Who Gets the Fish?

Proceedings of the New England Workshops on Rights-Based Fisheries Management Approaches

June 10, 2003 - Portland, ME
June 11, 2003 - Portsmouth, NH
June 12, 2003 - Groton, CT
June 13, 2003 - Narragansett, RI

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"One attractive aspect of the cooperative scheme is the ability of a group of boats to get together and demonstrate, through use of appropriate gear technology, that they could reduce bycatch. This might allow the group to have a higher quota. It would challenge people in good ways."

—*Workshop participant*

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The key message emerging from these workshops is that rights-based fishery management discussions should be expanded to examine all the choices, and that no one form of use rights is superior in all circumstances. Much may depend on the type of fishery people envision and the amount of responsibility they are willing to assume in achieving that goal. Most importantly, it may be a matter of trying to create an atmosphere where people believe in the system in which they are working.

Introduction

Margaret Petruny-Parker, Rhode Island Sea Grant Program

In the United States, fisheries management practices are founded on the public trust doctrine whereby all Americans are considered owners of the fish in the waters off the coast, with the government acting as a representative in managing fishery resources. However, declining fish stocks, more restrictive management measures, and decreasing profitability in some sectors have resulted in a movement toward limiting access to fishing, a first step in rights-based management. This privilege to fish, or user-rights approach, can then take on a variety of forms depending on how exclusive the right becomes, the level or entity to which the right is allocated, the transferability mechanisms attached to the right, and the criteria used for assigning the right initially.

In June 2003, Sea Grant Fisheries Extension programs in Maine, New Hampshire, Connecticut, and Rhode Island hosted a series of workshops titled, "Who Gets the Fish? Rights-Based Management Approaches." Part of a larger series of fisheries educational workshops centered on key fisheries management issues, the rights-based management approach workshop was aimed at providing a general overview of the different types of rights-based fishery management options, beyond the individual transferable quota (ITQ) systems most widely talked about. As with the other workshops in the series, this workshop provided an opportunity for fishermen, managers, scientists, environmentalists, and others interested in the issue to come together to review information and begin discussing how this information might apply to fishery management practices in New England. Specifically, participants in the workshop reviewed the range of rights-based management options available and examined case studies of rights-based approaches in use elsewhere with an eye toward the impacts associated with these methods.

Each of the workshops focused on presentations by four speakers who provided a general introduction to the concept of rights-based management, an in-depth view of the different types of rights-based approaches, and case study information on two forms of rights-based management—community-based management and cooperatives. At two of the workshops, panel discussions followed the presentations, with panelists and members of the audience responding to the information presented and offering their views on the applicability of the information to fishery management practices in their area.

The following document is a composite summary of the four workshops and includes an overview of each of the presentations along with the accompanying comments, questions, and answers generated at each workshop. Also included is a summary of the panel discussions that took place in Maine and Rhode Island. At the end is a general summary of the common themes that emerged from all four workshops.

Part I

Overview of Rights-Based Approaches

Traditional Fishery Management Measures vs. Rights-Based Approaches—Why Rights-Based Management Is Being Considered

Presented by Robert Pomeroy, Connecticut Sea Grant Program

Who Owns the Fish?

In the United States, the public trust doctrine states that the American people own the fish in the Exclusive Economic Zone (EEZ). Public trust includes the idea of free access or the public right to fish. But no one can have exclusive ownership of the fish until they are captured. It is the government's responsibility to act as a representative of the people to manage the resources. However, with our fisheries in crisis, these ideas are at a crossroads. The public trust doctrine makes restricting public rights to access difficult. Public interest in the resource has been based on the idea that those who invest their labor and capital in fisheries have priority rights to them. The public and private sectors both benefit from a healthy fishing industry. And the public interest is expanding; there are commercial and recreational fishing industries but also conservation and environmental communities. To become profitable, the fishing industry must move toward management that allows exclusion and places effective limits on access to fishing. People question the management structures: Where does the public trust begin and end? Can government give away rights to public trust fisheries? Can it create exclusive rights or privileges to fishing? Does rights-based management amount to a giveaway of public resources to private interests?

Rights-Based Management

The public trust doctrine allows government to lease, grant, and sell public resources—oil, mining, aquaculture—as long as it does not unduly harm public interests. Privatizing fisheries means assigning rights (property, use) to individuals, businesses, or communities. Property is composed of a bundle of rights (access, withdrawal, exclusion) that can be allocated to users. In the past, an individual fisherman held only one exclusive right: the right to own the fish he caught. Other rights were held in common. As fish became scarce and competition and conflict increased, the need to regulate prompted rules such as control of certain gear or closure of the fishing season. As it became clear that regulatory techniques were not effective, the idea of restricting access to the fishery was introduced.

There are a number of ways to restrict access, including limited entry (licensing), territorial-use rights, effort rights, and harvest quotas. Rights to some fisheries have been made more exclusive by assigning individual fishermen the rights to catch a specified share of the total allowable catch. Creating individual rights that can be bought and sold is an attempt to create benefits by converting most of the sticks in the bundle of rights from shared to exclusive rights. ITQs are a form of individual rights where the owner has exclusive rights to participate in the fishery, take a certain portion of the fish, and sell or lease the rights to others. However, these are limited rights, defined in law, whose ultimate ownership remains with the public. Group ownership of fishing rights by communities, cooperatives, or corporations is also possible.

Establishing property rights to fisheries creates stable expectations among users and managers. It provides owners with an incentive for long-term sustainability. The government retains the responsibility to conserve fishery resources for the public, who is involved through the management process. When fishing privileges are limited, the public gives up the stick of free access. Rights-based management involves limiting access to the fishery, but it creates self-interest that fosters stewardship. It also creates winners and losers. There is a fear that fishing rights will become concentrated in the hands of a few owners. The public interest is ill served when limited pools of people gain more and more power over access. Community ownership may be more acceptable. But there is also a concern that continued open access will lead to more overfishing, overcapitalization, and loss of profit. Rights-based systems depend on the design of the management approach, the specified exclusiveness of the right, the conditions under which it could be transferred, and the basis for

the assignment of the rights. The assignment of rights not only to fishery access but also to a specified share of the catch is a controversial issue. Individual fishing rights or property ownership does not automatically lead to better stewardship. It depends on the mentality of the people who participate. Property rights approaches to fisheries management are not new; they have existed for centuries. As the trustee of fishery resources, the government may assign exclusive rights to the resources only if it is in the public interest. Rights-based management approaches already exist in many fisheries. However, it may not be appropriate for all fisheries.

Concluding Remarks

The choice of a rights-based management approach will depend on many factors—social, economic, political, and biological. If this approach is taken, managers and fishermen must work together to identify the form of rights-based management that will work best for the fishery based on its history, the attitudes of the fishermen, and the nature of the resource.

Comments and Questions

- **Q:** Would you equate all limited access fisheries as rights-based fisheries?
  A: Yes.
- **Q:** There is a big difference between fishing and the rights involved with mining the seafloor or drilling for oil because these are sold to benefit the public. With fishing, it is not sold. The people who catch the fish are the people willing to put the money into boats, nets, etc. Once they catch the fish, the fish are theirs. There is no payback to the government.
  A: There is a debate about whether fishermen should be paying the government for access to the fishery. Fisheries are one of the only resource uses in this country that does not pay. Forestry pays. Grazing pays. Water use for aquaculture pays. Fisheries do not pay for use of the public resource.
- **Q:** You did not mention whether these rights would be given away to create instant millionaires or whether there would be some sort of system to share the rent either up front or through taxation.
  A: I just wanted to set out the general structure. That will be covered in other presentations.
- There are license fees in Canada and that might be considered as some sort of rent. However, aquaculture sites cost nothing. It may play out differently in different places.
- Under the concept of group ownership, there could be a community development corporation model.
- **Q:** Could you give us an example of a fishery for which rights-based fishing would not be appropriate?
  A: In some cases, communities may not be willing or able to take on the work and responsibility associated with a transfer of management authority. It takes time to go through the social preparation involved in doing this. In the short term the costs associated with doing the work may outweigh the benefits.

Rights-Based Fishery Management: A Focus on Use Rights

Presented by Anthony Charles, St. Mary's University, Halifax, Nova Scotia

Introduction

There has been a lot of discussion about ITQs, and economists keen on studying the impacts of ITQs have fostered the discussion. But other alternatives should also be examined. People see the need for a change in fisheries management approaches, but they are seeing only one option because of the exposure to this one option. Rights-based fishery management discussions need to expand to look at all the choices.

Fisheries managers are often looking at what can be done to limit fishermen's activities, but there is a need to consider how to provide for rights or privileges. Issuance of fishing licenses can be talked about as a "right," but it is a "privilege" given by the government. The terms, "rights," "privileges," and "responsibilities" are often meshed together. In Canada we have several examples of rights-based fishery management.

Two kinds of rights are most important in fisheries: *Use rights* deal with who has the right to "use" the fishery (i.e., to go fishing) while *management rights* address who has the right to manage the fishery. Management rights are crucial in fisheries; the holder of the rights will vary depending on whether one is

talking about big policy issues—what the fishery will look like in the future—or specifics, like deciding on hook or mesh size in a fishery. Use rights—the focus here—concern how access to the fishery is restricted, the amount of fishing effort each participant is allowed, or the catch each can take. Those with such entitlements (whether individuals, groups, or communities) are said to hold use rights, while all others do not have the right to use the fishery. In practice, a management measure (e.g., number of traps a fisherman may use in a lobster fishery) can be seen as a restriction (negative) or a use right (positive)—the fisherman having the right to use that number of traps.

Choosing a Use-Rights System

Figure 1. Use-rights assessment process

It is important to remember that no one form of use rights is superior in all circumstances. The choice will depend on society's objectives, the fishery structure, history and traditions, social and cultural factors, the economic situation, pre-existing rights, political realities, and fish stock realities (Fig. 1).

There are two primary considerations when choosing a use-rights system: the type of use right and the level at which the use rights is held. The types of use rights can be divided into two categories: *access rights* and *withdrawal rights* (Fig. 2). Access rights cover territorial use rights in fishing (TURFs) and limited-entry access rights. TURFs are rights to specified fishing locations, such as informal rights for lobster fishing. Limited-entry rights are those assigned through licensing to limit participation in fishing. This can be an effective first step in generating economic benefits by slowing expansion of capacity, but it does not resolve all fishery management issues (e.g., the "rush for the fish"). Withdrawal rights are divided into input rights (effort limits) and output rights (catch quotas). Input rights are numerical rights pertaining to use of a certain amount of fishing time or gear, a certain boat size, etc. An example is number of lobster traps per fisherman. These rights may provide cost-effective management, minimizing waste. Effort limits increase incentives to expand uncontrolled factors, but they require adjustment because technological change increases fishing effectiveness. Output rights are numerical rights to catch a piece of a total allowable catch (TAC). This can exist as community quotas, such as the Canadian Maritimes groundfish fishery, or as individual quotas, such as individual nontransferable quotas (INTQs) or ITQs. Output rights may reduce the race for the fish, reducing overcapitalization. But these rights also increase the incentive to underreport catches, and to dump, discard, or high-grade, thereby increasing waste of the resource.

The second consideration in choosing a use-rights system is the level at which use rights are held. Use rights may be held by a fishery sector, fishery organization, cooperative, community, private company, community development corporation, or an individual fisherman. The level of use rights is a crucial choice, as it can dramatically affect the impacts of use rights on stakeholders and communities, and the choice may be essentially irreversible. Irreversibility is especially an issue if rights are allocated at an individual level. In contrast, community-based rights are allocated geographically rather than to individuals. Fishermen (and their communities) create and enforce management plans and allocate rights in keeping with the local situation. An example of community-held rights in Canada is that seen in the lobster fishery off the coast of Cape Breton, Nova Scotia. A dispute over fishing territories led to consensus that areas would be divided based on land-access or connection to the ocean, and an area would be set aside as a common area to be used by those who might come upon hard times and need access to go fishing. Another example in the Canadian lobster fishery was based on the Marshall decision, which recognized the rights of aboriginal people to fish commercially. This resulted in individuals within communities pooling together their allowable lobster traps and deciding how to fish.

In making a choice, there are numerous issues to consider: How should use rights be allocated initially? Should market forces decide who gets the use rights? Should use rights be individual- or community-based? What should be the duration of use rights? Should use rights be transferable?

If one is trying to create a rights-based management system, the reality is that if rights are assigned to individuals, working the rights into a community-based level is unlikely. Once the rights are individualized,

they become dispersed. To proceed in the opposition direction—such as with the fixed-gear groundfishing sector in the Canadian Maritimes where the TACs were divided and assigned to community management boards—allows great diversity in how each board deals with its package of fish. Some have tried to maintain a community focus and maximize the value of the fish available to the whole community. Others have chosen an ITQ route. Some have INTQs. This diversity is not possible when the choice is to begin by dividing to the individual level. The order in which changes are made is important.

Canada's Atlantic Groundfish Fishery

An example of a use-rights system is found in the Canadian groundfish fishery. Within that fishery, however, each sector has chosen a different level to assign rights. The offshore sector uses "enterprise allocations," which are corporate quotas. Introduced in the early 1980s, these allocations were meant to stabilize the fishery but now are being sold between companies. The fixed-gear sector utilizes community quotas. These have led to a variety of arrangements of rights sub-allocation among fishermen in each community. Lastly, the mobile-gear sector employs ITQs, which were meant for individual, independent fishermen, but have become processor-controlled quotas held by about six companies. Often, transferability of rights occurs whether desired or not, leading to a concentration of rights. The examples of rights-based approaches in Canada demonstrate that, once a system is set up, there can be unexpected effects. For example, processing companies can find ways to control individual quotas so that fishermen become puppets of the processing company. With the allowance of transferability, one can expect a concentration of fishing effort, leading to the inability of some to be successful and will choose, or be forced, to get out of the fishery.

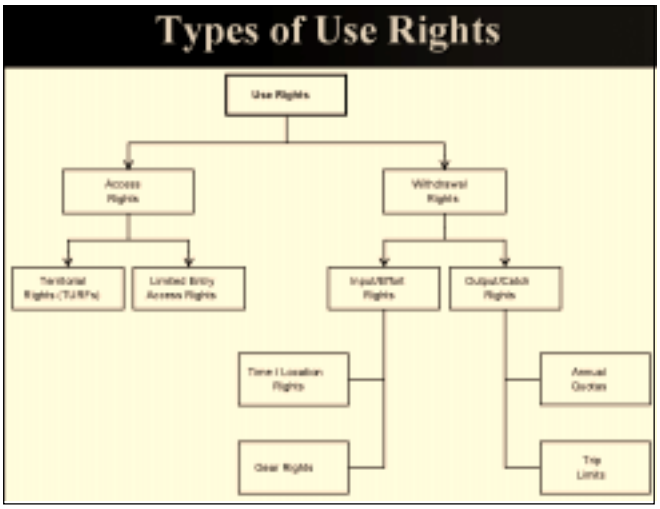

Figure 2. Types of use rights

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Comments and Questions

- **Q:** In looking at the flow chart for the use rights assessment process, it appears that what is missing is the idea of economic modeling. I would assume some economic modeling would have to be included.
  A: That is a good point. I am a natural resource modeler by background. Biological, social, and economic realities do form the foundation for the decision-making process. There has been a lot of economic modeling of ITQs. They are handy to model. Fishermen are treated as companies as in supply and demand analyses. It is more difficult to model the differences between individually based rights and community-based rights. Within a community-based system there is a whole range of options of how to allocate to the individual level, making the modeling more difficult.
- The modeling when you get to a corporate right involves a number of questions, such as what happens to the dealers, the market price, the community infrastructure. We need to look at socioeconomic impacts in addition to biological impacts.
- In the end you need some kind of cost-benefit analysis of all of these various options.
- **Q:** Under community-based management, what entity is actually recognized by Canadian law? Is it geographic communities or government boards that define a community?
  A: Under Canadian law, none of that is recognized. It is all in the regulatory framework of how the Department of Oceans and Fisheries is operating. It is more of an administrative process rather than a legal process. It is currently under review.

- **Q:** There is interest in this country about the option of INTQs. Do INTQs have value to fishermen when they want to get out of a fishery? Could you expand on how that is being carried out?
  A: The question about value is an important one. It is hard to say what you could sell the quota for when you cannot sell it. It is a matter of security of holding that quota over time. There are a number of ways that the INTQ is administered. Sometimes you can sell on an as-needed basis, such as a temporary transfer. Individuals within a community with a government management board may not be able to transfer quota to another individual in another community under another management board unless both boards agree to the transfer. Also there are ways around INTQs. An example would be when one company decided to close down its fish plant and shifted that quota to be caught to another community. It was able to do this because it was a company quota not assigned to a location.
- **Q:** In New England, some of the regulations are based on days at sea. There is talk about being allowed to lease days at sea. It seems as though days at sea have become property rights like quotas.
  A: The issue of transferability will be there with a days-at-sea arrangement as well.
- There can be some positive impacts associated with consolidation in fisheries that are overcapitalized. Making rights transferable can be thought of as giving people a choice to be able to get out.
- **Q:** Shouldn't we be asking ourselves what we want a fishery to look like?
  A: Yes, that is a first step.
- **Q:** In recent discussions with staff from NMFS and the director of the New England Fisheries Management Council, I found they did not know what the fishery should look like—there was no clear vision.
  A: Fishermen in certain fishing sectors in certain areas within Nova Scotia do have an idea of what they want their fishery to look like. Those visions tend not to look the same, but they have been able to pursue different paths because the decision was made to allocate to communities. Maybe there is no single view of what the New England fishery should look like; maybe you have to focus locally.
- **Q:** It is also a matter of how detailed you want to get in determining what a fishery should look like.
  A: There are different issues and different levels of discussion. Local decisions in Canada tend to be related to the more detailed questions, such as how gill nets will be used, when fishing is going to take place, etc. Broader questions about fishery management options, such as the future existence of ITQs, are addressed on the government level.
- **Q:** Are there management models that reward people for conservation? For example, people who choose not to pursue a species that is in trouble by modifying their gear or avoiding certain areas run the risk of being penalized when historic catch records are used to allocate that species. Can conservation credits be issued?
  A: It may involve the idea of stewardship rights. An example of this is in Cape Breton where the community decided to reduce the number of traps as a conservation measure. They could see that in the long run they would benefit. With groundfish it may involve population models and being able to track a community's fishing practices and associate this with stock availability. Maybe there is a way of bookkeeping to assign credit.
- **Q:** When ITQs or the regulations behind them are formulated, language can be put in place to prevent people from elsewhere, who have no interest in the fishery, from buying into the fishery. A fishing permit could be required. There is the fear that someone, say in Kansas, will buy up shares of quotas and have no interest in the fishery other than financial gain.
  A: It is a worry. I would have tended to disagree with you a couple of years ago but now I have seen the results in Canada. Some in Canada simply sit back and collect their checks.
- **Q:** Were safeguards put in place in Canada to prevent this?
  A: Yes, but these safeguards were bypassed. Non-transferability clauses have been bypassed. Trust agreements have developed. Fishermen have become nominal owners of the boats.
- **Q:** Can a processor sit on a management board?
  A: A processor cannot have a share but he may sit on a board—it is up to the particular board. Management boards tend to be driven by the fishermen, and processors support the management boards.
- **Q:** With community quotas, decisions are made regarding who, when, where, and how fishing takes place. Who makes the decisions on the ITQ level?
  A: At the ITQ level, the management board puts little focus on policy issues. Once at individual level, you loose the potential for the group to work together.
- **Q:** Are size and trip limits decided by the government?
  A: The government works with associations to establish ground rules.
- An advantage of having an allocation of quota is that there is less need for input controls.
- In the lobster fishery, we have certain areas that have Lobster Conservation Management Teams. The government says you must get to this target and the teams in individual areas decide how to get there. This is brought to the Lobster Management Board that says yes or no. It is not always perfect. This is

the same type of thing you [the presenter] are describing. It seems to work. But we are not given quotas.

- **Q:** Could you define the word "fishery"? Does it refer to a marine geographic area?
  A: It is defined by what people think of as being the fishery. For example, we sometimes talk about the Maritime Canadian lobster fishery. This includes the lobsters, the people fishing for them, the buyers of lobster, and the ecosystem that the lobster lives in. A "fishery system" goes to the consumer level—I do not usually think of a fishery going that far.
- **Q:** In a rights-based fishery management approach, only the commercial fishermen get to decide how to manage the fishery. The resource belongs to all of us. When do the rest of us get to say something?
  A: That is where the idea of management rights comes in. There are two different aspects of managing the fishery. For example, the types of hooks to be allowed is one level of decision making. Non-fishermen are probably not going to have much say in that. But there are other issues, such as should we have input or output rights? Should we rely on quotas or on gear limits? Should we have transferable rights? These kinds of issues affect everyone. The big issues are the ones that should be widely discussed. It depends on the type of decision you are talking about.
- The subject is just so broad. Limited access is difficult. When is the right time to incorporate rights-use management? Historical landings drive the quota management system in Canada. What you did in the past determines the future. Canadians need to look back and assess this approach and what it has generated in terms of the haves and the have-nots. There is a fear in this community of who gets what.
- There are mixed reviews in Canada. You have to dig deep to see all the impacts. There are winners and losers. Boat owners who were forced out because they did not have enough quota to make a go of it did receive some money when they sold out. But you also must consider impacts to the crew, boat repair businesses, etc. The community approach has developed a good sense of involvement.
- **Q:** In this country [the United States] we have many different institutional entities involved in managing fisheries. When you have this kind of complexity involved, how do you develop a coherent system?
  A: There are many options available. My concern is the feeling that our system is not working and there is only one other option. This does not answer your question about the large number of institutions but having these kinds of workshops gets a discussion going.
- **Q:** In Canada, do fishermen have to keep all their catch?
  A: If you are caught dumping fish you are penalized. If you are fishing in a mixed species situation, you have to stop all fishing once one particular species is caught.
- **Q:** This seems to come back to what society wants. Why wouldn't one start from the same starting point as you would for offshore oil? Society wants to maximize rent from the resource, to maximize the share of the rent that goes to the owners of the resource. If you start with this, the other things are secondary issues.
  A: There may be a lot of different views on what society wants. Your perspective may be opposed. It can be difficult to figure out what society wants.
- Society makes decisions every day not to maximize rent for some reason or another.
- **Q:** Opportunity costs need to be understood.
  A: Every action has opportunity costs but they are not necessarily monetary. For example, what is the opportunity cost measurement of a declining community as a result of a certain rights-based management approach?
- The current moratorium on development of offshore oil and gas suggests that society does not want to maximize rent. It may be the same in fisheries—we do not want to be continuously fishing at maximum sustainable yield because of other effects on the ecosystem that need to be taken into account.
- **Q:** When talking about fishing rights being given to a particular organization or fishing sector, it may be a matter of pushing the problem to a lower level and letting them deal with it.
  A: No matter what the level, management decisions will still have to be made.
- Fishermen tend to have an antagonistic relationship with regulators. When you do involve fishermen in making decisions, there is a higher level of compliance. It results in an overall improvement in management. Fishermen need to be given the skills to participate.
- **Q:** What is considered fair?
  A: It is not my expertise to define what is fair. What we see in Nova Scotia in the decade since various types of use rights were handed out is a lingering sense of how unfair a particular exercise was. It is probably more of a process thing.
- An example of unfair is a system where you give up rights and someone who did not fish at all ends up with a lot of quota.
- **Q:** Defining what is fair involves a subjective evaluation. It is not the job of fishery managers to define what is fair.
  A: If I were a public resource manager, and I was handing out use rights, I would have to deal with what is fair. It is difficult—it is a matter of figuring out a fair process.

- **Q:** It is important to distinguish between procedural justice and distributive justice. Working more on the process will enhance the acceptability of the outcomes.
  A: In Canada people are still reacting to what was perceived as a flawed process.
- **Q:** Do you know of studies that compare productivity in terms of fish recovery in association with different rights-based systems? Is one or another shown to better or worse than the rest?
  A: No, I have not seen comparisons in terms of conservation benefits. There is about to be a study in Nova Scotia on community quotas arrangements that have been done. It will look at how different communities have generated different approaches. Unfortunately, what you do not see is a comparison in terms of the big picture—TURFS, effort rights, community quota, individual quota, and limited entry. I am working on a paper at the moment that compares community-based management with the ITQ approach and looking at economic implications. It is hard to model how institutions develop, how effective they are, and how they improve compliance.
- We compared compliance results under a community-based system vs. a centrally managed system in the Philippines.
- If a biologically determined quota is set and adhered to, it does not make any difference what rights system may be in use. That becomes a matter of political will. A rights-based management scheme does not have a predictable biological result.
- The system in place may affect compliance. If fishermen are more actively involved, it may provide a higher incentive for compliance.
- There is a gray area in fishery management discussions regarding a subsidiary action [involvement in decision making] and the allocation of rights.
- **Q:** Has there been any documentation of these use-rights systems in terms of being able to grow fish faster than other management tools?
  A: I do not think that any particular use-rights system has been demonstrated to be better for the fish and the ecosystem than others. I would not try and sell one of these approaches based on the ecosystem impacts. It has more to do with managing the people involved—not everyone can go fishing as much as they want. It might be better for compliance to regulate the amount of catch being taken, but there is also the incentive to dump less-valuable fish overboard. Creating an atmosphere where people believe in the system is common to all use-rights methods. This promotes better stewardship.
- **Q:** When ITQs were implemented in Canada in the mid-shore fleet, how many boats sold out? How many crew were displaced?
  A: Originally the fleet was about 250 boats—it fell to 132 boats at one point. It has gone down further since then. There is less crew involved with fewer boats. It might be about 70 boats now. No one has ever done an evaluation of the impacts associated with the change in management structure.
- **Q:** Can you modify the scope of the right once it has been allocated?
  A: The point may be, can you be more sophisticated in what you do initially to overcome problems that might come up? That is a good point. For example, with the community quota arrangement in the fixed-gear sector, there is a rule in place that deals with the transferability issue. Two community boards must agree in order for a transfer to be effective. It is not just market force operating. This has been pretty effective. The regulations in the ITQ fleet have not worked. There has been a lot of promotion of particular approaches but preventing concentration and processor control is not easy.
- **Q:** In the groundfish fishery, where the fleet went from 250 to 70 boats, what happened in terms of income?
  A: Some people think the system has worked perfectly. They wanted a system to reduce the number of players in the game. Processor companies are making a lot of money. Current quota holders and the government think it is great. It has created a few high incomes. It has had a very mixed set of results.
- In terms of irreversibility, the right to make a profit is left out.
- In Canada the rights were given free. Now it would take a lot of money to buy back those quota shares.
- In the situation of state-by-state allocations, changing these allocations has been difficult once they are enacted.
- **Q:** The goals of these rights-based programs need to be examined in terms of their impacts on the fish and fishery management.
  A: Yes, there has been a separation between the conservation issue and the rights-based management issues. In the Canadian groundfish fishery, we have just about every kind of rights-based approach. There have not been any decent studies comparing these approaches.

Part II

Case Studies

Community-Based Management—Finfish Management in Nova Scotia

Presented by Arthur Bull, Fundy Fixed Gear Council and the Bay of Fundy Marine Resource Centre

Introduction

The idea that community-based management is worthy of public debate is admirable. In Canada, we have not had this opportunity. The policies that were put in place in Canada did not go through a public discussion process. I have been working with the Fundy Fixed Gear Council, a management board in Nova Scotia. This is the management board for the under-45-feet, fixed gear, groundfish fishery. I have also worked with a local fishermen's association and with the Bay of Fundy Marine Resource Centre. What I am going to present today is the story of what we did in Canada and how we learned from our experiences, which may prove useful to the discussion here.

Community-based management is very marginal in Canada; not all fisheries are managed this way. The main management system in Atlantic Canada is either ITQs or enterprise allocations (corporate allocations in the offshore region). Community-based management happened in response to this management system. People realized they could not simply fight a system they did not like; they had to come up with an alternative. We have been living with the ITQ system of management for a while. It came into place in the herring fishery in the early 1980s, in the groundfish fishery in the early 1990s, and in the scallop fishery in the mid-1990s. In Nova Scotia, the ITQ system has resulted in the following:

- Intense concentration of ownership (e.g., in the scallop fishery, six men own the 99 licenses; fewer than 10 processor companies own all the mobile groundfish quota in southeast Nova Scotia).
- Fishermen working for the processing companies—the owner/operator policy has been circumvented through trust agreements. The fisherman in the wheelhouse may look like the owner but in reality the company owns the quota.
- People making their living in the fishing industry who do not fish. They lease or sell the quota. Locally they are known as "slipper skippers."
- People who were in the fishing industry, such as crewmembers, are no longer involved.
- A loss of attachment to some quotas. Once the quota is concentrated, it can be moved to another location.

It is important to be skeptical about research on ITQs because there are winners and losers in such a system. The losers may have been displaced and may not be contacted to contribute their viewpoints on the system. Furthermore, a fishery may be in good shape but the profits being realized may only be in the hands of a few people or companies, such as what occurs in our scallop fishery. Others have to buy the quota from these companies to fish in the fishery.

Community-Based Management Comes to Nova Scotia

In 1996 there was a strong move to bring ITQs into the under-45-feet, fixed gear, groundfish fishery. There was a huge protest in response to this, with many community members and fishermen involved. Out of this protest came a process of negotiation, resulting in the federal government's decision to accumulate catch histories and allocate quota by county. The fishermen's associations in each county would then have to decide how to allocate it further. The federal government would simply monitor when the quota had been caught. In some areas, fishermen took on the responsibility of managing the fishery.

The fishermen set up a system of democratic self-governance. Quotas for cod, haddock, and pollock were allocated by the government. There was no capacity-building or policy directive. However, the Canadian

Department of Fisheries and Oceans (DFO) did stipulate that no fish quota could leave the assigned management board to another management board without an agreement between the two boards, and that licenses would not be issued or renewed to anyone in a management area without the management board's approval.

The Fundy Fixed Gear Council required fishermen to belong to a fishermen's association to be able to be part of the council, and these fishermen's associations comprised the management board. A system of compliance was also created. Fishermen were required to sign contracts with the management boards. An infractions committee was established with members from the fishermen's associations. Fishermen were reluctant to sanction each other, so a system was set up whereby fishermen rotated on this committee. Files containing the information on infractions were kept anonymous—only the secretary tracked names—so members of the committee did not know the individual being sanctioned.

The fishermen also created a system of port representatives. Every wharf elects a representative and an alternate to act as the eyes and ears of the Fundy Fixed Gear Council at the wharves. They also set up management committees for each gear type, including hand-line, longline, and gillnet management committees. They set the weekly catch limits. And there is a licensing committee to deal with issues regarding access.

This system is based on a firm bedrock of democratic fishermen's associations. Without this grassroots type of organization in place, making the leap to community-based management would be difficult.

Final Thoughts on Community-Based Management

This type of community-based management addresses every aspect of the fishery, from who is allowed to fish to research projects conducted, conflict resolution, policy relations with other groups, and interactions with federal managers. The overall system can be thought of in terms of three columns of responsibilities. In the first column are the things that the management board is entirely responsible for deciding. In another column are things, such as on-the-water enforcement, for which the federal government is entirely responsible. In a middle column are the shared things, such as the scientific research.

Community-based management is a dynamic process that can develop into other things. For example, in our area, this approach has resulted in the establishment of the Bay of Fundy Marine Resource Centre, a community-run institution that provides technical support to all the fisheries in the area. This was also the driving force in creating a network of 14 groups around the Bay of Fundy that formed the Bay of Fundy Fisheries Council, and a cross-border initiative centered on the Gulf of Maine called the Saltwater Network.

This approach involves a tremendous amount of capacity building for democratic organizations. Being part of a fishermen's association is a very important element. People need to decide, through a democratic process, how they want their fishery to look. Fishermen do not talk about owning the fish, although there have been conflicts about dividing fish among groups. They view the fishery resource as a common-property resource; this is part of their principles. It is a trust agreement between the federal government and the local communities in which the fishermen take care of the resource on behalf of the Canadian public. They do this because they are in the best position to make the decisions. A community-based approach with decision making primarily at the local level provides an opportunity to adapt to changes in resource abundance. As for the question of rights, it is more a question of responsibility than it is about property rights.

Comments and Questions

- **Q:** Where was the community-based approach set up?
  A: When they gave out quotas, the government went mainly by counties. In the Bay of Fundy they lumped together five counties. This included the whole Nova Scotian side of the Bay of Fundy as well as counties on the New Brunswick side. It was a large geographic area. Most of the licenses were held in Digby County in Nova Scotia.
- **Q:** Who really created this process?
  A: The fishermen. Fishermen elect the people who sit on the management boards. The management board realized it needed to actually make sure fishermen were involved.

- **Q:** Do the sanctions come from the Fundy Fixed Gear Council or the individual associations?
  A: From the Fixed Gear Council. Individual fishermen's associations delegate or elect people to sit on the council.
- **Q:** The principles that were developed are very important to the democratic organizations involved.
  A: Fishermen put the principles in place early on to develop an alternative to the system that the state was planning on implementing. For example, there is no individual quota in this fishery. Through the Bay of Fundy Fisheries Council, 14 groups developed 12 ecosystem principles to help define what is meant by ecosystem management. This process involved answering questions like, What would you protect in the Bay of Fundy and why?
- **Q:** Some of the councils or management boards decided to go in different directions. For the council you are involved in, does the council automatically limit the number of participants or is anyone allowed to fish as long as one follows the appropriate steps?
  A: They have not had to limit the number of participants, but it may still happen. However, reduction of capacity is a community decision.
- **Q:** Is there any effort to get legal sanction for this type of community-based approach?
  A: We have tried without success. The main direction of the DFO has been towards privatization. Community quota and community-based management are different things.
- **Q:** When the management boards cannot come to consensus, what happens then?
  A: In one case involving 14 fishermen's associations that came together to establish ecosystem principles for the Bay of Fundy, an advisory committee was established to review the situation when consensus was not reached. This committee helped to rework the resolution and, eventually, the group decided by a 75-percent-majority rule to establish the set of principles. It was an interesting process.
- **Q:** Regarding ecosystem principles, can any of the management boards or councils do anything about land-based activities that could affect fisheries?
  A: No, not really, but through something like the Bay of Fundy Fisheries Council, they can find out who else is interested and form coalitions. An example where I live involved a proposed rock-quarry project. The community did not want it, and the fishermen were concerned about siltation problems. So a coalition was formed between the community, fishermen's associations, and environmentalists to oppose it.
- **Q:** Under the anonymous system of dealing with infractions, can you impose more severe penalties for repeat offenses?
  A: Yes, because the secretary keeps track of repeat offenses. There have been two cases in which the council has stopped people from fishing by not signing their contract the next year. These people then have to fish in Group X—an unmanaged group that is a bad place to be.
- **Q:** Can people in Group X fish in the same area as the other people?
  A: Yes, it is not a place-based system. They fish the same stock and same grounds.
- **Q:** Community or local management is usually associated with a defined area with a not-so-mobile resource and with the possibility of people being excluded from that area. You are talking about quota potentially being transferred to different areas, and members of a mobile fleet being able to come into an area.
  A: A quota is assigned to people in an area, but it can be caught anywhere. But it has to be *landed* in that area. Ideally you would have a place-based approach with clear lines on the water, but we did not have any of these things.
- **Q:** In the situation you are in, the Fixed Gear Council has been allocated a certain piece of the TAC by the DFO and then told to decide how to fish it. This is almost a virtual TURF.
  A: Yes. Most people do not go out of the Bay of Fundy, but there is no legally defined area.
- **Q:** Fishermen from outside your area can come and take the quota outside your back door.
  A: Yes, it is not a place-based management system.
- **Q:** Is the Fixed Gear Council deciding allocations of gear by fishing sector from one year to the next?
  A: Yes, they come up with formulas that everyone can live with. Conflict resolution is also evolving at the local level.
- **Q:** Do fishing sectors hire lawyers for negotiations?
  A: No, they do it themselves. The Fundy Marine Resource Centre was asked, for a couple of years, to come in and help facilitate this process.
- **Q:** You mentioned Group X. Are the people in that group those who did not have allocation granted to them on Day 1?
  A: Not exactly. DFO says everyone is in Group X. If you want to go out of Group X, you can go into one of the management boards. They have allocated the quota by county. Those in Group X are the ones who have not gone to one of the management boards, so their catch history is pooled with others in

Group X. This group is unmanaged and the fishing is unpredictable. It is a matter of putting one's fishing effort in a place where you are not sure what will happen.

- **Q:** How is the council funded?
  A: The funding comes from the fishermen through dues paid to fishermen's associations. Projects are done with grants.
- **Q:** How does the management board interact with the federal government?
  A: Members of the management boards sit on an advisory committee to the DFO. There are also situations where management boards work together on certain issues.
- In the system you are talking about, people do not feel that they own the fish, but they have the right to manage the resource.

Fishing Cooperatives in Alaska and Japan

Presented by Andrew Kitts, National Marine Fisheries Service

The idea of fishing cooperatives is not new, and recently, several West Coast cooperatives have been getting a lot of attention. I will discuss these and how they are different from "traditional" fisheries cooperatives in the United States, then discuss cooperatives in Japan, which are quite different from U.S fisheries cooperatives.

In general, U.S. cooperative law is not well understood, but it has the potential to create benefits if applied in a certain context. Passage of the Fishermen's Collective Marketing Act (FCMA) of 1934 allowed fishermen to jointly harvest, market, and price their product without being in violation of antitrust laws. Antitrust case law defines the collective activities protected and not protected under the law. It is not an invitation to engage in anticompetitive practices but allows for collective activities, such as agreeing on a minimum price, that would normally draw scrutiny from antitrust authorities. Fisheries cooperatives are limited to harvesters, not processors, but processing may occur once the cooperative is formed. This kind of vertical integration has been significant to the formation of the Northwest harvest cooperatives. The formation of a cooperative does not require new legislation or fisheries management council approval, although it is most effective if done in conjunction with a specifically assigned TAC and limited-access program. This approach tends to avoid the customary micromanagement by the council. It is a form of property rights that allows the industry to make many of its own decisions. This approach also allows for an interesting interplay of conservation benefits from reducing effort and the effect on price. With elasticities in fisheries, there is still a lot of room for conservation before price is significantly affected. Furthermore, the initial effect of reduced effort may be an increase in supply. I'd like to discuss three cooperatives that combine fishery cooperative laws with quota allocations.

Cooperatives Can...

- Agree on terms of sale and minimum prices accepted for products
- Make similar agreements with other cooperatives
- Achieve monopoly power through natural growth or through combinations with other cooperatives
- Limit production if market is limited
- Harvest with fewer vessels and share costs and revenues

Cooperatives Cannot...

- Make agreements with those outside the cooperative
- "Unduly enhance" the price by holding back supply
- Force agreements by refusing to sell, boycotting, or picketing, or through other non-competitive practices

There are three types of FCMA fishery cooperatives: *Marketing/supply cooperatives without quota* are the most common fishery cooperative in use today; 70 of them exist as of 1980. But these cooperatives have limited ability to negotiate price or cooperate in harvesting because they have no control over supply. The second type, *harvest cooperatives*, has a group quota allocation but only cooperates in dividing the shares among vessels; the catch is marketed competitively. Lastly, *marketing cooperatives with quota* jointly harvest by sharing costs and revenues and sharing quota. This type of cooperative also markets the catch jointly, negotiates prices, and may handle/process the catch as well.

An example of a harvest cooperative is the Pacific Whiting Conservation Cooperative—the first harvest cooperative established in the Northwest region. The reason for creating a harvest cooperative, rather than a marketing cooperative, relates to the inclusion of processor-owned vessels and catcher vessels engaged in processing. Had processors been excluded from special consideration, it seems likely that vessel owners would have formed marketing cooperatives.

In the case of the Pacific whiting cooperative, the cooperative requested a business review letter from the Antitrust Division of the U.S. Department of Justice. To obtain a favorable review, they agreed to cooperate only on harvest schedules and to take the full TAC allocation. Narrowing the cooperative's activities to sharing quota satisfied antitrust authorities who recognized that Congress's intent in creating the FCMA was to exclude processors from cooperative membership.

After the creation of the Pacific Whiting Conservation Cooperative, some vessel owners in the Bering Sea pollock fishery who were in the whiting cooperative sought Congressional action to form pollock cooperatives. This action was taken because the North Pacific Fisheries Management Council (FMC) had not clearly defined the pool of permit holders and had not assigned TACs in the pollock fishery as it had in the whiting fishery. As a result, the American Fisheries Act (AFA) was passed that authorized the allocation of Bering Sea pollock catches to inshore and offshore sectors as well as to specific vessels within these two sectors. The AFA also allowed harvest cooperatives in the pollock fishery to be formed where vessels could redistribute quota and establish rent-share agreements.

Harvest cooperatives have significant benefits even if the cooperative is unable to negotiate higher prices. These benefits include decreased capacity and an end to the race to fish, decreased costs, increased quality and yield, an optimized product mix, decreased share-negotiation time, better timing of harvest with market, and cooperation to avoid bycatch (yellowtail rockfish in the Pacific whiting fishery).

An example of a marketing cooperative with quota is the Chignik Seafood Producers Alliance in Alaska. The Alaska Board of Fisheries allocated 70 percent of sockeye salmon TAC to 77 permit holders. The cooperative used 19 vessels to harvest the TAC. Cooperative members shared reduced costs and higher revenues and were able to negotiate higher prices; in fact, one buyer paid for fish in advance. Forming the cooperative also allowed members to develop new markets, improve the quality of the catch, time production with the market, and avoid crowding and the race for fish.

It is not necessary (or appropriate in each case) to cooperate in all aspects, but forming an FCMA cooperative leaves the door open. The following summarizes the benefits of the cooperatives discussed:

- Laws exist and are currently being used; there is a structure in place
- Cooperatives can be established quickly
- Establishment of cooperatives does not require council action beyond establishing quota share and limited access
- Individual vessel shares can be negotiated within a cooperative (or individual shares brought to the co-op)
- There is an incentive to harvest efficiently and control capacity
- There is an incentive to time the catch to the market
- Harvesters may negotiate higher prices

Cooperatives in Japan

Cooperatives are the backbone of fisheries management in Japan. Fishing rights to a sea area are bona fide personal property of individual members of the cooperative; there is no conceptual difference between land holdings/tenure and sea holdings/tenure. Japanese cooperatives are based on village customary law. They are organized, true cooperatives (one-member, one-vote) and involve an all-inclusive management council with a TURF. The role of the management council, or fisheries cooperative association (FCA), includes marketing and other support, assignment of fishing rights, dispute resolution, implementation and enforcement of national and prefecture legislation, and drafting of supplemental legislation as local conditions require. These cooperatives are more extensive than the U.S. examples presented.

Japanese fishery cooperatives can be traced to pre-feudal times (pre-1603). Emperors granted rights for setting gear to areas where rivers flowed in or out of lakes. Power then shifted to shrines that received shares of the catch, and exclusive offshore rights were granted to privileged communities. During the feudal era (1603–1867), all sectors of Japanese society were organized according to strict hierarchical systems (fiefdoms). Coastal villages were instructed to proclaim and define sea territory, and coastal fisheries were closely adapted to local physical, biological, and socioeconomic conditions. Villages were classified as farming or fishing settlements with shared use of the resources. Within the shared fishing territory, the use of a given technology or the harvest of a particular species was reserved for one village, whereas other species could be taken using different gear, regardless of where the fisherman lived, provided that his residence was in one of the settlements having rights to the shared fishing grounds. After fiefs were dismantled, in post-feudal times (1868–1948), ownership of fisheries reverted to the central government, and permits were issued based on a use tax, which resulted in a free-for-all. Following this period, fisheries management reverted to a traditional system of fisheries cooperatives governed at the prefecture level (replaced fiefs). Rights were based on clearly defined sea territories associated with traditional use patterns.

Today, use of cooperatives and licenses is based on distance-from-shore and gear. Rights may be granted to individuals, private organizations, or cooperatives. Cooperative rights are area-specific and are not based on quotas. Rights cannot be loaned, rented, transferred, or mortgaged, but they can be inherited. The FCA belongs to the local community of fishermen. Membership is currently less reliant on kinship because of the out-migration of the younger generation; it now may involve apprenticeships (rite of passage in some villages) or crewing and/or residency.

For more information:
Ruddle, K. 1987. *Administration and Conflict Management in Japanese Coastal Fisheries.* FAO Fish. Tech. Pap. (273): 93pp. *Available at: www.fao.org.*

Comments and Questions

- **Q:** If fishermen want to form a cooperative, even on a Fisheries Management Plan (FMP)–covered species, if they can talk the council out of an allocation, can they go with it?
  A: Yes, the actual establishment of the cooperative does not have to be done by the council. However, the council would have to assign a quota.
- Rather than trying to totally change the current system of management, the formation of cooperatives seems like a way to try something. It could be a controlled experiment where something could be tried and evaluated.
- **Q:** In the Chinook cooperative, how has the ownership question been dealt with? How do they deal with the “slipper skipper” issue?
  A: In that case, the cooperative was formed in conjunction with the allocation. I believe most of the members were boat owners. Internal decisions then had to be made about transferability.
- With cooperatives and with community quotas, there is a group of people who share something. This forces them to have to get together and work together.
- The lines between community quota and cooperative are blurring as we talk about this.

General Discussion

- One of the weaknesses of community-based management in Canada is that it did not look at the economics. Without control over the price of fish at the wharf, the best community-based approach can fail.
- A community-based management approach might be broader than a cooperative. Conceivably members of a cooperative can ignore those in the outside community.
- There have been efforts to bring community members onto fishery management boards in Canada.
- In Central America and Asia, fishermen’s associations tend to be broader in scope and not as restricted as cooperatives. Cooperatives work in Japan because of the culture.
- The approach that works tends to be culturally determined.
- Maybe territory ownership should be the basis of a system. People then make good decisions for their own backyards. Otherwise a boat from another area can come in and break the rules and destroy what a group is trying to accomplish.

- It may not mean owning an area but rather establishing a management zone where members of the local community make the rules.
- The recreational fishing sector often gets left out of the discussion.
- We need to move toward ecosystem management—we cannot continue to manage by species.
- We need to look at the big picture; maybe a combination of looking at a place along with quotas. If dealing with rights in a certain region, then one might care more about habitat or predator-prey issues.
- A quota attached to an area would force people to look at how upland activities may affect it.
- Boundaries should be created based on ecosystem function, not political boundaries.
- An argument used against place-based management is that species migrate. But really, responsible stewardship may be involved.
- **Q:** In the case of the Pacific Whiting Conservation Cooperative, how many people were involved in share-agreement decisions?
  A: I do not know for sure; I do not think it was a lot.
- **Q:** In that case, did the council recognize the cooperative as a quota-management authority? What about the fishermen who did not want to join the cooperative but wanted to fish on that quota?
  A: The council issued a portion of the total quota to a defined group.
- **Q:** In Alaska, what was the motivating factor for someone joining a cooperative?
  A: There were a number of reasons: In a harvesting cooperative, you have the ability to negotiate higher prices. As part of a group allocation, there is the benefit of not having to race to catch the fish on a competitive basis.
- **Q:** In the case where they had 77 permits and they decided 19 boats would be used to harvest the fish, what happened to the other boats?
  A: Some probably have permits in other fisheries, but they probably spent time tied up at the dock. This was something they had to weigh when determining the number of boats that would catch the quota. It has only been under way for one season and each member of the cooperative received $25,000. They expect things to get better. When they looked at the costs of all the vessels being used to catch the quota, they decided to do it with fewer vessels.
- There is fear behind collective decision making. It involves group benefit versus individual approaches.
- Not sending out as many boats affects crewmembers. There are also impacts on supply businesses in the area.
- **Q:** In the Alaska cooperatives, what fraction of the total quota do they represent?
  A: I think it is the majority.
- **Q:** It sounds like there is a good payoff associated with cooperatives. Why are there so few of them? What are the constraints on the formation of cooperatives?
  A: There are 70 in the United States. Only three have quota allocations.
- Many benefits associated with the cooperatives would still exist without having rights-based (quota allocations) management involved.
- **Q:** The concept of being able to exclude others is associated with property rights. The question is, Is the fishery open to those who want to gain entrance?
  A: Limited access is part of group formation. The group then has to develop membership rules to govern those exiting and entering.
- **Q:** If a cooperative is growing, does the council increase the quota allocation?
  A: Typically a percentage of the TAC is determined. The way it is set up now, the council does not increase the group's share because of additional members.
- This approach seems to be reversible. If it does not work, it could easily be dissolved. This is an attribute that should be highlighted.
- **Q:** The presentation focused on commercial fishing. Do the same laws apply to recreational fishing?
  A: I do not know how these laws are interpreted for recreational fishing.

Part III

Panel-Audience Discussions

Maine Workshop

Focus Question: *What are the advantages and disadvantages of the rights-based fishery management approaches presented? What future role will these rights-based approaches play in managing Maine's fisheries?*

Panelists

- Craig Pendleton, Northwest Atlantic Marine Alliance
- Mary Beth Tooley, Representative of the Herring Industry

Northwest Atlantic Marine Alliance — Craig Pendleton

I have been working with Arthur Bull for the past six to seven years and have been spending some time thinking about this. I think we have come to a point where different scenarios have been laid out on how to allocate these rights-based approaches. I am not convinced that ITQs are the way to go. Based on what Bull presented, people have been able to get together to form agreements and create governance structures to deal with issues. The piece that may be missing for Nova Scotia fishermen is that, although they can all agree not to go fishing at all, they do not have jurisdiction over the waters in which they fish. Other people outside of their area can come in and take the fish they are trying to preserve. There must be an area-based dimension added to their system. This would promote a sense of stewardship; people have an area for which they are accountable.

My work includes creating this type of all-inclusive governance structure to look at all the scenarios. We are currently looking at people who hold multi-species licenses; it is possible to see the consolidation coming from both ends.

I believe we need more local management. Government should work with us to define achievable goals. Everyone tends to look at the economics of rights-based approaches but the real conflict comes when the TAC is issued. The TAC needs to make sense. There is progress being made through collaborative research projects to break down such barriers.

What we want the fleet to look like is an important question to address given the makeup of New England fisheries.

Herring Industry — Mary Beth Tooley

The herring industry does have a hard TAC. It is a matter of scientists sitting down and coming up with numbers—currently they do not agree. The science is evolutionary. You will always have questions about the science. We still need to move forward and try to manage with the information we have.

Implementing a hard TAC in the herring fishery without limited access in place is very difficult. There are three distinct areas in the herring fishery divided by spawning components of the resource. The inshore area is fully utilized. There is a capacity problem. I work with an association that would like to look at cooperative ways of managing the fishery. A harvest cooperative might be an option.

Working with the New England FMC is very difficult. The council is not flexible.

Summary of Responses

- **Q:** It was mentioned that working with the council is difficult. The inshore groundfish fishery seems to be trying to develop a management approach for localized stock based on community principles and moving this through the council process. Does the cooperative model previously presented offer anything to this effort?
  A: There are many alternatives but it is hard to buck the prevailing way of thinking. The lawsuits do not help the situation. The council has so few staff it is difficult to quantify the effects of alternatives. It is frustrating to have this type of debate at the council. My personal interest is in governance structures. Sometimes situations force people to come together to work out their differences.
- One of the difficulties with working with the council is that there is a variety of interests involved trying to micromanage the fisheries.
- The council's role should be to set up overriding principles and goals, and fishermen should decide the details. Point Judith is different from Maine.
- **Q:** When the council system was set up the councils were supposed to accomplish that local representation.
  A: They have accomplished some of that but the complexity of the law makes it difficult.
- This conversation is good in that it highlights that there are a variety of options—there has been too much focus on ITQs.
- There is a segment of the fishery that is not out there to make a massive profit—they just want to make a living. We should not just look at profitability—it is not the only function that happens in a fishery.
- **Q:** Does NMFS look at economic viability in a fishery?
  A: The ideal situation would be to have an economic model to look at optimum fleet size. The reality is that allocation may be decided on other factors. We try to get information, such as economic viability, early in the decision-making process. All the objectives of managing a fishery should be explored.
- In Canada, it seemed that the community had a vision of what they wanted their fishery to look like and it was contrary to what was being created by the federal government. The community protested. We have not seen this happen in New England.
- The government in this country wants fewer fishermen, but they have not said how or where the reductions will take place. We need to decide what we want the fleet to look like.
- It is up to the fishermen to tell the fisheries managers what they want the fishery to look like.
- The process that takes a lot of energy is getting all of the fishermen's associations to sit down and decide what they want the fishery to look like. That is the first step before setting up a management process. This type of discussion might point out the need for a research agenda. The decision needs to be based on good information.

Rhode Island Workshop

Moderator: David Beutel, Rhode Island Sea Grant Program

Focus Question: *"In Rhode Island there has been an ongoing debate in many of the major fishing sectors about rights-based fisheries management. Given the need to balance biological, economic, and social objectives in fisheries management, would any of the approaches described in the previous presentations be appropriate and effective for managing fisheries in Rhode Island? Why or why not?"*

Panelists

- Christopher Brown, Rhode Island Commercial Fishermen's Association
- Jan Reitsma, R.I. Department of Environmental Management (RIDEM)
- Jon Sutinen, University of Rhode Island

Commercial Fishing Sector — Christopher Brown

There is a need to design a system that incorporates the needs of active fishermen. You cannot have a scenario were it is advantageous for someone to get out of the fishery as opposed to existing in it. Fishing should be good while you are in it—getting out of it should be your last act. It should not be a get-rich-quick scheme. Fishermen should be responsible and able to make a profit. There is value in consolidation. However, the method to consolidate is still open for debate. There is going to be some consolidation in Rhode Island and New England, but the degree to which consolidation is going to be used as a management tool should be dependent on transitioning from a non-sustainable condition to a sustainable condition. There needs to be more research on capacity to determine how many boats can profitably exist in a fishery. But I like the idea of the burden of management coming down to the communities.

RIDEM — Jan Reitsma

I came away with the idea that the future of our fisheries should not be processor-controlled quotas. We should preserve the way of life of traditional Rhode Island or New England fisheries. It is unlikely that a large corporation would be a good steward of the resource—they are too far removed. As in agriculture, the smaller entities stay closer to the resource. I was fascinated by the community-based approach described. Rhode Island is so small that we might have only one community if this were applied here. Perhaps the R.I. Marine Fisheries Council could be the management council charged with managing the government allocation. The council would develop the management plans once an allocation was provided, or maybe the fishermen should make these management decisions. But there is concern that not all fishermen do the right thing—there is cheating going on. RIDEM could continue to be responsible for enforcement and broader allocation decisions involving licensing and would work with the council on the research agendas, but we would still need to address the fact that we have too many people fishing for too few fish. A self-management system is more democratic. I would be glad to rethink the system we currently have. This may mean empowering fishermen to take on management responsibility and empowering RIDEM staff to do their oversight and support work more efficiently and effectively.

University of Rhode Island — Jon Sutinen

I have concluded that the world is becoming increasingly uncomfortable with ITQs because of the social fallout associated with these systems. There are more constraints being placed on how the systems are implemented. Community-based organizations managing group quotas holds promise for us. No single design fits every circumstance. None of us could pre-design a perfect configuration. I would hope that we entertain proposals on a variety of different approaches and encourage experimentation. A system should be set up that facilitates experimentation within basic management principles. Groups that are effective tend to be small in number and have a high degree of common interests. There are a lot of differences in this state despite our smallness. In the lobster fishery, for example, having one group carrying out management responsibilities might be too much to expect. We should go slow, encourage experimentation, and build up capacity to run organizations and deal with conflict resolution.

Summary of Responses

- The decision to try out different approaches should be made with a self-management system.
- There will be the need to make effective, timely management decisions. We would have to allow a specific amount of time for a self-management approach to yield decisions.
- One attractive aspect of the cooperative scheme is the ability of a group of boats to get together and demonstrate, through use of appropriate gear technology, that they could reduce bycatch. This might allow the group to have a higher quota. It would challenge people in good ways.
- **Q:** In the Canadian example, it appears that the community-based approach was sprung on them and communities had to come together fast. If we were to take a more deliberate approach here, would there be some guidelines that a group would have to follow to take on this management responsibility?
  A: At the time, we looked around for examples and there were not many. You might want to look internationally rather than limit your search to North America. Fisheries are very different, but there

may be a basic checklist of things that you know you will have to deal with. We are looking to develop a community-based handbook for managers but that will not be ready for awhile.

- In international work, we have workshops to discuss alternatives—people realize there may be a problem, but they do not know about alternatives. We also organize people into associations. Within the associations, internal core groups are formed to take on tasks. It is critical to address leadership. Comanagement sets up partnerships with government. Community-based management tends not to have a lot of government participation. It is critical not to take on too much too soon. It sets community groups up for failure.
- The community-based management approach is used in watershed management. It increases stewardship and makes use of local expertise. Performance standards are needed in order to define success, and these standards are needed up front.
- A weakness of what we did in Canada is that we did not set up performance standards first. We put it together quickly. It is important to determine, in the beginning, what you want the fishery to look like. It can be adapted as you go.
- We tend to know where we have to go; we know the goals although we may not like them. It is a matter of developing a program to manage participants. It is important in Rhode Island not to jump at one thing. We may not accomplish the goal without real pain.
- A basic goal in Nova Scotia was to keep a viable and sustainable fixed-gear fishery in that area.
- Community management in Canada only deals with a portion of the groundfish fleet. We should be careful here not to be too ambitious in applying this approach to all our fishing sectors.
- The R.I. Marine Fishery Council might work with RIDEM on the broader tasks of allocation using committees rather than working on plans for allocations to specific user groups.
- There is an important distinction between user rights and property rights.
- Community-based management does not require quotas. It might be easier in a fishery that does not have numbers to fight over.
- In a comanagement, democratic system, it is important to understand that the minority position could get voted out.

"As we move forward we need to recognize that the general goal of the various interest groups is the same—a healthy ocean with sustainable fisheries. We need to find ways to work together on what we agree on and find ways to address the things we disagree on."

—Workshop participant

Part IV

Summary

General Summary

As the presentations and discussions in these workshops demonstrate, there is a range of rights-based fisheries management approaches available beyond the ITQ systems most often discussed. Other options include limited-entry or access rights, community-based management, territorial use rights, and cooperatives. Social, economic, political, and biological factors all come into play in choosing the form of a rights-based system.

The term "rights" and what it refers to are central to the discussion of rights-based fishery management approaches. In fisheries, two kinds of rights are most important: management rights that deal with who has the right to be involved in managing the fishery and use rights that address who has the right to use the fishery or to go fishing. From this perspective, the concept of a right in fisheries can be thought of as a privilege and not necessarily as a property right involving exclusive ownership.

Use rights address such issues as who has access, how much fishing effort will be allowed, and how much catch can be landed. In turn, this entitlement to use a fishery can be allocated to a variety of entities including groups, individuals, communities, corporations, and cooperatives, and may, in some circumstances, be place-based.

Management rights and those who hold them may depend on the type of fishery-management decision being made. Broad policy issues involving, for example, the management approaches to be allowed or the general guidelines for determining who has access usually involve government managers and a wide range of interest groups. More specific regulatory decisions involving how the fishery will be fished may involve only those directly engaged in the fishery.

Some of the conclusions that can be drawn from the Canadian Maritimes' experiments with ITQ systems and community-based management approaches centered on quota allocations include the following:

- Establishment of a use-rights system defined by who can and cannot participate in a fishery and results in impacts on boat owners, crewmembers, related industries, and whole coastal communities
- The less the system allocates to individuals when it is set up, the less irreversible the measure or approach is
- Transferability of rights is likely to lead to a concentration of fishing effort. In Canada, when the government set up an ITQ system, measures were taken to avoid having fishing sectors controlled by a few, but trust agreements between processors and fishermen formed, and these measures were circumvented
- Community-based management in Canada happened in response to government efforts to implement an ITQ system in a particular fishing sector. People realized they could not simply fight the system they did not like; they had to come up with an alternative
- The system of democratic self-governance that fishermen set up in Nova Scotia addresses who is allowed to fish and how the quota allocation will be harvested, conflict resolution, research projects, and policy relations with other groups, including the federal government. The approach involves a tremendous amount of capacity building in grassroots organizations such as fishermen's associations. Through a democratic process, people decide what they want a fishery to look like
- A community-based approach has provided more of an opportunity to adapt to changes in resource abundance
- The community-based approach in effect in Nova Scotia is actually a trust agreement between the federal government and the local communities where the local communities take care of the public resource on behalf of the Canadian public. The federal government issues a quota, and allocation decisions are made at the community level

- Community-based management is a dynamic process that can lead to other things such as establishment of institutions to provide technical support and formation of networks of groups working on common issues
- More work needs to be done in Canada to compare the impacts of the various approaches in place

Cooperatives are another form of rights-based fishery management that allows fishermen to jointly harvest, market, and price their product, and, in general, make many of their own decisions. In the United States, the FCMA of 1934 establishes the legal framework for forming cooperatives and provides fishermen with the opportunity to work together collectively without being in violation of antitrust laws. Types of fishing cooperatives include marketing and supply cooperatives without a quota, which have a limited ability to negotiate price or cooperate in harvesting; harvesting cooperatives, which have a group allocation but only cooperate in dividing the share among vessels; and quota-based marketing cooperatives, which can jointly harvest, market, and negotiate prices. In Japan, cooperatives are the backbone of fisheries management and include fishing rights tied to a particular area of the sea.

The key message emerging from these workshops is that rights-based fishery management discussions should be expanded to examine all the choices, and that no one form of use rights is superior in all circumstances. Much may depend on the type of fishery people envision and the amount of responsibility they are willing to assume in achieving that goal. Most importantly, it may be a matter of trying to create an atmosphere where people believe in the system in which they are working.

Appendix

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"In a comanagement, democratic system, it is important to understand that the minority position could get voted out."

—Workshop participant