The joint planning agreement experience in Canada

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1. INTRODUCTION

Co-management evolved in Canada in response to calls by industry, the scientific community, and the public for more involvement and transparency in public management of fisheries. While development towards more transparency did occur, Fisheries and Oceans Canada (DFO) also embarked upon policies of cost recovery for services rendered and of resource rent extraction, mainly though yearly licence fees. Moreover, co-management arose within a broader governance system that does not provide for secure, long-term rights. The division of responsibilities under co-management in Canada occurs in individual fisheries through Joint Planning Agreements (JPAs). These agreements, also generally called Partnerships, were negotiated largely privately. The terms of the agreements changed from fishery to fishery but typically included both some sharing of responsibility with industry and also cost recovery to fund DFO services. Understanding these intertwined objectives of responsibility sharing and cost recovery provides a clearer understanding of both the evolution of co-management in Canada and also the context in which further evolution of this shared governance will occur.

The development of joint project agreements can be understood through some ideas from public choice theory and institutional economics. From institutional economics comes the argument that resource users may have a comparative advantage in some aspects of management of their fisheries. Public choice theory helps understand the motivations of government. The ministerial system in Canada provides great discretion to the Minister of Fisheries. This discretion both provides great flexibility in the response to political demands of constituents, but also means that a Minister or government can reverse policy initiatives. And public choice theory also emphasizes that the implementing government agency, in this case the DFO, may have its own institutional objectives. As the cases in this volume indicate, this political and economic environment has yielded interesting and innovative cases of public management that mix resource management objectives with other social objectives. But as governments and the DFO pursue their future interests, these governance structures may be subject to adjustment and even reversal over time.

2. AN OVERVIEW OF FISHERIES MANAGEMENT IN CANADA

The 138-year-old *Fisheries Act* governs fisheries management in Canada. Responsibility for the Act has changed over time with changes in government. Different ministries that have been responsible for the Act have had varying degrees of responsibility and visibility. For example, the *Government Organization Act of 1979* moved fisheries management and responsibility for the *Fisheries Act* out of the Department of the

Environment and into the Department of Fisheries and Oceans (DFO), which then became a ministerial post in the government.

In April 1995, the role of the DFO was further enlarged by the incorporation of the Canadian Coast Guard. The *Government Organization Act* also gives the DFO residual authority over all matters relating to the coordination of the policies and programs respecting oceans under Canadian jurisdiction that have not been assigned by law to any other department, board or agency. This residual authority is reaffirmed in the *Oceans Act* of 1996. Language in the *Oceans Act* favors integrated ocean policy, with an emphasis on protection of marine ecosystems. The DFO has characterized the Act as a significant step toward "consolidating federal management of oceans and coasts", entrenching an ecosystem perspective and, more recently, as "a framework for modern ocean management." A basic premise of the *Oceans Act* is that an oceans management strategy will require a collaborative and inclusive effort among stakeholders both inside and outside of government (Juda, 2003).

Among the most significant landmarks in Canadian fisheries management were the initial experiments with limited licensing. The first limited entry program was for lobsters in the Maritime Provinces in 1967 (Smith, 1978). Other fisheries followed in succession over the early 1970s: herring in 1970; Bay of Fundy scallops, offshore scallops, offshore lobster and groundfish in 1973; snow crab in 1974; and tuna in 1976. Licence limitation also occurred in British Columbia, where the salmon fishery went to limited entry in 1969 (Fraser, 1978). After this came other experiments in capacity control, including individual vessel quotas, a precursor to ITQ fisheries. These management changes laid the groundwork and possibly the economic motivation on the part of the industry, for further developments in management.

By the early 1990s, dissatisfaction with the decision-making process in fisheries governance was widespread. There has been an undercurrent of debate within Canada over the role of the Minister in fisheries management. From the side of the government managers and the scientific community, Ministers have been perceived as too ready to listen to the industry, at the expense of the health of the resource and the points of view of other stakeholders. Industry, on the other hand, has often argued that more management power should be given to those who use the resources. Both arguments are aimed at limiting the discretionary powers of the Minister. This debate over the appropriate division of public management responsibilities is one of the main drivers of the evolution of fisheries management in Canada. The question of who should pay for management is also a sub-text of this debate.

Creation of the Fisheries Resource Conservation Council (FRCC) in 1993 on the East Coast (FRCC, 2007) and the parallel Pacific Fisheries Resource Conservation Council (PFRCC) in 1998 for the West Coast salmon fishery (PFRCC, 2007) seemed to be a concession by the Fisheries Minister to these criticisms. These two bodies are advisory in nature, composed of specialists from academia and industry named by the Fisheries Minister, but financed at arms length by the DFO. Both organizations play a role in keeping the Minister of the DFO informed on both the biological and socioeconomic issues in the regions. And both organizations play similar roles with respect to the DFO.

On the east coast for example, the FRCC was envisioned as a partnership between government, the scientific community and direct stakeholders in the fishery. The FRCC is composed of up to 14 members, with a balance between "science" and "industry". In this organization, the social sciences are also represented. The Minister appoints the FRCC members for three-year terms. *Ex-officio* members can be appointed by the DFO. Most administrative aspects of the FRCC are analogous to other consultative systems, such as the U.S. Fishery Council system, except that the FRCC decisions are based upon consensus. The FRCC can be dissolved by Ministerial decree. Finally, the discretionary power of a Minister to ignore the advice of the

FRCC and apply other objectives is far greater than in the U.S. Even though Canada has been experimenting with different models for decentralized management, ultimate decision-making authority remains in the hands of the Minister. This has been a source of consternation at times, not only for members of the industry, but at times for the scientific community as well.

3. MINISTERIAL DISCRETION AND INTERNAL DFO CULTURE

The combined responsibility of the *Fisheries Act*, the Coast Guard and the *Oceans Act* gives substantial power to the Minister of the DFO. The Minister's office is a "lightning pole" not only for the industry constituencies, but also for any agendas that the government may want to put forth. In the case of governments with strong party discipline, part of the DFO policies might be aimed at keeping the ruling party in power. The more politically important a management issue is in a region, the more likely that these issues will receive special attention from the Prime Minister.

Lane and Stephenson (2000) provide an appraisal of the role of the internal culture at the DFO on Canadian fisheries management . Lane and Stephenson quote Larkin, who says that the organization is paternalistic, leaning heavily towards the "ichthyocentric" side. The objective of management has been mainly concerned with understanding the state of the exploited stocks and not necessarily on understanding the social and economic impacts of policy alternatives. The policy agenda of the DFO may have been influenced by the backgrounds of staff from the life sciences. There has been a shift in philosophy since World War II towards the pursuit of the more diffuse concepts of best use or optimal yield that incorporate biological, social and economic information (Stephenson and Lane, 1995). However, invoking a *raison d'être* for this additional scientific input can be challenging when, as Lane and Stephenson suggest, "all participants in the system converge on the Department and it's Minister (as the ultimate authority) to influence the trade-off between resource conservation and socio-economic health". If the political process mandates that the Minister is responsible for dealing one way or another with socio-economic impacts, one of two outcomes might occur. A Minister might ask for advice on these impacts from specialists in the social sciences. Alternatively, a Minister might fall back on discretionary power and make decisions based upon his/her own understanding of these socio-economic impacts. If the latter case prevails, how significant will the advice from social scientists likely be?

An important result of ministerial discretion is that whatever "rights" might have been created for fishers are themselves subject to future ministerial discretion. Fishing permits or individual quota programs exist only as elements of fishery plans. The Minister can amend those plans. Such amendments could invalidate any pre-existing privilege enjoyed by a fishing firm. Individual quotas are set as part of a condition of the licence. Quota transferability rules are found in licence policy and fishery management plans. In many fisheries, these regulations allow for transferability of quota only under limited circumstances. Permission of the DFO may be nominally required for transfers of licences or quota. This can result in civil contracting that attempts to circumvent these restrictions through informal market transactions. Because the Minister retains so much discretionary power over allocation, the risk that a future ministerial action could alter a "rights" regime can limit the asset value of quota. Without a clear future stake and with a limited ability to transfer any asset value that is created by management, the incentives for stakeholder involvement in management may be comparatively modest in Canada.

This quality of the ministerial system in Canada is a two-edged sword. It allows for a rapid deployment of policy changes at low cost, in part because decision-making is more centralized. It can be quite responsive to the evolving needs of constituents. And, as seen in the case studies, there is a high degree of initiative and innovation in the formulation of policy responses at the regional DFO level. However, because ultimate

decision-making authority rests with the Minister and because of the responsiveness of the system to political changes, the development of property rights regimes at the collective or at the individual level can be rapidly subverted by changes in policy or government. Innovations in new community based management initiatives may occur, but the development of new property institutions will be difficult, if not impossible, under this governance structure.

4. PARTNERSHIP AGREEMENTS

Roughly coinciding with the creation of the advisory Councils and the inclusion of the Coast Guard, the DFO began experimenting with "partnership agreements." This move was taken to project a new image of accessibility and willingness to engage in co-management contracts with fishermen's groups. This appears to have been motivated by several factors. First, the DFO felt it necessary to restore public confidence in the department. Second, this policy was considered supportive of a general objective to reduce overcapacity in the domestic fishery. Third, and importantly, these policies responded directly to the call by the fishing industry for more transparency in the decision-making process. Finally, the New Partnership (as it was called at the time) was designed to help reduce the deficit by placing more of the management responsibility and the costs of management, into the hands of the resource users themselves.

The DFO proposed to develop long-term contracts with specific fishing groups called "Joint Project Agreements" (JPAs). These agreements provide a complement to the discretionary powers of the Minister in setting quotas, permit numbers and permit prices. They usually cover the various shared responsibilities in management, which may include the payments in money or in kind that each partner is liable for under the agreement. DFO policy states that JPA's can only be negotiated with licence holder associations that represent at least two-thirds of the licence holders in any given fishery (Michelle James, Underwater Harvesters'Assn, pers. comm.). The parties can amend a JPA at any time. There is usually an annual sub-agreement or amendable annex regarding costs and specific responsibilities for the year. Under most JPAs, the DFO offers management services to the industry, which industry finances through direct payments, in-kind contributions (such as boat time for research), or other negotiated solutions.

Negotiations for JPAs can occur most easily with organizations that can easily communicate with the DFO and are economically motivated to do so. Smaller fisheries have an advantage, because the representation requirement to get two-thirds of the licence holders into one association is easier to meet. The agreements, which vary from fishery to fishery, are negotiated directly with the industry, usually through organizations and are not necessarily made public. This negotiation process raises questions. From a pragmatic standpoint, a fishery-by-fishery approach may be more cost-effective, but piecewise co-management may not be globally efficient when fisheries have interdependencies, such as bycatches. There are also clear questions of transparency and equity. In practical terms, the DFO is involved in bilateral negotiations, so different fisheries groups end up paying different amounts for similar services.

5. COST RECOVERY AND RENT EXTRACTION UNDER PARTNERSHIP AGREEMENTS

Although the *Oceans Act* of 1996 further consolidated many federal responsibilities for oceans under the DFO, it may have deflected attention (and funds) from fisheries management. The year 1996 saw fewer budgetary resources for fishery management services. At the same time, the DFO negotiated and extended co-management arrangements with Canadian fishers, which were precursors to partnering agreements (DFO, 1997). This process of moving toward partnerships has always involved two components: the formulation of "integrated fisheries management plans" for the target

stock and the signing of JPAs. The stated purpose behind these agreements was to foster greater accountability and cost sharing with the stakeholders in the fishery (Anderson, Sutinen and Cochrane, 1998). In May 1996, the Department issued its "*Fisheries Management Partnering Policy Principles*", which defined as a principle of cost recovery that "... all resource management costs that are attributable to the fleet and that result in or support private benefit to the fleet should be either paid for or undertaken by the fleet."

One question is whether cost recovery was the main policy objective driving JPAs, or simply an ancillary component. The Auditor General of Canada (AG) concluded in its review of shellfish JPAs that "Co-management arrangements examined by the AG were largely cost-sharing arrangements and have involved no sharing of real decision making powers." (Auditor General, 1999) The AG concluded that the Department had not determined which of its resource management activities, including science activities, resulted in or supported private benefit to the various fleets. In addition, the DFO did not and does not have a costing system that generates this information. The AG determined that the types of costs recovered from each fishery varied. These ranged from negotiated arrangements for industry groups to conduct stock assessments to no management charges at all.

Similarly, the AG reports that a panel appointed by the Minister to study the partnering concept concluded that the people consulted outside the DFO felt that co-management simply implied transferring fisheries management costs from the DFO to the industry. Kaufmann and Geen (1997) argue that most plans for "cost recovery" under the DFO "Partnership Program" were actually motivated by the desire for rent extraction. Kaufmann and Geen conclude that the 1995 DFO Regulatory Impact Analysis on the new fee initiatives confused the issues of cost recovery and rent extraction. They further conclude that the approach amounted to partial cost-recovery across all fisheries on the basis upon the ability of the fishery to generate revenues, rather than cost-recovery of specific costs by fishery. With this approach, some industry members would pay resource rents over and above costs of management, while others would not.

The realities of the partnerships seem more modest and piecemeal than envisaged in either *The Fisheries Act* or *The Oceans Act*. The partnerships appear to be driven largely by economic considerations. It was easier to negotiate with small groups of organized fishers than with large numbers of disorganized fishers. Fisheries whose wealth positions, or potential wealth positions, were relatively solid became some of the first partners. The pilot projects usually involved fisheries that had already undergone a transition to a rights regime and notably fisheries under an IQ or IVQ scheme. The AG report agreed that this was arguably a rational approach on the part of the DFO, but that it may have led to incoherencies in the definition of public services for private benefit and that it raises issues about fairness in taxation and rent extraction. In a sense, co-management may amount to reverse lobbying by the DFO after an initial phase of rationalization. The DFO, in order to reduce costs of negotiation, develops relations with easily identifiable stakeholders who are also sources of resource rent.

6. AMENDMENTS TO THE FISHERIES ACT

The new minority government of Canada intends to modernize the *Fisheries Act* (DFO, 2007). The proposed changes give clues as to the issues that have driven co-management. The proposal changes reiterate and enlarge the original mandate of the *Act*, which is the conservation and protection of fish and fish habitat. But a second objective is to expand roles for fisheries participants in decision-making and reinforce responsible fishing behavior. Removal of words like "absolute discretion" to describe the decision-making powers of the Minister of the DFO may be the result of the underlying debate over the sharing of fisheries management responsibilities in Canada.

At the same time, the Minister announced investment in fisheries science of Can$61 million over three years to broaden ecosystem-based science to more fish stocks and to incorporate that data and knowledge into fisheries management decisions. There has been a reversal of the previous government's decision to collect administrative costs for logbooks, gear tags and the at-sea-observer programs. A Licence Fee Review program is being proposed to examine the relative cost of licence fees in different fisheries to address equity issues. DFO will also re-examine how the government assesses licence fees. The thrust of these financial announcements might suggest that the cost recovery provisions of JPAs could also face scrutiny.

7. ECONOMIC INTERESTS AND THE EVOLUTION OF JPAS

Economic theories of institutions can help observers understand the factors that drove development of JPAs. Economists and other social scientists have made convincing arguments for the decentralization of management powers to fishing communities or organizations. Communities may have a comparative advantage in information and they may also have a compelling economic interest to manage the stocks they exploit, even in a commons setting (Anderson and Hill, 1983). This has been a common theme among institutional economists. The theme and the arguments are relatively straightforward.

The argument that alternative institutional arrangements may out-perform central government is part of a broader argument in social sciences against government control as a general solution to social and economic challenges (Jentoft, McCay and Wilson, 1998). This is why, in other articles Jentoft (2000) cites the community as the "missing link" in fishery management. For many applications in fisheries, governments have found that policies based upon centralized management, while easy to develop and put into place, can be costly in their application and enforcement (Nik and Pomeroy, 1998). This has led some governments to question their own competence in fisheries management and to search for other viable management models.

The argument that local control can out-perform central government control explains why groups of fishers would be interested in assuming greater responsibility. In addition, a strictly altruistic public agency might also search for more efficient management solutions and therefore would be interested in the social benefits of more localized control. But one could also turn to public choice theory and ask whether strictly self-interested elected officials and public servants would not also gain from shared responsibility. This perspective might explain why cost-recovery figured so prominently in the development of JPAs and why the fisheries "rights" created in Canada are less secure than they should be, from the standpoint of social and economic efficiency.

Mueller (1997) describes public choice theory as an interdisciplinary agenda of research that uses economic methodology to study politics. The field, in the words of one of the founders James Buchanan (1979), is the study of "government failure" in the same sense that earlier economists have written about "market failure." Public choice theorists have sought to study and to explain issues such as public sector growth, agency capture by special interest groups, free riding, vote buying, log rolling, bribe-taking and expansion of agency power. The focus of this research agenda is on the economic behavior of the elected official and the public servant (Wilson, 2007).

The behavior of bureaucracies has been an important issue within public choice. The public choice approach assumes that unconstrained bureaucrats would purse their own economic self-interest, such as higher salaries and bigger staffs. But this activity is constrained to some degree by the political process. Breton and Wintrobe (1975) identify two main themes in modern theories of bureaucratic behavior that suggest how bureaucracies may be constrained. The first deals with questions concerning how the political system creates incentives for bureaucrats that align their self-interest with

those of their political masters and of the broader public. The second line of research is whether bureaucracies are compelled to act as political competitors that deliver services efficiently or whether they are insulated from the process sufficiently to act as monopolists that raise prices and restrict output.

Another important line of inquiry related to public choice overlaps organizational theory as well. The idea of "bounded rationality" has been used to explain organizational behavior. In a widely published article on the subject, Herbert Simon (1991) argued that organizations, because they are composed of rationally bounded individuals with limited capacities to store and use information, are complex and relatively stable structures that evolve by bringing new people with different ideas on board or through learning by the actual members. One intuition from Simon's work is that organizational behavior may be relatively slow to change and this may pose problems during periods of rapid change outside the organization.

One important idea coming out of public choice is that of the economics of rent seeking. This was originally explored by Kreuger (1974) and further by Buchanan (1980). The argument is that the potential accumulation of rent brings on competition aimed at capturing a part of that rent. In extreme cases, the expenditures of resources among rent seekers may be large and actually may exceed the total value of the rent competed for. Governments are not immune to these pressures and the way in which rents are accumulated could result in their dissipation by the competitive process. On the other hand, limiting competition for rent may result in its accumulation, which can then be divided among fewer contestants.

These theories lead us to look more closely at the history of co-management in Canada. The Canadian case studies in this volume lend themselves to the interpretation that co-management was an institutional innovation that enabled specific fisheries facing inefficient resource use to organise more efficiently. However, the public choice literature reminds us that public servants are rational economic actors themselves, but "bounded" in terms of how they look at problems and how they design solutions. While an agency may place great professional value on promoting the welfare of its citizens, it also has its own internal agendas, objectives and inefficiencies. In the case of the DFO, the growth of the agency has meant that the Minister has high visibility within Canada and substantial decision-making power. In safeguarding that authority, it is reasonable to expect that devolving management powers to industry would proceed slowly. On the other hand, the DFO probably has more formal knowledge of natural systems and scientific capacity in the life sciences than they do in the economics of the fleets they are managing. It may not always have the information and expertise to regulate in a manner that generates economic surpluses, which might be used to fund DFO initiatives. When DFO delegates to industry the authority to search for management efficiencies, the DFO itself may be able to share in those efficiencies through cost recovery and rent extraction. Although this is also technically "rent seeking," the extreme result predicted by public choice specialists does not occur. The partnership limits competition and therefore generates rent. This prospect motivates the remaining partners to conserve and distribute the rent being generated.

8. CONCLUSIONS

This overview of Canadian fisheries management provides some insights as to why a variety of co-management experiments have arisen in Canada. Most of these seem to have been motivated by the twin desires of the DFO to extract resource rents/recover management costs while at the same time passing some management authority to the contracting party in industry. These organizational and economic explanations of why the DFO has experimented with co-management may also explain why Canadian fisheries management has often stopped short of creating the secure, long-term rights advocated by most economists. This has probably led to higher management costs in

some cases and it certainly has exposed industrial partners to costs that have not been equitably distributed across fisheries.

In discussing governance issues, political precepts and philosophies matter. In the Canadian example, "good government" may mean that the DFO must retain more decision-making authority than we might see in another country. However, the Minister then must deal with stakeholders whose behavior is affected by this policy environment. Industry members may not always act as rational economic stakeholders with long-term interests in the resource, precisely because most long-term decision-making authority still resides with the Minister.

Canadian fisheries managers and the industry have become partners in a form of co-management, as evidenced by the Canadian case studies in this volume. However, there are broader questions to be asked. These relate to the durability of co-management experiments in Canada, whether the new institutions lead to efficient contracts and the role of the public management structure in the ultimate success or failure of the experiments. Passage to a more decentralized and rights based fisheries management in Canada has long been proposed by a number of authors (Pearse and Walters, 1992; Grafton and Lane, 1998; Lane and Stephenson, 2000). However, change in this direction may require a fundamental re-examination of the economic motivations of those within the DFO who have the responsibility of fisheries management in Canada.

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