Fisheries Management and Problems of Social Justice

Reflections on Northwest Newfoundland

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Introduction[1]

ABSTRACT This paper considers how the general interconnections between fisheries management strategies and the social structure of fishery-dependent communities necessarily turn fisheries policy into social policy. After a general discussion of (1) the impact of policy on forms of organization, (2) the relationship of fisheries management to regional development, and (3) the way that local social structure can constrain management objectives, the paper examines the experience of policy implementation in northwest Newfoundland. In effect, if not by design, licensing policy has favoured larger scale rather than smaller vessels. Quota controls and limited access licensing have not prevented overfishing. Although small boat fishers are suffering economically, there is no effective regional development strategy to provide alternative employment. In conclusion, a short-term support programme for small fishers is recommended in conjunction with a licence buy-back scheme for draggers. Some problems of implementing co-management in this area is also discussed.

This paper considers how the general interconnections between fisheries management strategies and the social structure of fishery-dependent communities necessarily turn fisheries policy into social policy. Since the 1960s, states have become increasingly involved as owners and managers of fisheries in response to problems of low catches and low incomes of fishing enterprises. It is not surprising that state officials would prefer to treat the difficulties they encounter as purely technical matters that require action either to protect stocks or bolster the economic efficiency of boats.[2] It would be much simpler if fisheries policy could be about fish rather than people, but, whether the participants face it or not, fisheries policy is also social policy. Neither the pursuit of higher profit levels nor even the protection of fish species can take place without having an impact, sometimes detrimental, on the people who live from the sea. As social policy, issues of fairness or justice in fisheries management cannot be wished away because they are difficult to deal with. The core point is that fisheries policy cannot be either fair or effective unless the management of the resource is connected to a broad understanding of how people in fishing regions make a living, what options they have, and what impact policy changes will have upon them. In this paper, my intent is to draw out some general implications of this position and to illustrate them with respect to the development of the fisheries on the northwest coast of Newfoundland and southern Labrador (see map 1).

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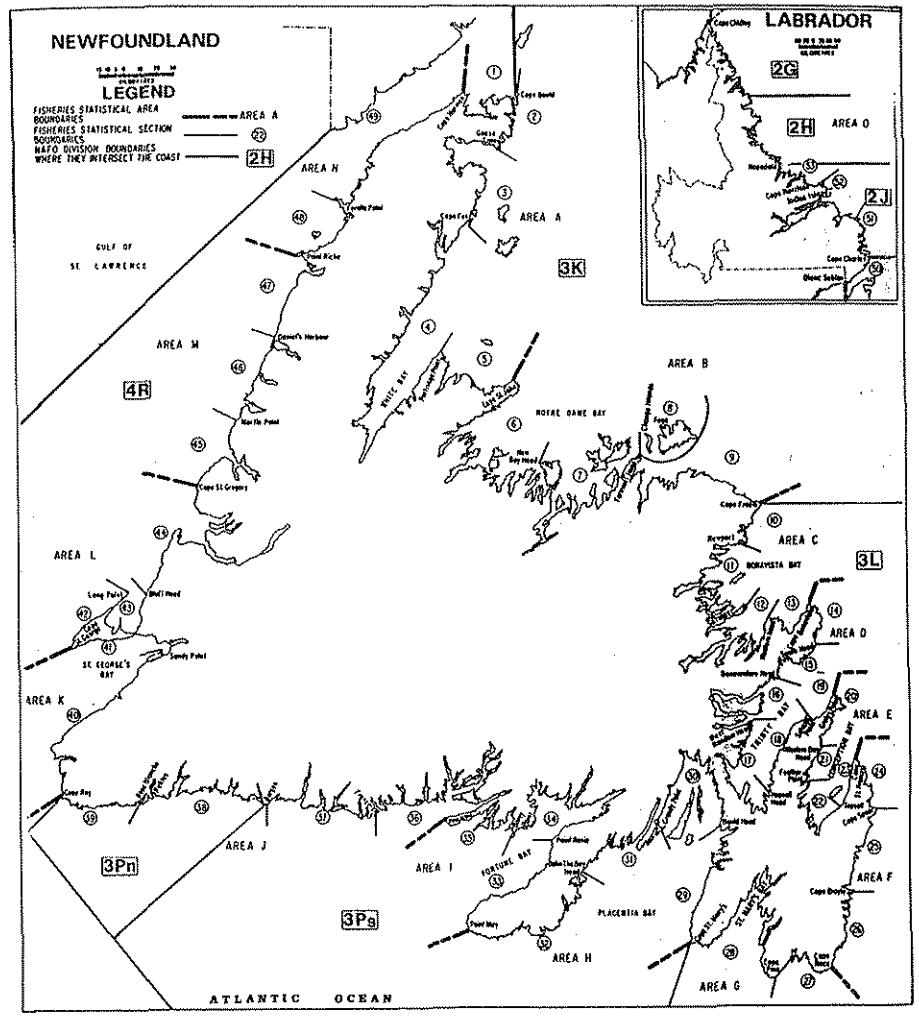


Map 1. *Fishing Zones*

In Newfoundland, where fishing has long been the only economic base for hundreds of coastal villages and small towns, it has never been possible, much to the chagrin of managers, to disconnect completely the technical and social issues. To give one preliminary example, the problem of social justice in fisheries management has come to the fore yet again in 1989-90 with reference to the federal government's decisions to reduce the "northern cod" quotas in NAFO areas 2J, 3K and 3L[3] from 266,000 tons in 1988 to 235,000 tons in 1989 and 197,000 tons in 1990 (*The Evening Telegram*, 9 February 1989, 2 January 1990). It should be stressed that this is an extremely important stock to the fishing communities of eastern Newfoundland because it has been the primary source of income for

thousands of inshore fishers and for the last twenty years has been central to the giant fish processing companies, which harvest this species in winter using deep-sea trawlers. Inshore fishers have received an allocation of 115,000 tons for several years with almost all the remainder going to Fishery Products International (FPI) and National Sea Products (NSP). For some time, inshore fishers have complained that they cannot catch their allocation because of overfishing by Canadian trawlers and by foreign vessels outside the 200 mile zone. Finally, federal scientists acknowledged that the stock is in such serious trouble that a reduction of the total allowable catch (TAC) to 125,000 tons was recommended in order to permit rapid rebuilding. In February, 1989, the federal government took the decision to cut back moderately to a level that would maintain the current biomass and to reserve further action until the report of a special advisory committee had been received later in 1989. Because the catches of inshore fishers usually fall well below their allocation, it is unlikey that a modest reduction would have any real conservation effect unless it came against the quota allocated to corporate enterprises. Hence FPI and NSP had to face lower quotas. With further reductions in 1990, these companies announced the closure of four major fish plants employing up to 2,000 people.

The point is that management decicions on fish quotas are also decisions about the social viability of different forms of enterprise and about the future of individual communities and households. Such decisions should not be made on purely technical criteria. Consequently, a basic problem is to devise a system of management that: (1) is conservationist in practice as well as in rhetoric or intent; (2) can be implemented without excessive expenditures on policing; and (3) as far as possible, is consistent with the cultural practices and economic needs of those who have depended on the resource in the past. A policy that is sensitive to the final point will contribute significantly to social justice. A policy that deepens social inequalities or that unnecessarily deprives people of old rights is, conversely, unjust. I shall not elaborate here on the moral basis of what I am calling social justice; rather, I shall sketch some general connections between fisheries management and social structure before turning to the concrete case of northwest Newfoundland in relation to these observations. I do so recognizing that the construction of fair policy requires an understanding of these connections and that this understanding will be better served by illustration than by abstract generalization alone.

General Issues

Impact on Forms of Social Organization

What are the social repercussions of fisheries management decisions, particularly those that control access to fish? Whether fishing rights go to communities, individuals, private companies, or cooperatives will support one form of organization or some combination rather than others. That is why, in Newfoundland, the distribution of the total allowable catch creates allies of those with similar

interests and produces intense lobbying and disputes between (1) inshore and offshore enterprises; (2) mobile and fixed gear within the inshore sectors; and (3) Newfoundland deep-sea companies and those from other provinces. Not only particular forms of enterprise, but whole settlements are implicated in these decisions. Indeed, without access to fish, survival is threatened in isolated, fish-dependent districts. It is then no surprise that fisheries management should be a source of almost constant, bitter controversy in which local people and politicians push arguments of social need against the technical vision of many policy makers.

Another way that management has an unequal impact upon different forms of organization is when decision imply expenditures for equipment. Sometimes continued participation in the fishery may be influenced by access to capital to meet management demands. One example is the problem of introducing quality controls, desirable in themselves, that would require expensive reconstruction of boats and change fishing practices, e.g., onboard boxing of fish, which has not been made compulsory in Canada.

Fisheries Management and Regional Development

Increasingly, the Canadian state has tried to limit access to fish through quotas and licensing policy. Obviously, such a policy will have implications for living standards that will vary according to the economic conditions of the area concerned. At the regional level, management strategies that reduce access should be integrated with regional programmes to provide alternative employment. Failure to do so must lead either to migration or to increased inequalities of income between those who have access to fish (and related processing work) and those excluded who have no alternative local employment. Elsewhere (Sinclair 1989) I have examined how Canadian fisheries policy blocks effective regional development strategy in Newfoundland because it does not make the province's employment problems a central concern. It focusses more on the fish than on the industry (including relevant manufacturing) that could be built on the resource. Moreover, fisheries policy has low national priority and decisions affecting fisheries management may be based on criteria that have nothing to do with the fisheries. In particular, the dispute with France over the extent of French jurisdiction around the islands of St. Pierre and Miquelon has been conducted in such a way as to sacrifice fish stocks to promote a more conciliatory French attitude on the boundary question.

Social Structure as a Constraint on Management

The interconnection between state and fishing people is not entirely a matter of state domination, because the state is itself constrained by values and collective action of those it seeks to control. How can the local structure of fishing communities affect management of fisheries? Rules considered illegitimate or inconsistent with past social practices may be broken where possible. Whenever

outside rules lack social support, policing will become a major problem, particularly where rule breakers enjoy social status in part for their success in beating the law.[4] Although local culture can impede fisheries management, is can also strengthen a managerial policy that is viewed as legitimate. For example, where strong corporate traditions exist and inshore fisheries have been controlled at the local level by informal means (Acheson 1975; Dahl 1988; Davis 1984; Jentoft and Kristoffersen 1988), it may be possible to decentralize policing by giving communities of fishers' organizations the right to determine local access within the general framework of the fishing plan (for a successful example, see Jentoft and Kristoffersen 1988). That such co-management is seldom smooth and sometimes disheartening must also be recognized (see Kearney 1989 and McKay 1988 for North American examples).

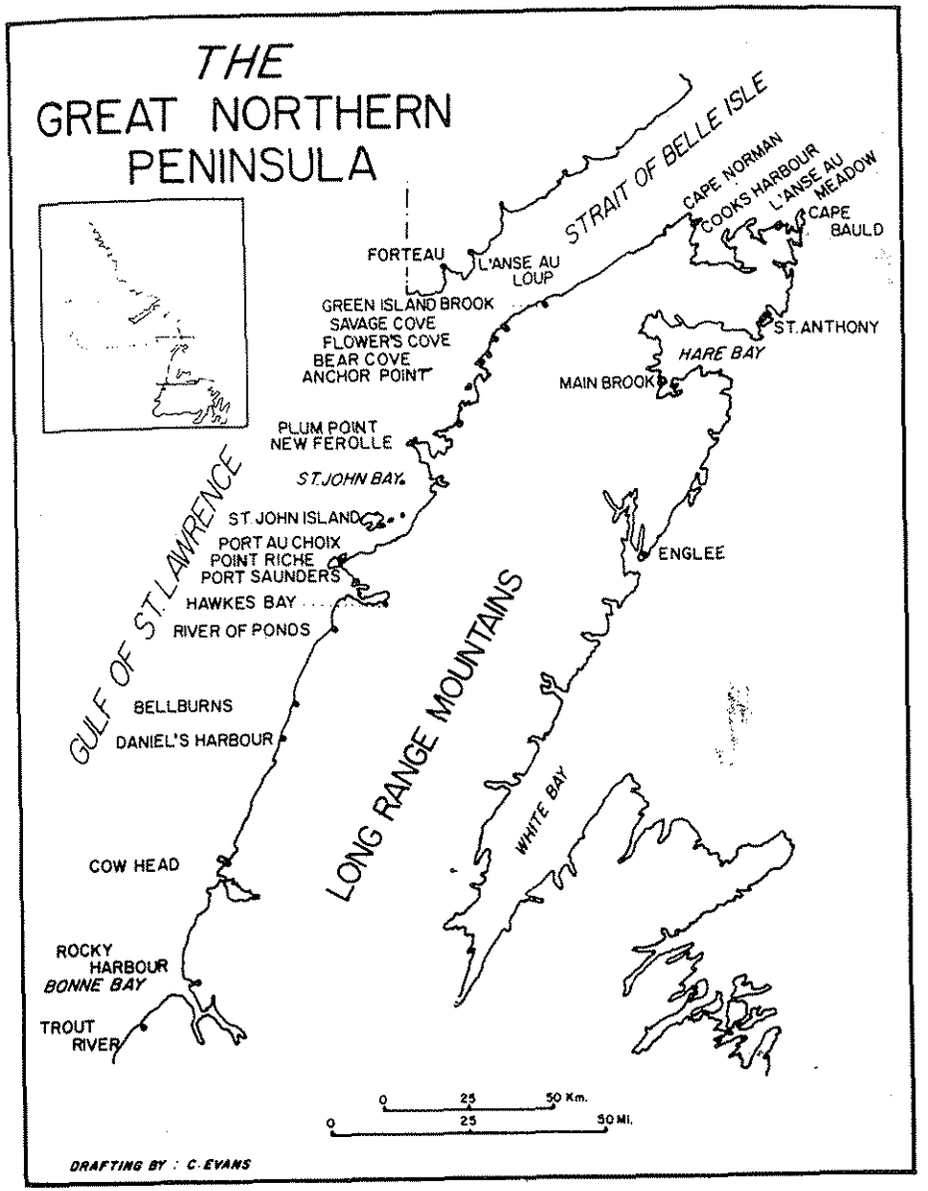
These connections between fisheries policy, social structure and equitable social policy may be explored further through a brief summary of the experience of the people along the northwest coast of Newfoundland as they have tried to cope with rapid change and an increasingly interventionist state.[5] In the conclusion, the potential of co-management to resolve the problems of this area (see Map 2) will be considered.

Northwest Newfoundland: Some Problems Illustrated

The Context

Jutting northeast from the core of the island and stretching some 300 kilometres towards Labrador, the Great Northern Peninsula of Newfoundland separates the Gulf of St. Lawrence from the Atlantic Ocean. The peninsula suffers from a harsh climate, with long snowy winters and harbours closed for months by ice. The growing season is short and soils are poor. The region's forests have supported a timber industry, but the pulpwood has been carried south to Corner Brook for processing in a pattern typical of underdeveloped regions. The old rocks of the Long Range Mountains may contain valuable minerals, but only zinc, mined at Daniel's Harbour, has actually been extracted, and that mine is soon to close.

This discussion concentrates on the northwest coast, bordering the Gulf of St. Lawrence where ocean resources are critical as the basis of the economy. Although there is some intermingling with Atlantic Ocean stocks, Gulf stocks are separately identified and managed independentely by the Canadian federal government. Cod is the most important groundfish in the northern Gulf of St. Lawrence, but redfish, turbot, plaice, halibut and witch are also landed. Herring and salmon are fished, and lobster are trapped along the southern part of the Gulf coast. Lobster have been important since the late nineteenth century, whereas the shrimp fishery dates only from 1970. Iceland scallops are harvested west and north of Anchor Point in the Strait of Belle Isle. Sealing, now of reduced commercial importance, takes place in early spring when the pack ice, bringing the seals with it, moves in from Labrador. The fisheries have given rise to a fish processing industry, which is the only type of manufacturing in the region. It employs about 20 per cent of the labour force, most on a seasonal basis.



Map 2. *The Great Northern Peninsula*

The Great Northern Peninsula is characterized by numerous indicators of marginality, such as low incomes, high dependence on welfare and unemployment insurance, a weak labour market, low levels of education, loss of youth who migrate in search of work opportunities, and minimal access to social serv-

ices. In most respects, the Peninsula is one of the least privileged areas of Newfoundland, which is itself disadvantaged in Canada as a whole. At the same time, it should be stressed that there is a wide range in living conditions from community to community on the Peninsula.

Unemployment is painfully high on the Peninsula – more than three times the national rate in 1986, although the labour force participation rate was higher than for the province as a whole and about the same as the national average. Reflecting the importance of the small boat fishing sector of the economy is the relatively high percentage of men who are self employed (13.5 per cent compared with 4.8 per cent for Newfoundland). The service sector of the economy is less well developed, whereas relatively more people are found in primary industry (mainly fishing) and manufacturing (almost exclusively fish processing). In 1986, 22.9 per cent of the labour force was engaged in primary industry and 20.8 per cent in manufacturing compared with Canadian figures of 6.6 and 16.8 per cent respectively. Incomes are low even by Newfoundland standards and, relative to Canada, male incomes are especially depressed. The 1986 median income for men was $11,489 (58 per cent of the Canadian median) and for women it was $6.957 (72.9 per cent of the Canadian median). Finally, the dependence on transfer payments in our research area is particularly high with 32.2 per cent of total income coming from this source compared with 21.2 per cent in Newfoundland and only 11.1 per cent in Canada.[6]

Expansion of State Management of the Fisheries

The Traditional Adaptation (Non-intervention)

From the establishment of settlement in the late nineteenth century until the major technological changes that date from about 1965, the region was characterized by a multi-dimensional economic adaptation at the level of the household. Most households depended on combined family labor to survive at a minimal level through fishing, sealing, logging and subsistence production according to the season. People built their own homes and furniture, and they provided most of their own food needs. Cash was a rare sight in a local economy dominated by the merchants who advanced supplies on accounts for which payment was taken in fish. Utilizing simple, low cost technology, the fishers caught cod, lobster and salmon, which were exchanged for goods that could not be provided by themselves – fishing gear, nails, molasses, tea, cloth and other basic items. The open boats and gear were typically owned within a household, which was also the source of labour wherever possible. In this domestic commodity form of production, accumulation of wealth was next to impossible for the fishing households.

No state controls existed on fishing, but access to prime fishing sites for cod trap berths was based on local custom – either inheritance or a lottery before the start of the season (Andersen 1979; Martin 1979). State support of the population in the first half the twentieth century was limited to meagre old age pensions and welfare payments during periods of severe shortage.

At the end of this period, most people on the Great Northern Peninsula functioned in a local economy that was based on domestic commodity production in fishing. In 1945, households in the St. Barbe district, which covered all the west side of the peninsula and included most of the population, were large, an average of 5.9 persons with an exceptionally high number of multiple family households – 18.8 per cent (Census of Newfoundland 1945, table 67). Of those gainfully employed, 71 per cent were classified as working on their own account, i.e. neither employing others nor selling their labour, and they earned an average of only $627 per annum. More than half the labour force was engaged in fishing and 1,299 of 1,418 fishers were classified as working on their own account (Census of Newfoundland 1945, tables 46 and 53).

State-sponsored Adaptation

After Newfoundland became part of Canada in 1949, the material circumstances of people on the Great Northern Peninsula improved in large part because of the introduction of the Canadian welfare state. Canadian pensions were more substantial and family allowance cheques meant a great deal to large households where previously cash incomes had been low. Unemployment insurance benefits were available to workers and by 1957 self-employed fishers also became eligible during the winter, when fishing is impossible due to ice conditions and the migration of the fish. Beyond unemployment payments, the initial interventions of the state in the fisheries included occasional price support and capital grants for processing plants as the industry began to switch from salt to frozen fish.

By the early 1960s, the survival or reproducton of households was based on the earlier multi-activity adaptation in conjunction with various forms of state transfer payments. All able bodied household members contributed their labour in some way to this process. Women attended both to domestic tasks – the housework, the child-care and gardening – and assisted in the processing of salt fish. Family allowance cheques were paid to the mothers. Men cut and hauled wood in winter and repaired boats and homes, while collecting unemployment benefits. Some worked for pay for logging companies. In late winter, sealing was usually possible. In the spring, lobster were caught inshore along the southern part of the coast. By June, capelin and cod moved close enough to be caught by traps, hand-lines and gill nets. Homes were built and gardens maintained where the soil allowed (Faris 1972; Firestone 1967; Philbrook 1966). This adaptation, it should be stressed, only permitted a low standard of living in comparison with the rest of the country. In 1960, men earned only 47.6 per cent of the Canadian average income and women, only 10.4 per cent of whom were in the labour force, earned 57.8 per cent of Canadian figure (Census of Canada 1961, Cat. 94-533). In this stuation, the arrival of mass media, improved education and communications served to raise local perceptions of what was desirable and possible.

State Managed Inequality

Beginning in the early 1960s, the social structure became more differentiated as some enterprising fishers managed to purchase or build bigger boats - longliners of some 12 to 14 metres that allowed the use of baited trawl lines and gill nets further from shore. These innovative fishers were no longer prepared to toil like their fathers, fishing lobster in miserable conditions for next to no income. By the early 1970s, scallop and shrimp dragging had started with Port au Choix as the primary centre. Gradually, vessel sizes and horsepower increased, as fishing success encouraged more investment, until they reached the legal limit for inshore boats (just under 20 metres in length). The best equipped, steel-hulled draggers now cost about $850,000-1,000,000 (see photo 1).

With the emergence of the draggers, the fleet structure has become more complex. There are no deep-sea trawlers based on the west coast of Newfoundland and southern Labrador, although French trawlers had fishing rights until 1986 and Canadian trawlers still operate in this zone. Based on the west coast of the island of Newfoundland and southern part of Labrador, there are now about 80 active, mobile gear vessels, under fisher ownership for the most part, and crewed by about 250 hired sharemen. These are essentially small capitalist enterprises. Apart from a small number of decked "longliners" of 13-15 metres in length, most of the other 2,400 fishers in the region work from open wooden boats, powered by outboard motors and roughly 5 to 8 metres long (see photo 2). They fish with traps, gill nets, baited lines and jiggers in waters close to shore. A few larger vessels have inboard diesel engines. About 700 fishers have lobster licences, while half that number have commercial salmon licences. Slightly more than half the small boat fishers are classified as full-time.

Photo 1. *One of the most successful draggers in the 1980s in Port au Choix*

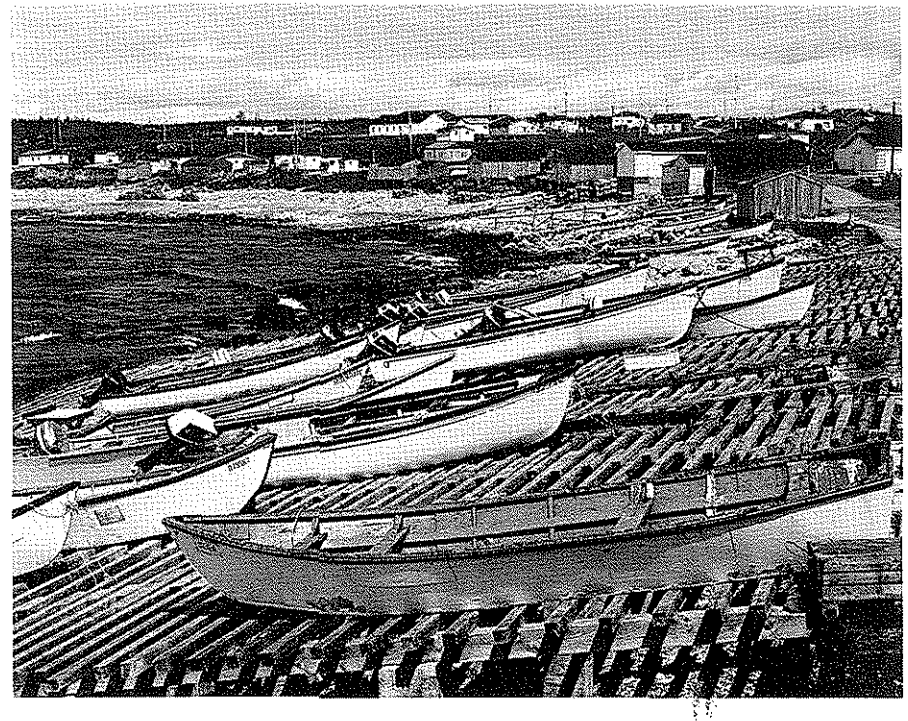


Photo 2. *Typical inshore boats in River of Ponds*

As the early draggers became better equipped, their skippers more knowledgeable and their catches improved in the mid-1970s, others were attracted to the fishery. It was at this time that the state also became more involved as a manager. I shall not cover he history of management in this area in fine detail; only the key points. In Canada's federal structure, the central government is responsible for ocean fisheries. By the mid-1970s, Canadian fisheries managers had become convinced of the economists' attack on the evils of common property - principally that it promoted excess capacity, economic inefficiency, loss of resource rent, and overfishing of the stocks. Consequently, they were willing to intervene in various ways to control access when the Atlantic coast fisheries fell into one of their periodic crises in 1973-74. The result in the Gulf of St. Lawrence was the creation of limited access licensing to fisheries of relatively high value - principally cod and shrimp dragging, lobster and salmon having been restricted a few years earlier.

In 1983, the licensing system changed in response to concerns over poor quality and over-capitalization as licensed draggers scrambled to get the largest possible share of the quotas allocated to their fleet sectors. Canada divided groundfish quotas by fishing area and according to type of vessel. Thus deep-sea trawlers, smaller mobile gear vessels, and inshore open boats had separate quotas. The mobile gear fleet was technically capable of catching much more than its season quota, which meant that there was a strong incentive for all skippers to catch fish as quickly as possible. This rush led to gluts of poor quality fish, due to improper handling on board, especially in the winter fishery off southwest Newfoundland, where the fish tend to be densely concentrated (in area 3Pn – see map 1).[7] At times, either the buyers or the federal government imposed daily trip limits, but the most interesting step was the introduction of seasonal, non-transferable boat quotas. This system appears to have been accepted by the skippers and remains in force (Groundfish 1990).

Contemporary Policy and Social Organization

But all is not well. I have argued that licensing and quota policy will favour some forms of social organization rather than others. This has been the most obvious social consequence of the policy in northwest Newfoundland. Although they do not say so publicly, interviews with senior fisheries managers indicate that they see no future for the small open boats of the traditional fishery, which they view as insufficiently productive to create adequate incomes. They also believe there are too many larger vessels for precisely the opposite reason: the catching capacity of these vessels is so great that, collectively, they can threaten the fish stocks on which all depend. In my judgment, the policies implemented are designed to restrain the larger vessels without giving any encouragement to small fishers that they can count on adequate fish in the future. The vessel and gear licensing system restricts access to the most productive technology in the name of economic efficiency and thus protects a class of affluent skippers and draggermen at the expense of those who have to rely on older technologies. Income disparities are enormous, in the range of 10:1, and are visibly reflected in the homes and other material possessions of the fishers, although this past prosperity is now threatened.

It is now clear that the control strategy of the last fifteen years has not protected the resource from overfishing, although the quality of scientific evidence is now seriously questioned (Harris 1989). The strategy generates social conflict and threatens the viability of many household enterprises, which are denied access to fish. As indicated in figure 1, the catches of small fixed gear vessels, on which the majority of fishers depend, have collapsed since 1985, falling to under 12,000 tons by 1989. Because the social inequalities are buttressed by state policy, they are particularly resented by those who cannot benefit. Social resentment is created not simply because one group is well off, but also because the fishing elite is thought to behave illegally and treat other fishers unfairly by catching so much that there is next to nothing left for open boat operators. There is no

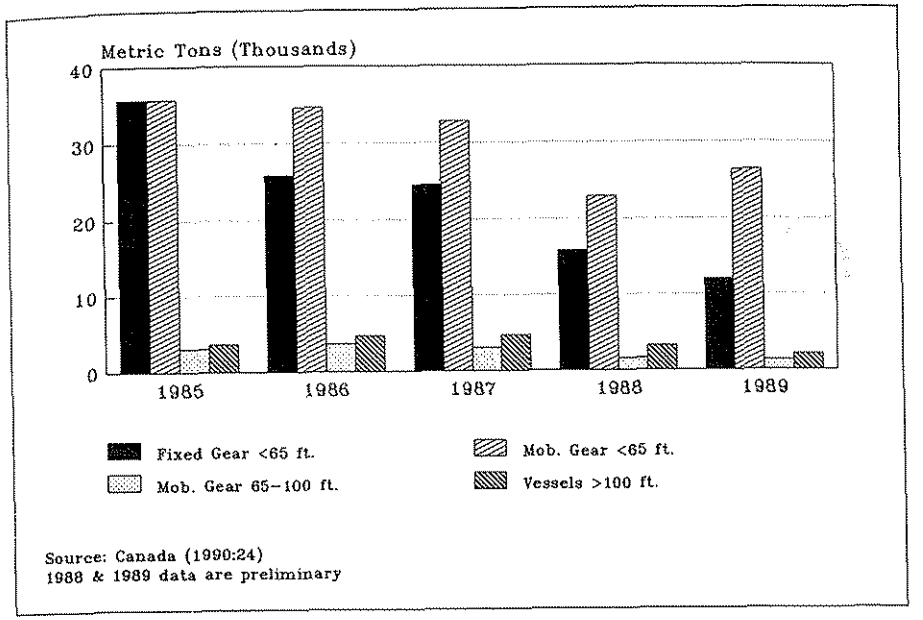


Figure 1. *Cod Landings, Areas 4RS and 3Pn, The Eastern Gulf of St. Lawrence*
Source: Groundfish (1990:24)
1988 & 1989 data are preliminary

point in small boat fishers receiving a quota if the fish do not reach their nets any more.

Although all full-time fishers (draggers skippers, sharemenworkers and open boat operators) are part of a single union, the Fisherman, Food and Allied Workers, that negotiates such matters as the minimum price of fish, open boat fishers often complain that they have no influence compared with dragger skippers and that the union does nothing for them. The tension and conflict became so strong that the small fishers have formed an independent Fixed Gear Association to lobby for new management rules that might afford them some protection.

Overfishing by trawlers appears to have decimated the stocks, and the total cod quota in the eastern Gulf of St. Lawrence (areas 3Pn and 4RS) has been cut by 25 per cent from 73,900 to 55,360 tons for 1990. Mobile gear vessels face a cut from 30,665 tons to 23,000 tons. Thus overfishing will certainly have an impact on draggers as well as small boat fishers. Marcel O'Brien, a dragger skipper, says many will be forced to leave the fishery:

> The only thing saving a lot of fellows is the good season they had the year before last. That held us through the last two years, but I'd say half the fleet is close to going under (*Northern Pen*, 10 January 1990; see also Dwight Spence, quoted in *The Sunday Express*, 7 January 1990).

But Pat Cabot, president of the Fixed Gear Association, wanted bigger cuts, a ban on fishing in spawning areas in order to rebuild the stocks faster, and a large uniform mesh size to reduce the number of small fish being caught *Northern Pen*, 10 January 1990). To him, the long-term interests of the majority of fishers are still being neglected.

Relationship to regional development is the second critical social dimension of fisheries management. It is socially damaging to implement a limited entry management system in an area like northwest Newfoundland because there are no alternative sources of employment sufficiently large to absorb those excluded from financially viable fisheries. Moreover, levels of education are low, especially among fishers, such that the displaced or excluded labourers have restricted opportunities elsewhere if they are willing to move. Still, a regional survey in 1988 showed that 31.1 per cent of all adults had considered moving away within five years.[8] This state of insecurity demonstrates the significance of the general need to co-ordinate fisheries and regional development policies.

State policy at present clearly supports the petty capitalist dragger fishery against the household or domestic commodity form of production that is represented by the open boat fisheries. But the management policy is also relevant to the very survival of villages in the area, because the privileged fleet is concentrated in only a few harbours: Port au Choix, Port Saunders, and Anchor Point. When the small boat fishers are deprived of fish, the culture and structure of their villages are threatened. They are increasingly becoming rural welfare ghettoes.

Parsons Pond, for example, is a small fishing community in which government transfer payments accounted for 48.6 per cent of total income in 1986 (data supplied by Statistics Canada). When the fish stay away and the fish plant is shut, unemployment benefits become more difficult to obtain and people are forced to rely on provincial government welfare systems that are destructive of morale. Subsistence production simply cannot compensate adequately for lost income, although it does make a difference to standards of living. But the house building, domestic work, hunting, wood cutting, etc., that supplements money income to a major extent itself depends on a cash income adequate to provide equipment and materials for this home production (Felt and Sinclair 1990). Without fish, that basic, minimal cash income (dependent on both fish sales and unemployment insurance benefits) is threatened.

The third general problem is the impact of community on policy, that is, the extent to which local groups can hinder managers' programmes. Although they bitterly resent present quota rules and enforcement practices, small boat fishers are largely powerless to help themselves. They simply do not have the vessels and gear to compete for scarce fish in any serious way. The key problem for implementing management plans in the Gulf of St. Lawrence is controlling the small draggers, who favour restricted access, but often try to get round other controls. In some cases this desire to catch as many fish as possible is based on a drive to accumulate wealth coupled with the prestige that comes from being a "highliner". In other cases, the high debt load on their vessels forces skippers

to fish in bad weather and to break fishing regulations, especially when they feel their quotas are too small.

Open boat fishers often protest that fish are now scarce inshore because of illegal fishing by greedy dragger operators who exceed their quotas and also encroach on the fixed gear areas when, as is usually the case, no fisheries patrol vessel is in sight. I have on several occasions observed draggers operating illegally in the Strait of Belle Isle by fishing almost against the shoreline where cod traps were moored. Occasional fines do not seem to deter some skippers. Moreover, several skippers were charged in 1988 with overfishing when they reported that fish caught in the Gulf had actually been taken in the Atlantic off Labrador, where there is also quota for this fleet sector. This is one example of how fishers can avoid the intent of regulations. Another is the illegal use of small mesh liners inside the trawl so that excessive numbers of small fish are caught. For this reason, the winter fishery was closed for a time at the end of January, 1990 (*Northern Pen*, 31 January 1990). There are also rumours, impossible to substantiate, of widespread falsification of landings through collusion between buyers and skippers.

Conclusion

If the preceding analysis is accurate for the Great Northern Peninsula, it follows that employment preservation should be as much a priority as fish preservation and profitable fishing. If small boat fishers' incomes are considered as part of a total socio-economic adaptation that involves subsistence production and other seasonal employment, a case can be made that they should be protected at least until the regional economy can be diversified. This would mean severely restricting the larger vessels and their otter trawling technology in the cod fishery. Yet, it is difficult to see how to correct the problems created by previous decisions. Simply to ban the draggers would be unfair to those who do fish within the rules and who made what appeared to be rational decisions to invest in new technologies. There is no indication that anyhthing so drastic is being contemplated; instead, reductions are being made in vessel quotas with the result that some dragger skippers may be forced out of the fishery. For 1990, the individual vessel quotas have been reduced from roughly 300 to 225 tons. If skippers do not have access to shrimp, their previous success is certainly threatened, unless there is an unexpected jump in the price of fish; some may indeed go bankrupt, as they have claimed. For those without shrimp licences, a generous scheme to buy back otter trawl licences would be ideal, though expensive. The cost of policing the remaining vessels would be high as well, but it would give both the small fishers and the fish a better chance of surviving.

It is tempting to argue that some form of co-management is required if a fair and equitable fisheries management programme is to have any chance of success (for recent reviews see Jentoft 1989 and Pinkerton 1989). In this way, the fishers who have been affected by the previous policies would become the decision makers either in conjunction with the state or by themselves in areas where responsi-

bilities have been delegated to them by the state. The logic behind co-management is that policy must be seen as legitimate by those involved in the industry; otherwise, boat and plant owners will seek, usually successfully, to avoid the regulations as they pursue their own interests. Rules are more likely to be considered reasonable and legitimate when those affected by them have taken part in their construction. In Atlantic Canada, there now exist consultation bodies, such as the various quota advisory boards, in which some fishers' organizations are represented, but these boards are not the decision makers. That power remains with the Department of Fisheries and Oceans. Decisions should have greater legitimacy in a system of co-management and should reflect the interests of the resource users.

The problem in the Gulf of St. Lawrence is that local conditions are not conducive to successful co-management. There is no single group of fishers with whom the state can negotiate and no sign that the Fishermen's Union can reconcile the conflicting views among its own members. Jentoft (1989) and Felt (n.d.) both argue that decisions are more likely to be considered legitimate when the resource users are relatively homogeneous and when participants have a prior history of cooperation and trust. These conditions are not evident in northwest Newfoundland. The type of issue is also unfavourable to resolution by co-management. Co-management seems to work best when fishers have responsibility for distributing their share of a quota and determining rules of access to fishing grounds in situations where conflicts of interest can be resolved in such a way that all groups can survive. When a situation has deteriorated to the point that each group (fixed and mobile gear fishers in this case) feels it cannot give any ground, it is unlikely that a viable strategy can be reached in a co-management forum. Unfortunately, it may be necessary for the situation to degenerate even more, to the point where many dragger skippers are losing their boats, before a compromise can be reached so that the remaining draggers are effectively prevented from destroying the livelihood of open boat fishers. Co-management might work if each group concerned has a chance of surviving based on a new stock management strategy, perhaps with areas reserved for specific types of gear. It has little chance in a situation like that of the Gulf coast where everyone needs more fish immediately.

Whatever the precise plans that are developed by fisheries managers to cope with this specific situation and with other areas in which stocks are threatened, the state should not manage the fish while ignoring the people who depend on fishing. Nor should management favour an elite and abandon the rest to migrate or swell the welfare rolls. Distrust and jealousy must be overcome by creating a structure for management that involves openness with regard to information and policy formation. Management practices that appear to protect resources and treat people fairly, as they define it, have some chance of success (though a common understanding of what is fair may be difficult to attain). At least this is what we should work towards in the more isolated, fisheries-dependent areas. Fisheries policy must also be social policy.

Notes

1. An earlier version of this paper was presented to the Project Prospero Seminar on Fisheries Management at KFA, Jülich, Federal Republic of Germany, 17-19 May 1989. I am grateful to Larry Felt for his helpful advice.

2. In their work on salmon fishers in New Brunswick, Pool and Stewart (1988:175) put the point strongly: "The bureaucrats are there *to protect the fish* and so they devise rational management plans completely outside the community context of commercial fishing."

3. These are the fishing areas off southern Labrador and eastern Newfoundland, including most of the Grand Banks (see map 1). The stock is known locally as northern cod.

4. An excellent example of the conflicting visions of management and fishers is resistance to turtle excluding devices among Gulf of Mexico shrimp fishers (Durrenberger 1988; White 1989).

5. These observations are based on research on the fisheries conducted from 1981 to 1983 followed by a recent period of research (1988-90) on the general problem of underdevelopment in the area. For a more extended treatment of the earlier research, see Sinclair (1983, 1985, 1986).

6. All data in this paragraph refer to the 1986 census and are based on Population (1988).

7. Every year the small trawlers head south in December in preparation for the winter fishery based on Port aux Basques.

8. With Lawrence F. Felt I have surveyed all adults in 250 households on the Northern Peninsula. This was a multi-stage, cluster sample designed to represent the peninsula as a whole.

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