Chapter 13
Community-based Fisheries in the Canadian Maritimes

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Introduction

This penultimate chapter, while dealing with relatively developed fisheries within the Maritime Provinces of Canada’s Atlantic coast, focuses, in particular, on the more small-scale and community-based components of those fisheries. Thus the chapter reflects something of a hybrid of the themes in the first section of the book, where the emphasis was on small-scale fisheries and local management, and those in later chapters dealing with developed fisheries. Indeed, the chapter demonstrates how moves toward greater participation of fishers and their communities in fishery management, common in developing regions of the world, are also emerging in a nation such as Canada.

This approach of community-based fishery management (Wiber et al. 2004) is gaining popularity worldwide as a mechanism with the potential, where appropriate, to support marine conservation and sustainable development in fisheries and to enhance the well-being of coastal communities. In particular, community-based management (CBM) in fisheries can potentially provide two major classes of benefits (Kearney 1999; Pinkerton 1999; Charles 2005):

1. CBM can serve as a mechanism to orient fishery operations around community needs, improving the sustainability and resilience of both, by: (a) enhancing geographical, social, and cultural linkages between fisheries and coastal communities; (b) increasing efficiency and equity in the fishery and the community, in part through more effective mechanisms for resolving conflicting resource uses; and (c) countering trends toward concentration of fishery control outside the community, which naturally have negative effects on those communities.

2. CBM can support marine conservation and sustainable development in fisheries, by: (a) better utilizing traditional ecological knowledge or local knowledge; and (b) empowering resource users, fisher associations, and communities, thereby leading to better acceptance of conservation measures and thus improved compliance with management rules.

To what extent has community-based management been adopted in the fisheries of Canada’s Maritime Provinces, and to what extent have the potential benefits described above actually been realized? This chapter explores these questions. We begin with an overview of fisheries in the region, paying particular attention to the prominent groundfish and lobster fisheries. Following this is the presentation of a set of three community-based fishery examples: community groundfish management boards; the Fundy Fixed Gear Council; and the aboriginal Mi’kmaq fisheries of Prince Edward Island. These examples are followed in turn by descriptions of a set of three fishery-related linkage and support mechanisms: marine resource centers; the Centre for Community-Based Resource Management; and the ‘Turning the Tide’ initiative. Finally, in the concluding section of the chapter, we provide a synthesis of these examples and a number of resulting conclusions on the state of and potential for community-based fishery management.

Fisheries in the Canadian Maritimes

The history of fishing in the Canadian Maritimes – the provinces of Nova Scotia, New Brunswick, and Prince Edward Island, on Canada’s Atlantic coast (Fig. 13.1) – dates back to that of the aboriginal Mi’kmaq people who have inhabited the coastal Maritimes since long before the arrival of Europeans in the seventeenth century, and who depended greatly on the sea for food, trade, and travel. Today, fishing in the region continues to be widespread and important, taking place commercially, recreationally, and for subsistence. The contribution of current fisheries to employment, the role they play as engines of regional economic development, and their social, cultural, and historical place in the life of the region all contribute to their overall political importance.

Yet these fisheries have experienced large changes in the last few decades of the twentieth century: changes in the fish stocks, as well as in fishing methods, fishing communities, and fishery policies. The overview in this section first describes the major marine resources, the fishers and fishing communities, before examining a set of policy and management issues relevant to the subsequent discussion of community-based fisheries in the region. This analysis is based on, and updates, the coverage of these fisheries in Charles (1997).

The resources

The major species harvested in the Canadian Maritimes can be placed in three groups (Charles 1997). First, groundfish species – particularly cod, haddock, redfish, pollock, halibut, and various flatfishes – have historically provided about two-thirds of the total harvest by weight, and 40% or more of the landed value. This
contribution has, however, decreased greatly since the collapse or serious decline in many groundfish stocks in the early 1990s, described below. Second, shellfish species including lobster, crab, shrimp, and scallops, have collectively grown in importance over recent years, in relative terms compared to groundfish, and in absolute terms, with remarkable increases in both abundance and market price of lobster and crab. Third, pelagic species, including herring, mackerel, capelin, eels, skate, salmon, tuna, and swordfish, tend to be utilized in specific locales and by specific fishery participants.

Of particular importance on the Atlantic coast of Canada are the fisheries for groundfish and for lobster. The commercial groundfish fishery dates back roughly 500 years and, over much of that time, groundfish resources of the region were among the most plentiful in the world. However, the current reality in this fishery has been driven by two major collapses suffered in the second half of the twentieth century (Charles 1997, 2001). The first, in the early and mid-1970s, was largely due to heavy fishing pressure by foreign vessels. With extended fisheries’ jurisdiction and strong year classes recruiting to the fishery, groundfish stocks rebuilt considerably in the late 1970s and early 1980s. Nonetheless, stock assessment and management efforts proved unable to properly monitor and control fishing pressure. A second groundfish collapse occurred in the late 1980s and early 1990s, caused fundamentally by excessive levels of domestic and foreign fishing mortality, both legal and illegal, leading to a fragile situation where the stocks were unable to overcome the onset of unfavourable environmental conditions. The first groundfish fishery to be closed was that for northern cod, off the coast of Newfoundland and Labrador, north of the Maritimes. In 1993 and the next few years, Maritimes fisheries were closed on most cod stocks and a considerable number of other groundfish species. Only the most southerly part of the region, near the US border, avoided most closures – this area will be discussed below. Today, most closed fisheries have been reopened, but none can sustain past levels of harvesting. Indeed, for some stocks, such as cod on the Scotian Shelf, recent biomasses remain at only 10% of those in the mid-nineteenth century (Rosenberg et al. 2005).

Lobsters, a more sedentary resource than groundfish, are present throughout most of the Maritimes, but there is great variation in catches between areas, with the greatest production in southwest Nova Scotia and the southern Gulf of St Lawrence. While considerable information is available about some aspects of lobster biology, the amount of research on lobster is much less than that on groundfish (Pringle and Burke 1993). The commercial lobster fishery developed in the mid-1980s, to serve a market for canned lobster. As the fishery developed in the late 1800s, catch levels declined steadily over several decades, but then were relatively stable over the period from mid-1910 to mid-1970. Subsequently, in the 1980s and 1990s, catches began rising, perhaps in response to environmental conditions or the decline of their groundfish predators, reaching a peak in the early 1990s, then falling somewhat. Today, the Maritimes lobster fisheries – while always at risk, as with any other fishery – remain in a far healthier state than their groundfish counterparts, and continue to serve as the “backbone” of many Maritimes fishing communities.

**Fishers and fishing communities**

There are tens of thousands of fishers located across the Canadian Maritimes. The lobster fishery in particular provides seasonal employment to a large percentage of these fishers, and is considered to represent a relatively stable core of the overall fishery in the Maritimes (Pringle and Burke 1993). Within the coastal commercial fishery (as opposed to the more industrially-oriented ‘offshore’ fishery), fishers often fish for multiple resources, to reduce reliance on any one fish stock, and to provide more fishing time. However, the methods and gears vary between fisheries. Some fleets, particularly for shellfish such as lobster and crab, tend to be structurally quite uniform, involving the same general configuration of vessels and gear across the region. Other fisheries involve a variety of gear types and vessel sizes – for example, the groundfish fleet is very heterogeneous, involving vessels ranging from under 12 to well over 35 m in length, and involving several different gear types.

The coastal fisheries support over 550 coastal communities across the region (Moore et al. 1993). Many other economic activities in coastal communities are dependent, at least in part, on the fishery – these range from closely-connected
activities such as boat-building to sectors such as tourism and aquaculture, which can benefit from fishery infrastructure and scientific expertise. Increasingly, the communities of indigenous peoples in the region – the Mi’kmaq, as well as Maliseet and Passamaquoddy – are adding to traditional subsistence fishing by playing an expanding role in the commercial fisheries. This evolution is described below and is the focus of a case study later in the chapter.

**Fishery management**

Canada’s national government – in particular, its Department of Fisheries and Oceans (DFO) – has responsibility for the management of Canada’s ocean fisheries and the conservation of marine resources. This takes place within specific administrative zones established through some combination of political factors, natural boundaries such as between major ecological zones, as in the Gulf of St Lawrence and the Scotian Shelf, and areas used to compile statistics, such as for the groundfish fishery of the international Northwest Atlantic Fisheries Organization (NAFO). The management of all commercial fisheries in Canada has certain common features – such as the use of “limited entry licensing” to limit participation in the fishery. However, many differences exist between specific fisheries – indeed, the examples explored in this chapter largely revolve around groundfish and lobster fisheries, for which management approaches differ considerably, reflecting differences in the nature of the resource, the gear used, and the management style.

With respect to the groundfish fishery, in areas where fishing has continued, or has reopened after closure, the focus of management remains on the same approach in place at the time of the collapse, namely total allowable catches (TACs) set for each stock in an attempt to control harvests (Charles 1995, 2001). Once the federal Minister of Fisheries and Oceans sets the TAC for each stock, it is subdivided into allocations for each of the fishery’s various ‘sectors’, where groupings are defined by location, gear type, and vessel size. For example, a certain fraction of the TAC for cod in NAFO area 4X would be assigned to a sector defined as those vessels using otter trawls and of 14–19 m in length. Given these quota allocations, each sector of the fishery engages in a co-management process by developing its own conservation planting plan, a set of management measures agreed upon by the corresponding fishers in that sector, and subsequently approved by DFO fishery managers, who retain final authority over fishing plans. In those plans, single-species quotas are typically supplemented by gear restrictions, such as mesh and hook sizes, to enhance the selectivity of fishing, and other measures such as closed areas and closed seasons, to protect spawning and nursery grounds.

In contrast to groundfish, the lobster fishery operates on a more localized geographic scale, with one’s lobster fishing taking place near one’s home community. Hence, management issues tend to be discussed locally. There is a long history of spatial management, which was institutionalized in the early 1980s by dividing the region into lobster fishing areas (LFAs), each with its own management plan adjusted to local conditions. Unlike “quota management” for groundfish, lobster fishing is regulated largely through input controls. The key to such controls are: limited entry, where a license is required to participate; limits on the number of traps per fisher; and limits on the fishing season. In addition, biologically-oriented controls – including closed areas, a prohibition on capture of egg-bearing females, and size limits – are designed to keep the size and maturity of individuals in the harvest to desired levels. The size limits are regulated through a slot size where lobster below and above a certain size must be returned to the water – the minimum size protects the juveniles while the maximum protects the most mature and fertile female lobsters. Recent conservation concerns have led to efforts to increase future lobster recruitment by increasing the overall egg production, adjusting management measures to decrease harvesting of egg-bearing lobsters.

**Fishery policy**

The manner by which fishery management was implemented in Canada and in many locations during the second half of the twentieth century created a polarized view of the world, pitting government regulators (as “protectors of the resource”) against fishers (as “selfish exploiters”). This view led to the exclusion of fishers from management decisions, which in turn led to a poor acceptance of regulations among fishers, creating a situation where enforcement efforts were unable to prevent illegal fishing and overharvesting (Charles 1997). When this dysfunctional situation was eventually recognized, DFO moved to consultative co-management, where government discussed management measures with the industry prior to implementation. However, attending consultations did not equate to decision-making power and, as a result, the government-imposed regulations did not receive broad acceptance. This was clear in the groundfishery, where in the 1980s, extensive anti-conservationist behavior such as dumping and high-grading, as well as under- and misreporting of catches, was reported (Angel et al. 1994).

As fishery management has evolved globally, the weaknesses of such approaches have been recognized, leading to more participatory management. Thus ‘co-management’ becomes more than consultation – it implies the creation of suitable institutions where stakeholders and governments work together to develop and enforce regulations (Berkes et al. 1989; Jentoft 1989; Pinkerton 1989; Charles 2001). The Canadian government has some form of co-management in many fisheries, but in most cases, this is organized by fishery sectors, reinforcing the established divisions of the fishery by gear type and vessel size. This ‘sector-based co-management’ was pursued at the expense of attention to more broad-based ‘community-based co-management’ approaches (Charles 2001), incorporating community institutions alongside governments and fishery sectors. In many parts of the world, the latter approaches have effectively increased the efficiency of management by more fully incorporating local knowledge, promoting local enforcement of regulations, and
maximizing community pressure in support of conservation measures. Despite the lack of attention in Canada to community involvement in fisheries, there are some positive initiatives on this front — some of those in the Maritimes are the focus of the examples presented below.

Closely related to this policy issue was the key event of September 1999, when the Supreme Court of Canada issued the so-called ‘Marshall decision’ that recognized the treaty-based right of the Mi’kmaq, Maliseet, and Passamaquoddy peoples in the Maritimes to fish commercially. This court decision has led to a much increased involvement of these ‘First Nations’ in the fisheries of the Canadian Maritimes, as the Mi’kmaq in particular move to finally build their livelihoods through the use of natural resources that they have traditionally harvested, but that they lacked access to in recent decades. The Mi’kmaq also view the Marshall decision as an opportunity to advance their role in management of local fishery resources, in accordance with their self-governance aspirations and building on their long tradition of community management. Unfortunately, this goal has been inhibited by a lack of attention to the potential of community management systems as effective means to promote conservation and sustainable fisheries (Milley and Charles 2001). However, progress in this direction is indicated in one of the case studies below.

Examples of community-based fishery management

The above discussion of fisheries in the Canadian Maritimes highlighted the evolution of the region’s groundfish and lobster fisheries, and of corresponding fishery management and policy in the region. In particular, it was noted that government policy has yet to embrace local-level fishery management initiatives — a minority of fisheries are more industrial and large-scale, and thus not conducive to such management, but for most, the lack of management on a local or community basis seems to reflect an implicit preference within government for the conventional ‘sector-based’ approach referred to earlier.

Despite this situation, there have been advances in the direction of community fisheries across Canada’s Maritimes region, including a range of local initiatives. There is, for example, a history of local-level management in lobster fisheries, both in Canada and the United States; these fisheries, as noted earlier, tend to operate on a more local level than others, with regulation often occurring outside the framework of formal governmental management (Acheson 1975; Brownstein and Tremblay 1994). More recent examples of community fisheries in the Maritimes are also to be found. In this section, we present three such examples: (1) community groundfish management boards, a community-based approach in the groundfish fishery; (2) an example of such a board, the Fundy Fixed Gear Council; and (3) aboriginal (Mi’kmaq) fisheries in the province of Prince Edward Island. These examples are complemented later in the paper by discussion of a set of linkage and support mechanisms for such community fisheries.

Community management in the Scotia–Fundy groundfishery

As noted earlier, despite the now-famous groundfish collapse on the Atlantic coast of Canada, noted above, there is one region of the Maritimes — the more southerly part of what is known as the Scotia–Fundy management region (the Scotian Shelf and Bay of Fundy) — in which the fisheries for most species of groundfish remained open, albeit at a low level. The following describes how the small-boat fixed gear (hook and line and gill net) fishery for groundfish in that region was transformed in the direction of community-based management. Later, we examine the development and operation of one particular player in this community management system, the Fundy Fixed Gear Council, on the Nova Scotian side of the Bay of Fundy.

The story begins following the groundfish collapse in the early 1990s, when debates ensued over the appropriate management of fisheries that remained open. The debate originated around the choice between managing by input controls such as fishing effort, or controls on outputs such as quotas. The fixed gear groundfish fishery was originally managed by a combination of effort and biological controls, similar to the lobster fishery management described above. Indeed, a high proportion of inshore, fixed gear groundfish fishers are also lobster fishers who are aware of the benefits of such management. Fishers see effort controls as keeping with fixed gear technology, for which catch rates are more closely related to abundance of the stocks and are further limited by available fishing time, given the migratory behavior of groundfish species. Furthermore, as the lobster fishery protects juveniles through minimum size limits, this is achieved in the groundfishery by the hook and mesh sizes employed. In addition, just as the lobster fishery protects spawning females, it appears that some groundfish species do not feed during reproduction and will thus not bite a baited hook.

There is, however, another important function of effort and biological controls besides resource conservation, namely social equity. The former suite of management measures in the inshore, fixed gear groundfishery provided a level playing field that permitted what was seen as an equitable distribution of fishery wealth in the community; with differences in income levels considered to arise reasonably, through the degree of hard work, knowledge of the resource, and fishing skill. When the DFO began to impose output controls on this fishery in the late 1980s and early 1990s, the fishers insisted that these controls should also limit the output of individual fishing enterprises per fishing trip so that more highly capitalized fishers could not take an inordinately high share of the total catch allocation. But then, in the fall of 1994, the DFO announced that they would no longer enforce these trip limits. Fishers feared that the larger boats that could fish during rough winter conditions would catch the entire quota before the vast majority of license-holders in the region could begin their fishing.

After a long period of negotiations, in 1995, the fishers devised their own system of distributing the fish quotas allocated to them through trip limits within 18 management units, based on the 18 quota groups and varying by geography, vessel,
and gear characteristics of the license-holders. One of these 18 plans included a ‘community quota’ for the village of Sambro near Halifax, Nova Scotia (Loucks 1998). The fishers’ organizations enforced their fishing plans through contractual agreements with individual fishers, arrangements for independent monitoring of catch levels, and an industry sanctions committee that determined the appropriate punishment for any fisher found to have violated the rules.

In September 1995, the fixed gear groundfish organizations held a workshop to develop a vision of their fishery. They agreed to operate the fishery based on the goals of:

1. Sustaining groundfish resources through use of non-destructive gear, a code of conduct, inclusion of ecological factors, reduction of waste, and improvement in yield from the available harvest.

2. Sound science incorporating an ecosystem approach and greater involvement by fish harvesters.

3. Sustaining coastal people through economic viability, stability of incomes, equitable sharing of the benefits of resource exploitation, and maintaining values of independence, inclusiveness, commitment, and flexibility.

4. Improving communication and educational programs for fishers and the general public.

These goals were to be achieved through community-based management – understood as a system of management authorities where each would manage the fleets rather than the fish in a specific geographical area. Although many fishers would have preferred a community-based system based on effort and biological controls, they recognized that quotas now lay at the heart of the government’s management of groundfish. Thus, using the Sambro experiment during the previous season as a base model, a request was made to the government to sub-allocate the total Scotia–Fundy fixed gear allocation of cod, haddock, and pollock into a number of discrete community quotas. The sub-allocation was to be guided by the historical catch performance of the fleet based in a particular geographical area, usually a county or pair of adjacent counties.

The development of community-based management was soon threatened by the real or perceived threat that the federal government, in collaboration with a group of license-holders comprising the largest boats in the fleet, would scuttle the efforts by imposing a system of individual transferable quotas (ITQs). Having seen the high cost of access and the concentration of ownership in a regional trawl fishery that moved to ITQs, most fixed gear fishers strongly opposed such a system. It appeared to them as the antithesis of their fundamental orientation toward an independently owned and operated, family-based, and socially equitable fishery.

This concern led to weeks of large-scale protests, resulting in a promise by the government that there would be a one year moratorium on ITQs for fixed gear groundfish, an agreement to allocate fixed gear groundfish quotas by area rather than by fishing sectors, and support for establishment of five community management boards to determine the allocation. By 1997, there were seven such boards, and ten by 1999. The fundamental shift to community management did not, in the end, involve a change from quota to effort controls, but rather from quota allocations based on fishery sectors, defined by vessel size and gear type, to allocations by area, reflecting the real ties of fishers to their home communities and regions.

Each of the groundfish management boards operates differently, reflecting one of the goals of community-based management, to allow enough flexibility to manage fish according to local ecological, economic, and social conditions. However, all or most management boards share a number of characteristics:

1. The boards were established and are run by fish harvesting organizations, and strive for inclusive decision-making processes.

2. The boards sub-allocate the community quota among different gear types and devise rules for all license-holders in the form of a community management plan.

3. The management plans are enforced through contractual arrangement between the board, the license-holders, and the catch monitoring companies.

4. Management plans are consistent with basic conservation requirements set out by DFO and each license-holder must follow the conditions of license as determined by the government.

5. Management boards have infraction committees to judge alleged violations of management plans and impose penalties.

6. Seasonal adjustments are made to management plans and in a number of cases these adjustments include the sale or trade of unused quota between different management boards.

7. Individual license-holders can still choose to fish under a generic management plan devised by DFO for the whole Scotia–Fundy region, instead of under a community management plan devised for local conditions. However, more than 98% of license-holders choose to fish under the community management boards each year.

This approach can enhance community sustainability by allowing each community to decide for itself how to utilize its quota. Loucks’ (1998) description of the goals of Sambro’s community quota arrangement could equally apply to all of the boards: ‘The objective of the Sambro community quota fishing plan was to protect community access rights to the fishery, to ensure it lasted throughout the year, and to maximize the value of a scarce resource through flexible decision making . . . The community shared the burden of the reduced quota allocations, and of enforcing regulations, and tried to adapt as a collective by participating in the fisheries management planning process and maintaining a sustained commitment to follow it’.

This community management board system was undoubtedly a compromise. As noted, the fishers would have preferred effort-controlled rather than quota-controlled management. Another limitation of the system is its orientation towards
managing the quota of a particular local fleet rather than managing the geographic area where that fleet operates. While in a sense this was the breakthrough approach that allowed community management to take place for a fishery on a mobile resource, this has limited the capability to take an ecosystem approach to management. Mobile gear fleets have moved around the region opportunistically, depleting fish substocks in shallow water inshore grounds first (Graham et al. 2002). This phenomenon is at least partially responsible for the more severe effect of groundfish declines on the hand line fishers who fish closer to shore and use a less intensive fishing strategy. Without geographic control of the overall harvesting practices on local fishing grounds and more general powers to exercise ecological stewardship, community-based management is handicapped in the benefits it can provide.

Nevertheless, community-based management in the Scotia–Fundy fixed gear groundfish fishery is a positive development. It has served to bring management more to a local level, thus improving the acceptance of management, and drawing on inherent moral persuasion within the communities to improve compliance. A fuller description of this tendency is illustrated in the following case study of one management board.

**The Fundy Fixed Gear Council**

The Fundy Fixed Gear Council (FFGC) is an example of how the process described above has produced community-level fishery management. The FFGC is the management board for the approximately 160 inshore fishing enterprises comprising the fixed gear fleet of vessels under 15 m in length – some of which are shown in Fig. 13.2 – fishing on the Nova Scotian side of the Bay of Fundy, for groundfish, notably cod, haddock, and pollock, but also species such as halibut, hake, and dogfish. The FFGC was established in 1996 (Bull 1998), following the large-scale protest noted above, which included fishers in the Digby–Annapolis area who saw this as an opportunity to move ahead with community-based management. Although the FFGC manages a relatively small fishery with limited access to the resource, its work has involved many aspects of community-based fishery management, such as policy, science, research, compliance, access, conservation and harvesting.

The FFGC governance structure is designed to give equal representation for the two fishers associations in the area, the Bay of Fundy Inshore Fishermen’s Association, and the Maritimes Fishermen’s Union, Local 9. Representatives of these bodies sit on a decision-making council that sets the overall direction for the local fixed gear fishery, subject to quota limitations and management constraints imposed by the DFO. Under the Council, three gear-specific committees, for long line, hand line and gill net fishers, elected by the membership of each, design and implement fishing plans for each gear type, and carry out the hands-on management of the plans, including setting catch limits, to reach the goals set by the membership.

In addition to these committees, there are elected port representatives who act as the contacts and communication between the council and the local fishers. This whole community management system works thanks to the institutionalized requirement that, in order to take part in the fishery, each fisher must sign a civil contract with the FFGC and, to do that, a fisher must belong to one of the two associations and agree to be bound by the FFGC fishing plan.

The following analysis identifies several major features of the FFGC, in terms of accomplishments and failures, and lessons learned over the past 10 years.

1. The FFGC has managed each year to (a) negotiate a set of allocations of the available fish quotas among its gear sectors and (b) write and ratify annual fishing plans. This continuing operation can be seen as an accomplishment in itself, one that can be traced in part to the development of a democratic governance system with transparent and participatory decision-making. However, that system continues to be prone to major periodic conflicts over quota allocations between the major gear sectors involved (hook and line and gill net fishers).

2. The FFGC, as well as other community management boards, has shown that community-based fisher organizations are able to deal internally with those who break agreed-upon fishing plans. This has been accomplished through a major innovation, an infractions committee, reporting to the FFGC council. This committee is responsible for ensuring that members comply with the fishing plans, and has the authority to give out sanctions. Each fisher must
sign a contract agreeing to be subject to the infractions committee if he or she contravenes any part of the plan, for example, by exceeding a weekly quota. The committee is made up of fishers, but to ensure fairness, membership changes regularly and is unknown to members external to the committee. In addition, the files of fishers under review by the committee are unlabeled so that committee members do not know the individual who is being sanctioned. While this system has not eliminated rule breaking, it is producing what are generally considered fair and appropriate sanctions.

(3) The FFGC has played a role in the basic survival of the local fishery. Without an effective management board, many more fishers would have been driven out of the fishery than was the case. In particular, the gill net and long line fleets have been maintained, with both able to continue to fish, keeping within allowable catch limits, despite the low level of those limits. On the negative side, the FFGC has not been able to prevent a reduction of the hand line fleet from about 159 to about 25 boats, as a result of declining quotas and fishing on local stocks by outsiders, which has prevented hand line fishers from finding sufficient fish locally.

(4) The FFGC instituted innovative mechanisms for developing community-based management, such as an outward-looking research and advisory committee, and establishment of three seats on the FFGC’s council for non-fishery community members. However, most of the innovations did not continue beyond the FFGC’s first few years — this would appear to be due to a lack of staff and a continual need to deal with pressing management issues, such as fishing plan conflicts and new DFO measures. (To some degree this is speculation, because the FFGC did not build in a process of evaluation and reflection.) Nevertheless, a community spirit continues in the FFGC, and there continue to be efforts to build its community focus.

(5) The FFGC has had success with ‘outreach’ on two fronts. First, it recognized the need for research to meet its information needs, and has successfully initiated research projects from studies of marine protected areas, to fishing fleet profiles, to mapping of local cod spawning areas, to the assessment of local dogfish stocks. Second, the FFGC served as a catalyst for several other initiatives supporting local management and conservation, such as the Bay of Fundy Marine Resource Centre and Saltwater Network, which are described below.

While the FFGC has a number of accomplishments to its credit, it has also identified some important goals that it has yet to achieve:

- Marketing. The hook-and-line fishers have yet to capitalize on the fact that they catch a premium product that is environmentally friendly, and could receive a higher price if sold into niche markets.

- Conflict resolution. The conflict over allocation continues and, without a built-in conflict resolution mechanism, this is a constant internal threat to the FFGC’s integrity.

- Policy change. The overall policy of DFO is not supportive of community-based management and the FFGC has not successfully mobilized a policy change strategy.

- Evaluation. Clear goals and objectives were never set out, nor were the mechanisms for the FFGC to recognize and document its achievements.

One tentative conclusion we might reach from this sketch of the FFGC experience is that there was a need for an investment early on in developing the social capital and research that might have helped advance the FFGC’s visions for community-based management. Because the ongoing demands of managing are intense, and the financial resources that the fishers can provide are limited, the FFGC has yet to fully capitalize on its early successes. On the other hand, the FFGC has managed to develop mechanisms to encourage conservation and compliance among fishers, and indeed its continued existence and operation may be seen in itself as a success story.

**PEI Mi’kmaq fisheries**

As noted earlier, the indigenous peoples of Canada’s Maritimes, the Mi’kmaq, Maliseet, and Passamaquoddy ‘first nations’, play an important role in the region’s history and culture, and are now playing an increasing role in the commercial fisheries. This section describes how the two Mi’kmaq communities in the province of Prince Edward Island — Abegweit and Lennox Island — have been developing their commercial fisheries in recent years. As shall become apparent, recent situations are linked intrinsically to the historic relationship between the Mi’kmaq and the colonial (British) and post-colonial (Canadian) governments, a relationship first defined through treaties between the Mi’kmaq and the British Crown, and subsequently by Canada’s federal Indian Act.

Historically, the fishery was a central part of Mi’kmaq society, a major source of protein and a subject of trade and commerce. Fishing for subsistence has continued into the present and, in the early 1990s, a ruling by Canada’s Supreme Court (the so-called Sparrow case) recognized the rights of Canada’s aboriginal peoples to fish for food, social, and ceremonial purposes. Nonetheless, this did not halt the dwindling of Mi’kmaq participation in the commercial fishery, something that can be attributed to implementation of government policies, such as fleet licensing. The first nations’ desire to implement a commercial fishery was realized in 1999, with the Supreme Court of Canada’s Marshall decision recognizing the Mi’kmaq and Maliseet right to fish commercially (based on treaty rights) in a communal ‘livelihood fishery’.

As noted earlier, this has led to an increased Mi’kmaq involvement in the region’s fishery (Wiber and Kennedy 2001), facilitated by a government initiative to provide financial support for first nations’ transition into the fishery, and interim fisheries
agreements between DFO and individual Mi'kmaq and Maliseet communities. The focus of these agreements was primarily on harvesting activities, with little attention paid to other aspects of the fishery, in particular, management activities. However, Mi'kmaq leadership recognizes the nation’s responsibility for management of the resources, and traditional management systems were integral within the Mi'kmaq culture. These are based on the principle of Netukilimk—a traditional world view where all resources are seen as part of a web of connected living and non-living things, providing benefits to the community as a whole. Today, Mi'kmaq resource management efforts remain founded in the principles of Netukilimk, and Mi'kmaq leaders still recognize the management responsibilities associated with the right to harvest natural resources.

After the Marshall decision, the PEI first nations began a process of planning their participation in the communal livelihood fishery. It is important to note that in each community, fishery management (as with other governance matters) is ultimately the responsibility of the band council. Thus, each band set up internal consultations to determine the desired vision for their fishery and to develop band-level management systems. The Mi'kmaq Confederacy of PEI (MCPEI), the common forum for the two bands, coordinated this vision development. The PEI first nations established long-term priorities for their fisheries: (1) protection of Mi'kmaq treaty and aboriginal rights to access natural resources for the benefit of their communities and their members; (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, such as providing incomes sufficient to meet the moderate needs of fishers and their families; (4) establishment of local governmental and administrative structures and mechanisms regarding fishery decision-making; and (5) development and maintenance of harmonious relations with adjacent fishing communities.

An important tenet that the PEI first nations have built into their plans for fisheries development is that of pursuing a goal of employment and not profit generation. In other words, the objective is to establish and maintain a fishery where the number of band members employed as harvesters, fish handlers, and marketers, and the duration of work during any calendar year, are maximized subject to the band’s catch quotas. This development strategy has greatly increased the level of employment and accordingly reduced the level of dependence in the community on social programs. The bands have negotiated with the Canadian government to acquire access to multiple resources so that as the season for one species ends, fishers will change gear to target an alternative species and extend the duration of employment, all within conservation limits. This strategy requires that the species targeted be viable enough to provide returns sufficiently larger than the cost of fishing, since the fishery must not be an economic burden on the community but must generate enough revenue to meet the costs of fishing, provide enough revenue to meet the personal needs of the fishers, and provide sufficient surplus revenue to cover the management costs incurred by the community.

In developing the fishery management system, an arms-length approach to management decision-making was established, using community organizational structures to develop band-level management plans based on community needs and priorities, resource abundance and health, and market opportunities. These plans include policies and regulations that govern all aspects of the fishery including entry requirements, harvesting methods and seasons, distribution and sharing of benefits, and penalties for non-compliance.

An organizational structure was established in each community to ensure community control over the fishery—so individual band members, or non-native interests outside the community, could not compromise agreed-upon management objectives. In each community, the band council, through its fisheries sub-committee, appoints community committee members, reviews policy documents and fishery plans, and approves operational procedures and work plans. Band council approval of fishing plans occurs only after discussion and endorsement by the wider community, through open community meetings. This reflects the reality that all aspects of the Mi'kmaq fishery involve the wider community, beyond just the fishers, in protection, planning, allocation, research, and monitoring of the fishery resources.

The actual preparation of annual fishery management plans, as well as sets of rules by which commercial, food, social and ceremonial fisheries are conducted, is the responsibility of a community fisheries management planning committee. Finally, a harvesters' committee, comprised of all fishers, meets specifically to review and discuss proposed plans and regulations, sharing arrangements, markets and other day-to-day matters. This committee ensures that those most affected by management rules and regulations have a significant input into the decision-making process, but not full control of that process.

There have been three ongoing challenges in this process. First, despite best efforts to maintain a politically-independent management regime, the potential for political intervention has remained a reality in these small communities. The transition to an independent planning and management system has been greatly facilitated by the advisory and technical support from the MCPEI, but diligence on the part of the band council and committee members has been necessary to prevent local political intervention in the decision-making process. Second, the PEI Mi'kmaq experience in establishing local management capacity has not been without resistance from the federal government. Due to the first nations' dependence on federal funding programs, efforts to make local management decisions that may be in the best interest of the communities have been impeded by the need to accommodate policies and plans of the federal fisheries department that have a broader geographical focus.

The DFO has been slow to recognize and adopt the first nations' plans and to assist in enforcing band-level rules and regulations. Third, the rapid increase in first nations' involvement in the commercial fishery since the Marshall decision has placed a considerable demand on the human resource capacity within the PEI. As a result, some of the development efforts have been slow in progressing, as band members acquire the knowledge and skills necessary to be effective participants.
in the fishery. In some instances, bands have engaged external, non-native staff or entered into business arrangements with non-native companies that have created new dependencies for the community that have not always been well received by some sectors of the communities.

On the positive side, a significant development in building local fishery management capacity has been a community justice program (Customary Justice Group) that was established to ensure infractions to band and DFO management plans and regulations are dealt with in a manner that will promote compliance, be respectful to the communities as a whole, and ensure effective penalties are imposed where required. This is an example, like that of the community groundfish management boards described earlier, of how community-based fishery management can support conservation through improved mechanisms for enforcement and compliance.

In addition to developing fishery harvesting capacity and annual harvest planning, PEI bands have initiated business relationships in fishery marketing and marine supply activities. This is an important component of the community management system designed to promote conservation, treaty rights, employment and social wellbeing of the communities. In addition, band participation in marine research is promoted to strengthen their involvement in resource management. Finally, bands have undertaken coordinated management of fisheries, aquaculture, wharves, and ecotourism, recognizing the broader context in which the fishery fits into integrated marine and coastal management. In this regard, there has also been increased first nations participation in management activities with adjacent non-native communities and industry.

Linkage and support mechanisms for community fisheries

In this section, we examine three linkage and support mechanisms for community-based fisheries and fishery management in Canada’s Maritimes region: marine resource centers; the Centre for Community-Based Resource Management; and the Turning the Tide initiative.

Marine resource centers

Discussions of local-level and community-based fisheries management naturally focus to a considerable extent on fishers and their organizations and, in cases such as the Mi’kmaq fisheries described above; it is also crucial to explore the role of the broader community. There is often a third component in community fishery management that is less obvious but still crucial – the local community-based institutions that provide the capacity-building support for the fishers and their communities. This case study describes a set of marine resource centers established in the Bay of Fundy and Gulf of Maine area as mechanisms supporting local-level fishery and coastal management and conservation.

The first such initiative, in 1999, was the Bay of Fundy Marine Resource Centre (MRC), established by the Fundy Fixed Gear Council, a local community economic development agency, and a number of marine-related community groups, harvesters’ organizations, first nations, and others, all seeing the need for a local organization to support the marine economy and ecosystem in Nova Scotia’s Digby-Annapolis region. The MRC helps local marine-oriented groups develop the skills needed for defining problems, establishing goals and working cooperatively, and provides support services for these groups in conflict resolution, organizational development, facilitation, technical support, geographic information systems (GIS), and research. The MRC’s work focuses on six broad areas: (1) community-based resource management; (2) aquaculture; (3) marine tourism promotion and marketing; (4) digital data storage and retrieval; (5) training for aquaculture and fisheries; and (6) ecological, market, legal, technological, and social research relating to marine resources.

The MRC has provided support to a range of fisher organizations, fish processors, aquaculturalists, marine ecotourism operators, first nations, environmental groups, researchers, and governments. A major focus has been on fishery themes, to organizations such as the Fundy Fixed Gear Council, the Digby-Annapolis Clam Management Board, and the new Management Board in Lobster Fishing Area 34 of southwest Nova Scotia, as well as to Bear River First Nation, providing assistance in planning its fishery. The MRC has also worked at the scale of the entire Bay of Fundy in: (a) developing a Community Learning Network to provide technical, research, educational, and informational resources, and (b) supporting the Writing the Rules project to develop ecosystem-based management principles for the Bay of Fundy fisheries, based on input from fishers and their organizations.

The MRC experience points to some lessons on how to support fishery management at the community level. As a community-run institution, it essentially provides a “tool box” for local groups interested in local management. Emerging community fishery groups can draw on institutional capacity-building support (organizational, technical, or research-based) from an organization that does not have interests or an agenda of its own – it is purely an enabling agency. Without a local capacity-builder of this kind, it is very hard for a fishery to move forward. Indeed, the MRC has helped link local fishers to universities, networks, first nations groups, and other fisheries organizations as needed. It has also supported the development of organizations that address wider regional and bio-regional issues, such as the Saltwater Network, described below, and the Bay of Fundy Fisheries Council, which involved more than a dozen fisheries groups, and was able to create a plan for ecosystem-based fisheries in the Bay of Fundy. All these efforts seem likely to have increased the resiliency of community-based management in the Digby and Annapolis area and beyond.

There remains an ongoing challenge relating to funding. While the MRC provides valued services to local organizations, those organizations do not always have the financial capability to pay for those services. The MRC has relied on a
range of funding sources, including rental income from offices rented to community groups and government agencies, ‘fee-for-service’ income, for providing GIS mapping, technical support, facilitation and other support, funding from Canadian and US foundations, and funding from government grants provided for specific project activities. Nonetheless, there will always remain a concern about financial sustainability, and thus a need to explore new funding strategies. Some possible strategies include: (a) creating ‘one stop shopping’ capabilities to reduce costs and increase cooperation among groups; (b) working with university students, interns, or summer students to carry out research for and with communities; or (c) looking for additional fee-for-service opportunities. As with many other community-based organizations, risk in this continual search for funding lies in its potential to limit the options and/or drive the working of the MRC.

Funding limitations lie in part behind the failure of the MRC to achieve some of the goals it had identified at the outset — such as setting up a research facility with a wet lab, and a fully-staffed marine information and referral center. On the other hand, the lack of these facilities may be because local groups were not demanding this form of support. Fundamentally, the question is: has the MRC’s work had a significant effect on the health of economies and ecosystems of the region? Beyond the obvious benefits to local organizations, broader benefits are much harder to identify, and to measure. This may point to the need for a greater focus on evaluation of MRC performance in the long term.

The MRC is part of an expanding network of citizen-run place-based marine resource centers in the Bay of Fundy and Gulf of Maine region. Efforts are underway to establish three new marine resource centers in the Canadian Maritimes: in St. Andrews, New Brunswick; the Upper Bay of Fundy region of Nova Scotia; and the Acadian region of southwest Nova Scotia. There are also marine resource centers formed or forming in the US, such as the Cobscook Bay Resource Centre in Eastport, Maine, and another in Stonington, Maine. This provides the potential for a coordinated local-level approach to marine conservation and management in the Gulf of Maine.

Indeed, an important outcome of the collaborative work between resource centers in the Gulf of Maine region has been the creation of Saltwater Network. This organization was established to support the development and growth of community-based ocean and coastal management in the Gulf of Maine, to increase peer learning and cross-fertilization among organizations involved in community-based management, and to fill the gap of a lack of significant government support for this work on either side of the Canada–US border. Saltwater Network provides small grants to resource centers, fisher groups and others, through funds from Canadian and US foundations, to support community-based management in the Gulf of Maine, and to support convening, capacity-building, and access to learning opportunities, including using bursaries to attend learning events. Established to support local activities within a broad ecosystem, it is still in its early days, but has so far been able to successfully channel financial support to a range of local-level conservation and management initiatives.

Centre for Community-Based Resource Management

In 1998, in large part in response to the initiation of community-based management in the Scotia–Fundy fixed gear groundfishery described earlier, the Centre for Community-Based Resource Management (CCBRM) was established at St Francis Xavier University. The CCBRM drew on the university’s strong history (since the 1920s) of supporting the development of adult education, cooperatives, and credit unions in the Maritimes, through the ‘Antigonish Movement’. Indeed, university outreach staff saw the present-day implementation of community-based management in the Scotia–Fundy groundfishery as a natural evolution of the cooperative movement in the face of globalization and increasing privatization of natural resources.

One of the first initiatives of the CCBRM in the 1990s was a needs assessment with the groundfish management boards in order to evaluate ways to advance their capacity for community-based management (Kearney and MacIntosh 1998). The Centre also supported in various ways the formation and operations of the Bay of Fundy Marine Resource Centre, and is currently leading the establishment of the new marine resource center in St Andrews, New Brunswick, referred to above. In addition to its work in the Bay of Fundy, the CCBRM also supported community-based fisheries management in Guysborough County, Nova Scotia. This involved working with the Guysborough County Women Fisheries Enhancement Association, an organization of women fishers and fisher spouses that provided support for the groundfish community management board in that area, among other initiatives (GCWFEA 2001).

As with marine resource centers, the CCBRM plays a linking and support role for community groups, as an independent third-party organization that is able to facilitate multi-stakeholder meetings and act as a mediator in conflict resolutions. It also provides training and capacity-building resources, a training program in community-based resource management, and support for community-based research — such as a cod tagging study in the Bay of Fundy, and a compilation of fisher knowledge on spawning areas and local stocks (Graham et al. 2002).

A rather unique contribution of the CCBRM in the Maritimes arises out of its dual role in working with local organizations and communities and, at the same time, working with their counterparts in developing countries. This enables the CCBRM to provide north–south linkages between fishers in the Maritimes and those in developing nations. Such linkages to fishers and countries where community-based management is the dominant form of management and is supported by government policy have proven extremely important for Canadian fishers — given their situation within an environment of little government support for community-based management and a largely privatized Canadian fishing industry. This networking not only offers new ideas and tools for community management but also helps to situate Canadian fishers in a wider global setting of conflicting economic, social, and ecological values.
One of the potential advantages of a university-based resource center is its larger funding base and long-term presence in a region. However, cutbacks in governmental funds available to universities in Nova Scotia placed the CCBRM in the position of having to externally raise much of both its core and program funding. It thus developed many of the same issues around funding described above for the Bay of Fundy Marine Resource Centre. To make matters worse, the community-based and university-based resource centers were essentially competing for a limited pool of funds from similar sources. Even when there was clear differentiation in the roles played by each, there was not enough Maritimes-oriented funding to support both types of centers in local work. In response, the CCBRM turned more and more to international work, where funding was more readily available, which alleviated competing for funding with its community partners.

Another disadvantage of a university-based resource center is its lack of accountability to the broader community. At least in this particular case, decision-making is entirely internal to the university administration. Even when there is community input, it is of an advisory nature. Thus, if the CCBRM is to provide a significant and stable contribution to community-based fisheries management, the university will need to find a way to provide a secure funding base and develop a partnership with the community such that it can have a real influence over decision-making.

**Turning the Tide**

The 1999 Marshall decision created real opportunities among Mi’kmaq communities, as described earlier, with significant social and economic development through increased fishery access. It also created opportunities for participants in the Maritimes inshore small-boat fishery, many of whom are involved in the community management boards described earlier. These fishers had undertaken major efforts to develop community-based management, but with little official support. They are finding common ground with some Mi’kmaq communities in the region, ones with an expanding role in commercial fishing and a shared desire for more locally-based fishery management and more emphasis on place-based and ecosystem-based management.

This has led to new linkages and cooperative endeavours between Mi’kmaq first nations and community-based non-native fishing organizations. One such linkage is ‘Turning the Tide: Communities Managing Fisheries Together’, which has sought to support capacity-building for community-based fishery management, and at the same time to build linkages between native and non-native participants in the fishery.

Turning the Tide involves several participating organizations described earlier in this paper – the Fundy Fixed Gear Council, the Mi’kmaq Confederacy of Prince Edward Island, the Bay of Fundy Marine Resource Centre and the Centre for Community-Based Resource Management – as well as several other organizations and communities: Acadia First Nation and Bear River First Nation (the two Mi’kmaq bands in southwest Nova Scotia), the Bay of Fundy Inshore Fishermen’s Association and the Maritime Fishermen’s Union, Local 9 (the two fisher associations making up the Fundy Fixed Gear Council) and Saint Mary’s University, in Halifax, Nova Scotia. Turning the Tide provides these participants with a forum to discuss issues, principles, and values relating to community-based management, as well as to identify common issues, priorities, and strategies. It also supported educational and capacity-building efforts, such as workshops, study tours, training courses, and resource materials, the establishing of regional, national and international links, and concrete activities ranging from the development of fishery management plans to the production of a community fishery management handbook.

Turning the Tide participants – coming from native and non-native communities that may well have had little interaction historically with one another – see the initiative as a helpful ‘safe place’ for participants to meet, with no strings attached. In particular, this was apparent in a set of study tours carried out within the initiative, where Maritimes participants travelled together to Canada’s Pacific coast and around the Gulf of Maine. These trips helped to develop bonds among participants, to develop linkages regionally and nationally, and to produce a set of new community fishery approaches, through discussions in mobile workshops held along the route of the study tours (Fig. 13.3). The team-building phenomenon also led to local work on specific initiatives, as in the support provided to Bear River First Nation by other participants – from facilitation of a process to formulate their fishery development and management plan, to providing a fishing vessel for their first post-Marshall involvement in the commercial lobster fishery.

Turning the Tide differs from the support mechanisms described earlier in that it has been funded entirely through one source – a Pew Fellowship project of
the US-based foundation, Pew Charitable Trusts. This has had both positive and negative implications. On the one hand, it enabled activities to take place independent of governmental constraints and, it could be argued, these activities might have been simply impossible if government were involved. On the other hand, because the federal government in Canada has nearly absolute power over fisheries management, it is essentially impossible for an activity such as this to take on actual management efforts in the absence of governmental involvement — although it certainly was possible to engage in useful capacity-building and knowledge-oriented work. Furthermore, the lack of interaction with government may have caused the initiative to miss out on larger-scale effects, such as on government policies and related government work. Thus the type of independent initiative reflected in Turning the Tide cannot be seen as a model for local self-management by itself, but rather as an effective tool for relationship-building and grass roots capacity-building.

Conclusions

At the start of this chapter, two major benefits of community-based management in fisheries were noted:

1. CBM can serve as a mechanism to orient fishery operations around community needs, one that helps improve efficiency and equity in the fishery and the community, resolve conflicting resource uses, and counter trends toward the centralization of control over the fishery that can have a negative effect on coastal communities.

2. CBM can support marine conservation and sustainable development in fisheries, by better utilizing traditional and local ecological knowledge, and empowering resource users, fisher associations and communities, leading to better acceptance of conservation measures and thus improved compliance.

This closing section examines the extent to which the examples provided in the preceding section have demonstrated these benefits.

Orienting fisheries around community needs

There are indications that both the Mi’kmaq fisheries and the community management boards have improved efficiency and equity in their fisheries — better avoiding the ‘rush for the fish’ and better distributing fishing opportunities, to meet a locally-determined sense of equity. On the other hand, there is an increased burden on the organizations and individuals involved, in terms of time and resources needed to maintain the new institutional arrangements. Communities have also been supported through limits on the centralization of fishery control that have come from (a) maintaining the small-boat fishery, in the case of the boards, or (b) building the economic base of rural aboriginal communities, in the case of Mi’kmaq fisheries. It would also appear that in responding to the needs of community fisheries, the support mechanisms described earlier played a constructive role.

The question of whether the case studies reflect success in ‘orienting fishery operations around community needs’ requires additional exploration. Recall that development of commercial fishery activities in aboriginal Mi’kmaq communities arose as a result of a Supreme Court of Canada decision recognizing the right of Mi’kmaq to fish for a ‘moderate livelihood’. The court decision in fact recognized the authority of Mi’kmaq communities to administer this right, thus entrenching the community-based nature of Mi’kmaq fisheries. This forced the federal government, which is much more accustomed to working with individual fishers and their associations, to deal directly with communities. This reality contrasts with the community management boards that operate within geographically-defined areas, as in any community-based approach, but do not necessarily involve those in the local communities apart from the groundfish fishers themselves. In some cases, as with the Fundy Fixed Gear Council, there is an allowance for involvement of non-fishers in the boards, but in general it is reasonable to conclude that Mi’kmaq fisheries have an inherently higher level of community involvement. Indeed these fisheries, as in the case of the two Prince Edward Island first nations, are managed through community governance bodies, rather than through a fisher organization. This strong community governance is reflected in the close linkage between fishery operations and community objectives, so that in such cases it is clear that fishery operations are indeed explicitly oriented to meeting ‘community needs’.

Supporting marine conservation

While this chapter has focused primarily on the human dimensions of community-based fishery management, underlying these aspects is the fundamental importance of CBM to conservation of ocean resources, and the resulting sustainability of resource use over time. As noted above, CBM can support marine conservation through a combination of ingredients.

First, community-based management can fully incorporate the local understanding of the fish stocks and ocean environment. The Fundy Fixed Gear Council represents a strong example of this: its member fishers, operating in the unique ecosystem of the Bay of Fundy, have the familiarity with that system on which wise management depends. The FFGC is able to directly build on the local ‘traditional ecological knowledge’ of the fishers in designing its management plans. Both the FFGC and the PEI Mi’kmaq communities are also involved in research activities, in some cases in conjunction with marine resource centers and university support mechanisms, demonstrating a further involvement in the management system and a link between the local knowledge and scientific research.

Second, the fishery case studies described in this chapter are strong examples of how empowerment of fishers and their associations and communities can improve
the acceptance of conservation measures, and thus the compliance with management rules. In the case of the FFGC and other community management boards, the development of infractions committees involving board members themselves, which penalize the breaking of the fishing rules they set, has been a highly significant and successful innovation. In the case of the PEI Mi’kmaq fisheries, similar home-grown processes to deal with infractions are incorporating aboriginal values, thus respecting the cultural aspects of the communities.

Third, the progress toward community fisheries described here also provides an indirect conservation benefit in supporting a shift toward a more diversified livelihood base for fishers, households and communities. The idea is that diversifying income sources reduces pressure on individual fish stocks by spreading out the fishing effort, and reduces pressure on the fishery as a whole by diversifying to other sources of livelihood (Charles 2004). This is particularly apparent in the use by Mi’kmaq communities of fishery development funds to develop a diverse economy through (a) acquiring access to a range of fish stocks, and (b) initiating a diverse set of coastal economic activities.

Synthesis

The three fishery case studies of this chapter can be usefully compared and contrasted. Major similarities are that: (1) all represent successes, in their own way, in the implementation of community-based fishery management; (2) all developed initially within a context of turmoil (for the community management boards, following a period of widespread protest, and for the Mi’kmaq fisheries, following the court’s Marshall decision); and (3) all involved a management framework that allowed for a strong diversity of approaches (between boards or between first nations), reflecting the desired capability for grass-roots adjustments to reflect local conditions.

Two key differences are important to note between the cases examined here. First, while the community management boards have been widely accepted and institutionalized, their existence has not been enshrined in legislation, and therefore remains somewhat at the whim of the government. In contrast, the Mi’kmaq fisheries reflect a formal right, and a Supreme Court decision. This may well have provided the Mi’kmaq bands with a greater level of confidence in their negotiations with the federal government than might have been the case with the boards.

Second, a major difference exists with respect to financial support provided by the government. On the one hand, the boards have received little such support, and indeed, it is often argued that their formation served the government’s goal of downsizing its management services and downloading management costs onto fishery participants. The situation was very different in the case of the Mi’kmaq fisheries, with the federal government recognizing the need to redress a situation where Mi’kmaq communities had been excluded from the fishery for many years, and thus lacked the capital for fishing once their right to do so was recognized. Therefore, government negotiated with each band an agreement by which, in return for the band agreeing to abide by the government’s fishery management scheme, a certain number of boats and fishing licenses (purchased from non-native fishers) were assigned to the band, and further funds were provided for the purchase of equipment. In this way, the communities generated the capacity not only to enter various fisheries, but – as described earlier – to become involved also in a range of related activities, such as fish processing, tourism, and other economic development. The success of these efforts suggests that providing such support for broad-based developmental initiatives within other fishing communities would be a useful addition to government policy.

Overall, the examples in this chapter reflect progress toward community-based fishery management in Canada’s Maritimes. The groundfish management boards, while limited in the scope of their management responsibilities and in their level of community involvement, have proven to be resilient organizations for local or geographically-defined management, ones maintained without outside financial support. The Mi’kmaq fisheries, while initially reliant on federal government financing, are becoming self-reliant, are strongly community-based, and are successful in their key goal of providing sustainable livelihoods for their community members. Significantly, both the boards and the Mi’kmaq communities operate their fisheries within the context of co-management and within the constraints of conservation. This has been supported by development of marine resource centers and a broad support and communications network reflected in the cases of this chapter.

As noted earlier, the cases described here do not reflect the typical experience in the Maritimes region, where the majority of fisheries are not managed on a community basis. Indeed, the federal government’s fishery management regime has tended to resist movement in that direction. To the extent that the cases here reflect successful community-based management, it is important to recognize two key determinants. One major factor has been pressure on the government, arising through a large-scale protest by fishers on the one hand, and a fundamental court decision forcing the government to take a community approach in dealing with aboriginal fisheries on the other hand. A second key factor has been the support mechanisms available in the Maritimes, as described in this chapter, which are important vehicles for facilitation, conflict resolution and knowledge gathering needed to make community approaches work, particularly in a context of limited governmental backing. The availability of such mechanisms, combined with the knowledge and determination of the region’s fishing peoples, may well continue to produce successful conservation-minded community approaches to fishery management into the future.

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FISHERIES MANAGEMENT
Progress Towards Sustainability

Edited by
Tim R. McClanahan and Juan Carlos Castilla

2007

Blackwell Publishing