain) jobs in the fishing industry and in related industries to bring greater economic stability to the entire community while at the same time providing important services to the fishing industry.

Business opportunities in marine related services that support the fishery and create non-fishing jobs include:

- Ice plants and cold storage
- Transportation services
- Boat repair and supplies
- Vessel inspection and insurance services
- Catch monitoring services

WHY IS IT IMPORTANT?

- One of the most important benefits the fishing industry can bring to the wider non-fishing communities are jobs in the fishery and related industries. In particular, for many First Nations communities, the new employment opportunities stemming from participation in the commercial fishery are as important as the revenue from the fishery itself.

- There is clear interdependence between the fishing industry and its supporting infrastructure. The fishing industry cannot function without harbours, wharves and other shoreline industries. At the same time, harbours and wharves will not be maintained and upgraded unless there is a viable commercial fishery sector depending on this infrastructure.

- The job creation impacts from community-based fisheries management will be mainly local. Small increases in job availability or length of employment can make big differences to individual households

HOW TO DO IT?

Inherently, community-based fisheries management creates more jobs because it keeps more boats on the water, and keeps more licenses and landings in the community. Additionally, many community-based organizations try to maximize jobs and economic opportunity for the wider community as part of their management activities.

Some approaches include:

Maximize employment. Maximizing employment opportunities requires thinking of the fishing industry, rather than just about harvesting, so that employment can be created in harvesting, handling, monitoring, research, processing and marketing. The Mi'kmaq Confederacy of PEI has assisted PEI First Nations which are seeking to maximize employment from the fishery, thereby reducing dependency on social assistance for as many households as possible. They expect this to be of greater long term benefit to the community than merely generating maximum profits.

Extend the season. Inshore fisheries are traditionally multispecies fisheries with harvesters switching gears over the course of a year depending on markets and species availability. A longer, more diversified fishing season maximizes the length of time harvesters are working and makes fishing a more attractive option. Fishing organizations and management often work to acquire and maintain fishing rights for as many species as possible, to keep boats on the water longer.

Meet needs of fishers, but also of management. Community fisheries have to sustain the fishers and pay the management costs. Build the costs of managing the fishery into the fishery through membership fees, levies, or other ways to make the fishery pay for itself. The Mi'kmaq Confederacy of PEI assists First Nations communities to manage their fisheries to meet the needs of fishers and their families, but also to generate enough money to pay for the management of the fishery.

Including marketing in fisheries management plans. It is easier to promote integration of fisheries and marketing when the marketing is already in-

cluded in the fisheries management plan. A complete management plan can include, in an integrated manner, species availability, marketing opportunities, and employment opportunities.

Look for business relationships. Some First Nations communities are building effective relationships with the marine supply industry as they equip their communities to participate in the fishery. These partnerships can lead to new jobs and training opportunities.

Start your own businesses. There are many opportunities to provide needed services for the fishing industry that create jobs and provide revenue for an organization. Some examples include fisheries monitoring, lobster trap construction and sales, engine repair, and boat insurance.

Tourism. The tourism industry is realizing that many visitors to the Atlantic Region are drawn to explore working waterfronts. They want to see and experience local fisheries. Partnerships with local tour operators or tourism associations can create employment opportunities in interpretation, fishing trips, or nature tourism.

Ultimately, there is no one recipe for successful job creation except being constantly aware of the importance of local fisheries to the wider community. Make sure to record information about jobs and employment in the community and document any changes in employment that occur as a result of community-based fisheries management.

Local Examples

Acadia First Nation tries to create as many jobs as possible in all aspects of the fishing industry, including fisheries management, boat maintenance, fishing, research, and eventually processing and marketing. They strive to provide work opportunities to different parts of the reserve and to different segments of the population (i.e., youth, women, or single mothers).

The Fundy Fixed Gear Council helped to establish a local fisheries monitoring company in order to comply with mandatory dockside monitoring requirements. This company offers reliable local service to fishermen at a much cheaper rate than other companies and it creates new non-fishing jobs in the community.

The Guysborough County Inshore Fishermen's Association will not write any funding proposal that does not create some local jobs, whether in the office, doing research, or in other community-based activities.

The Bay of Fundy Marine Resource Centre has worked with the Western Valley Development Authority and community organizations on Digby Neck and the Islands to promote eco-tourism and marine-based tourism opportunities in the area. They are also working with other groups to set up the Bay of Fundy discovery centre, an interpretative and education centre.

Keeping Wealth in the Community

WHAT DOES IT MEAN?

- Community-based fisheries management requires keeping an eye to the future and being vigilant about forces that can negatively affect the community and fishery. This includes the very real threats of fish plants and wharves closing, stock collapse and fishery closures.

- Being vigilant is also about being aware of new opportunities in the fishery or within the community. Fisheries managers look for complementary activities that will keep community businesses and services operating and profitable.

WHY IS IT IMPORTANT?

- Knowing what forces or institutions shape the economic structures of a community is very important in any attempt to keep wealth circulating

within a community. Communities need to understand where the wealth is now in their community and where profits from their industry are going.

- Keeping wealth in the community is closely connected to the question of equity, so important in community-based management. Being concerned with the distribution of benefits within a community naturally leads to an interest in ensuring as much wealth as possible remains circulating within the community.

HOW TO DO IT

There are a number of tools and exercises that community groups can use to find out more about the flows of goods, services, and money in and out of their community. For example, asset mapping exercises with community groups can help understand the resources existing in their community and plan how they can be used to generate more wealth.

Keeping wealth in the community can be supported through many of the management activities discussed in other chapters. It involves:

- Maintaining fishing licenses and access within the community
- Avoiding arrangements that lead to 'haves' and 'have-nots' in the fishery
- Working towards a sustainable conservation-minded fishery
- Active involvement in stock enhancement and rehabilitation activities
- Using research to create new jobs, new opportunities and new skills
- Encouraging innovation and adaptation within and outside the industry
- Building local capacity to recognize and respond to new opportunities
- Making the fishery and its organizations a meaningful, public and valued part of community life.

Summary

- All economic development efforts in community-based fishery management are part of an integrated approach to fisheries management and community development.

- Linking economic development with community-based fisheries management is a relatively new activity in many places. Experience will come from experimentation with new approaches and partnerships.

- Economic development activities can work best when they complement existing fisheries management initiatives. There must be an economic incentive built into community-based management to build long term sustainability.

- Organizations starting to focus on economic development in the fishery must be clear about what they are trying to achieve. Take the time to define goals and objectives.

- Most of the economic development activities arising through community approaches will be local rather than global. Be realistic in expectations and be creative in execution. Working on international marketing may be effective in some cases, but simple management measures like adjusting a fishing season may bring more security and economic well being to fishing families.

- Look for allies. Economic development is a huge topic with many opportunities for fisheries managers to link up with many different sectors and institutions. Build partnerships, build awareness, and build relationships.

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Chapter Eight: Managing Conflict

Conflicts are a normal part of human existence. In community fisheries management, managers spend a lot of time dealing with internal and external conflicts. Many find conflict situations stressful and frustrating and feel they lack the skills to handle them effectively.

This chapter discusses:
- Managing Conflict
- Collaborative Conflict Resolution
- Internal Conflicts
- Conflicts with outside interests
- Mediation

Much of the information in this chapter comes from an excellent training package called "Community-based Forest Resource Conflict Management" prepared by RECOFT, a social forestry-training network in Thailand (Means et al, 2002).

WHAT IS A CONFLICT?

"A conflict is a relationship between two or more opposing parties, whether marked by violence or not, based on actual or perceived differences in needs, interests and goals." (Means et al, 2002).

There are different types and intensities of conflicts, but a conflict is usually not just a one-time dispute between two parties. A conflict is an ongoing dispute that can evolve and change and have an impact on individuals, organizations and institutions beyond the original parties.

In community-based fisheries management, conflict occurs:
- within a community group or organization
- between communities and outside institutions such as regulatory agencies
- with other stakeholders including commercial interests, businesses, and NGOs.

Stakeholders are those who have a stake (interest) in, or who are affected by, the management of the natural resource...
This can include individuals, communities, social groups, or institutions.

Stakeholders can be different sub-groups within one category of interests. For example, within communities there are subgroups such as men, women and youth, and divisions by religion, ethnicity, gear type, and income level. Within government, there are subgroups that include specific departments, field offices, central offices, elected officials and staff.

There is usually more than one cause for a conflict and its reasons are generally complex. Many fisheries management conflicts have long histories.

Managing conflict is a strategy for reducing and managing its impacts, but it will not eliminate all conflicts and difficult situations. Conflict is a normal and regular part of all organizational processes. A more realistic focus is using a range of conflict resolution strategies to manage the conflict.

Conflict management addresses the differences amongst stakeholders. Conflict managers have to identify these differences and find ways to make interactions more equitable and productive.

WHY IS CONFLICT MANAGEMENT IMPORTANT?

A conflict that is ignored can end relationships and lead to the breakdown of a community organization or management body.

Most people think conflicts are negative and will do almost anything to avoid dealing with them. Yet conflicts can be a force for change and can have constructive and positive outcomes depending on how they are handled.

Conflicts can reveal a lot about how individuals inside and outside an organization perceive the group's activities. Conflict can be a warning sign of:
- Inequality
- Potential loss or unacceptable impacts
- Obstacles to progress
- The need or the desire of a group to assert its rights, interests, and priorities.

HOW TO MANAGE CONFLICTS

A mechanism for addressing and dealing with conflict is an essential part

of a community-based management system. The appropriate strategy will depend on the situation and the stakeholders involved.

The strategy will also depend on the timing of the intervention. There are different stages of conflict, and sometimes a conflict has to be dealt with early before it starts to affect how people act or make decisions. Conflicts can be described as one of:

- Hidden
- Emerging
- Full-Blown.

Many stakeholders in a conflict situation will require capacity building to participate effectively in the process. This sometimes requires support from outside facilitators and supporting institutions.

Anyone attempting to manage a conflict should be very clear about the scale and boundaries of the conflict that they are going to manage. Conflicts within a community group start for very different reasons than those between a community and an outside group and should be managed differently (see sections on internal conflict and on conflict with outside interests).

Collaborative conflict management means that all parties agree to engage in a process of mutual dialogue, learning, and understanding. The community-forest conflict management training kit (Means et al, 2002) offers a general step-by-step collaborative approach to conflict management in natural resource management situations, which can be adapted and applied to many conflict situations...

Collaborative Conflict Management

(from Means et al. 2002)

1) Entry Point. The entry point is when conflict is openly acknowledged and strategic conflict management planning begins. Any stakeholder involved or affected by the conflict may initiate a conflict management process. For example, those directly involved in the dispute, such as community members arguing over access to a fishing area, can initiate action, or a more distant stakeholder like an NGO or resource centre can begin the conflict management process.

2) Preliminary Analysis of Conflict. The preliminary analysis helps in determining the scale and boundaries of the conflict and who needs to be involved in the conflict management process. The scale of the intervention and number of stakeholders involved can evolve as the process unfolds.

3. Engaging Stakeholders. Engaging stakeholders is the process of getting the right people involved in the process. It may take some effort to get the stakeholders identified in the preliminary analysis to participate. Participation may be hampered by mistrust, past history, and lack of capacity. Some strategies to engage stakeholders include working through mutually trusted individuals, negotiation, raising public awareness, and sharing the results of the preliminary conflict analysis.

4. Stakeholder Analysis of Conflict. Stakeholder analysis allows each group to better understand and articulate their own interests and positions. For this to be effective, individual stakeholder groups need to carry out their own analysis of the conflict. Some groups may require capacity building and support to do their own analysis. Stakeholder analysis of the conflict may involve participatory research on some key issues, and may result in the identification of even more relevant stakeholders.

5. Assessment of Individual Conflict Management Options. Based on their own analysis of the conflict, each group has to figure out their own best-case scenario for managing the conflict. The conflict analysis allows the stakeholders to assess, weight, and expand on the various options available for managing the conflict. Stakeholders evaluate and select what they think is the best option for achieving their interests. Not all conflict management options involve collaboration. Some of the options could be withdrawal, use of force, doing nothing, compromise, or collaboration.

Stakeholders should also consider the possible outcomes and impacts of their choices, the likely options of the other stakeholders, power imbalances, and differences in stakeholder capacity.

6. Agreement on Strategy to Manage Conflict. This is the stage at which each stakeholder must formally declare whether or not they will engage in the collaborative conflict management process. A collaborative approach to managing conflict requires agreement and support from all parties.

Stakeholders must agree on guidelines for this process and what actions and resources are required to support it. They need to decide whether or not a third party should be involved in the process.

7. Negotiation Agreements. This is the stage where individual stakeholder groups present their analysis and options to each other. Stakeholders negotiate agreements based on the individual and shared needs and interests they have identified. They look for win-win agreements. Often agreements are made progressively and incrementally to build trust and demonstrate commitment.

For each agreement, stakeholders decide how they will implement and monitor the agreement, and whether or not new stakeholders or information needs need to be considered.

8. Implementation of the Agreement. At this stage, the agreements and actions agreed upon must be carried out. Agreements are continuously monitored so each party knows if they can proceed as agreed or if further discussions and modifications are required

9. Evaluation, Learning, and Conflict Anticipation. At the end of the formal negotiation and implementation stage, stakeholders evaluate the outcomes and impacts of the conflict and the process of managing it. The evaluation process can also help stakeholders learn to anticipate further conflict. A conflict management process can lead to a cycle of learning and adaptation.

When is Collaborative Conflict Management not the right approach?

The collaborative conflict management process described above will not work in all situations: sometimes a group will decide that the conditions are not right for collaboration. A collaborative conflict management approach will not work if:

- The power imbalance between groups is too great
- Not all parties are genuinely interested in participating in the process
- There is no common ground or shared goals on which to base a collaborative approach
- Some of the parties or facilitators try to hurry or force the process.

In addition to the step-by-step conflict management process described above, Means et al (2002) also identified a few other important elements in managing a conflict situation:

Information Needs and Management. Information plays a key role in understanding conflict, identifying shared interest and goals, and assessing the feasibility of solutions. Key information must be available and acceptable to stakeholders. Some time may be required to address information needs and gaps, and to negotiate how information will be managed and exchanged.

Capacity Building. Addressing conflict requires a wide range of capacities, such as knowledge, skills, attitudes, organizational structures, and logistical support. Finding solutions for conflict situations requires making sure stakeholders can participate effectively in the process. Capacity building can include institutional strengthening, building research and documenting skills, or working on building the facilitation skills of key individuals.

Consensus-based Decision Making. Consensus building is about finding solutions that are acceptable to all stakeholders with a minimum of compromise. Consensus building requires identifying the underlying needs of all stakeholders, identifying creative solutions, ensuring good communication, and building rapport and trust.

Keeping People Informed. Representatives often carry out discussions between stakeholders. An important part of the conflict resolution process is

establishing good communication between representatives and the groups they represent so that all affected parties are informed and can provide meaningful input.

Internal Conflict

WHAT IS IT?

A conflict within a community is a dispute between people who are already working together as part of the same organization or management body. It is a conflict between individuals or groups that already identify as being part of the same community.

Conflict within a community is often characterized by:
- personal relationships between key individuals, including the possibility of past personal or family tensions
- shared histories
- emotional forces
- disagreement over who can claim to have an interest in a particular issue or resource
- different social and cultural understandings of authority and power
- the presence of invisible conflict
- the influence of local politics and economic relations
- connection to wider political or economic institutions.

WHY IS IT IMPORTANT?

- Internal conflicts are extremely painful and distressing. They test friendships and relationships, and since they pit people who are on the same side against one another, they lower the spirit and morale of the organization.

- Internal conflicts can lead to the formation of rival factions and subgroups which can destabilize and weaken management institutions.

- Any group locked in an internal conflict is essentially paralyzed – communications and decision making are negatively affected and members begin to lose trust in the organization and its effectiveness.

HOW TO ADDRESS INTERNAL CONFLICT

The 9-step collaborative conflict management strategy described above is suitable for working with internal conflicts. The starting point for dealing with conflict within a community is the same as for any other conflict:
- Identify who is involved
- Articulate shared and divergent interests and goals
- Analyze apparent reasons for the dispute
- Determine the scale and boundaries of the conflict
- Engage participants and negotiate agreements.

In addition there are elements that make conflicts within a community more challenging than those with outsiders. One factor is that the option to "walk away" or "do nothing" seldom exists. There is already a shortage of leaders and active members in community-based management, so every effort should be made to keep them active, engaged and working together. This means that internal conflict management requires more attention to conflict prevention, group maintenance and interpersonal relationships than do external conflicts.

The following are some ideas for minimizing and dealing with internal conflict

1. Regularly articulate who is "the community". Sometimes conflict starts with different perceptions of who is included in the definition of community. For example, all of the fixed gear management boards established to manage the inshore ground fishery in Nova Scotia are composed of pre-existing fishing organizations and their membership. Some individual members may see their community as being the entire membership of the management board, while others may identify with their own individual association or their gear type, or with all harvesters from their homeport. The different management boards all have different levels of group cohesion and this shapes what they consider to be "their" community. It also leads to internal conflicts if, for example, some elected representatives are considered to be more concerned with their own geographic area or their gear type than with the management board as a whole.

Defining community is part of the process of building community. This will always be complicated: Who is "in" or "out" of a group or community will change over time. The only way to keep on top of these changing perceptions and definitions is to talk about "who is community" regularly both during informal conversations and at meetings.

2. Acknowledge Feelings. Internal conflicts are often very personal and often accompany the breakdown of a working relationship and friendship. Common feelings around internal conflict are: betrayal, anger, disappointment, regret, sadness, and depression. It is important that these feelings are acknowledged as they will continue to shape how individuals within the group interact.

Talking about feelings takes practice. It is easier if these conversations start before conflicts emerge. For example, community visioning and developing organizational principles (Chapter 2 – Fisheries Management Planning, and Chapter 6 – Building and Maintaining Community Organizations) are opportunities for members to articulate their dreams and values. This lays a foundation of trust that can be built on when talking about less pleasant emotions.

Many organizations start or end their meetings with a 'check-in' or 'check-out' in which there is an opportunity for everyone in the room to say how they are feeling about an issue, the meeting, or their own situation. It is a good way to start talking about the often strong feelings associated with any kind of intensive group activity.

3. Let people talk. Many conflicts emerge when individuals or sub-groups feel their voice is not being heard, or their interest not being met. Create regular spaces for members to be heard. Leaders should regularly ask for members' opinions during meetings and also find opportunities to talk informally with members, especially those who frequently express different perspectives. This can prevent differences of opinion from developing into full scale conflicts.

4. Set up organizational mechanisms. Organizational mechanisms are systems set up to deal with differences of opinion and potential conflicts before they become full blown conflicts. They anticipate potential differences, and set up how they should be dealt with and who should be involved. These mechanisms can be formalized through terms of reference or contracts.

5. Pay Attention to Group Process. A group can only function effectively when it has a clear organizational structure, and a clear and consistent process to follow during meetings and discussions. A good facilitator should pay attention to the overall 'feel' of the meeting. Notice who is speaking and who is not. Encourage new voices. Ask for feedback and reaction. Set a tone of respect and collaboration. Make sure meetings take place in an environment where everyone feels respected and heard.

6. Develop facilitation skills. Many tense situations can be kept from flaring up into a real conflict with appropriate facilitation. Key leaders should try to improve their own skills at handling difficult situations by working on developing their facilitation skills. Many community institutions, like community colleges, offer conflict resolution training sessions for community leaders and volunteers. Outside support can also help during potentially explosive meetings or discussions.

Local Example

The Guysborough County Inshore Fishermen's Association represents a membership that is involved in a variety of fisheries. Most of the membership is inshore fishermen, but some also participate in the offshore crab or shrimp fishery. The members have many overlapping and conflicting interests - two individual fishermen, for example, may have a shared interest as stakeholders in the inshore lobster fishery, but opposing interests in other fisheries. Over the years, this has led to occasional friction and outright conflict within the Association.

The Association manages these disagreements by making sure that all decisions are made democratically and completely transparently. Gear or sector committees are ad hoc and do not have the power to make or pass resolutions on their own. There is an executive committee that coordinates

activity, but it does not have the power to make decisions on fisheries matters. Every member has the right to vote on a management measure or motion. For example, members who participate in the mackerel fishery can request to sell their mackerel catch to a non-local buyer offering higher prices, but the motion must be discussed and voted on by the entire membership, including the local lobster fishermen who might be most affected by not being able to purchase mackerel for bait. Similarly, all members vote on the lobster management plan, not just the lobster fishermen, because everyone is a stakeholder in anything affecting the local fishing industry.

The process can be time consuming and tedious, but it works. It manages conflicts by making sure that they are out in the open and that everyone gets a say before a vote is cast. People that are not satisfied with the decision can make their argument and promote their suggestion at the next meeting. Big disagreements are discussed until some solution is found. The Association staff is responsible for implementing whatever action the membership has agreed on.

The process encourages consensus-based decision making because the different interests are aware of the underlying needs and goals of the other sectors. Collaboration can begin with shared interest in one fishery and extend to more difficult issues between different gear types or fisheries. The system also keeps people informed since information is loudly and publicly exchanged. This provides an incentive for members to attend meetings and actively participate so they do not miss the chance to vote on something that can affect their livelihood.

Conflicts with Outside Interests

WHAT IS IT?

Conflicts with outside groups are those in which a clearly defined group has a long running dispute with an outside organization or group. This can sometimes mean a conflict between two community groups that have a difference of opinion about how the fishery should be managed, but the most common type of conflict with outside interests is one between a community group and a larger, more powerful entity such as a regulatory agency or corporation.

Conflicts with outside groups or agencies are often about the use of local resources. Both sides may have a shared interest in this resource, but may not have equal attachment to the resource. Often, the local group has a real connection to the resource, but does not have the power to control how it is managed. This imbalance between the level of attachment and power held by local and outside stakeholders often leads to conflict.

Conflicts with outside groups are often characterized by:

- Widely divergent worldviews
- Very different goals and interests
- Involvement of more formal systems such as the legal system or government
- Fewer options for resolving the conflict due to a lack of social relationships and overlapping interests
- Clear economic interest for some parties in the conflict
- Strong influence of dominant forces of politics, economics and power operating in the larger society.

WHY IS IT IMPORTANT?

- Conflicts with outside interests can lead to loss of community access to resources and can completely reverse hard-won conservation gains.

- Communities involved in community-based fisheries are already stretched to capacity. External conflict can stretch institutions and people to the breaking point and lead to the collapse of the management body.

- Outside interests, especially those with money and political connections, can interfere in local decision making and destabilize community organizations.

HOW TO DEAL WITH EXTERNAL CONFLICT

- As with internal conflicts, the steps for collaborative conflict resolution outlined earlier in the chapter can work in situations of conflict with external interests. There are a few additional considerations about using this approach in addressing external conflicts.

- Collaboration can take a long time. Sometimes it is worth the investment of time for a community to learn to collaborate with neighbouring communities. Other times, the process can be time consuming and difficult, and may not ultimately lead to any benefits for those initiating the process. Be patient and keep expectations realistic.

- Collaboration is not always possible. Collaborative conflict management requires a commitment to dialogue and negotiation as well as trust in each other and the process. These conditions do not always exist, especially between parties with vastly different levels of power. Some conflicts cannot be mediated or resolved, so sometimes the only viable option for community groups trying to protect their resources is to take on a conflict that they will either win or lose.

- The media can help. Sometimes outside groups such as large corporations will only come to the table when they realize the communities they are in conflict with have support for their cause. Media attention has often generated a lot of sympathy and support for local communities in conflicts over natural resource management. Work to get the word out.

- Alliances make you stronger. A community organization can strengthen its position when it is part of an alliance engaged in the same struggle. This may bring more stakeholders to the conflict management process, but the strength in numbers resulting from resolving the dispute as an alliance could be invaluable.

Local Example

Bear River First Nation is a small aboriginal community on the Nova Scotia side of the Bay of Fundy. When the right to formally participate in the commercial fishery was recognized by the Canadian government after the Supreme Court's Marshall decision in 1999, community members were eager to start fishing. However, as a community, they decided not to enter the fishery until they could do so with the support and friendship of their non-Native neighbours.

From that point, Bear River began a long-term process of internal capacity building and relationship building with non-Native fishermen. This process was facilitated by the Bay of Fundy Marine Resource Centre and key leaders in both communities. The process involved learning about each community's history and traditions, building trust and friendship, understanding cultural differences, recognizing shared values and a shared attachment to the area and its resources, and, eventually, discussing how they might share the resource. The process culminated when non-native lobster fishermen actively supported Bear River First Nation in entering the lobster fishery.

Mediation

WHAT IS IT?

Mediation is a process that uses a third party to help stakeholders negotiate an acceptable resolution to a conflict. Mediation does not have the authority to impose a solution, but can help each party present and negotiate their interests.

WHY IS IT IMPORTANT?

- As community-based management institutions improve their own capacity to manage a fishery, they often are called upon to help others in similar situations. They are often asked to use their skills and connections to help parties find a mutually agreeable solution to a conflict.

- Many local organizations embroiled in painful conflict feel helpless and do not know where to turn for help. It is important that they can access mediation support to help them deal with difficult situations they do not have the internal capacity to handle.

HOW TO DO IT

- Effective mediation requires effective facilitation. Anyone asked to get involved in conflict mediation should improve their own facilitation skills by training, reading, or discussions with skilled facilitators.

- Organizations involved in mediation cannot take sides. They must be perceived as fair and balanced and able to listen to both sides.

- Clearly articulate your own interests. Transparency is important. Be clear about how your organization is a stakeholder in the process, and about your own interests and intentions.

- Provide a truly safe space. Mediation requires a safe space that is open and accessible to all participants. For example, in the Atlantic Region, Marine Resource Centres play an important role in mediating user group conflicts by providing facilitation, capacity building, and support.

Local Example

Around Cobscook Bay, clam harvesters from Eastport, and Perry, and the Passamaquoddy Reservation at Pleasant Point (Sipayik) traditionally harvested clams without licenses. This changed in 1993 when the City of Eastport began to issue clam harvesting licenses and to deny access to harvesters without licenses. This quickly led to conflict with the Passamaquoddy Tribe which refused to purchase municipal licenses.

At that time, the Cobscook Bay Resource Center helped negotiate an informal reciprocal agreement whereby clam harvesters had to have either a Tribal license or a town license, and all harvesters had to take part in conservation efforts by putting in "conservation hours" of work in the areas they were harvesting. This informal arrangement lasted for about three years, after which a formal agreement was negotiated, and formally recognized by the municipal and Tribal governments.

The conflict was resolved by helping both parties identify a shared interest in ensuring conservation and access. Education and research have helped to develop a shared sense of community and stewardship. This was fostered through numerous community meetings, kitchen table meetings, and other mechanisms for ensuring ongoing dialogue.

Summary

- Conflict situations, especially those happening inside an organization or community, are a difficult and painful aspect of community-based fisheries management. They are also completely normal in any organizational or group process.
- Conflicts have to be addressed since they have the potential to impact and even destroy organizations and their work. Strong facilitation skills are important in preventing and dealing with conflict.
- Managing conflicts and reducing their impacts is more realistic than trying to eliminate or resolve them altogether.
- The basis of conflict management comes through understanding the causes of the conflict, and having the right people involved in the resolution process.
- Collaborative conflict management can be a learning process for everyone involved in a dispute. It can lead to stronger relationships and win-win agreements.
- Collaboration requires a shared commitment and shared goals. There are some situations where collaboration is not an option, and there is no option but to fight to protect community interests.

Resources

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Chapter Nine: Collaboration and Building Supporting Institutions

This chapter talks about how to build collaboration for community-based fisheries management through:

- Linking and Networking
- Forming Alliances
- Participating in Advisory Bodies
- Building Supporting Institutions
- Scaling Up

WHAT IS IT?

Collaboration occurs when two parties actively and consistently work together to achieve common goals. In community-based fisheries management, collaboration suggests the coordination of management and resource use efforts, as well as efforts to promote and support community-based management, not only within the fishery but beyond it as well.

Community-based management institutions collaborate to:

- coordinate their own activities internally and with neighbouring management units
- communicate and try to solve problems with others
- resolve internal and external disputes
- maximize the impact and influence of their efforts

Collaboration is a more active partnership than coordination. Coordination means trying to ensure organizational activities complement or do not hinder another's. Collaboration means jointly working to plan and implement complementary activities.

Supporting Institutions are the places or programs that provide capacity building support to fishing organizations engaged in community-based fisheries management. They are vital in expanding the impact of community-based fisheries management efforts.

WHY IS IT IMPORTANT?

Fisheries management in many locations suffers from uncoordinated resource use strategies among the many different levels of government and the government agencies responsible for regulating the ocean and coastal zones. Community-based fisheries management can offer an alternative by showing that collaboration and coordination across boundaries is possible.

Collaboration builds stronger alliances supporting community fisheries. And without coordination, community-based initiatives may work at cross purposes to one another, with each community or organization trying to protect "their" community at the expense of other users and communities.

Approaches taken by various governments have created situations that pit:

- Native and non-Native communities against each other
- Different gear types against each other
- Harvesters with access to marine resources against those with limited access
- People from one community against resource users from another community

Collaboration can reverse this trend and build a stronger movement dedicated to community-based management.

HOW TO DO IT

Collaboration does not happen quickly. Collaboration requires a shared value system. For groups to work together, they first have to build relationships and trust. The relationship has to be rooted in equity, fairness, and a shared history and commitment.

Described in the rest of this chapter are types of activities that often lead to collaboration (linking and networking, participating in advisory bodies), as well as the kinds of results that happen because of collaboration (forming alliances, building supporting institutions, scaling up).

Linking and Networking

WHAT IS IT?

Networking is the process of developing knowledge of, and contacts with,

individuals and institutions with common interests. Networking is about building relationships with potential contacts and supporters.

Linking is making connections between different people and organizations that can lead to real collaboration.

WHY IS IT IMPORTANT?

- Networking is a strategy to meet people who will take an interest in an organization's work and offer resources and support.
- Networking helps to create a larger group of community-based management practitioners working on their separate but complimentary projects
- Linking and networking helps spread new ideas and ways of doing things. Collaboration has to start somewhere; the contact building stage is a key part of the process.

HOW TO DO IT

Networking as an activity is often associated with an organization actively trying to build a formal network of like-minded individuals and institutions. Networking does not have to lead to forming a network – it can take place informally during meetings or workshops and during coffee breaks.

The following often help in linking and networking effectively:

Articulate your vision and goals. Networking is trying to find people who share common ideas and interests. Being able to clearly articulate the organization's vision and goals helps others understand what you are doing and why they might want to get to know your organization.

Develop a communications strategy. Find ways to tell others about what you are doing. Use business cards, posters, brochures, and a website to let others know who you are and how to get in touch.

Attend meetings. While invitations to meetings and workshops can be a real burden to already over-committed community leaders, attending and making presentations at these events is a way to make contacts with others working in the field, including academics, scientists, funders and government.

Meet friends of friends. Use existing connections with a particular institution to find other contacts in that organization or with other potential partner institutions.

Offer to Help. Linking and networking is not just about finding resources or support for your own organization, it is also about helping bring about a stronger community-based management movement. Offer to help your new friends, especially smaller and newly formed organizations. Share ideas, experiences, lessons learned and contacts.

Look beyond the fisheries. Those working for community-based management can be found in fields like health, tourism, education, forestry and economic development, and in all sorts of other places. Look for other community leaders working for their community and you will find friends and allies.

Have the information. Research goes a long way towards networking. A group that knows what it's talking about is a respected resource for other organizations. Having information to share and being willing to share it is a key part of networking.

Forming Alliances

WHAT IS IT?

An alliance is a formalized relationship between two or more organizations that are working on similar issues. It is expected that the members of an alliance support each other and actively speak up for a common goal. Other words used to describe a group of allies include 'network', 'coalition', or 'caucus'.

WHY IS IT IMPORTANT?

Alliances and other established multi-group partnerships bring many benefits to their members:

Strength in numbers: The more organizations (and people) an alliance represents, the stronger is its voice in influencing public opinion and policy.

Common Cause: Successful long-term community-based fisheries management requires lots of efforts on multiple fronts. Working together on one or many issues makes it easier for each individual group to achieve their goals.

Access to resources: A network or alliance as one group can sometimes access funds and other resources that one organization alone cannot obtain. It can provide members with resources like training, media support, or computer equipment. An alliance also allows more established organizations to work directly with newer or less well funded organizations.

HOW TO DO IT

Build Trust. Successful alliances have to build on common ground, shared issues and concerns. Take the necessary time to talk to each other, learn about each other's values and principles as well as goals and objectives. Cross visits and study tours are very effective ways to build relationships of trust that will lead to successful alliances.

Negotiate partnership agreements. Some groups take great care in negotiating their participation in any partnership or alliance to make sure all parties understand the intent and responsibilities of the relationship. This understanding is captured in a written partnership agreement signed by all parties.

Draft community resolutions. Some coalitions develop community resolutions that state the goals they are collectively working towards (e.g., preserving the owner-operated policy in the Canadian inshore fishery). This process can be the basis of a common action plan. It can also be used in press releases and communications material.

Stay in touch. Communication is key for strong coalitions. Successful coalitions require trusted, knowledgeable, and respected community members to facilitate and inform other members. Partners need to be kept up to date. Many coalitions seek funding or resources for a Secretariat that can facilitate the networks' communications.

Follow good decision making practices. It is not unusual for coalitions to fall apart because members do not feel they know how decisions are being made. Decision making procedures should be agreed upon by all members. The emphasis should be on transparent and democratic decision making and accountability.

Work with a resource centre. Resource centres are great assets for coalition building. They can provide a space for meetings and information exchange. Many different people come into resource centres that might not feel as comfortable elsewhere. Resource centres can provide skills and resources for the task of building a coalition and they offer good long-term housing for a coalition. They can sometimes support administrative and communications costs.

Take Action. Coalitions need to be moving towards something specific and not just exist for the purpose of bringing people together. They are geared towards action and should have an active campaign to make change. Meetings and workshops should always come up with an action plan and a time frame for their desired outcomes.

Be Open. Some alliances do not require negotiation and formal partnership agreements. They are open to all like-minded institutions that want to lend their name and support to a cause or issue. Some coalitions will require unusual allies.

Local Example

"We're pragmatic and realize if we don't speak to everyone, even perceived enemies, we won't be in the room when decisions are made. We have to compromise occasionally. Sometimes, the hardest challenge is from our own industry". (Paul Parker, Cape Cod Commercial Hook Fishermen's Association)

Participating in Advisory Bodies

WHAT IS IT?

An advisory body is a group of experts that make recommendations to government managers on fisheries policy issues. These bodies can be made up of harvesters, scientists, managers and other industry interests. Depending on the context, the participants in advisory boards or other similar bodies have a great deal of power to influence decisions, or none at all.

In some American jurisdictions, fisheries councils have power to shape policy and make regulations. In most Canadian jurisdictions, they are usually exactly what the name suggests - a forum for the government to receive advice from industry representatives that it is not legally required to follow.

WHY IS IT IMPORTANT?

Joining an official government advisory body means representing an organization, sector or community on that body. Frustrating as they are at times, many important decisions are made and announced during advisory meetings and a group that is not present might miss the only opportunity to have any input in decisions that will affect their fishery.

Advising government can lead to real collaboration. It can be a way to build relationships of trust and mutual respect which are essential for collaboration. It can lead to sharing responsibilities and power for resource management. Participating in advisory meetings can be a way to engage government in community-based fisheries management.

HOW TO DO IT

Community-based management organizations are developing strategies to make their participation in advisory bodies more effective and rewarding:

Good representation. The Guysborough County Inshore Fisherman's Association always sends two representatives to any advisory group meeting. That way, one person can sit back and listen and actually take in all the information presented, while the other can concentrate on speaking on behalf of the organization. This system also promotes accountability since there is someone else to verify what the other representative says. Neither representative is allowed to make decisions on behalf of the organization. They bring back the necessary information and the full Association votes before the organization makes its official position known to the other members of the advisory board.

Good relationships. The fisheries manager and members of the fisheries management board for Acadia First Nation sit on a Joint Management Committee with DFO representatives. The Joint Management Committee tackles a different issue each meeting, with many opportunities for discussion. Acadia First Nation has found that regular personal contact makes relationships better, and indeed, relationships with DFO are improving as DFO begins to understand the community.

Formalized role in decision making. The Area 19 Snow Crab Fishermen's Association's role in the crab management advisory bodies is formalized within a long term Joint Project Agreement. A Management Committee made up of representatives from the Area 19 Crab Association and DFO manages the fishery. They serve as an Advisory body, and establish the annual harvesting plan based on a set of pre-determined objectives that satisfy their mutual interests (Loucks, 2005).

Involving community. The members of the Hants Shore Concerned Citizens Association live along the shore of the Minas Basin. Many members participate in the local recreational bass fishery. The group is concerned with the impacts of commercial bloodworm harvesting on the mudflat ecology and on bird and fish populations. The group has been persistent in approaching DFO managers with suggestions for improving management through further research, catch limits, size restrictions, and closed areas. Their persistence has resulted in a seat on the Bloodworm Advisory Committee where, along with DFO area managers and bloodworm harvesters, they have a chance to review the science and have some input into the

management planning. This provides a venue for community concerns to be heard by fisheries managers.

Get organized! In Southwestern Nova Scotia, lobster harvesters renamed the LFA 34 Lobster Committee as the Lobster Fishing Area 34 management Board after holding port cluster meetings, numerous Board of Directors meetings, and three regional general meetings where fish harvesters unanimously agreed they must organize effectively, pay fees to support the organizational structure and work, to develop and to ratify Bylaws and a Business Plan. These harvesters are organized under sixteen port clusters covering 69 harbours within three Nova Scotia counties and hold a total of 979 lobster licenses. Port cluster representatives and their alternates are elected by local harvesters and automatically become the Board of Directors who elect the executives from the Board. This group also includes representation on the Board of Directors from the Bay of Fundy Inshore Fisherman's Association and the Maritime Fisherman's Union, Local 9, in order for all lobster fish harvesters in LFA 34 to have one voice.

Historically, LFA 34 has risen up successfully a number of times to address issues, but usually in a reactive mode. This newly restructured organization has a diversity of concerns to deal with, of which one is to develop initiatives as a result of DFO downloading. The lobster industry is facing the need to find out ways to carry out lobster science, to work with various levels of government, and government departments besides DFO, to find ways to improve communication from the wharf to a central location, to government, to increase awareness about the importance of the lobster fishery, and to address safety at sea, etc.

During the restructuring and organizational development stages the LFA 34 Management Board worked with the Bay of Fundy Marine Resource Centre (BFMRC) and the Canadian Council of Professional Fish Harvesters (CCPFH) which provided an independent chairperson / facilitator while harvesters sat as equals to work through the process of developing their organization's foundation. The assistance provided by these two independent groups were significant for LFA 34 to navigate through the critical stages of development.

Promote community-based management. Practitioners can use any opportunity to promote community-based fisheries management. An advisory board meeting is a chance to suggest management alternatives. For every top-down management approach suggested by government, it is helpful to have a community-based alternative to put forward.

Building Supporting Institutions

WHAT IS IT?

Supporting institutions are local organizations that provide capacity building support for fish harvesters and their organizations or for the wider community participating in community-based fisheries management. They are "enabling" organizations that allow local groups to pursue their own agendas.

Supporting institutions can be physical places, such as a resource centre, or specific programs that assist those directly involved in promoting local fisheries management. They can focus exclusively on the fishing industry or have broader mandates for community development or for dealing with certain local issues.

Some supporting institutions are established by fishing organizations and those who work with them specifically to meet their capacity-building needs. Universities or foundations also sometimes create supporting institutions for community-based management.

Most supporting institutions have staff with skills in facilitation, research, and negotiation who work closely with fishing organizations or other community groups to support their fisheries management efforts.

Types of supporting institutions include:
- Marine Resource Centres
- Training programmes
- University-based resource centres or extension departments

Key roles and functions of Marine Resource Centres (Bull, 2004):

- To be citizen run institutions
- To provide technical support
- To provide information and referrals
- To provide conflict resolution
- To provide GIS tools
- To put on training workshops
- To help build linkages

WHY IS IT IMPORTANT?

- After being involved with community-based fisheries management for a few years, many local groups realize just how many resources are required to make it work. They often create or seek out institutions or programs that can provide resources and support.

- Supporting institutions provide the institutional capacity building for local groups to move forward effectively. They allow groups to access organizational, technical or research support.

- There is a multiplier effect that comes from creating new institutions. It allows more organizations access to resources and support, and widens the impact of community-based management.

- Supporting institutions connect fishing organizations with potential collaborators such as academic institutions, researchers, or other organizations as needed. This can be done through study tours, community dialogues, or other events that get people to meet face to face.

- Supporting institutions are about creating the tools; the community determines how the tools are used. Supporting institutions must be flexible and adaptable to community needs. Some programs developed by supporting institutions such as the Turning the Tide project bring people together within their own or neighbouring communities.

- Resource centres are greater than the sum of their physical resources. They are a communications hub, meeting place, lunch room, and school. They become part of the community.

- A resource centre can offer technical support, but it also helps develop the experience of going through a learning process. A resource centre is a safe place for ideas and conversations to emerge.

- A marine resource centre is about its services, but it is also about the idea and vision of community. A manager can run the building and programs, but the Institution as a whole requires leaders to provide inspiration and ideas.

Local Examples

In 2000, the Cape Cod Commercial Hook Fishermen's Association constructed the S.S. Shanty Community Fisheries Action Center to 1) empower fishermen, 2) educate concerned residents and 3) facilitate collaboration between conservation, fishing and community organizations to generate a more active and effective marine community on Cape Cod. They felt that lack of communication between stakeholders had created distrust which stood in the way of more proactive and sophisticated fisheries management. By offering a place for fishermen and concerned coastal residents to learn the details of the management process and how to change it, the gaps between management and industry will diminish and true collaboration for community-based fisheries management will be possible.

HOW TO DO IT

The rest of this section presents some ideas about how to create supporting institutions for community-based fisheries management:

Getting Started

Let the process evolve. In the case of the Cobscook Bay Resource Center, the evolution of its identity was gradual. It started with the Sustainable Cobscook Project, and then began the clam restoration project, and eventually the Resource Centre concept arose.

Seize opportunities. Look for creative options to get what you want and act quickly to secure them. The Bay of Fundy Marine Resource Center purchased their building for one dollar when a former naval base was selling its assets. Choose a name early on - naming something makes it real. If you are on the right track, people will come.

Let it grow. The Marine Resource Centre in New Brunswick started with the idea of setting up a local person as a GIS provider to serve the community-based management organizations in the area, and evolved into a resource centre offering services for a number of communities.

There is no single organizational model for marine resource centres. Resource centres are chameleons – they have to respond to local community needs. No two can be alike. Each Marine Resource Centre has to develop clear organizational and staff structures.

Sustainability

Some community groups worry that by starting a Resource Centre, they are making a long term commitment to maintaining a physical space and all its associated costs. This can be intimidating for small organizations that are trying to stay afloat themselves.

The following ideas can help build sustainability into resource centres:

- Maintain the vision and principles, while being flexible. Many different agendas will have to be supported by project funding, so be prepared for continuous adaptation.
- Share rent. Some resources centres host many different community organizations. The resource centre functions as a "one-stop shopping" centre. This saves on costs and increases cooperation between groups.
- Bring in students. University students, interns, graduate students or summer students can be a big boost for a resource centre. They can do research for, and with, communities and be an extra staff person.
- Develop a funding strategy. Sometimes other more established institutions like university extension departments are willing to help.
- Develop a clear identity. A well-defined organization is easier to market to funders. Build on past successes and relationships.
- Look for 'fee for service' opportunities, such as GIS, printing or renting meeting space.
- Getting core funding is always a challenge for any institution. Funders that provide support for organizational capacity building, technology adaptation or organizational change can sometimes supply funds for the core operating expenses of an organization.
- Hire office staff though employment or job change programs supported by governments.

Specialization

The marine resource centres around the Gulf of Maine are part of a network of institutions working towards community-based fisheries management. They form a network of supporting institutions working closely together for the development of new resource centres and community organizations.

Some resource centres have certain areas of specialization – e.g., Cobscook Bay Resource Centre in GIS and clam restoration, the Shanty in collaborative research, policy change and marine education, and the Bay of Fundy Marine Resource Centre in facilitation, community-based management planning, and building relationships between Native and Non-Native fishing communities.

These marine resource centres coordinate to make sure the services they offer complement each other. This shows support between the centres, and prevents unnecessary overlap.

Scaling Up

WHAT IS IT?

"Scaling up" is a way of increasing the impacts of community-based management. It means expanding the positive impacts of community-based resource management by expanding the scale of activities, and connecting across broader scales. This may be by:

- Involving more people
- Taking on more management activities

- Taking responsibility for a larger management unit
- Integrated resource management

In community-based fisheries management, this might mean that a management body scales up their activities so they are increasing the number and kinds of management activities they are involved in, such as economic development and research. It could also mean that community-based management is expanding from being only a fisheries management approach to incorporate other local concerns like health care and education.

Table 9: Types of Scaling Up (Uvin and Miller, 1994)

Quantitative scaling: This type of scaling up equals growth or expansion. It happens when an organization or program increases its size or membership base.

Functional scaling up: This happens when an organization expands the number and type of its activities, often in response to internal or external pulling or pushing, e.g. demand from the community.

Political scaling up: Political scaling up requires that local organizations change their relationship with regulatory authorities. Community-based organizations go beyond service delivery and start to challenge the structural causes of underdevelopment. Political scaling up usually involves information and mobilization, networking, aggregation, advocacy, and policy change work.

Organizational scaling up: This is when an organization increases its organizational capacity to conduct activities, through capacity building, more sustainable and diverse funding sources, or technical support.

WHY IS IT IMPORTANT?

Community-based fisheries management in not just about fish. It is mainly about supporting coastal communities through fisheries management. To achieve these goals and to be a meaningful part of a community, community-based fisheries organizations have to get involved in other issues. Collaboration outside the fishing industry is necessary for getting the necessary support to make community-based management work.

- Scaling up enhances collaboration. It means all those working towards community-based management have more influence and more credibility.
- Scaling up increases results. The more communities are involved in community-based fisheries management, the greater the impact on local livelihoods.

HOW TO DO IT

Seize opportunities. The Bay of Fundy Marine Resource Centre building was purchased because its founders saw the potential in creating a space that would provide services to the fishing community. The BFMRC has since expanded into a multi-service provider, and research support structure for the marine industry in the region.

Respond to member demands. The Guysborough County Inshore Fishermen's Association was founded to provide services to its members. Over the years, the range of services provided has expanded from training and information services to promoting and supporting community-based fisheries management. The Association is now involved in research projects, policy change work, fisheries management, economic development, and conflict resolution activities.

Start Small. Think Big. The Cape Cod Commercial Hook Fishermen's Association began with one research project on fisheries habitat. They have since developed school curricula on fishing, won a lawsuit against the U.S. government, coordinate a cod tagging program for the region, and manage a share of the hook-and-line groundfish quota on Georges Bank.

Be Strategic. Expanding too quickly can put a real strain on the resources and quality of work of an organization. It can even be counter productive. Most 'scaling up' seems to be rather opportunistic, yet strategic thinking and planning before taking on too many new projects can help maximize the impact.

Advance Africa (a coalition of Aids service providers in Africa) has a list of questions for organizations wanting to scale up, to help them think about what it is that they want to achieve...

Questions of change:
- How do we know when we have reached the right scale?

Questions of capacity:
- What management, technological, and human competencies are necessary to bring program to scale?

Questions of strategy:
- What strategies most effectively produce the desired leap?

Questions of impacts:
- How should the desired impact be measured?

Questions of sustainability:
- How do we sustain the gains of an expanded and comprehensive program?

Questions of access:
- What kind of coverage is enough to qualify as scaled up?

Questions of supply and demand:
- What is being scaled up? Who is asking for this? Can we provide this?

Questions of cost:
- How much will it cost to scale up?

Questions of resources:
- What resources are needed and how can they be mobilized?

Questions of timing:
- When is the right time to scale up?

Summary

- Collaboration does not just happen. It is a conscious decision to build supportive relationships with allies and work towards a common cause.
- Community-based fisheries management requires more collaboration than conventional management. It can provide an example of working together towards shared goals that can spread beyond the fishery.
- Building relationships is at the heart of collaboration. These relationships have to go both ways. You cannot always take from your allies without offering to give back.
- Sometimes you need help. Supporting institutions, such as local resource centres, provide space, services and resources to local groups. They are vital in expanding the scale of community-based management activities.

Resources

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Chapter Ten: Policy

"We are vulnerable without legislation, policy and regulation (the force of law). Fisheries organizations and coastal communities need to work closely together in the process of developing or impacting policy." Mary Keneally, RCIP Project, September 2003).

This chapter is about how community-based fisheries management organizations can influence and change the policies that impact their communities.

This chapter talks about:
- Problem identification and analysis
- Setting policy objectives
- Identifying policy alternatives
- Advocacy and lobbying
- Public education

Much of the information in this chapter is adapted from research papers and resources prepared by the Rural Communities Impacting Policy (RCIP) project (www.ruralnovascotia.ca).

WHAT IS POLICY?

Policy is the body of formal or informal practices that dictate how existing rules and legislation are implemented. Most government legislation (such as the Canadian Fisheries Act) is accompanied by policy documents that guide bureaucrats in applying the law. Usually, in community-based fisheries management, when people say that they want to make policy change, they are referring to changing the approaches, practices and operational guidelines of governmental fisheries regulatory agencies such as DFO (Canada) or NMFS (U.S.).

Policy also includes the more informal institutional policies that influence how rules and regulations are interpreted – for example, whether or not docking fees are always collected from recreational boaters at a public wharf. However, this chapter deals mainly with changing more formalized government policy, rather than the informal practices – even though the latter also influence efforts towards community-based fisheries management.

WHY IS CHANGING POLICY IMPORTANT?

- Many different kinds and levels of policy have an impact on fisheries and coastal communities. Fishing livelihoods are affected by the policies of various levels of government, corporations, and their own fishing organizations.

- Many coastal residents believe that bad government policy is the main reason for the decline of their fishery and their communities. They have felt powerless against top-down decision making and its impacts. Thus, changing unpopular policies through community-based approaches is empowering. People realize they can influence the policy making process.

- Community-based fisheries management is difficult under the current regulatory framework of many fisheries. Local efforts to change restrictive government policy are creating small spaces where community-based approaches are possible.

HOW TO DO IT

- The reality is that changing policy is a slow process and can be discouraging for community members. Unfortunately, the changes that need to happen often will not occur in the time frame to be most useful to those who started trying to bring about change. However, there are positive steps that can be taken, and the main focus of this chapter is on how community members can be proactive in trying to develop and change policy.

- There are many different groups and interests working to shape public policy to meet their own needs, and those working for community-based fisheries management are but one part of a large and complex policy change process.

- There are many occasions when community groups are not actively shaping policy, but instead have to react to policy imposed by government, and are trying to prevent or minimize negative impacts on their communities from that policy. A way for community-based management groups to do this is by participating in policy consultations or reviews

initiated by governments or other institutions. These are opportunities to influence policy, put forward ideas and suggestions, and try to prevent bad policy decisions.

The rest of this chapter focuses on how community groups can take the initiative in the policy change process by: identifying and analyzing problems, setting policy objectives, developing policy alternatives, advocacy and lobbying, and public education in order to help shape policies that affect their livelihoods.

Problem Identification and Analysis

WHAT IS IT?

Problem solving and analysis helps a group define a problem, analyze the root causes of a problem, generate and choose from possible solutions to the problem, and put solutions into practice. Problem analysis can be used to find which individual factors could be good targets of change for collective action such as trying to change a specific policy or regulation.

WHY IS IT IMPORTANT?

Policy change has to happen from many different angles, from policy removal, to policy modification, to preventing harmful policy from passing in the first place. The first step in a policy change process is figuring out what to ask for. What does the group want to achieve? What problem will be addressed?

Before starting to articulate policy objectives, a group needs to make sure that they understand the root causes of a problem or they will end up with a solution that does not get to the real source of the problem. Problem identification and analysis help to start clarifying community policy objectives.

HOW TO DO IT

Problem identification and analysis is a process of isolating the issues contained within a larger policy issue. It requires becoming very familiar with a larger policy problem and breaking it down into smaller pieces to determine the cause and effects of the problem.

Training and Resources. Many community groups need some assistance to learn how to work through policy issues. There are many different resources to help community groups identify and analyze policy issues. These include worksheets, games, problem analysis exercises and step-by-step guides to doing a problem analysis.

The Rural Tackle Box (http://www.ruralnovascotia.ca/tacklebox) developed by the Rural Communities Impacting Policy Project has many helpful tools and exercises that community groups can use by themselves or with the assistance of a trainer or facilitator.

Research. Research is a fundamental part of the problem identification and analysis process. Policy research can provide communities and policy makers with useful recommendations and possible actions for resolving problems. It can also generate support for a particular course of action.

The following types of research can help provide a better understanding of policy problems (Dukeshire and Thurlow 2002):

- Focused synthesis or review of existing research: To understand what others think about a particular issue.
- Secondary analysis of existing data, for example analysis of official statistics: To see what the data suggests about a situation and to examine trends and patterns.
- Field research, for example implementing a pilot project: To see what happens and monitor impacts.
- Qualitative research such as focus group discussions: To find out how a particular policy is impacting people.
- Case studies: To paint a picture of a particular community at one moment in time.
- Surveys and polls: To find out what people think about a particular policy issue.

Local Issues

The Fundy Fixed Gear Council recently hired a student to do a small research project into the economic and social impacts for crew after the transition of the scallop fleet from a competitive fishery to an ITQ fishery in the mid 1980s. This research has provided baseline information about current conditions for scallop fishing crew, and identified areas of local concern.

Workshops. Some supporting institutions train local people in identifying policy problems affecting their communities. They can help organize workshops where a community group's members can work together to better understand the policy issues in their communities. Afterwards, it is easier for community members to do similar workshops on other topics, as well as to move forward on their priority issues.

Identify potential supporters. Part of the problem identification process is identifying potential supporters and allies who might help to change the situation or be sympathetic to local efforts. Start a list of people to contact, or who have been contacted.

Setting Policy Objectives

WHAT IS IT?

Policy objectives are clearly worded statements that articulate what the community wants to achieve through changes in the existing policy. Setting policy objectives enables a group of people to be able to say, "This is what we want! This is the direction we want to move towards."

WHY IS IT IMPORTANT?

Policy objectives are what give direction and clarity to any attempts to influence policy. They clarify the overarching reason for trying to make change.

HOW TO DO IT

- Policy objectives can be developed during community meetings and workshops to maximize participation and input.
- Policy objectives should be clear and specific and identify the desired changes and at what level they should happen.
- Find out what has been done in other places. It is appropriate to base a local policy objective statement on work done by others. Make sure the statement really says what you want to say, and make changes as appropriate.
- Policy objectives need to be re-worked and restated a number of times to ensure the message is clear and consistent. A group can draft a number of statements and then have them reviewed by other members or supporters, and revised until all agree on the message and wording.

Local Examples

Policy Statement - Actions to Strengthen the Owner-Operator and Fleet Separation Policies in the Atlantic Fisheries

Representatives of fisheries in Nova Scotia developed "A Policy Statement on Owner-Operator in the Atlantic Fisheries" (RCIP 2004) to proactively express to government their call to strengthen a regulation in certain fisheries that the owner of a fishing license must actually 'fish the license' – the so-called Owner-Operator provision (and a related Fleet Separation provision). The resulting policy statement included the following:.

1. We call upon Canada's Minister of Fisheries to take the necessary steps to ensure that Owner-Operator and Fleet Separation policies are enshrined in regulations such that it is no longer possible to separate the beneficial use of limited entry inshore fishing licenses from the titular ownership of the licenses.
2. Pending full implementation of new owner-operator regulations through the established procedures, we call upon the Minister to enact a temporary regulation to prevent any further erosion of the Owner-Operator and Fleet Separation policies through trust agreements or such mechanisms.

3. In developing the new regulations and in defining the areas of "flexibility" for fleets, we call upon the Minister to establish a working group made up of appropriate DFO managers and representatives of legitimate inshore fish harvester organizations, coastal community organizations, and provincial governments.

Identifying Policy Alternatives

WHAT IS IT?

The policy objectives identify where a group wants to go and what they want to achieve. Policy alternatives are the suggested policies that fishermen's organizations bring forward to counter the policies that are negatively affecting their livelihoods. Viable policy alternatives are a result of good problem analysis and well thought out policy objectives. They offer proposed solutions to resolve troublesome issues and situations.

WHY IS IT IMPORTANT?

Drafting and presenting policy alternatives is a means of engaging constructively in the policy development process. It says "We can't support the government's policy for these reasons, but we suggest this instead, because it will achieve the following policy objectives".

There is a great deal of power in a well-thought-out policy alternative:

"Fishermen will take over the management of fisheries once they start coming forward with real alternatives to current fisheries policies. When you start saying what you want, it frightens decision makers and your calls will get answered." (Craig Pendleton, NAMA, September 2004)

Community fisheries managers will not be able to set all the rules and regulations that govern their fisheries. They will never have unlimited power to shape new policies. Developing policy alternatives recognizes that sometimes the best that can be done is to influence the system and offer alternatives, even if they are only partially accepted.

HOW TO DO IT

A policy alternative has to offer a solution to current management problems that is:

- Timely
- Cost effective
- Achievable
- Likely to achieve wide-spread support

Look what is being done elsewhere. Find out which provinces, states, or countries are the policy leaders in the field you are working on. Explore policy statements and papers to get ideas for new programs or approaches. A good place to start is looking for polices from other jurisdictions on fishery, health, community development, or whatever type of policy from the jurisdictions that relate to the policies you want to change here.

Solicit ideas from the community. Bring the results of your research on policy problems and desired policy objectives to community meetings, town halls or other public spaces. Ask for suggestions on potential policy alternatives to achieve desired goals.

Ask for professional help. Other community organizations, academics, or government agencies could be asked to review your work and make suggestions on wording and content to make sure the message is strong and clear.

Think long term. Consider the potential short and long term consequence of the proposed policy change. Who will be positively impacted? What are the negative impacts and where will they be felt? Viable policy alternatives require some compromise to meet the needs of many different interest groups.

Write a Policy Brief. A well researched and well presented argument for why a particular policy alternative is being suggested can be a convincing tool to win support for your cause.

Make an Action Plan. Identify all the strategies to be used to bring about policy change around the issue, and establish a timeline for various activities.

Enlist support. Let contacts, supporters, and potential allies know what you are trying to achieve. Work with all levels of government and all political parties as well as other grassroots organizations and supporting institutions.

Advocacy and Lobbying

WHAT IS IT?

Advocacy is trying to influence public and political opinion to gain support for a particular policy change.

Lobbying is when elected officials are directly and personally targeted to gain their support for a policy initiative.

WHY IS IT IMPORTANT?

- Advocacy and lobbying are often necessary to get government to adopt and implement policy changes.

- Advocacy uses many different tactics to draw attention to an issue and get support from as many people and institutions as possible. It is a way to reach people and get them engaged.

- Policy change is usually very slow. A strong advocacy campaign that captures public attention, in combination with some strategic lobbying, can occasionally push those in power to make change happen faster.

- There are many hard working staff people in various government departments who are working on new policy initiatives, including some initiatives that might support community-based fisheries management. Such initiatives often get bogged down waiting for political approval. A good advocacy campaign can help move positive policies forward faster.

HOW TO DO IT

For advocacy to be successful, many strategies need to be employed simultaneously.

Use the media. A good advocacy campaign generates news, and may even be the news. Local groups wanting to sustain interest in their campaign need to have a variety of media strategies, including working on in-depth reporting as well as coverage of one-time events such as rallies.

Work at Multiple Levels. There are many avenues to reach the ear of those with power to change policy. Use them all. Work with local politicians and national ones. Include the civil servants and bureaucrats who can help or hinder a policy change process.

Highlight the benefits beyond the fishing community. Community-based management should always focus on the importance of the inshore fishery to the viability of coastal communities. It should also stress how important coastal communities are to the fishery and speak out loudly in support of non-fishing issues. Make the connections and show commitment that extends beyond the fisheries.

Build strategic alliances. Other groups want to see the same kinds of policy change that harvesters do. Make the connections and form alliances. Rural communities, the health sector, forestry, environmentalists, and First Nations, amongst others, many find common interests in reversing or changing certain policies.

Local Example

The Cape Cod Commercial Hook Fishermen's Association succeeded in getting a sector allocation for the hook-and-line fleet in November 2003. Their success was due to their ability to move their elected leaders to stand up and advocate for their plan. They were able to get support from elected officials at the national, state, municipal, and community level. The campaign also had the support of the conservation community and of many individuals who attended hearings and wrote letters on their behalf. The CCCHFA organized a multi-level campaign including public education, extensive and creative use of the media, distribution of information materials, lobbying, and coalition-building in support of their clearly articulated desired policy outcome.

Lobbying. Actually getting a regulatory body to change its policy or even create a new policy can be a time consuming and expensive process for a community-based organization. It helps to have connections directly with elected officials who are in a position to help changes laws and policies. This requires cultivating relationships and trust over a long period of time.

Sometimes it is worth paying (if possible) for a professional, based near where the decision makers are, to help build political support and push forward the policy change agenda. However, be careful: in many jurisdictions, there are legal implications for non-profit organizations using paid lobbyists to try to influence policy. Be aware of the risks and implications, as well as the potential costs of hiring a lobbyist.

Local Example

In order to put in place conservation measures that would favour local fishermen over larger boats from outside the region, scallop fishermen wanted the Maine State legislature to recognize a special "Cobscook Bay Conservation Zone". With the coordination support of the Cobscook Bay Resource Center, fishermen around the Bay met to discuss how to establish daily scallop catch limits. They involved the enforcement personnel from the Maine Department of Marine Resources in the discussions since they would have to enforce any new rules.

The fisherman's organizations hired a lobbyist to help them build political support in the legislature. In addition, fishermen made presentations at hearings and committee meetings. As a result of all these efforts, the Cobscook Bay Daily Catch Limit was approved by the Maine State Legislature.

Public Support

Building public support for a particular policy initiative is a process of changing public opinion about an issue and building an informed constituency willing to speak up on, or even vote appropriately on, a particular policy issue.

WHY IS IT IMPORTANT?

- For community-based fisheries managers to have any chance of achieving desired policy changes, they need public support. They need to ensure that the public's attitude and awareness is on their side.
- In the minds of politicians, numbers do count. Policy makers are swayed by the opinions of large groups of voters.

HOW TO DO IT

Reach their hearts. To get the non-fishing public on board, it is useful to focus energy into positive change. Community-based fisheries organizations need to be creative and innovative in getting their message out and building sympathy for their cause.

Show why it matters. Public understanding of fishing issues is decreasing as fewer people make their living from the sea. A campaign to build public support for changes in fisheries policy must show why fishing matters – economically, socially, culturally, environmentally - and remind people that how the ocean is managed matters. The voting public does respond to

financial arguments, and the highest return to the public purse is a vibrant inshore fishery.

Use your allies. It is sometimes difficult for fishing organizations to connect directly to the non-fishing community outside their own community. Allies in other movements (e.g., environmental or social justice) can help connect with a wider audience of engaged people. University or government partners can arrange talks or presentations to meet more people.

Ask for help. A good campaign for public support lets the public know how they can help. Be clear if you are asking for letters of support, phone calls, calls to radio shows, money, or attendance at a meeting.

Local Example

The Cape Cod Commercial Hook Fishermen's Association has been very successful at getting the local non-fishing community to care about fisheries policy. They have encouraged local residents to get involved by creating meaningful volunteer opportunities on research vessels and in the office. CCCHFA makes it easy for the public to speak out because they have a clear, consistent message that is continuously articulated in the newsletter, speeches, press releases, and in the media. The organization also makes a point of being very specific in what they ask people to do: "Attend this hearing", "Write to this Senator".

Summary

Influencing policy is part of community-based fisheries management. Changing policy is necessary to create conditions that will support community-based fisheries management and enable it to be successful. The policy change process can be frustrating for community-based organizations. There are many setbacks, but there are also examples of success.

Policy change begins with an analysis of the current policy environment and what needs to be changed, than articulating which policy objectives and a plan to reach these objectives is similar to making a fisheries management plan. A policy alternative is a community vision and a road map to get there.

Having a clear, consistent, positive message is important in communications with government, with potential allies, and with the general public.

People do care. There are many potential allies in a policy change process. They can provide resources, encouragement and contacts in efforts to bring about change.

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PART THREE: Concluding Remarks

Community-based fisheries management is not only about technical matters such as designing specific fisheries management measures. Community-based fisheries management is also about people's values, attitudes and beliefs, and how they are reflected in the process of fisheries decision making. Indeed, these are perhaps the most important aspects of community-based fisheries management, and are also usually the most challenging. This final part of the handbook briefly reflects on several themes, ones that have re-occurred throughout this handbook, and that underlie many of the issues and decisions community-based fisheries managers struggle with regularly:

- Community-based management can succeed
- Making difficult decisions in community-based management
- Community-based conservation and stewardship
- Monitoring and evaluation
- There is no recipe for community-based management.

COMMUNITY-BASED MANAGEMENT CAN SUCCEED

Survival of inshore fisheries and coastal communities has long been a preoccupation of community-based fisheries management. The state of local coastal fisheries – whether or not they are thriving, or perhaps simply surviving – is a key indicator of the success or failure of the community-based management approach.

Practitioners may feel discouraged in the face of slow progress and a lack of improvement in the state of their fisheries, but it is important to judge success from a wider perspective. Community-based fisheries management is often working within a context of depleted resources, working to reverse a long term decline, and often functioning in a context of increasing privatization of natural resources. Naturally, progress is slow.

Yet there are successes. Community-based fisheries management has often helped maintain access to fish for the inshore fishery sector and coastal communities. In the Atlantic Region, for example, community-based fisheries management has kept boats on the water, helped provide steadier incomes, prevented the fishery from becoming an entirely corporate fishery,

and kept hope alive among small-boat fishermen. These are things that are important when considering success and failure, progress and challenges.

A significant accomplishment in community-based fisheries management in the Atlantic Region is how well fisheries organizations have been able to work together to make their own fishery rules and to implement management measures. Fishermen can cooperate for the collective good.

Even those community-based fisheries management efforts that did not accomplish all they aspired to do should be looked at with pride and a sense of accomplishment. They have produced important learning for the future and have all made a contribution to the survival of fishing communities.

MAKING DIFFICULT DECISIONS IN COMMUNITY-BASED MANAGEMENT

The technical and management skills associated with running a fishery are only a small part of what makes a good fisheries manager. In community-based management, all decisions require thinking about:

- Why a decision is important to the organization
- Who will be involved in the decision making
- How the decision will be made
- Who will be affected

The process of group decision-making within community-based management is challenging because it requires changing how people make decisions. There is a common belief that bringing fishermen together to make decisions is particularly hard, since they are more independent and individualistic than others, due to the competitive nature of the industry. This is a stereotype that is not necessarily true. Indeed, there are many examples of people helping one another and working together in the fishery, just as there are in many other human activities.

Fishermen may cooperate to arrange wharf repairs in their home port, play on a baseball team together or volunteer for a community barbecue. On these occasions, they can work and make decisions together. At other times, they may cut each others' trap lines, run against each other for municipal council or take opposite sides during a discussion at their local church. Cooperation will not happen under all circumstances, but people can learn to create the conditions that improve cooperative behaviour.

A first step to encourage cooperation is for individuals and groups to articulate their values and beliefs. Stating personal and deeply held beliefs in a group is a very powerful experience. It makes beliefs real and public, and they can then become the basis for ethical decision making.

A community leader should know his/her personal values and beliefs and be comfortable speaking about them and encourage others to do the same.

Even with clearly articulated statements of principles in place, groups will face difficult decisions that will require soul searching and questioning. Community-based fisheries management is about people's livelihoods, and there are often no easy choices.

Some examples of difficult decisions faced by individuals or groups involved in community-based fisheries management could include:

- Selling licenses and quota outside the community management board, resulting in the loss of that quota from the community, or selling licenses or quota at inflated prices, so they cannot be purchased by anyone from within the community.
- Choosing between a fishing arrangement that brings rapid individual benefits and one that is better for the community as a whole and for more long-term benefits;
- Requiring a fisherman to leave the community management board after they continuously violate fishing rules;
- Laying off or reducing the salary of the office manager in a situation where less revenue is available to the community management body;
- Accepting money from a corporate donor to fund research of interest to participants in community-based fisheries management;
- Allocating new licenses within the community;
- Gaining access to a fishery at the expense of a neighbouring community;
- Deciding to join forces with environmental groups in a public campaign or a lawsuit against the regulatory agencies.

- Signing a fisheries management agreement with federal regulatory agencies.

Difficult situations such as these are bound to arise in community-based fisheries management and will never be painless, even with good principles and decision making structures in place. The only way for these situations to be tolerable is for individuals and organizations to keep talking to each other, about their values, about the choices they make, and how each has been affected by the decision.

All decisions, especially the difficult ones, should be made at the most local level possible. That has to be where the power is and where the discussion takes place. This approach may take a longer decision making process, but it will make everyone more comfortable with the results.

Decision making processes must be transparent, and decision makers have to be accountable to the community. Never hesitate to use compassion and common sense in decision making.

Community-Based Conservation and Stewardship

Implicit throughout this handbook is the message that many community-based fisheries management organizations have much in common with conservationists and others fighting to protect the marine environment - perhaps more so than with other sectors in the commercial fishery, particularly the corporate-owned fleets. There are inshore fishermen who consider themselves environmentalists, as they are concerned with the well-being of marine life and marine ecosystems, not just the species on which they depend economically.

Community-based fisheries offer an opportunity for harvesters to promote marine conservation by emphasizing low impact fishing practices and the protection and restoration of fish stocks and habitat. Indeed, fishing organizations in the Atlantic Region have frequently initiated and/or supported the creation of marine protected areas or closed areas, to protect sensitive habitat or nursery areas, or have worked closely with conservationists on issues such as gear entanglement and protection of endangered species. First Nations communities, and others, have taken on habitat restoration projects, especially around rivers and streams, while other organizations concentrate on rebuilding shoreline species like clams.

The desire to secure the long term survival of inshore fisheries and coastal communities is part of what fosters a sense of resource stewardship in many community-based management practitioners. In addition, many are descendants of generations of fishermen who feel a deep connection to the ocean and their communities. This connection is often expressed in a strong ethic of care for the marine environment.

Overall, then, it is crucial to keep in mind that community-based fisheries management is about the present and the future. It is about making a living and supporting the community now, while also maintaining healthy resources and marine ecosystems so future generations can also benefit.

Monitoring and Evaluation

Another recurring idea in this handbook is of the necessity to take the time to monitor and assess the work being done, and to make changes accordingly. This is essential not only to collect and analyze quantitative measures of success, but also to encourage reflection and learning.

It is often easier to continue with the status quo than to try something new and different - this is in part why there is so much resistance to community-based fisheries management in the first place. However, a community organization or management body can also get 'stuck in a rut' where they do the same things over and over again, year after year.

A capability to adapt over time is therefore important, and this is where ongoing monitoring and evaluation is needed. But it is not only the fisheries management system and its impacts that need to be monitored. All rules, policies, governing mechanisms, and decision-making should be revisited from time to time to see if they are still relevant, and of course to monitor how well they are working. This is why it is so important to keep good written records of previous decisions.

Monitoring and evaluation promotes accountability, learning, and change. Thus, it should be a regular part of all community-based fisheries management systems, built into the process – within all, or most, of the steps described in Part II of the Handbook.

THERE IS NO RECIPE FOR COMMUNITY-BASED MANAGEMENT

How do we know when community-based fisheries management has been achieved? This is a question that cannot be answered by practitioners or anyone else. In situations where community-based fisheries management is new, no one really knows where it can go. Everyone is learning by doing.

The question is also unanswerable because by their very nature, community-based approaches are unpredictable. They involve moving towards something that can never be fully achieved. Community-based management is about moving towards a dream or vision of a better future. We can never really get there – not because local fisheries management is an impossible dream, but because it is the nature of visions to evolve and change as we move closer to them.

The examples of community-based fisheries management illustrated in this handbook all show different elements of this process. Some focused on pushing policy change, others on building alliances, still others on celebrating a place, or on carrying out strong research, or on building up the community organization. Each is heading in the same general direction, but no one took quite the same path.

Some organizations may feel they have stalled somewhere along the way, hampered by limited opportunities to have a meaningful role in fisheries management decision-making, while others may have redefined their relationship with government and achieved more management control than they thought possible. After years of effort, some organizations are discouraged and frustrated, while others are confident and jubilant. Still other groups are just exhausted by the constant challenges they are dealing with. It is this diversity, including the wrong turns, dead-ends and breakdowns, which is the real power behind community-based management.

The lack of formal recognition for community-based fisheries management in the Atlantic Region, while regrettable in many ways, has had its advantages. It has allowed for a few years of adaptation and experimentation before settling on a formal management system. There is time to alter course when necessary and to build capacity – through a 'trial and error' approach. On the other hand, some countries have tried to impose community fisheries management all at once by government decree. This happened in some Asian countries where few resources were made available for implementation or capacity building, and no time was allotted to support community visioning and planning. Despite full legal encouragement, they still have to go back and start at the beginning – at the community level – to achieve good community-based fisheries management.

Given that there are no recipes and no step-by-step guides, it is good to celebrate diversity and adapt approaches to local conditions. Community-based fisheries management should be whatever the community wants it to be, which is why it looks slightly different everywhere. The management systems described in this handbook are real life working examples, not the theory or idealized systems found in textbooks.

Practitioners are creating their own knowledge-base generated from their own experiences as they develop management practices that reflect community values and beliefs. Yet, while there is no standard theory or recipe to follow it is remarkable that certain universal practices and principles seem to arise in community-based management.

The range of activities described in this handbook, while each unique to its own circumstances, nevertheless reflect similar practices and principles to those in other parts of the world. The variety of successful working models, united by common underlying principles, is a powerful combination in making it clear to government, to communities, and to harvesters, that community-based management can succeed.

QUESTIONS FOR FISHERIES MANAGERS

Chapter One

- To what fishery (or fisheries) does my community have a collective attachment?
- Who else depends on this resource or this area?
- Do our community fisheries have legal recognition and protection?
- What methods will help us get access?
- Can we use our current access as a stepping-stone for community-based management?
- How will we decide who can and cannot participate in this fishery?
- Does excluding other users fit in with our principles and objectives?
- What kind of access are we working towards in the long term? For whose benefit?
- What are the potential threats to community access?
- What are the opportunities to protect and maintain access?

Chapter Two

- What is our community's vision for the fishery? How is this vision expressed?
- Who participated in developing the vision? When was the last time it was revisited?
- What are the main objectives for our fishery? Have we considered including activities beyond harvesting fish, e.g. research, marketing or policy change?
- Is there any technical support available for developing a fisheries management plan?
- Are there any issues surrounding formal recognition of the management plan?
- How do we monitor and evaluate the implementation of the plan? How are we putting lessons learned into practice?

Chapter Three

- How can we build our capacity to be involved in the stock assessment process?
- Which partners can help us in stock assessment?
- What aspects of harvest can we currently influence?
- Do we have access to accurate landing data?
- How effectively do we prevent harvest overruns?
- Who is involved in decisions about closing the fishery?
- What goals (equity, etc) are we trying to achieve in our fishery allocation process?
- How effectively do we monitor and evaluate the system?

Chapter Four

- Does our organization use member education to improve compliance?
- What are the primary compliance issues in our fisheries?
- What are the main law enforcement issues in our area?
- How does this organization participate in law enforcement?
- What systems are in place to deal with rule breakers?
- What kinds of penalties and sanctions is the management body able to assign and implement?

Chapter Five

- What are our priority research and information needs?
- Is research an integral part of the management process and not just and add on?
- Do our research projects relate directly to our management goals and objectives?
- Does our organization have the staff and resources to do research? If not, how will we build our capacity?
- Can any of our existing partnership provide research support?
- Does the data we are looking for already exist as a result of past research elsewhere?
- How will our organization be involved in data analysis and interpretation?
- Is there a clear plan for data storage and ownership?

Chapter Six

- Can we explain our organizations' history? When, why and how did it start?
- What are our most significant accomplishments?
- What are the biggest leadership challenges facing our organization?
- Can most members explain our mandate? How do members perceive the organization?
- How are decisions made and communicated within our organization?
- What strategies do we use to engage membership?
- What are our main sources of revenue and our biggest expenses?
- Does our financial plan allow us to meet our management objectives?
- What has worked or not worked in the past to generate revenue?

Chapter Seven

- How do we incorporate economic development into our fisheries management plans?
- Who is actively engaged in economic development activities in our community? How can we work with them?
- What are the main markets for our marine products?
- Where do our inputs (everything we need to fish) come from? Where do our products go?
- What are the unique characteristics of our fishery? Are there opportunities to benefit from them economically?
- Have we explored job creation options in the fishery? What opportunities and support exist? Who do we want to create jobs for? What kind of employment are we trying to build or maintain?

Chapter Eight

- Think of a personal conflict: how was it resolved? What did I learn about my own style of dealing with conflict?
- Describe some of the conflicts facing the organization. Have we discussed potential conflict management strategies?
- Is there anyone in the organization with the skills and attitude to support conflict management situations?
- What has been our experience of conflict with outside interests? Where have we found support? What has been learned?

Chapter Nine

- How would we describe our current collaborations? What is working well? What could be improved? Have we ever articulated our collaboration strategy?
- Is there someone in our organization with a clear responsibility to make contacts and network?
- How are we supporting other organizations? Allies? The non-fishing community?
- How can we maximize the benefits from participating in advisory boars?
- Do we have a vision for expanding the scope and impact of our efforts? Is it part of our long term management plan?

Chapter Ten

- Which policies currently have the greatest negative impact on our community?
- Which offer the most opportunities to bring benefits to the community?
- Have we started to identify policy change priorities? What would we change if we could?
- What do we want to achieve? Can we clearly describe our objectives?
- Are there some issues affecting us that are likely to generate a lot of pubic interest? How can we connect with others who have the same concerns?
- Can we describe some successes we have had at influencing the policy process?

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