

JURISDICTIONAL CONFLICTS IN RESOURCE MANAGEMENT: PERSPECTIVES  
ON THE CANADIAN WEST COAST COMMERCIAL FISHING INDUSTRY

by

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#### ABSTRACT

Management of the Canadian west coast commercial fishery has become increasingly complex and crisis oriented. The future of the fishing industry appears threatened by a number of developments internal and external to the fishery, consequently there is stress on the federal agency which is largely responsible for the management of the resource. In the past two decades the competition for fish resources and fish habitat has increased significantly and management problems have arisen. While the agency responsible for the management of the fishery has jurisdictional authority in the primary sector of the industry, the management of fish habitat is constrained by jurisdictional uncertainties. Discord in habitat management objectives has evolved because federal legislative authority conflicts with provincial proprietary rights in other areas such as forest or water resource management. As a result of this discord, incompatible resource uses have periodically resulted in federal-provincial conflict. Drawing from conflict theory and related concepts, this study describes how some fishery management issues escalated to a conflict stage and how the conflict attenuated through different conflict reducing activities. The study concludes that while jurisdictional uncertainties appear to contribute to conflict development in the fishery, methods of conflict prevention do exist.

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To Colin—who showed me what matters

## CHAPTER I

### MANAGEMENT OF THE WEST COAST COMMERCIAL FISHERY: INSTITUTIONAL AND ORGANIZATIONAL ASPECTS

#### 1.1 INTRODUCTION

The decade of the seventies was an era in which increasing recognition was given to the significance of natural resources and the problems encountered in their exploitation. Canadian economic history, which is largely a history of natural resource exploitation, provides numerous examples of the problems associated with resource development. Some of the problems have perhaps arisen because of a frontier mentality, one which is closely tied to the perception of unbounded wealth in natural resources. By attempting to maximize profits, developers could exploit and abuse many resources and invest elsewhere if the returns on investment decreased. Many resource developments carried out under such narrow parameters often generated unanticipated social, environmental and economic costs. The realization that there were often costs as well as benefits associated with resource developments contributed to broader approaches to resource management decision making.

The recognized need for new resource management practices is perhaps best illustrated by the importance given to renewable resources. By their nature, renewable resources provide the opportunity to be of continued use and benefit to man. The future of some renewable

resources remains in doubt however, as they are threatened by a variety of conflicting and competing resource developments. The nature of this conflict and competition can be illustrated by the effects forest harvesting may have on wildlife, or the impact of waste discharges on fish populations. In addition, resources may be threatened through mismanagement, including for example: resource exploitation at a level beyond the capacity of the resource to renew itself, or; a failure to recognize the biophysical interdependencies of some renewable resources. In responding to these and other issues, the management of renewable resources becomes more difficult. In addition, it is suggested that with the growth of knowledge and understanding, public expectations of agency competence and management expertise have increased. As the pace and scale of resource developments increase, and public demands and expectations rise, there is greater stress on public resource management agencies to respond to new problems which arise and to anticipate management problems which might develop. If, however, an agency is ineffective in addressing the resource management problems which have arisen, and appears to be crisis oriented, it is likely that individuals and groups will become increasingly dissatisfied with its performance. It appears that this situation has developed in the west coast commercial fishery.

*dissatisfaction w/ the performance of the agency (resource management)*

A variety of crises and problems have beset the west coast commercial fishery in recent years. Some of the major management issues which have evolved include: overcapitalization in both the primary and secondary sectors of the industry; excessive harvesting capability in the

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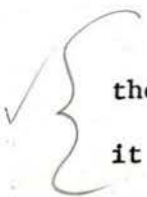
primary sector; market instability for some fish products; threats to the resource base originating from a broad range of competing land and water based activities; and the interception of domestic fish stocks by foreign fishing fleets. With these and other problems in the commercial fishery, the management of the resource has become increasingly difficult for the lead agency involved, the federal Department of Fisheries and Oceans. The responses of the Department to these and other issues, however, appear to have disaffected many individuals and groups in the fishing industry. ] It is suggested here that the dissatisfaction with the management strategies of the Department is partially a result of jurisdictional factors. ] Jurisdictional considerations appear to have resulted in stress on the Department and contributed to the development of conflicts in the management of the resource.

jurisdictional factors

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The extent to which one agency has jurisdictional authority for the management of a resource is important in determining how effective it will be in responding to management problems which develop. Christy (1973) has suggested that effective fisheries management generally develops when one agency has the jurisdictional authority for the management of all aspects of a fishery. For the management of the British Columbia commercial fishery, jurisdictional authority is vested in both the federal and provincial governments, however because the federal Department of Fisheries and Oceans has the primary role in resource allocation and regulation, it is also the target of public criticism for many of the problems which have developed. This dissatisfaction, which has resulted in stress on the Department, has originated from a number of



sources. As Craine (1971) has noted, stress on resource management agencies may develop because of: (1) the spillover effects arising from specific types of resource uses; (2) a perceived discrimination in the distribution of costs and benefits by individuals or groups involved; (3) a public's loss of faith in an agency's ability to deal with spill-overs and distributional questions. The stress on the Department of Fisheries and Oceans has implications for the management of the fishery resource. Lacking jurisdictional authority for all aspects of fishery management, the Department has been unable to prevent some of the conflicts which have developed in the fishery. Many of the conflicts in the fishery occur in the primary sector of the industry where management of fish habitat is constrained by provincial jurisdiction over competing resource uses. As a result of jurisdictional factors, some aspects of fishery management have become increasingly crisis oriented, with policies implemented to counteract the problems that have developed. The management of the commercial fishery has, therefore, become increasingly reactive in nature, as decisions and policies are implemented in response to issues rather than in anticipation of them.

## 1.2 RESOURCE MANAGEMENT LIAISON

The development of more comprehensive management practices has evolved as a response to problems in resource planning. In the past, planning often failed to establish a clear understanding of resource use patterns, conflicts and interest group positions (Lord and Warner, 1973). Often one consequence of this failure was the escalation of an issue to

a crisis stage, generally forcing a hasty, and at times inadequate, solution (Downs, 1972). In some cases issues arose because of a lack of understanding of the biophysical processes involved. The concept of a critical wildlife population threshold, for example, has resulted in the formation of endangered and threatened species lists. The introduction of non-native plant and animal species in some areas of the world is another example of how management problems or crises may arise because of this lack of understanding or foresight. While knowledge concerning biological and physical interrelationships and processes has increased in recent years, major problems in implementing this knowledge remain. One of the most notable constraints in this regard relates to jurisdictional and administrative factors which impinge on management activity. These factors play a major role in determining the range or scope of considerations involved in resource planning because they provide the parameters and limits in which resource management agencies operate.

The difficulties encountered in developing resource management programs which integrate a wide range of considerations is partially dependent upon the authority accorded that resource agency. In Canada this authority is largely determined by the jurisdictional parameters established by the Canadian Constitution, particularly the *Constitution Act, 1867*. The Act has little provision for environmental matters (Gibson, 1974; Mitchell, 1980) and appears to inadequately delineate federal and provincial responsibilities in some areas. While decisions of the Judicial Committee of the Privy Council and the Supreme Court of

Canada have clarified management responsibilities between the two governments, problems still remain.

It has been suggested (Dwivedi, 1974) that in areas of environmental and resource management, the question of jurisdiction has been settled, but this is debatable. Even assuming that jurisdictional issues are settled, and management roles made explicit, biophysical interdependencies require federal-provincial cooperation for some management activities and economic linkages between the primary, secondary and tertiary sectors of a resource industry often require some degree of federal-provincial communication and cooperation.

Arriving at solutions to resource management problems created by the involvement of two levels of government presents major challenges to established decision making procedures. As public policy formulation becomes increasingly intricate, pressures to establish and maintain new structures of decision making are likely to grow. This pressure is likely to be closely linked to perceived inadequacies in the existing decision making environment and the need for its restructuring. Often one of the reasons for changing or altering these arrangements is the failure of a resource management agency to respond to complex problems which routinely confront it, or, when action is taken, to be too late or ineffective. As a consequence, agency structure and function may be altered in response to a variety of pressures. ★

### 1.3 FEDERAL-PROVINCIAL CONFLICTS

One prominent feature of resource management in Canada is the primary involvement of the two senior governments.<sup>1</sup> It has been suggested (Chandler and Chandler, 1979) that any attempt to understand resource politics in the Canadian context involves federal and provincial relations and with it, the establishment of formal and informal arrangements between the various agencies of each government. Periodically, however, there is discord or stress between the two governments and conflict develops.

In part, it is the nature of a federal system which contributes to federal and provincial disagreements in policy matters. According to Doern (1979) the federal system of government almost by definition legitimizes and encourages the pursuit of different priorities by the federal and provincial governments. The west coast commercial fishery is an example of how difficult resource management problems may result from discordant federal-provincial resource policies and inadequacies in institutional arrangements. The problems encountered in the management of the fishery have resulted in stress in a number of areas. This study is concerned with relating some of the management issues which have developed in the industry<sup>2</sup> and how these issues were resolved. At this point it should be noted that because this study is concerned with the commercial fishing industry, issues pertaining to the management of the sports and Indian fishery are not addressed. The remainder of this chapter will describe the roles of the federal and provincial governments in the management of the commercial fishery in British Columbia. Chapter

two relates some of the conflict concepts that have been developed and provides the conceptual framework used in this study. Some of the concepts described in this chapter include: competition, power threats, and the causal factors of conflict. Chapter three describes some of the major fishery management issues and events that have occurred in the past two decades in British Columbia. The case studies describe some aspects of fishery management, including for example: fleet rationalization, resource enhancement, habitat protection, and international fishery management. Chapter four assesses the role of conflict in the issues described in the previous chapter and concludes by considering the theoretical and practical implications of these conflicts. The chapter notes that conflict development appears to be related to jurisdictional considerations in some aspects of fishery management.

#### 1.4 FISHERY MANAGEMENT PROBLEMS

Management of the commercial fishery in British Columbia is singularly complicated. While numerous factors may contribute to this complexity, similar fishery management problems exist elsewhere. In an assessment of world fisheries, Hood (1976) suggests that as a whole, the fishing industry steadily develops more complicated modes of interaction because of: (1) the onset of regulation/response cycles, in which fishing activity is altered in such a way as to defeat policy effectiveness; and (2) the ineffectiveness of single measure policies or programs. If, as Christy (1973) suggests, fishery management becomes much less difficult when there is a greater degree of authority vested in one management

agency, then present institutional structures in the west coast fishery appear to hinder the management of the resource. The following attempts to identify some of the structures and arrangements in the west coast fishery. These arrangements have evolved from legal/constitutional processes and administrative decisions and are the basis for federal-provincial relations in fishery management. \*

### 1.5 THE ROLE OF THE COMMERCIAL FISHERY IN BRITISH COLUMBIA

The commercial fishery has a major social and economic role on both coasts of Canada. Taken as a whole, the commercial fishing industry contributes approximately 1% towards Gross National Product (GNP), and 1% of total employment in Canada (Munro, 1977). The industry is particularly important in those maritime areas where employment opportunities in other occupations are limited. In British Columbia the fishery is closely linked to the economic development of the province, and in addition, is of much cultural significance to the native people. The economic contribution of the industry to the province varies, however, because of fluctuations in harvests and market demand. In 1978, the landed value and wholesale value of the resource were \$251 million and \$518 million respectively. In 1980 these values had decreased to \$198 million and \$404 million.<sup>3</sup> The west coast commercial fishery is differentiated from its east coast counterpart by its capital intensive nature. The Atlantic fishery is a more labour intensive sector of the regional economy than is the west coast fishery (Environment Canada, 1976; Anderson, 1978; Forbes, 1979).

Management of the west coast fishery has been characterized by a series of crises over the years. While the origins and nature of these problems may vary, the effects are generally the same. The fishery has experienced a number of negative impacts and concerns have been expressed about the future of the resource. Some have suggested that the industrial development of British Columbia in the 1950s and 1960s did more than generate negative impacts, it perpetuated misconceptions about the benefits of single purpose use (Larkin, 1979; Ainscough, 1979; Dorcey, et al., 1980). The emphasis on single purpose use in many resource developments resulted in concern about the deterioration of fish habitat in the province. In addition, other problems arose in the fishery, including for example: over-capitalization of the primary and secondary sectors of the industry; herring stocks were over-fished to the point of depletion, requiring a closure of that industry from the years 1967 to 1972; technological changes in the industry (such as the development of on-board freezing facilities which reduce the need for immediate landing of the fish on shore) have had a severe negative impact on many coastal communities where fish processing is a major source of income (Sinclair, 1971); a near province-wide failure to change logging practices (McMynn, 1970) continued to threaten fish habitat; and the possibility of a substantial increase in oil tanker traffic was considered by many to be a major threat to the resource (Thompson, 1979). These and other problems of varying scales and intensity have contributed to mounting pessimism concerning the survival of the industry. As a result of the problems in the fishery, there have been questions concerning management effec-

tiveness and attempts to improve relevant decision making processes (cf. McMynn, 1965; Meadows, 1972; Barnwell, 1979; Larkin, 1979). While there is a complex network of public and private sector interests involved in the fishery, decisions regarding the management of the resource are largely the preserve of one agency, the federal Department of Fisheries and Oceans. The problems which exist in the industry have resulted in stress on the Department. Some of the stress on the Department has developed because it does not have plenary authority in all aspects of fishery management, and as a result the likelihood of conflict increases because of differing preferences and objectives involved in the management of the resource.

In an attempt to respond to some of the management issues in the industry, in January 1981 the federal government appointed a Royal Commission of Inquiry into the Pacific coast fishery. Appointed under the *Inquiries Act*,<sup>4</sup> the one-man commission<sup>5</sup> released its final report in October 1982. The conclusions and recommendations of the Commission<sup>6</sup> generated a great deal of controversy within the industry. One conclusion which generated little disagreement was the "awkward" nature of fishery resource management due to jurisdictional factors. Jurisdictional aspects have been cited elsewhere (McMynn, 1965; Shaffer, 1979; Seal and Thompson, 1980) as constraining management flexibility and responsiveness.

## 1.6 JURISDICTIONAL AND ADMINISTRATIVE ASPECTS OF FISHERY MANAGEMENT IN BRITISH COLUMBIA

Jurisdictional responsibilities which are established by the *Constitution Act, 1867* provide the legal basis for resource management in Canada. While the Act does not, by itself, provide the definitive statement of Canada's constitutional functioning (Cheffins, 1969), it does provide the basis for federal and provincial roles in many areas. The Act has given both levels of government responsibilities in resource and environmental matters and as a result, conflicts between the two governments have arisen.

The jurisdictional division of powers established by the *Constitution Act, 1867* has increased resource management complexity. Woodrow (1980) suggests that many resource and environmental crises in Canada are often the result of jurisdictional and administrative failures. Hogg (1977), however, contends that the Act is not, and never was intended to be, a statement of all the important laws establishing and regulating the major institutions of government. In fishery management, divided jurisdiction is often cited as an obstacle to problem solving (Morse and Dewolf, 1971), although it does not necessarily prevent it. As La Forest (1969) notes, it is the vagaries of the Act which have resulted in federal and provincial management of the fishery resource. Accordingly, there is often a tendency to underestimate the relevance of constitutional provisions in understanding federal and provincial institutions, thus the basis for federal and provincial cooperation or conflict is often poorly understood (Shultz, 1980). A cursory review

of the responsibilities set forth in the Act reveals why cooperative management arrangements between the two governments have been necessary in the west coast fishery.

1.7 THE ROLE OF THE CONSTITUTION ACT,  
1867 IN FISHERY MANAGEMENT

Under section 92 of the *Constitution Act, 1867* the Province of British Columbia is given control over the resources within its boundaries.<sup>7</sup> The subsections relating to provincial jurisdiction are: (2) direct taxation; (5) the management and sale of public lands and the wood thereon; (10) local works and undertakings; (13) property and civil rights; and (16) matters of a private and local nature. While the province is given proprietary rights to the land, air and water resources within its boundaries, environmental and resource management is complicated by the legislative authority granted the federal government under the Act.

The *Constitution Act, 1867* grants the federal government the authority to legislate with respect to fisheries, navigation and undertakings which are interprovincial or international in nature.<sup>8</sup> In addition, the legislative power of the federal government is residual, it is able to legislate for the "peace, order and good government" of Canada under section 91 of the Act. It is this residual clause that has produced some federal-provincial discord in resource management. The clause reveals a constitutional emphasis on a strong national government and has been defended by some because it provides for the unexpected and the unforeseeable (Forsey, 1976). The provinces and

Rainfall  
cuts

federal  
cuts

others, however, have expressed their concern that such extensive authority may be abused or used unnecessarily (Hogg, 1977) in response to a problem that could be resolved by other means. According to this view, the potential for invoking this clause to justify a policy is a subtle form of coercion, and is contrary to the development of a federal-provincial cooperative spirit.

The foregoing briefly outlines the constitutional authority granted the federal and provincial governments as it pertains to fishery management. As has been alluded to, the Province of British Columbia is granted proprietary (ownership) rights to resources, while the federal government is given legislative (law making) authority over certain functions including fisheries. The assignment of these legislative powers to the federal government considerably increases its role in environmental and resource management (Gibson, 1974). La Forest (1969) has noted that the Province of British Columbia has little or no legislative control over tidal fisheries because the right to fish in public waters is a public, not a property, right.<sup>9</sup> Once ashore, however, fish become a resource like any other; it is considered a confined resource, capable of possession (Canadian Bar Association, 1978), and is subject to provincial control and regulation (section 2.5 below).

#### 1.8 FISHERIES JURISDICTION AND MANAGEMENT: THE BRITISH COLUMBIA VIEW

As has been alluded to, there is evidence that suggests provincial power and influence have increased substantially in relation to that of the federal government. This "province building" process has manifested

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itself in many areas of resource management decision making including fisheries. The growing provincial involvement in fisheries has occurred on both the east and west coasts, although major differences exist in the fisheries of the two regions. In British Columbia, the impacts of fishery policies are largely confined within provincial boundaries, whereas on the east coast fishery management is more complex, partially because of the number of provinces involved (MacKenzie, 1974; Mitchell and Huntley, 1977; Andersen, 1978). The economic and social importance of the industry on the east coast is revealed by each province in that region having a Ministry or Department of Fisheries. In British Columbia, a Ministry of Fisheries does not exist.<sup>10</sup> The Province of British Columbia has, however, expressed an interest in expanding its role in fishery management decision making.

At the Eighteenth Annual Premiers' Conference held in New Brunswick in 1977, the Premier of the Province of British Columbia articulated four objectives of the province's resource policies. The resource policy objectives for all resources including the fisheries are: to increase employment; to increase real incomes; to insure stability of income and employment; and to achieve greater regional balance in provincial economic development (Bennett, 1977). Jurisdictional overlaps between the province and the federal government are, in the province's view, preventing or impeding progress toward attaining these objectives. The province feels it should be taking the lead role in formulating and implementing resource management policies (Bennett, 1977). The province believes that jurisdictional overlaps have "resulted in an ongoing

problem of duplication, inconsistency and competition between governments" (Bennett, 1978). The basis for these conflicts and overlaps, according to the province, is the *Constitution Act, 1867*.

The Government of the Province of British Columbia has stated that the *Constitution Act, 1867* is too rigid, discouraging consultation and negotiation between the federal government and the province (Mair, 1977; Province of British Columbia Executive Council, 1978). The province's concerns relate to a range of resource issues in which the federal government is directly or indirectly involved. Provincial influence and involvement in federal policy areas such as fisheries is, in the province's view, inadequate. As an illustration of this perceived inadequacy, the province has cited how amendments to the *Fisheries Act* (Bill C-38) had provisions for provincial involvement written in only as an addition to the final legislation (Bennett, 1977). Conversely, the province has expressed concern over what it considers to be jurisdictional intrusions into provincial policy space in many areas, such as fish habitat protection requirements altering forest harvesting practices.

#### 1.9 JURISDICTIONAL INTRUSIONS AND POLICY IMPACTS

Despite the apparent clarity of roles and responsibilities set forth under the *Constitution Act, 1867*, it is not comprehensive or complete in its treatment of resource management issues. Strict adherence to the responsibilities established by the Act would likely increase inter-governmental conflicts in fishery resource management. In the past

conflicts have arisen because of the nature of the wording of the Act and because of administrative and political factors. As Gibson (1974) notes, however, it is not possible to create two lists which would define federal and provincial functions in resource and environmental management. According to Gibson, five factors complicate management:

(1) the generality of the language of the Act, which enables both federal and provincial involvement; (2) it is not possible to formally delegate authority from one legislative body to another, although the legislature of one government may confer authority on the administrative officers of another government; (3) inter-jurisdictional immunity; (4) the solution to some problems influence jurisdictional considerations; and (5) federal authority over the Yukon and Northwest Territories, which enables Parliament to have the same powers as the provinces (Gibson, 1974). The Act therefore may contribute to jurisdictional conflicts while impeding the development of conflict resolution mechanisms.

Jurisdictional responsibilities set forth in the *Constitution Act, 1867* have contributed to some of the federal-provincial discord in fishery management. The "pith and substance" doctrine of legislative enactment allows one level of government to enact laws with substantial impact on matters outside its jurisdiction (Hogg, 1977). Thus, legislative conflict in fishery resource management may be the result of constitutional provisions which fail to recognize physical and/or biological relationships. These relationships may involve for example: the impacts of forest harvesting on fish habitat or the effects of

\* }  
effluent discharges on fish stocks. The pursuit of different objectives by each government may, therefore, result in jurisdictionally based conflict even when jurisdiction is not in dispute (Shultz, 1980). In British Columbia, jurisdictionally based conflicts are not unknown. Stevenson (1979) has suggested that the pursuit of "provincialist" goals in a number of policy areas by the Province of British Columbia has resulted in almost constant conflict with the federal government. In the province's view, however, many of the conflicts are jurisdictionally based largely because the Constitution is "out of tune with contemporary needs and regional realities" (Province of British Columbia Executive Council, 1978). To address some of these concerns, the Province of British Columbia has proposed a number of resolution mechanisms.

Recognizing that current jurisdictional divisions have contributed to federal-provincial conflicts in resources management, the Province of British Columbia has suggested methods to reduce their extent or prevent their occurrence. As the major method of reducing conflict and intrusions, the province has proposed a basic restructuring of institutions such that federal-provincial consultation would be a "day-to-day reality" (Mair, 1979). Additionally, the province has suggested that a delegation of authority is a better route to management flexibility than the concurrent exercising of authority (Province of British Columbia Executive Council, 1978). The province has not suggested a restructuring of the Constitution or altering the distribution of powers (Mair, 1977), rather it has pressed for a more substantive role in the decision making processes of federal institutions involved in resource management.

To achieve this, British Columbia's constitutional proposals have been based on the need to revise the consultative forums or arrangements which have been developed. The provincial view is that these arrangements lack "systematic organization and procedures" and often fail to recognize the importance of regionalism in policy setting (Province of British Columbia Executive Council, 1978). The province, in representing itself as the credible defender of regional interests, has pressed for changes in institutional arrangements in a number of policy areas, including fisheries.

#### 1.10 THE FEDERAL ROLE IN FISHERY MANAGEMENT

As has been alluded to, both the federal and provincial governments are involved in the management of the fishery because of the jurisdictional divisions set forth in the *Constitution Act, 1867*. Shaffer (1979) suggests, however, that de facto control of the fishery is in the hands of the federal government. While it is often no longer plausible to speak of a single agency "making" policy (Phidd and Doern, 1978), the federal agency responsible for fishery management has a major decision making role in the west coast fishery. The federal agency concerned, the Department of Fisheries and Oceans (Pacific Region) in 1977 had an annual operating budget of \$34 million and a staff of 960 employees. For the 1981-1982 fiscal year, the budget of the Department in the Pacific Region was \$84.1 million and the staffing level was at 1,231 employees. The Pacific Region of the Department includes both British Columbia and the Yukon Territory, with British Columbia

receiving most of the manpower and budget expenditures in the region.

The federal Department of Fisheries and Oceans is given the authority for the management and development of Canada's commercial fisheries based on federal legislative authority established in the *Constitution Act, 1867*, section 91. The Department is responsible for the enforcement of a number of Acts pertaining to Canada's commercial fisheries, although some of the legislation is not particularly relevant to British Columbia. Further, some of the legislation does not directly involve management of the resource. The Department is responsible for: *The Fisheries Act; The Coastal Fisheries Protection Act; The Territorial Seas and Fishing Zones Act; The Fisheries Research Board Act; The Fisheries Development Act; The Fish Inspection Act; The Fisheries Price Support Act; The Canadian Salfish Act; and The Freshwater Fish Marketing Act.*

Of paramount importance among these statutes is *The Fisheries Act* [R.S.C. 1970 c. F-14], which gives the Department of Fisheries and Oceans (DFO) the authority necessary for the routine management of the fishery, licencing provisions, resource protection, and resource enhancement measures. *The Fisheries Act*, initially proclaimed in 1868 (S.C. 1868 CAP 60, pp. 177-183) has undergone considerable revision to achieve its present form. The Act, however, is not without its faults. The recent Royal Commission on Pacific Fisheries Policy was highly critical of the Act, calling it archaic, with provisions which are "anachronistic and ambiguous." According to the Commission, the Act is narrow in scope and punitive in tone, and should be "repealed and replaced by a modern

lucid statute" (Commission on Pacific Fisheries Policy, 1982). Further, the provisions of the Act do not appear to reflect the objectives of a 1976 federal policy paper on fisheries which stated:

The guiding principle in fishery management no longer would be maximization of the crop sustainable over time, but the best use of society's resources. "Best use" is defined by the sum of net social benefits (personal income, occupational opportunity, consumer satisfaction and so on) derived from the fisheries and the industries linked to them.<sup>11</sup>

Despite the shortcomings of the Act, in its present state it is particularly relevant to the primary sector of the fishery because it provides for the protection of fish and fish habitat.

#### 1.10.1 The Federal Role in Primary Sector Management

The Department of Fisheries and Oceans has the major role in regulating the primary (harvesting) sector of the west coast fishery. Administration of this sector requires the Department of utilize what has been described (Christy, 1973) as the three categories of fisheries regulations: (1) those dealing directly with the resource; (2) those governing the kind of fishing effort; and (3) those controlling the amount of effort. The Department utilizes a variety of methods to regulate the exploitation of the resource. These regulations may include: area openings and closings; varying the timing and length of openings; altering the size, type and length of nets (gear restrictions); establishing limits on the size and number of hooks; prohibiting certain gear types in some areas, and so forth. Implementation of these and other regulations have periodically generated a great deal of criticism

from those in the industry as the Department attempts to prevent the depletion of fish stocks while providing for acceptable employment and income levels.

In addition to regulating the kind and amount of fishing effort, the *Fisheries Act* enables the Department to regulate non-fishing activities that may threaten fish stocks or fish habitat. In 1977, assent was given to Bill C-38 which amended the *Fisheries Act* and the Criminal Code concerning its enforcement. The Department was given greater authority for the protection of the fishery resource, particularly with respect to prosecutions arising from externalities generated by other resource uses such as logging, mining, or the pulp and paper industry. The sections of the Act pertaining to these activities are sections 20, 28, 33, and 34(a).

→ is this  
in effect.  
          

Section 33 of the Act is particularly relevant to British Columbia because it affects the lumber industry in the province. It has been suggested (Scott and Schouwenburg, 1977) that section 33 of the Act is Canada's original pollution control legislation with respect to man-made pollutants in the nation's waterways. Offences under the Act are created as follows:

- 33(1) No one shall throw overboard ballast, coal, ashes, stones or prejudiced or deleterious substances in any river, harbour or roadstead, or in any water where fishing is carried on, or leave or deposit or cause to be thrown, left or deposited, upon the shore, beach or bank of any water or upon the beach between the high and low water mark, remains of offal of fish, or of marine animals, or leave decayed or decaying fish in any net or other fishing apparatus; such remains or offal may be buried ashore, above high water mark.

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- 33(2) Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where such deleterious substance or any other deleterious substance that results from the deposit of such deleterious substance may enter any such water.
- 33(3) No person engaging in logging, lumbering, land clearing or other operations, shall put or knowingly permit to be put, any slash, stumps or other debris into any water frequented by fish or that flows into such water, or on the ice over either such water, or at a place from which it is likely to be carried into either such water.

The Act in general, and the above section in particular, has resulted in some criticism by the forest industry in British Columbia. The main criticism of the Act by the forest industry is that in their view, the Act disregards other resources and concentrates exclusively on fisheries (Clarke, 1980). If this assertion is true, a recent decision by the Supreme Court of Canada is likely to alter this concentration somewhat.

In a decision handed down on June 17, 1980, the Supreme Court of Canada ruled that section 33(3) of the *Fisheries Act* was ultra vires (beyond the scope of) the federal Parliament [1980, 5 W.W.R. 511]. In this case, the appellant, Dan Fowler, was charged with two counts of violating section 33(3) of the Act. Prior to this, Fowler had been acquitted, the court ruling that s. 33(3) of the *Fisheries Act* is not certain and effective to exercise the power of Parliament under s. 91 (12) of the *Constitution Act, 1867* and that it interferes with the power of the provinces under s. 92(5) and s. 92(13) of the *Constitution Act*, and as a result was ultra vires Parliament. The federal government had appealed this decision and in a subsequent ruling, the British Columbia Court of Appeal held that subsection (3) was within Parliament's power

to legislate "in relation to the matter of inland fisheries and particularly to the preservation of fish." Fowler then appealed to the Supreme Court of Canada. In the Supreme Court Fowler had argued that subsection (3) of section 33 impinged upon provincial legislative powers, specifically, section 92(5), (10), (13), and (16) of the *Constitution Act, 1867*. The Supreme Court allowed Fowler's appeal, stating that:

The criteria for establishing liability under s. 33(3) are indeed wide. . . . Section 33(3) makes no attempt to link the proscribed conduct to actual or potential harm to fisheries. It is a blanket prohibition of certain types of activity, subject to provincial jurisdiction, which does not delimit the elements of the offence so as to link the prohibition to any likely harm to fisheries. . . . In my opinion the prohibition in its broad terms is not necessarily incidental to the federal power to legislate in respect of sea coast and inland fisheries and is ultra vires of the Federal Parliament.<sup>12</sup>

The case illustrated some of the difficulties encountered in managing the fishery when federal legislative authority conflicts with provincial proprietary rights.

Section 34 of the Act provides for the Minister of Fisheries to enact regulations to support the Act. These regulations set forth acceptable activities by which the Department manages the resource. These regulations appear to conform to the three categories of regulations described by Christy (1973) above.

#### 1.10.2 The Federal Role in Fish Buying and Processing

Management of the secondary sector of the commercial fishery involves both federal and provincial governments. Federal involvement is based upon the *Fish Inspection Act*, which, in turn, is supported by

federal authority over the regulation of trade and commerce under section 91(2) of the *Constitution Act, 1867*. Inspection of fish processing facilities is undertaken by federal fisheries officers and officials of the federal Department of Consumer and Corporate Affairs. The federal Act requires that plants exporting fish must be certified as well as those plants that are engaged in inter-provincial shipments of fish and/or fish products.<sup>13</sup> The Act sets forth regulations concerning a variety of plant requirements, including:

fish and containers imported or exported; labelling and grading of canned fish; sanitary conditions within the plant; temperature controls with respect to storage and transport; water quality standards for fish cleaning and ice making.<sup>14</sup>

Buying stations or processing facilities which meet these federal inspection standards are granted a license by the Province of British Columbia. The license may be renewed annually upon application and payment of the required fee (see below).

### 1.10.3 The Federal Role in Fish Marketing

As has been alluded to, the federal government has the major role in marketing fish and fish products by virtue of its authority over international and inter-provincial trade and commerce. Additionally, under the federal *Fisheries Act*, the Department of Fisheries and Oceans may restrict fish exports<sup>15</sup> if it appeared a restriction would be of benefit to the industry. The export market is important to the survival of the industry and is expected to grow in the future,<sup>16</sup> necessitating continued and perhaps federal and provincial cooperation in market development. According to Shaffer (1979) export controls (a federal

prerogative) would have a critical impact on the processing sector. The impact would be particularly onerous on the small, export-oriented fresh/frozen processor. Accordingly, Shaffer (1979) notes the need for a stronger provincial presence in this aspect of the industry:

if the provincial government is to have responsibility for the processing sector, then its policies must take precedence on all matters directly affecting the structure of that sector—including the matter of export controls. The federal government's authority over exports should be confined to broad issues of international trade and international relations—not the specific export mix of a specific industry.<sup>17</sup>

At present, with the federal government having the lead role in determining all aspects of fish exports, and the provincial government responding to the impacts of federal decisions, the marketing aspect of the commercial fishery is complex.

#### 1.10.4 The Federal Role in Industry Financing

Federal involvement in financing some aspects of the west coast fishery is a complex area involving numerous agencies and programs. Financial assistance programs are important management tools in the fishery, because financial assistance may be used as an inducement to alter past patterns of behaviour. A number of federal agencies are involved in providing funds or expertise to various sectors of the industry. The broad range of financing programs in the industry has produced mixed results. Some financing programs have been more successful than anticipated (Mitchell, 1977), while other programs have compounded the problems they were intended to solve (Shaffer, 1979). Assistance programs established for the industry often have definite

time horizons, depending upon their effectiveness. Assistance may be provided to fishermen or processors, depending upon the objectives of the sponsoring agency. In general, fisheries financing programs are directed towards achieving one or more of the following objectives: (1) encouraging the growth and development of the industry; (2) stimulation of employment; (3) correcting economic dislocation; (4) developing and expanding markets; (5) improving productivity and technological development; and (6) stimulating research and development within the industry (Environment Canada, 1976; Foodwest Resource Consultants, 1979). Different sectors of the industry are affected by agencies attempting to achieve one or more of the foregoing objectives.

Fishermen may receive financial assistance through a variety of federal programs. The Department of Fisheries and Oceans is responsible for the implementation of a number of capital cost programs which affect the development of the fishery. Included in this category are: the Fishing Vessel Construction Assistance Program, the *Fisheries Improvement Loans Act*, the Fish Chilling Assistance Program, and the Fishing Vessel Insurance Program. Some of these programs are the subject of much debate within the industry. One of the major concerns relating to these programs is the extent to which they subsidize fishermen while perpetuating the problem of over-capitalization in the traditional fishing fleet. The Pearse Commission described further subsidies as a "wasteful use of taxpayers' money" and recommended they be abolished (Commission on Pacific Fisheries Policy, 1982). One of the most prominent subsidy programs to which Pearse referred is the *Fishery Improvement Loans Act*.

The *Fishery Improvement Loans Act* has had a major impact on the fishing industry in Canada. Initially proclaimed in 1955, the Act is designed to provide intermediate and short term credit to fishermen with the objective being the development of fisheries enterprises. Loans of up to \$150,000 are granted at an interest rate that is 1% above the current prime rate. The loan may be used for the purchase, construction or improvement of a fishing vessel. For the fiscal year ending March 31, 1980, 1,408 loans were made across Canada, of which 551 were dispersed in British Columbia. In the 1979-1980 fiscal year the amount of money loaned throughout the province under this program totalled \$22,978,418, of which 407 loans (\$19,412,585) were for boats, engines and repairs; 81 loans (\$691,018) were for fishing equipment; and 63 loans (\$2,868,815) were for building and construction (Department of Fisheries and Oceans, 1980). For the fiscal year 1980-1981, 415 loans were extended under this program (Commission on Pacific Fisheries Policy, 1982).

An additional assistance source for the primary sector is the Federal Business Development Bank (FBDB), which provides funding through its loans program, although Shaffer (1979) suggests it is a lender of last resort. Further to this, the primary sector is aided by programs for manpower assistance administered by Employment and Immigration Canada.

Like the primary sector, the secondary sector receives financial assistance from a number of federal agencies and programs. Some of the more prominent programs and administering agencies are: the *Fish Chilling*

*Assistance Act*—the Department of Fisheries and Oceans; the Export Market Development Program—The Department of Industry, Trade and Commerce; the *Regional Development Incentives Act*—the Department of Regional Economic Expansion; the Industrial Training Program—Employment and Immigration Canada. In addition to the foregoing, there are a number of other programs directed towards assisting the processing companies; however, their impact is considered to be small (Foodwest Resource Consultants, 1979; Shaffer, 1979). In general, however, federal financial assistance programs are an integral part of federal management of the resource.

#### 1.10.5 The Indian Fisheries Assistance Program: A Special Case

One of the most important federal financing programs in the west coast fishery is the Indian Fisheries Assistance Program (IFAP). Although funded by the Department of Indian and Northern Affairs, IFAP is administered by the Department of Fisheries and Oceans. The program is designed to bolster Indian involvement in the fishery, which is a traditional Indian activity. One of the major reasons for the development of the program arises from the fact that Indian fishermen do not have as high an income in the industry as their non-Indian counterparts (Sinclair, 1978). The IFAP was given Treasury Board approval on May 15, 1968 in an attempt to increase incomes and reverse the trend of declining Indian participation in the industry. Under the IFAP, native Indians are assisted in the buying, building and refurbishing of vessels. This assistance attempts to help Indians maintain or increase their share

of the catch of the commercial fleet. An early evaluation of the effectiveness of the program concluded that while the anticipated benefits had not materialized, some progress had been made (Hamel, et al., 1972). According to Shaffer (1979), however, the IFAP has contributed to the trend of larger, more capital intensive vessels and, in addition, has aggravated the excess capacity problem in the processing sector. One of the major problems that remains unresolved in the fishery centers around the need for special treatment of native Indian fishermen by integrating or accommodating this group with the existing practices and trends within the industry. Native Indian involvement in the industry remains a complex problem which is not likely to be solved in the short term.

#### 1.10.6 The Federal Role in International Fishery Management

An important feature of the west coast fishery is the international aspect involved in the management of the resource. The federal government, which exercises exclusive treaty making powers with respect to international law (cf. La Forest, 1969; Hogg, 1977) has the lead role in international fisheries management. On the west coast, two fish species are managed under international convention. In addition, there is a tripartite commission that recommends fishery management strategies to its member nations. The federal Department of Fisheries and Oceans has representation on all three of these organizations, as does the federal Department of External Affairs.

The International North Pacific Fisheries Commission (INPFC) was established as a result of the 1952 International Convention for High Seas Fisheries of the North Pacific Ocean. The convention, consisting of representatives from Canada, the United States and Japan, sought to develop international accords for the management and exploitation of the high seas fishery. The Commission coordinates and promotes scientific research related to fishery management and development, although it does not have an autonomous scientific staff.

The International Pacific Salmon Fisheries Commission (IPSFC) was formed in 1937 by the United States and Canada. The IPSFC was founded with the intent of protecting and rehabilitating the Fraser River sockeye runs which had been severely impacted by over-fishing and habitat deterioration. Perhaps the most critical habitat concern was the Hell's Gate slide which occurred in 1913 and resulted in a dramatic decline of the sockeye fishery (Thompson, 1945; Hilborn and Peterman, 1977). Later, jurisdiction over pink salmon was added to the Commission's tasks. The Commission recommends management regulations, thus it lacks the enforcement functions of a conventional resource management agency usually has (Mitchell and Huntley, 1977). Federal fisheries representation on the IPSFC is established by the *Pacific Salmon Fisheries Convention Act*.<sup>18</sup> †

The other species-specific fishery commission relevant to the west coast is the International Pacific Halibut Commission (IPHC). The IPHC is a U.S.-Canadian commission consisting of three persons from each country, and was formed to determine how to maximize the halibut catch without threatening stocks (Mitchell and Huntley, 1977), the IPHC has

the power only to recommend regulations. The Involvement of the Department of Fisheries and Oceans and the Department of External Affairs is established by the *North Pacific Halibut Convention Act*.<sup>19</sup>

#### 1.11 THE PROVINCIAL ROLE IN THE COMMERCIAL FISHERY

While the Province of British Columbia has a smaller role in fishery management than that of the federal government, it is still important to all sectors of the industry. At one time this importance was reflected by the creation of an autonomous fishery management agency similar to other provincial fishery agencies in the Atlantic provinces. In 1947, the British Columbia Legislature established the Department of Fisheries,<sup>20</sup> which was charged with the administration of the provincial *Fisheries Act* and all matters relating to fisheries within the province. Ten years later the Department was abolished, and became the Fisheries Branch of the Department of Recreation and Conservation.<sup>21</sup> The Fisheries Branch later evolved into the Fish and Wildlife Branch of the Ministry of Environment. The Branch's main organizational objective is the management of the sports fishery in British Columbia. Further, within the Ministry of Environment is the Marine Resources Branch which is responsible for the administration of the provincial *Fisheries Act*<sup>22</sup> and the *Fish Inspection Act*.<sup>23</sup> It is largely through the Marine Resources Branch that the provincial role in management of the commercial fishery is realized.

1.11.1 The Province of British Columbia  
and the Primary Sector

The Province of British Columbia has a minor role in the management of the primary sector of the commercial fishery. As has been mentioned, property rights to, and the administration and disposition of, natural resources rests with the province, while the federal government is charged with the general management of fisheries. The province, therefore, has no mandate with respect to the general management of the fishery because the formation, implementation and enforcement of fishery regulations rests with the federal government. It would be simplistic, however, to assume that the province has no role in decisions relating to the primary sector.

Under present arrangements provincial influence on the primary sector would likely result from its role in the secondary sector, that is, provincial regulation of the buying and processing of fish and fish products. It is possible that provincial policies established for the buying/processing sector could affect the type of fish caught or the catching methods employed,<sup>24</sup> however, little is known about how strong these "backward linkages" might be. The lack of provincial involvement in the management of the harvesting sector is viewed by some as unfortunate (McMynn, 1965), particularly because of the increasing demands upon the resource and the competition from various water users.

### 1.11.2 The Province of British Columbia and the Secondary Sector

As Canada's only Pacific coast province, British Columbia has historically received most of the economic benefits associated with the secondary sector of the commercial fishing industry.<sup>25</sup> Since the establishment of the first commercial salmon canneries on the Fraser River in the 1870s, the fish processing industry has provided seasonal employment for many residents of coastal communities. The processing industry also attracts seasonal workers from the interior of the province. Although it is doubtful if the west coast fishery has the similar extent of occupational pluralism as its east coast counterpart (Armstrong, 1977; McCay, 1978), a migrant labour force has historically been essential to the operation of many canneries (Select Standing Committee on Agriculture, 1978). Today, processing plants for commercially caught fish are largely concentrated in the Lower Mainland/Vancouver Island area of the province and in the Prince Rupert area of northern British Columbia.<sup>26</sup> While the number of processing facilities has remained relatively stable in recent years, Proverbs (1978) suggests that there is a growing fear throughout the industry that the processing sector will continue to decay. The Province of British Columbia, which is concerned with maintaining the economic health of this industry, has the responsibility of ensuring this does not happen.

Provincial jurisdiction over the processing sector was clearly established following a federal-provincial dispute over who should be granted the licensing authority for fish canneries. The federal govern-

ment had maintained that the operation of a fish cannery or curing establishment required a federal license. It was contended that this requirement was valid under section 91(12) of the *British North America Act* (now the *Constitution Act, 1867*) because it was directly or indirectly related to seacoasts and inland fisheries and that the operation of canning and curing establishments was inseparably linked to the conduct of fisheries. The Judicial Committee of the Privy Council, however, held that the licensing matter was "not within the legislative competence of the Parliament of the Dominion of Canada and cannot be supported"<sup>27</sup> and ruled in favour of the province.

Shaffer (1979) has suggested that the licensing of canneries and processing facilities is the principle instrument of provincial fisheries policy. While the province has not used this authority to alter the structure of the industry (Quadra Economic Consultants, 1979), it remains a viable option should trends in the processing sector develop which are viewed by the province as being undesirable. While the licensing of buying stations and processing facilities provides a small source of revenue to the province,<sup>28</sup> it also provides an information base to monitor the type and location of fish buying and processing activity.

In addition to the licensing of buying stations and processing facilities, the province is also responsible for the inspection of these plants. The *British Columbia Fish Inspection Act*<sup>29</sup> details the storage, transportation and sanitary requirements to which the secondary sector must comply. Section 4 of the Act permits any inspector of the federal Department of Fisheries and Oceans who is appointed under the federal

*Fish Inspection Act* to act in a similar capacity under the provincial Act. The federal Act is concerned with plants that ship fish inter-provincially or internationally and, because the fish processing industry is export-oriented (Shaffer, 1979), provincial regulations would duplicate those of the federal government.<sup>30</sup> Thus, plant inspection is largely a federal activity.

Recent studies into the processing industry have shown the nature of some of the problems with this sector of the industry. The problems of the largely export-oriented herring industry, for example, have been blamed in part on the failure of the Province of British Columbia to take a more active role in the processing and marketing of that product (Foodwest Resource Consultants, 1979). The conservatism of domestic financial institutions such as the British Columbia Development Corporation or the chartered banks is thought to have contributed to the recent influx of foreign capital investment in the secondary sector (Proverbs, 1978; Shaffer, 1979). Currently there is substantial foreign ownership of the processing sector because of this influx (Budgen, 1978; Quadra Economic Consultants, 1979). Provincial regulation of the secondary sector has not prevented foreign capital investment to date, although it, like the primary sector, is heavily over-capitalized at present. To what extent foreign capital investment has exacerbated the over-capitalization problem remains unknown.

### 1.11.3 British Columbia's Role in the Marketing of Fish and Fish Products

While the international marketing and exporting of fish and fish products is largely a federal concern, provincial programs supplement or work in conjunction with federal programs. As a whole, the west coast fishery has the potential for diverse export markets because of the variety of species and products available. The establishment of the 200 mile economic zone contributed to this diversity because it provides for the potential exploitation of species which traditionally have not been the target of the commercial fleet. One example of a provincial program relating to market development is the Market Development Assistance Program (MDAP). The MDAP is designed to aid companies that wish to determine the potential for new market development, for direct selling of products, or for the appointment of local agents or distributors of a firm's products. MDAP funds are used to provide air fare<sup>31</sup> for applicants who wish to develop or expand their out-of-province business. The program is administered through the Ministry of Industry and Small Business.<sup>32</sup> An additional program of the Ministry is the funding of some trade fairs and trade missions, both incoming and outgoing. While the Province of British Columbia generally has a limited regulatory role in the marketing of fish and fish products, it has commissioned studies relating to marketing problems and prospects.

In a study of the structure of the west coast salmon fishery, Shaffer (1979) suggests that processors have an inefficient or inappropriate mix of output. The study contends that there is too much

concentration on canned salmon relative to the fresh/frozen or smoked product. A survey of processors indicated that they believe any major growth in demand will be of foreign, not domestic origin (Select Standing Committee on Agriculture, 1979). Developing international export markets is likely to alter the output mix, however, because the fresh/frozen product is largely export-oriented (73% of production), while canned salmon is generally destined for the domestic market (UMA/ERA, 1977). In meeting this anticipated demand it is expected that the catches for trollers and seiners will grow and there will be an increase in freezing facilities either on-board or at small plants near the fishing grounds (Select Standing Committee on Agriculture, 1979). These provincially funded studies show the need to evaluate market developments and trends and to plan for their impacts on the processing sector.

#### 1.11.4 British Columbia's Role in Industry Financing

In an effort to promote further fishery resource development in the province, several financial assistance programs have been developed by the Province of British Columbia. While the provincial commitment to industry financing is perhaps not as strong as provincial commitments in the Atlantic fishery (Foodwest Resource Consultants, 1979), financial assistance programs do reflect some measure of provincial government concern with industry vitality.

The Ministry of Industry and Small Business administers some of the more major provincial financing programs within the industry. One such program, the Technical Assistance Program (TAP), is designed to aid

companies that wish to diversify their production, enter new markets, or expand existing facilities. To determine the feasibility of a company's development plans, the Ministry provides funds to pay part of the cost of an independent consulting report on a specific aspect of a firm's production. In the 1979-1980 fiscal year, the total cost of this program was \$222,490, of which one application from the fishing industry was approved. In the next fiscal year (1980-1981), three applications from the fishing industry were approved at a cost of \$16,278, while the total expenditure of the program was \$196,194.<sup>33</sup>

The Ministry of Industry and Small Business is responsible for the funding and administration of the special *Agricultural Rehabilitation and Development Act* (ARDA) program. This program, funded by both the federal and provincial governments, is directed primarily to status and non-status Indian fishermen. Shaffer (1979) suggests that the special ARDA program has had minimal impact on the west coast fishery. One other federal-provincial financing program relevant to the fishing industry is the Assistance to Small Enterprise Program (ASEP), which is also administered by the Ministry of Industry and Small Business. At present no funds from this program have been given to the fishing industry.

The British Columbia Development Corporation (BCDC), a provincial Crown Corporation, is another source of industry financing. A major program of BCDC which is relevant to the fishing industry is the Low Interest Loans Assistance program (LILA). The LILA program is intended to aid regional economic development through funding provincial processing and manufacturing sectors. In an attempt to promote regional equity,

funds under the LILA program are not available to companies located within the Lower Mainland or Greater Victoria areas.<sup>34</sup> A further requirement of the program is that the project be economically viable, a stipulation which is often difficult to satisfy because of the cyclical nature of the industry (Shaffer, 1979). In addition, the BCDC provides funds for asset acquisition and working capital through the Business Assistance Program (BAP). The interest rate of this program varies according to the commercial viability and location of the project, although there is no maximum or minimum size of loan (Foodwest Resource Consultants, 1979). In a study of the economic structure of the British Columbia salmon fishery, Shaffer (1979) concluded that the BCDC has had minimal impact on the fishing industry because of its conservative lending policies. This conservatism, together with the cyclical instability characteristic of the industry has likely contributed to the growth of foreign investment in the fishery.<sup>35</sup> In general, however, provincial financing programs have not had as strong an impact on the industry as federal initiatives have.

#### 1.12 FEDERAL AND PROVINCIAL ROLES IN FISHERY MANAGEMENT: SUMMARY

As the foregoing indicates, the management of the west coast commercial fishery involves both the federal and provincial governments, with the federal role paramount. The Province of British Columbia has direct and indirect involvement in many aspects of the industry, however, because of jurisdictional responsibilities granted under the Constitution Act, 1867. While jurisdictional roles may appear to be distinct, the

effectiveness of some federal fishery management strategies are contin-  
gent upon provincial support and cooperation. The need for provincial  
cooperation results from provincial proprietary rights influencing the  
legislative authority of the federal government. For some aspects of  
fishery management such as processing and marketing, the province has  
generally cooperated with the federal government and conflicts have been  
infrequent. For example, the province licenses fish processing facili-  
ties, but has delegated the inspection of these facilities to the federal  
government. As a result of the Privy Council decision, jurisdictional  
responsibilities in the secondary sector of the fishing industry are  
clear, and because federal and provincial objectives in this sector are  
usually coincident, there is little stress between the two governments.  
In some other areas of fishery management, however, there is tension  
and stress between the federal and provincial governments. Stress in  
federal-provincial relations is particularly evident where habitat  
management issues are involved, perhaps because many federal habitat  
protection requirements appear to intrude upon provincial jurisdiction  
in other resource areas such as forest harvesting or water management.  
Periodically, this stress has developed into conflict because juris-  
dictional authority is uncertain and the position of one party is  
perceived to be threatened. For example, conflict may develop because  
provincially approved activities may contravene federal fish habitat  
protection standards and threaten to reduce the effectiveness of the  
Department in managing the resource. The Fowler case illustrates how  
conflicts of this nature may develop. To help understand the basis of

some of the issues and conflicts in the west coast commercial fishery, the following chapter briefly reviews some of the conceptual aspects of conflict and conflict development.

ENDNOTES--CHAPTER I

<sup>1</sup>There are exceptions to this, however, such as the management (but not necessarily control) of some resources by internationally oriented agencies or local/regional agencies whose authority is the result of a delegation of power by one of the senior governments. Similarly, Crown Corporations may be involved in resource management or development, however, they too are accountable to federal or provincial governments.

<sup>2</sup>This study is descriptive/analytical in nature. It is not the primary purpose of this research to make recommendations on the complex problems associated with fishery management. The emphasis of this research is the commercial fishing industry, consequently issues regarding the sports fishery and native fishing rights are not addressed. While these excluded groups are important to understanding the industry as a whole, it was felt their inclusion would make the study less manageable.

<sup>3</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, Vancouver, Sept. 1982, p. 163.

<sup>4</sup>R.S.C. 1970, Ch. 1-13, Pt. 1.

<sup>5</sup>The Commissioner was Dr. Peter Pearse, a University of British Columbia economist, hence the report is commonly referred to as the "Pearse Report."

<sup>6</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*.

<sup>7</sup>A Supreme Court decision concerning the Province of British Columbia's claim to offshore resources held that the province was bounded by the low tidal mark. *Re: Offshore Mineral Rights of British Columbia* (1967) S.C.R. 792 at 821. See also: *La Forest* (1960), pp. 92-107.

<sup>8</sup>The relevant sections/subsections in the Act for these areas of responsibility are: 91(12), 92(10)(a), and 91(2) respectively.

<sup>9</sup>To complicate matters further, since 1938 the Province of British Columbia has had management responsibility for the administration, protection and development of freshwater fisheries, with the exception of anadromous salmon in freshwater. Legislative responsibility, however, is retained by the federal government which, at the request of the Province of British Columbia, passes provincially developed regulations.

<sup>10</sup> At one time the Province of British Columbia did have a separate Fisheries Department. See section 1.11.

<sup>11</sup> Environment Canada, Fisheries and Marine Service, *Policy for Canada's Commercial Fisheries*, p. 53.

<sup>12</sup> 1980, W.W.R. 511.

<sup>13</sup> As a result, most plants processing commercially caught fish are federally certified because the marketing of fish and/or fish products has a significant international/inter-provincial aspect.

<sup>14</sup> R.S.C. 1970, Ch. F-12.

<sup>15</sup> In the past, export controls have been applied to whole sockeye salmon and to herring. See: Shaffer (1979), p. 141.

<sup>16</sup> Future growth in export markets is thought to center around fresh or frozen salmon, herring roe, and some varieties of groundfish, crustaceans and mollusks. See, for example: Select Standing Committee on Agriculture (1979); Commission on Pacific Fisheries Policy (1982).

<sup>17</sup> M. Shaffer, *Commercial Fishing Policy Study: Economic Management of the Processing Sector*, p. 93.

<sup>18</sup> R.S.C. 1970, Ch. F-19.

<sup>19</sup> R.S.C. 1970, Ch. F-17.

<sup>20</sup> S.B.C. 1947, Ch. 36.

<sup>21</sup> Which in turn had been created by the British Columbia Legislature (S.B.C. 1957, Ch. 22).

<sup>22</sup> R.S.B.C. 1979, Ch. 13.

<sup>23</sup> R.S.B.C. 1979, Ch. 136.

<sup>24</sup> For example, if the province wished to influence the production mix of salmon such that the fresh/frozen component of that production increased, inducements or incentives might be offered to processors who in turn would demand salmon or a specific type and quality from the primary sector. The use of seine or gillnets would probably not meet

the quality requirements (because of net marking), thus the demand for troll caught fish would increase.

<sup>25</sup>The "secondary sector" of the industry as used here refers to the buying and/or processing of raw fish and/or fish products.

<sup>26</sup>In 1979 there were 22 salmon canneries operating in British Columbia. The locations of the canneries were as follows: Skeena River-Prince Rupert area, 6; central area, 1; Vancouver Island, 6; Fraser River-Lower Mainland, 9.

<sup>27</sup>[1929] 3 W.W.R. 449; [1930] A.C. 111; [1930] 1 D.L.R. 194.

<sup>28</sup>In 1979 the revenues from licenses and permits totalled \$78,084. See: Ministry of Environment, *Annual Report 1979*.

<sup>29</sup>R.S.B.C. 1979, Ch. 136.

<sup>30</sup>Both the federal and provincial Acts are similar in requirements.

<sup>31</sup>The maximum grant is \$1,500. In fiscal years 1979-1980 and 1980-1981, funds granted to the fishing industry were: \$7,372.45 and \$8,198.00 respectively (Ministry of Industry and Small Business, personal communication).

<sup>32</sup>Formerly Ministry of Economic Development.

<sup>33</sup>Ministry of Industry and Small Business, personal communication.

<sup>34</sup>Regional equity refers to the fairness of regional distribution of employment and income in the industry. See: Shaffer, *Commercial Fishing Policy Study: Economic Management of the Processing Sector* (1979).

<sup>35</sup>See, for example: T.B. Proverbs, *Foreign Investment in the British Columbia Fish Processing Industry*, Fisheries and Marine Service Industry Report No. 105, Fisheries and Environment Canada (1978).

## CHAPTER II

## THEORETICAL AND CONCEPTUAL ASPECTS OF CONFLICT

2.1 INTRODUCTION

One of the characteristics of resource management literature is the diversity of approaches taken in the study of resource issues. Research into a resource issue may, for example, concentrate on the role of interest groups, the perceptions and attitudes of decision makers, the legal aspects of a decision, the physical impacts of a development, or the economic implications of a decision.<sup>1</sup> These and other approaches reflect the broad range of concerns associated with some resource issues. One aspect of many resource issues is their cyclic nature. Downs (1972) suggests that many environmental issues are elevated onto the public agenda for a short period of time, are given attention by decision makers and interest groups, and then receive waning interest although the issue might not be resolved. Boulding (1962) suggests similar characteristics exist for conflicts in general: they are conceived, flourish for a while, and then end. As Sproule-Jones (1983) suggests, one aspect of many resource issues is the presence of conflict. Stress and conflict, therefore, appear to be inherent in the management of many natural resources, including fisheries resources on the Canadian west coast. Conflicts in commercial fishery management vary in their nature and intensity, and have developed in a number of areas of fishery

management, including for example: conflicts between different gear types in the primary sector; the interception of Canadian fish by foreign fishing fleets; or the negative spillover effects from competing resource uses on fishery habitat. The notion of conflict, when used in the context of resource management, often produces a variety of interpretations and preconceptions, most of which are pejorative in nature.

The idea that conflict avoidance or conflict prevention should be a social objective reflects the view that conflict is undesirable. In part, this view is likely based on the popular conception that conflicts are hostile and violent interactions (Hoglund and Ulrich, 1972) and, although conflict may be manifested in other forms, it generally has negative connotations. As Simmel (1955) notes, however, conflict has many positive functions and may, in some instances, be desirable. Often conflict aims at resolving tension between antagonists and can constitute a mechanism for the maintenance or continual readjustment in power (Coser, 1956). Deutsch (1973) suggests that conflicts can be viewed as destructive or constructive,<sup>2</sup> noting that one of the creative functions of conflict resides in its ability to arouse motivation to solve a problem. According to this view, a productive conflict resolution may result because: (a) open and honest communication evolves; (b) there is a trusting, friendly attitude; and (c) recognition of the legitimacy of others' interests is encouraged and a solution that is responsive to these interests is considered necessary. Conflict, therefore, is not necessarily a state or situation to be avoided or prevented. Further, it is doubtful if conflict avoidance or prevention is possible in many

cases, because as Abrahamsson (1972) suggests, conflict situations are inevitable by-products of human interaction and cannot be completely eliminated.

The development of conflict theory has largely evolved from the field of peace research and the study of military/political conflict.<sup>3</sup> Despite this seemingly distant relationship to resource management research, it is suggested that conflict concepts have applicability to many resource issues. As Boulding (1962) has noted, one of the basic characteristics of conflict is discord, and it is discord that is often an aspect of resource issues. The following relates aspects of conflict theory, providing an indicative rather than exhaustive overview<sup>4</sup> of this expanding field of research.

## 2.2 CONFLICT DEFINED

The development of conflict theory has generated numerous definitions of conflict. Boulding (1962) notes that in a "true" or "pure" conflict situation, one side loses what the other side gains—a zero sum situation.<sup>5</sup> This type of conflict occurs infrequently, however, because in most conflict situations, both parties win and lose in varying degrees. Coser (1956) defines conflict as being "a struggle over values and claims to scarce status, power and resources in which the aims of the opponents are to neutralize, injure or eliminate their rivals."<sup>6</sup> A more comprehensive definition is both forth by Deutsch (1973), who suggests conflict is "an action that is incompatible with another action [that] prevents, obstructs, interferes, injures or in some way makes the

latter less likely or less effective."<sup>7</sup> According to this definition, conflicts arise because of incompatible actions or activities; however, the aims of the conflicting parties are not necessarily as hostile as those suggested by Coser. As Hill (1982) notes, however, conflicts are defined by issues which subsequently determine the parties involved, thus different strategies to resolve a conflict may develop.

There is a distinction made between conflict and competition which is relevant to the study of resource management decision making. Boulding (1962) notes that competition arises when potential positions are incompatible, and that while all cases of conflict involve competition, the converse is not always true. Similarly, Deutsch (1973) argues that:

Competition implies an opposition in the goals of the interdependent parties such that the probability of goal attainment for one decreases as the probability for the other increases. In conflict that is derived from competition, the incompatible actions reflect incompatible goals.<sup>8</sup>

The intensity of competition therefore determines whether or not conflict will develop.

### 2.3 CONFLICT GENESIS

Prior to an understanding of the nature of a conflict or the mechanisms to resolve or prevent it, it is necessary to know why it developed. It has been suggested (Hoglund and Ulrich, 1972) that there are two lines of thought regarding the origin of conflict: (a) the one-sided conception of conflict genesis—in which one side initiates the action which precipitates a conflict; or (b) the view that conflict develops from the relationship between structural, interactional and/or

ideological levels. Regardless of the approach taken in determining conflict evolution, an understanding of the value systems present is often of importance. As an example, there is a need to be aware that there might be a difference between one party's declared values and the values that it pursues. \*

It is also useful to distinguish between a real and a possible conflict. As Boulding (1962) suggests, in an actual conflict there must be an awareness of incompatibility between parties, in addition to incompatible wishes, desires or actions. It should be noted, however, that there is a great deal of difficulty in defining "awareness" or "wishes." As a result of this obscurity, it is difficult to determine at what point a real conflict begins. A potential conflict is similar to what Deutsch (1973) terms "unrecognized" or "latent" conflicts wherein the parties do not realize they are in conflict at the time, or where conflict should be occurring but is not. In general, however, conflict is often thought of only when it is occurring or when the actions of one party result in a high probability of it occurring. The nature of the issue involved has a major role in determining how active a conflict may be.

While values may provide the basis for some conflicting activities, Deutsch (1973) has proposed a typology of issues which conflicts are usually about. According to this typology, conflict issues are usually concerned with: (1) control over resources; (2) preferences and nuisances; (3) values; (4) beliefs; and (5) the nature of the relationship between parties. Deutsch suggests that resources such as space, property and

power can be viewed as non-sharable; thus if two or more parties seek exclusive possession or use of a resource, conflict is likely to occur. Resolution of conflicts of this kind is difficult when the parties have a rigid fixation on the resource and satisfactory substitutes are not possible. Preferences and nuisances involve one party impinging on another's preferences, sensitivities or sensibilities such that a nuisance or disturbance results. Value issues are concerned with what "should be," and often arise when one party maintains that one value should dominate or be applied generally, as is often the case in political or legal situations. Conflicts originating from issues concerned with beliefs are often over facts, knowledge or beliefs about reality. The fifth issue type which may result in conflict relates to the nature of the relationship between parties. Conflicts arising from issues of this nature occur because of the opposing views and desires of the parties involved. Issues of this type are broad, and may include one or more of the issue types mentioned above. Regardless of the issue type involved, the tension and stress associated with the issue facilitates conflict development.

#### 2.4 TENSION AND STRESS IN CONFLICT DEVELOPMENT

Central to an understanding of why conflicts develop are the concepts of tension and stress. The two concepts are not dissimilar in many respects, although stress is often used to distinguish a more action-oriented situation. Kasperson (1969) defines stress as being any noxious or potentially noxious environmental force. A more detailed

description of stress is put forth by Wolpert (1967), who suggests that in stress situations:

an excitation is present in the environment which may take the form of time pressure to reach a decision, insufficient information or ambiguity about alternatives or an over-abundance of information that cannot be assimilated or cues from the environment which indicate that one's energy and ability are insufficient to deal with the problem at hand or other stressors.<sup>9</sup>

This description is similar to the notion of volume or content stress put forth by Young (1968), who suggests that volume-related stress arises because one party cannot meet or satisfy all the demands it has received, while content-related stress arises because one party cannot fulfil the qualitative demands placed on it. According to Easton (1965) stresses in political spheres are the influences from the total environment of a system that act on it so that it is different after the stimulus from what it was before. This description does not attempt to identify or classify the nature of the stress.

Related to stress as a conflict factor is the concept of tension. A rather general definition of tension has been put forth by Rosener (1980) as being a state of opposition between groups. This definition is somewhat vague, consequently it is difficult to operationalize the concept in terms of concrete indicators of opposition. This difficulty is exacerbated if, for example, there is any intra-party variation in opposition or if opposition varies over time. According to Gouldner (1954), tension arises when one or more expectations of a party are frustrated by another party. If great enough, this frustration may lead to some form of action.

Associated with the development of a conflict situation is the commencement of activity aimed at reducing tension or stress. Often the proneness to act in a conflict situation arises because of a dissatisfaction caused by an under-fulfilment of expectations (Abrahamsson, 1972). Similar to the concept of action proneness is what March and Simon (1948) term "search behaviour" which develops because of individual or group dissatisfaction and the need to explore alternatives. According to this view, if the search fails to identify alternatives or the barriers to action are perceived to be too high, aspiration levels are gradually revised downwards; if, however, the barriers to action are perceived as being surmountable, it is likely that in situations of high tension or stress inter-party conflicts may escalate. The barriers to action are constraints, which O'Riordan (1971) defines as being the attributes of a system which affect the attainment of an objective, and may be simple, such as physical or financial matters, or complex, involving institutional, political or social aspects. The constraints that are characteristic of a system are not necessarily permanent, however, and may be altered over time.

As a corollary, in situations where there is a high degree of stress or tension and one party wishes to redress its frustrations or unfulfilled expectations, it may take action which manifests itself in more obvious conflict behaviour. As a result of the actions of one or more groups, the conflict may escalate.

## 2.5 CONFLICT ESCALATION, POWER AND THREATS

As tension increases and the parties to a conflict undertake action to fulfil their expectations, a new dimension to the conflict may evolve. Bonoma (1975) has defined conflict escalation as being the controlled and specified application of sanctions over time. Conflict behaviour, however, can assume a multiplicity of forms (Wood, 1976), thus it is often difficult to determine at what point a conflict begins to escalate. As Bonoma (1975) suggests, the problems in operationalizing escalation and de-escalation arise because of the number of confounding factors in a conflict. As a result of this, causal questions cannot be easily formulated or adequately answered and often much speculation is involved. While there are functional indicators of conflict escalation such as protests, legal action, violence and so forth, at best they are only able to approximate conflict escalation.

While many factors may influence the likelihood of conflict escalation, the centrality of the issue is important (Deutsch, 1973). According to Deutsch, this centrality "is determined not only by the substantive significance of the issue, or by what values are perceived to be at stake, but also by the perceived vulnerability of the [party]."<sup>10</sup> Thus, the likelihood of capitalizing on the weaknesses of another party may contribute to an escalation in conflict behavior. Another contributing cause of conflict escalation may involve the activities of groups that are secondary to the two conflicting parties.

One aspect of many resource management issues is the involvement of interest groups. For some resource issues there may be a variety of

interest groups involved, each with differing goals, strategies and internal characteristics. One feature of interest or pressure groups is that they are formed in order to further some common interest of their members (Eckstein, 1960; Curtis, 1971). The pursuit of decisions and policies favourable to themselves may contribute to stress and strain on resource management agencies because of the demands of the group or groups involved. As Muir (1981) notes, the efforts of interest groups are often directed toward resisting threats to the status quo, rather than the pursuit of change or reform. As a result, agencies that attempt to solve a public policy problem involving a specific resource may be confronted with opposition from interest groups. This opposition may develop because the objectives of a policy must be acceptable to those affected by it in addition to those administering it (Hamill, 1968). While alienation of certain interest groups may be unacceptable to an agency (Kasperson, 1969), it is difficult to determine what level of interest group involvement can be achieved without producing major internal conflicts within a public agency (Romzek and Hendricks, 1982). As Wolpert (1980) has suggested, the involvement and participation of impacted interest groups introduces a new dimension of conflict into the decision environment. Interest groups may have a major role in the escalation or de-escalation of conflict. Such groups may be closely linked to two related concepts often associated with conflict escalation: the exercise of power, and the issuance of threats.

The study of the exercise of power presents one of the more complex areas of public policy research. A simple definition of power put forth

by Lasswell and Kaplan (1950) describes power as being the exercise of coerciveness. A more detailed approach is that of Deutsch (1973), who suggests that power may be environmental, personal or relationship oriented. According to this typology: (a) environmental power is where A can usually favourably influence his environment and/or overcome resistance from B; (b) relationship power is described as being where A is usually able to influence and/or overcome B than B is able to do with A; and (c) personal power, in which A is usually better able to satisfy his desires than B. This typology combines six types of power which Deutsch (1973) has identified as being necessary to influence another party. These six types are: (a) coercive power, which uses negative incentives such as threats to well-being or status; (b) reward or exchange power, which involved positive incentives such as promises of power in exchange for desired action from another; (c) ecological power, which involves control over one party's environment to permit desired behaviour or prevent unwanted behaviour; (d) normative power, which is based on one party accepting the power of another; (e) referent power, which is based on one party's desire to change in order to alter attitudes and values; and (f) expert power, which is based on one party accepting the knowledge, skill and ability of another party. For some resource management issues the exercise of one or more of these six types of power is readily apparent. The provincial governments in Canada, for example, have normative power in the production of agricultural products within provincial boundaries, while the federal government has normative power regarding the export of these products outside provincial boundaries. Closely related to power in the escalation of

conflict is the exchange of threats between conflicting parties.

An indication of conflict escalation is the use of threats by one or more parties to a conflict. The mutual exchange of threats determines the nature of intergroup conflict (Wolpert, 1970), creating a field of choice among parties and determining to what extent a conflict will escalate. While threats imply that one party will attempt to reduce the valued resources of another party (Deutsch, 1973), they may contribute to conflict escalation, short term stabilization or de-escalation. Boulding (1978) suggests that there are four options available to the threatened party: submission, defiance, counterthreat, or flight. In a submission situation, the threatened party does what is demanded of it and the threat is not carried out. If the threat-submission arrangement exists over an extended period of time, it becomes legitimated and some degree of normative power is involved. In a defiance situation the threatened party refuses to comply with the desires of the threatener, and as a result of this non-compliance, the threatener must decide whether or not to carry out the threat.<sup>11</sup> Counter-threat is often associated with threat defiance and may provide some short term deterrence and stabilization in conflict situations. Flight, as the term suggests, is simply the physical movement of one party out of a threat situation to a location where the risk of injury or loss is diminished.

As the foregoing indicates, the issuance of a threat may cause a conflict to escalate, de-escalate, or to temporarily stabilize. Gamson (1971) suggests that it is not always possible to distinguish what is,

and what is not, a threat because threats are often veiled. Deutsch (1973), however, notes that threat ambiguity is related to a party's power and intent, thus veiled threats would likely originate from a weak party. As Boulding (1978) states: "Threats are most effective as power when they are specific, and especially when they are not carried out but held, as it were, in reserve."<sup>12</sup> The issuance of a threat may, therefore, add some equilibrium to the relationship of conflicting parties. This equilibrium may provide an opportunity to resolve the conflict.

## 2.6 CONFLICT RESOLUTION

There are numerous methods by which conflicts are concluded, depending upon the nature of the conflict and its participants.<sup>13</sup> While Goodge (1974) maintains that incompatibilities of interest are the major obstacles to the resolution of conflict, other factors may be equally important. Conflict conclusion is largely dependent on the mutual will to cooperate in solving a problem.<sup>14</sup> It is difficult to determine at what point in a conflict one or both parties will reveal a willingness to seek a solution to their incompatibilities. One party may seek a settlement earlier than another if it appears that it will soon be at a disadvantage. In addition, as Hill (1982) notes, there is a difference between conflict resolution and conflict settlement, because in a settled conflict one or more of the parties is often coerced into accepting a solution. Boulding (1962) suggests that conflicts can be resolved in one of three ways: avoidance; conquest; or through a procedural conclu-

sion. The avoidance method involves one of the parties moving to a point where conflict ceases. This movement does not always involve physical distance; it may, for example, involve social or political distance. Conquest is a form of avoidance because one party is eliminated and the winning party is dominant. A procedural conclusion is most likely when parties can neither conquer nor avoid each other. According to Boulding there are three types of procedural resolutions to conflict: (a) reconciliation—in which the value systems of the conflicting parties change so that common preferences evolve; (b) compromise—in which, by mutual bargaining, each party agrees to settle for something less than its ideal position rather than continue the conflict; or (c) award—which is a similar conclusion as compromise (it is less than ideal for each party), however, agreement is based on the verdict of an outside party. An example of an award resolution might be the decision of an arbitrator in labour negotiations. For some conflicts the use of a third party is the most viable method of resolving inter-party differences. As Fisher (1983) notes, in many cases the third party consultant is "a skilled scholar/practitioner whose background attitudes and behavior engender impartiality and whose professional knowledge and expertise enable the facilitation of productive confrontation."<sup>15</sup> A common form of third party involvement in an award situation is the judicial system, which, as Deutsch (1973) notes, is oriented toward removing power in an effort to determine the outcome of conflict. By agreeing to limit, control or settle conflict through litigation, one party may risk losing an advantageous conclusion to a

conflict because a judicially determined settlement is usually supportive of, or contrary to, the interests of one party. The use of other mechanisms to resolve conflicts, such as task groups, or impartial consultants, for example, might result in a more satisfactory solution. The development of these forms of integrative solutions (Hill, 1982) reflects the beneficial attributes of some conflicts. Coser (1956) has noted that conflict often tends to create organization, and as a result, an organization may be conflict relevant or conflict dependent. In essence, conflict may become institutionalized and may, or may not, be concluded.

Associated with the resolution of conflict is the possibility that conflicts may be prevented from arising at the outset. The prevention of conflict, however, is not as simple as it might appear. Boulding (1962) notes that the two major problems associated with conflict prevention are: (a) detection—how to identify the need for action; and (b) implementation—what to do about the situation. The detection problem has two types of error associated with it: (a) the possibility of a false alarm—whereby action is requested or taken when it is not necessary; or (b) the possibility of a failed alarm—where action is needed but is not requested or undertaken until it is too late. Boulding notes that false alarms are often more preferable than failed alarms because the social, economic or environmental costs incurred are generally smaller than with failed alarms. In resource management, for example, the compiling of social and environmental impact statements are to some extent an attempt to detect conflicts that may arise from a

proposed resource development project. Given that there are often complex issues involved in resource development, however, it is often difficult to predict the qualitative and quantitative features of any conflicts which might evolve,<sup>16</sup> thus in many cases it is debatable if conflict prevention is feasible.

## 2.7 ASPECTS OF CONFLICT: A COROLLARY

The foregoing has attempted to provide an overview of the basic concepts associated with conflict theory. While much of the development of this theory is based on military conflict and peace research, other examples of conflict such as is associated with labour negotiations or religious conflict have furthered the development of conflict paradigms. While the origins of conflict theory may be based on issues and events somewhat distant from resources management, it is suggested that many of the concepts are applicable to some resource issues. The element of competition, for example, is often present in determining resource development priorities; conflict may escalate as threats are exchanged between competing groups such as environmentalists and developers; or the creation of a task group to investigate transboundary pollution problems may aid in de-escalating international tensions related to environmental management. Resource conflicts, as with other forms of conflict, may vary in complexity, depending upon, for example: what is known about the resource; the number of individuals and groups involved; the value placed on the resource; the nature of management arrangements and so forth. Thus resource conflicts may occur at varying scales,

involving disparate groups, and requiring changeable time horizons for their conclusion. With the management of the west coast commercial fishery often involving the consideration of a broad range of social, economic, environmental and political factors, some of the issues which have developed are extremely complex. As a result of this complexity, some of the policies of the Department of Fisheries and Oceans have been ineffective in solving some of the problems in the industry. As the following chapter illustrates, stress on the Department of Fisheries and Oceans has contributed to an escalation of conflict in some aspects of the fishery.

ENDNOTES—CHAPTER II

<sup>1</sup>See, for example, G.V. La Forest, *Natural Resources and Public Property Under the Canadian Constitution* (Toronto: University of Toronto Press, 1969); T. O'Riordan, *Perspectives on Resource Management* (London: Pion, 1971); and O.P. Dwivedi (ed.), *Resources and Environment: Policy Perspectives for Canada* (Toronto: McClelland and Stewart, 1980).

<sup>2</sup>Deutsch (1973) notes, however, that these terms are easy to define at the extremes, particularly so in simply laboratory situations rather than in the complex conflicts of groups in everyday life.

<sup>3</sup>See, for example: L.B. Richardson, *Arms and Insecurity* (Pittsburg: Boxwood Press, 1960); K. Boulding, *Conflict and Defense* (New York: Harper and Brothers, 1962); and H. Kahn, *Thinking About the Unthinkable* (New York: Aron Books, 1964).

<sup>4</sup>See, for example: J.D. Singer, *Deterrence, Arms Control and Disarmament* (Ohio State University Press, 1962); J. Galtung, "An Editorial: What is Peace Research?", *Journal of Peace Research* (1964), pp. 1-4; or J. Galtung, "Notes on the Long Term Development of Peace Research," in *Conflict Control and Conflict Resolution*, edited by B. Hoglund and J. Ulrich (Copenhagen: Munksgaard, 1972), pp. 202-216.

<sup>5</sup>See: Dencik and Wiberg (1972) for an example of a gaming experiment in a two-person conflict situation.

<sup>6</sup>L.A. Coser, *The Functions of Social Conflict* (Glencoe: The Free Press, 1956), p. 8.

<sup>7</sup>M. Deutsch, *The Resolution of Conflict* (New Haven: Yale University Press, 1973), p. 9.

<sup>8</sup>Deutsch, *The Resolution of Conflict*, p. 10.

<sup>9</sup>J. Wolpert, "Departures from the Usual Environment in Locational Analysis," *Annals of the Association of American Geographers* 60, No. 2 (June 1970):224.

<sup>10</sup>Deutsch, *The Resolution of Conflict*, p. 21.

<sup>11</sup>Boulding (1978) makes a distinction between capability and credibility in response to threat defiance: capability refers to the ability of the threatener to carry out the threat; credibility involves both capability and the likelihood of the threat being carried out.

<sup>12</sup>K.E. Boulding, *Ecodynamics* (Beverly Hills: Sage, 1978), p. 241.

<sup>13</sup>Brickman (1974), for example, argues that conflicts may be thought of as existing along a continuum from the structured to the unstructured, consequently the resolution procedures of the various types of conflict may vary considerably.

<sup>14</sup>However, as Deutsch (1973) notes, cooperative relations may facilitate conflict more frequently than when interaction between parties is infrequent. While this paradox would seem to obviate the need for cooperation, the conflicts are generally more easily concluded:

<sup>15</sup>R.J. Fisher, "Third Party Consultation as a Method of Intergroup Conflict Resolution," *Journal of Conflict Resolution* 27, No. 2 (June 1983):303.

<sup>16</sup>For example, it is often difficult to determine at what point competition becomes conflict. Similarly, there is the problem of determining whether or not a conflict is concluded or if it has only stabilized temporarily.

## CHAPTER III

## MAJOR FISHERIES MANAGEMENT ISSUES AND EVENTS

3.1 INTRODUCTION

During the past two decades a number of complex management problems have arisen in the west coast commercial fishery. In addition to increased competition for fishery resources, the regulation of activities which threaten fish habitat has become a major problem. While the nature of the problems in the fishery have varied, their cumulative effect has been greater stress on the agency responsible for the management of the resource, the Department of Fisheries and Oceans.

The Department of Fisheries and Oceans has the responsibility to develop and implement policies that address both short term and long term fishery management problems, in addition to the enforcement of day-to-day regulations which affect the resource. The social, economic and environmental considerations involved with this responsibility are often complex, making it difficult to placate the wide variety of interests which may be affected. There are, for example, thirteen groups and organizations involved in the primary sector of the fishery which are affected by routine management decisions such as area openings or gear restrictions. In addition, long term policy development pertaining to resource enhancement or the high seas interception of salmon stocks, for example, also impact on these groups. Management of the

west coast fishery is not based solely on resource harvesting, however; the Department of Fisheries and Oceans must also contend with the impacts on fisheries which result from the decisions of agencies in other jurisdictions. Many of these impacts originate from the Government of the Province of British Columbia largely because of the province's jurisdiction over most resources within provincial boundaries. In the past two decades the commercial fishery industry has been impacted by the resource development policies of the Province of British Columbia and from international developments. In addition, there have been internal changes in the primary and secondary sectors of the industry. Some of these developments have had a profound impact on the fishery and have necessitated major adjustments in the management strategies of the Department. In some cases the adjustments originate from crises precipitated by resource management conflicts between the Province of British Columbia and the Department of Fisheries and Oceans. While not all of the following issues and events originate from federal/provincial conflicts in resource management, they are indicative of some of the stress on the Department of Fisheries and Oceans and the tension which periodically arises between the two governments. By understanding the origin and nature of these events, it is possible to better understand how the present system of fishery management evolved and to speculate what direction future fishery may take. The following describes some of the more prominent<sup>1</sup> fishery issues in the past two decades, indicating the need for policy developments in one or more of the following areas: rational management of the primary sector; resource enhancement; habitat

management; international management arrangements; or the general direction of the fishery as a whole. The following case descriptions conform to one or more<sup>2</sup> of these policy areas.

### 3.2 RATIONALIZING THE PRIMARY SECTOR

#### 3.2.1 The Salmon License Limitation Program (1969)

One of the most important aspects of fishery resource management relates to balancing the supply of, and demand for, the resource. When the demand for a species increases such that the resource is over-exploited, the potential for collapse of that stock increases greatly because there is not sufficient recruitment to perpetuate the species. Further, when harvest levels increase in response to demand, there is an incentive for fishermen to increase in numbers and to improve their harvesting capability. In an open access fishery there is no restriction on the number of participants pursuing a relatively fixed number of fish, thus increasing demand will eventually deplete the resource<sup>3</sup> if supply and/or demand are not managed. In addition, it has been shown that in open access fisheries elsewhere, fishermen's incomes may rise and fall in the short run, however, in the long term they generally decline (Sinclair, 1978). This situation developed in the British Columbia salmon fishery in the 1950s.

In British Columbia the commercial fishing industry is dominated by the salmon fishery. The advent of commercial processing in the late 1800s resulted in large scale exploitation of the resource. MacLeod (1977) has suggested that the downward trend in salmon stocks also

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commenced around this time.<sup>4</sup> By the mid-1930s the salmon runs in British Columbia were fully exploited (Campbell, 1973) and a complex set of regulatory arrangements had evolved which attempted to permit sufficient escapements for stock recruitment while satisfying the expectations of a growing salmon fleet. As a result of these expectations and advancements in fishing technology, the salmon fleet became increasingly difficult to manage.<sup>5</sup>

In 1958, in response to the growing pressure on the fishery resource and the declining income levels of fishermen, the Government of Canada commissioned an economist<sup>6</sup> to undertake an intensive study of the salmon fishery and make recommendations concerning the future of the industry. Basing the study on theory developed by Gordon (1954) and Scott (1955), it was concluded that the problems in the salmon fishery were largely economic and it was recommended that entry into the salmon fishery be controlled by limiting the number of licenses available (Sinclair, 1960). The study, known as the Sinclair Report, created a great deal of controversy in the industry because the solutions it proposed were viewed by many as being too harsh on those in the primary sector. The Sinclair Report recommended that license fees for boats be increased and that a five year moratorium be placed on the issuance of new licenses. The Report advocated that at the end of the five year period the Department of Fisheries should determine the number and type of licenses which could efficiently and equitably harvest the resource and that licenses should be allocated by competitive bidding and be transferrable between fishermen. The recommendations were controversial

and it has been suggested (Fraser, 1979) that their implementation was delayed until after June 1968 when a federal election resulted in the formation of a majority government. While the political ramifications of implementing some of the recommendations may have delayed major policy changes, some action on the suggestions of the Report was taken prior to the election.

In 1966 the Department of Fisheries began to implement some of the recommendations in the Sinclair Report. Preliminary attempts to control fleet development through licensing were undertaken. The new system required that fishery vessels rather than fishing gear be licensed. Further, a controversial announcement by the Minister of Fisheries provided an indication of what was to come when it was suggested that a fisherman might not receive a license for his vessel in 1967 if the vessel had not been operated in the 1966 fishery or if the vessel was not under construction at that time. The furor that resulted from this announcement resulted in the proposal being withdrawn two weeks later (Campbell, 1973). Although the license limitation proposal was withdrawn, it was evident to many in the industry that an open access fishery would soon be prohibited. In response to the probable restrictions on the fishing fleet, there was a boom in construction of new salmon vessels in the years 1967 and 1968 (Campbell, 1973). During this time the Department of Fisheries was developing strategies to reduce the salmon fleet, provide income stability and assure the continued survival of the fishery.

Prior to 1969 there was free entry into the salmon fishery. Under these open access conditions vessels could participate in the British Columbia fishery if: (a) they were registered with the Department of Fisheries as a commercial fishing vessel; (b) an annual license fee of ten dollars was paid; (c) application and fee payment were made prior to May 31 of the year to be fished. During this period a large number of vessels and fishermen were present in the industry.<sup>7</sup> In addition, fishermen were not a homogeneous group, as some fished part time, others fished one year and not the next, while still others were bona fide fishermen who fished on a full time basis and had no other non-fishing income. The industry was characterized by large fluctuations in employment due largely to changes in fish prices and quantities landed. Further, there was a trend of increased capital investment in the fishery which if left uncontrolled would probably dissipate the economic rent derived from the resource.<sup>8</sup> As a result of these trends in the fishery a license limitation program was announced by the (then) Minister of Fisheries Jack Davis.<sup>9</sup> The plan became law on May 28, 1969.

The introduction of the license limitation plan was a significant transition in west coast fisheries management policy. The plan was designed to attain two basic objectives: (1) to make the salmon fleet economically rational; and (2) to facilitate biological management of the resource (Fraser, 1979). To rationalize the fleet, the plan was designed to first freeze the size of the fleet and secondly to reduce the size of the fleet. The plan was to be undertaken in two phases<sup>10</sup> to achieve these objectives.

Under phase one of the license limitation program vessels which qualified to fish for salmon were divided into "A" or "B" categories.<sup>11</sup> Category A vessels were those which had generated \$1,250 or 20% of average gross income in either 1967 or 1968. B category vessels generated less revenue than A vessels, and were to be licensed for a maximum of 10 years, at which time they were to be phased out. By categorizing vessels in this manner, the Department of Fisheries hoped to be able to distinguish the "serious" commercial fisherman from the part time or recreational fisherman (Wilson, 1975; Fraser, 1979). At the outset of the license limitation program a vessel-for-vessel replacement rule was established; the replacement rule required that for a new vessel to enter the fleet an existing vessel had to be retired, thus the fleet size would remain constant.

The main features of phase two of the license limitation plan consisted of: (a) a substantial increase in license fees for fishing vessels; (b) a phase-out of vessels in the B category; and (c) a program to "buy-back" some of the vessels in the fleet. The license price of category A vessels in the 1970 salmon season was increased. Vessels of less than 15 net tons of capacity had their license fees increased from \$10 to \$100 annually, while vessels larger than 15 net tons had their fees increased to \$200 from \$10. In the 1971 salmon season the license fees were doubled to \$200 and \$400 respectively. Vessels in the B category did not have an increase in license fees. Commencing in 1971 the revenue derived from the sale of A licenses was used to fund a buy-back program of A vessels. The vessels purchased were

acquired from fishermen who voluntarily wished to retire their vessels. Owners of A vessels were paid the average of two appraisals of vessel value plus 5% of this value as an incentive to retire the boat from the fishery.<sup>12</sup> Owners of vessels which were marginally in the A category had the option of remaining in the category or downgrading their license to category B and paying the nominal \$10 license fee.

Shortly after its introduction it became apparent to the Department of Fisheries that the license limitation plan was being subverted because of inadequacies in the regulations. At the outset of the David plan, a fisherman who wished to enter a new vessel into the fleet had merely to replace an existing vessel. Fleet capacity continued to increase however because the boat-for-boat replacement rule enabled larger boats to replace smaller ones in the fleet. A larger seiner, for example, could be licensed as the replacement vessel for a small gillnetter. The objective of not increasing the size of the fleet was being met; however, fleet capacity was increasing significantly as was the capital investment in the fleet (Fleet Rationalization Committee, 1982). It was evident that the spirit of the license limitation program was being violated and that additional regulations would be necessary if fleet capacity and capital investment were to be restrained.

To halt the continued growth in the fleet, the Department of Fisheries established new requirements for vessel licensing in 1971. The new regulations specified that: (a) category A vessels registered under the *Canada Shipping Act*<sup>13</sup> were to be assigned their registered

net tonnage; (b) category A vessels licensed under the *Canada Shipping Act* were to be assigned a tonnage based on overall length; (c) a replacement vessel must retire an equal amount of existing tonnage; and (d) existing tonnage is additive<sup>14</sup> (Fleet Rationalization Committee, 1982). Known as the "ton-for-ton" replacement rule, the Department of Fisheries again tried to control the growing capital investment and the increased harvesting capability of the salmon fleet. Despite the enactment of the 1971 regulations, fleet capacity continued to increase and the regulations were refined again. The new regulations prohibited the adding of tonnage and required that a replacement vessel not exceed the length or tonnage of a retiring vessel.<sup>15</sup> While the new regulations are far more comprehensive than those originally set out in the Davis plan, problems still remain in controlling the fleet.<sup>16</sup>

When the license limitation program was announced, it was widely recognized throughout the industry that action was needed to prevent the continual erosion of fishermen's income and to slow or stop the capitalization of the fleet. From the outset, it was evident that the new policy would have a major social impact, particularly on those fishermen who were part time or inefficient. The Department of Fisheries did not view part time participants in the industry as being bona fide fishermen because they were able to receive income from other sources of employment. Similarly it was believed that inefficient fishermen would be better off in other occupations rather than in an industry which is cyclical and subject to the vagaries of nature. At the time of the announcement of the plan the provincial government did

not oppose the Department of Fisheries' intent, and, like many of the industry groups, adopted a "wait and see" approach. There was doubt within the industry as to whether or not the regulations of the plan would enable the Department of Fisheries to accomplish its objectives,<sup>17</sup> and the subsequent revisions to the regulations appear to show that this doubt was well founded. Regardless of the plan's provisions, neither the industry nor the Province of British Columbia questioned the power of the federal government to undertake the license limitation program. In addition, there was stress on the Department because of the growing instability within the industry. While the Davis plan attempted to reduce this instability by reducing competition for the resource, it was not notably effective, consequently additional policy responses appeared necessary.

### 3.2.2 Recommendations of the Commission on Pacific Fisheries Policy (Pearse Report)

By the late 1970s the west coast commercial fishery was plagued with a variety of policy concerns in areas such as vessel licensing, habitat management, research and international arrangements. To address some of the problems in the fishery the Minister of Fisheries and Oceans appointed a Royal Commission to make recommendations on many aspects of Pacific fisheries policy.<sup>18</sup> One of the more controversial aspects of the final report of the Commission involved its recommendations for licensing the salmon fishery.

The final report of the Royal Commission on Pacific Fisheries

Policy<sup>19</sup> noted that the license limitation plan of 1969 was, for the most part, a failure because it did not effectively control and reduce excess fishing capacity. The Commission noted that fleet capacity had doubled or perhaps trebled since the implementation of the plan.<sup>20</sup> Pearse<sup>21</sup> suggested that as a result of this over-capacity potential annual returns of \$75-\$100 million are not presently realized because they are dissipated in excessive costs of fishing. The Commission noted that the problem of excess capacity contributes to threats of fish stocks, results in poor economic performance and creates instability in the industry and that the challenge of any new policy framework would be "to stop this treadmill of overcapacity, so that fishermen can receive reasonable returns and the people of Canada can begin to realize some of the substantial surplus that the fisheries are capable of yielding with a better fleet structure."<sup>22</sup> In its final report the Commission reviewed the objectives and purposes of regulating fishing privileges, and the problems encountered in the process.

The Commission made a number of recommendations concerning licensing provisions in the fishery as a whole. It was recommended, for example, that fishing licenses be issued by species and that the Pacific coast be divided into three zones for licensing.<sup>23</sup> The Commission recommended that quota licenses be established for many fisheries<sup>24</sup> and that leases for mariculture and ocean ranching be developed. The recommendations regarding the future of the salmon and roe herring fisheries, however, probably provided the most significant change in licensing provisions that the Commission developed.

The Commission determined that under the present salmon licensing system the license is perpetual because it is renewable automatically each year. Noting that management flexibility is hampered by this situation, the Commission recommended that salmon licenses have a 10 year term. It was recommended that fleet capacity be controlled by regulating gear categories for each licensing area and that one-tenth of the capacity by gear category be available for allocation each year. It was recommended that the allocation of salmon licenses be determined by competitive bidding, with only current license holders being eligible to bid for the licenses during the first 10 years of the program. At the end of the 10 year transitional period any Canadian would be permitted to bid for the licenses. The salmon license would be specific regarding gear, vessel capacity and zone of eligibility. The bid would state the number of dollars offered per ton of vessel capacity applied for, paid on an annual basis. By licensing the fishery in this manner, the Commission suggested that the allocation of the catch would be more systematic because the annual catch is somewhat predictable. If temporary surpluses were to develop, the Commission recommended that short-term quota permits be issued, again through competitive bidding.

In the terms of reference the Commission was required to determine what charges should be levied for the resource after the private sector receives a "fair and reasonable" return for its effort.<sup>25</sup> In recommending new licensing arrangements and recognizing the need for license revenues to accrue to the Crown for the use of public resources,

the issue of license transferability had to be addressed. The Commission noted there is a need to distinguish a license being transferred from one person to another and from one vessel to another. The transferring of a personal license involves the conveyance of fishing privileges, and is often done in conjunction with the sale of a vessel. The Commission advocated that salmon licenses be freely transferable from person to person, and suggested that the public would benefit more through the imposition of license fees and landing charges than through prohibiting of license transfers. According to the Commission, the only valid objection to the transferring of licenses is the possibility that licenses could be monopolized or concentrated among a few persons or companies. To avoid this, the Commission recommended that regulations be implemented such that no person or company is able to control more than 5% of all salmon licenses.

An important consideration of the proposed salmon licensing arrangements involves the generation of revenue to the Crown. In the Commission's view, the \$2.5 million paid in license fees in 1981<sup>26</sup> to the Department of Fisheries and Oceans was insignificant in relation to the Department's \$85 million budget for managing, administering and enhancing the resource. With annual license fees the only direct source of government revenue at present, the Commission considered the flat rate of license fees inadequate because it does not reflect the value of the harvest. The flat rate was also considered inequitable because vessel owners may pay the same license fee regardless of the size of their catch. As a result, the Commission recommended that

salmon fishermen<sup>27</sup> pay a royalty on the fish landed. The imposition of a royalty of between 5% and 10% of landed value would, according to the Commission, return to the public a portion of the value of public resources used by the private sector, reduce windfall gains in the industry and provide a disincentive to add additional fishing capacity. A further recommendation of the Commission involving revenue generation was that the annual validation fee for fishing vessel licenses should be increased to \$50 from the present \$10 and that additional species fees be eliminated because royalties and bidding fees would generate revenues from the private use of public resources. To administer the proposed licensing arrangements, the Commission recommended the creation of a Crown corporation known as the Pacific Fisheries Licensing Board, which would be responsible to the Minister of Fisheries and Oceans.

The chronic problem of fleet over-capacity was addressed by the Commission, which noted that any solutions to the problem would be complicated and controversial. The Commission recommended that at the end of the 10 year transitional period in 1993 the salmon fleet should be at 50% of its present capacity<sup>28</sup> in terms of vessel tonnage. According to the Commission this reduction is necessary to reduce the pressure on fish stocks and improve the economic performance of the industry. The Commission noted that while the optimal fleet size and structure has not been determined, reducing the target fleet to 50% of present capacity would represent a more rational investment in harvesting capability than exists at present. To achieve this target, however,

the Commission noted the need to compensate those who wished to retire their labour and capital from the fishery.

While industry groups may express conflicting or different views on various aspects of fishery management, there is a consensus throughout the industry that the salmon fleet is too large and should be reduced.<sup>29</sup> To reduce the salmon fleet by one-half of its present capacity, the Commission recommended that a buy-back program begin in 1983 under the authority of the proposed Pacific Fisheries Licensing Board. To undertake this buy-back program it was recommended that the Board receive revenue from the following: a \$10 million grant from the federal government; a loan, to a maximum of \$100 million, secured by the anticipated revenues of the Board; all revenue received from the competitive bids on salmon licenses; and one-half of the royalties paid from salmon landings, with this amount being equally matched by a grant from the federal government.<sup>30</sup> The financial resources of the proposed Board would obviously be substantial, however, this would be necessary if one-half the salmon fleet was to be retired. The Commission noted that the primary responsibility of the government is for licenses and not vessels although the two are often related. The Commission proposed therefore that the salmon fleet be reduced by purchasing the lowest priced licenses from those who wished to voluntarily retire from the fishery. At the end of the transitional period the Commission suggested that the Board would be able to identify the appropriate capacity of the salmon fleet and make adjustments accordingly. The Commission recommended that vessels purchased under the buy-back

program in this period be disposed of in other west coast fisheries or possibly as a form of foreign aid to other countries.

The final report of the Commission was released in September, 1982, nearly nine months after the deadline established in the Commission's terms of reference.<sup>31</sup> Many of the recommendations regarding the licensing of the salmon fishery would, if implemented, represent a major change in licensing policy. The proposed solutions to the fleet's over-capacity generated a great deal of controversy in the industry.

The release of the Pearse Report generated near universal opposition to the salmon licensing regulations which it had recommended.<sup>32</sup> The methods proposed to remedy the problems of the salmon fleet were such a major departure from existing policy that adjustment to them would, in the view of many groups, be impossible and unnecessary. The largest fishermen's organization on the west coast, the United Fishermen and Allied Workers Union (UFAWU) termed the report a "disaster."<sup>33</sup> Similarly, other groups<sup>34</sup> in the fishery opposed the salmon licensing proposals put forth by the Commission. In addition to rejecting the controversial proposals on licensing, many industry groups demanded a minimum one year moratorium on implementing other recommendations contained in the report. The controversy surrounding the report placed it in the political arena, with both federal opposition parties<sup>35</sup> demanding a moratorium on implementing the recommendations of the report and for Parliament's Standing Committee of Fisheries and Forestry to hold public hearings on the recommendations. While many in the industry

feared that the licensing recommendations would be quickly implemented, particularly if there was not strong opposition, the Minister postponed any action until he had received advice from his Advisory Council.

In February, 1983 the Minister of Fisheries, acting upon the recommendations of his Advisory Council, announced that 76 of the 300 recommendations of the Commission would be adopted immediately. Many of the accepted recommendations of the Pearse Report dealt with aspects of general fisheries management, habitat management, enforcement and administration. The controversial recommendations of the Commission regarding a buy-back program, competitive bidding for licenses and establishment of a Crown corporation to administer the new licensing arrangements, were rejected by the Minister who concurred with the views of his Advisory Council. While this rejection was viewed with relief by many in the industry,<sup>36</sup> the problem of fleet over-capacity and over-capitalization still remained. Prior to rejecting the licensing proposals of the Pearse Report, the Minister had challenged fishermen's organizations to develop viable alternatives to those proposed by Pearse, rather than simply criticize the report. In addition, in April, 1982 the Minister commissioned a committee to study the problem of fleet capacity and to recommend methods to rationalize the fishery.<sup>37</sup>

The appointment of a Royal Commission into fisheries policy provided the first opportunity to comprehensively review the 1969 Davis plan and suggest non-incremental solutions to the problems in the salmon fishery. The Commission noted that despite repeated refinements to the 1969 license limitation program, the salmon fleet continues to be

grossly over-capitalized and has a capacity far in excess of the available harvest. While the recommendations of the Commission to remedy this situation were unacceptable to the regulating agency and to many in the industry, they reflected an awareness that some action to address the problems is necessary. The recommendations of the Commission conflicted with the policy preferences of many fishermen's organizations. In addition, the proposals appeared to threaten the future of some in the industry. The tension between fishermen's organizations and the Commission developed because many fishermen believed that they would now be forced to pay the costs resulting from ineffective policies of the Department. As a result, many individuals and groups in the fishery believed they were being discriminated against. As a result of the Minister's rejection of the licensing proposals, the Department of Fisheries and Oceans was still under stress to develop and implement licensing arrangements which would address the problem while at the same time being administratively practicable and politically acceptable.

### 3.2.3 Report of the Fleet Rationalization Committee (Cruickshank Report)

There is a general consensus within the west coast fishery that the salmon fleet should be reduced to a level which represents a rational investment in harvesting capability given the available harvest. The need to address the problem of fleet over-capacity resulted in the Minister of Fisheries and Oceans appointing a

Committee to suggest methods by which the salmon and roe herring<sup>38</sup> fisheries might be rationalized. The Fleet Rationalization Committee<sup>39</sup> was appointed in April, 1982 to advise the Minister on this process. The terms of reference of the Committee required it to address the following issues and questions: How to reduce and prevent further growth in fleet capacity. Is a buy-back program necessary, and if so, what types of vessels should be bought back? What is the appropriate fleet size and mix? By what methods can vessel replacement rules be strengthened, and what administrative arrangements are necessary to implement the recommended arrangements?<sup>40</sup> The Committee, which was comprised of five active participants<sup>41</sup> in the fishery, submitted its report in November, 1982.

The general purpose of the Committee was to recommend solutions to the problems that the Davis plan had sought to solve in 1969. The Committee noted that the problems which existed prior to the implementation of the Davis plan are still present in the salmon fishery:

The present fishing capacity of the fleet is not based on the size of the fish resource but on individual ambitions to catch more fish. Fleet size and overcapacity have contributed to, and continue to be major factors in the decrease in available stocks in both the salmon and roe herring fisheries.<sup>42</sup>

The Committee reviewed a variety of methods which have been proposed to rationalize the fleet, and categorized these methods as acceptable or unacceptable.

*Quota bank?*

The Committee determined that the following regulatory activities are unacceptable methods of rationalizing the fleet: gear and vessel restrictions; personal quotas; catch allocation; single gear licensing;

and area licensing. While these methods were deemed unacceptable for further rationalization measures, they were not necessarily considered impractical.<sup>43</sup> The Committee was strongly opposed to the recommendation of the Commission on Pacific Fisheries Policy that salmon licenses be awarded by competitive bidding. According to the Committee, competitive bidding for salmon licenses "is absurd to the extreme. Displaying deep misunderstanding of and contempt for fishing values, this manoeuvre ignores the need to retain professional fishermen in the industry and reduces participation to those with the greatest ability to pay."<sup>44</sup> The social costs in terms of dislocating bona fide fishermen from the industry was, therefore, a major factor in rejecting this recommendation of the Pearse Report.

The Committee took the position that enhancement of the salmon resource was a more acceptable method of rationalizing the fleet than reducing the number of vessels through a buy-back program. To be realistic, however, the Committee noted that enhancing the resource would not in itself rationalize the fleet, and that a buy-back program would be necessary. The buy-back program proposed by the Committee would be undertaken by a committee chosen from the industry and chaired by an official of the Department of Fisheries and Oceans. The buy-back committee would undertake its activities based on clearly defined objectives regarding fleet size and mix. The buy-back committee would, therefore, need to determine what vessel types would make up the fleet at the end of the buy-back program. The vessels acquired through the buy-back program could, according to the Committee, be disposed of by

public auction or possibly sold to developing nations. To finance the program the Committee recommended that revenues be used from the sale of vessels, license fees and royalties on fish landings.

The Committee recommended that the initial funding of the proposed buy-back program be based on a combination of the approximately \$10 million in previously collected license fees together with a \$40 million government loan which would be recovered from future license fees and royalties. The proposed royalties would escalate from 1.5% of the value of landed salmon (round weight) in 1983, to 10.5% until the year 2011. With royalties based on the landed value of the resource, revenues to the buy-back program would be somewhat variable, depending upon market conditions. On the matter of license fees, the Committee concurred with the recommendation of the Pearse Report that license fees should be \$50 regardless of vessel type.

The Committee assessed the likely impact a buy-back program would have on the structure of the fleet, and suggested that control of the seine fleet would be particularly important if the program was to be effective. It was noted that although the seine fleet comprises only 11% of all licensed salmon vessels in the fishery, it accounts for 40% of the capital investment, 40% of the value of the catch and over 50% of the weight of the catch.<sup>45</sup> In addition, almost one-half of the vessels in the seine fleet are less than 10 years old, while for the fleet as a whole, over one-half of the vessels are more than 25 years old. The seine fleet, therefore, has had a major role in the evolution of a fleet which is greatly over-capitalized and possesses excess

capacity. The Committee recommended that the buy-back program reduce the seine fleet by 25% and that the small boat fleet<sup>46</sup> be reduced by 12%. According to the Committee, the net cost of the buy-back program would be \$80-\$90 million, which would be recoverable.<sup>47</sup> At the end of the proposed buy-back period, the salmon fleet would consist of the following: 400 seiners; 1,467 trollers; and 2,208 gillnetters and combination boats. The projected fleet size would be 4,075 vessels, versus 4,707 in 1982 and 6,104 in 1969.<sup>48</sup> The recommended reductions in the fleet, therefore, would not be as large as suggested by the Royal Commission on Pacific Fisheries Policy which had advocated a 50% reduction in the fleet.

The report of the Fleet Rationalization Committee did not create the controversy in the industry that the Pearse Report did, perhaps because its recommendations were not as radical as the reforms Pearse had suggested. Both the Committee and the Commission concurred that changes to the fleet are necessary, however, they differed on the best methods to achieve this reform. The Committee's report, released after the Pearse Report, stated that the recommendations of Pearse were "untried, theoretical solutions which would gamble with the resource, individuals and communities." According to the Committee, its recommendations would provide more stability in the industry and would employ methods which have had a background of success. As a result, the level of stress and conflict associated with the recommendations of the Committee appeared to be lower than that associated with the recommendations of the Pearse Report. The Committee noted, however, that the

success of its licensing recommendations would be contingent upon a continued commitment to reduce pressures on present fish stocks through the Salmonid Enhancement Program.

### 3.3 RESOURCE ENHANCEMENT: THE SALMONID ENHANCEMENT PROGRAM

One of the major objectives of fisheries management is the development and implementation of policies which balance the supply of, and demand for, the resource. Many commercially valuable fish species are susceptible to physical and/or ecological threats throughout their life cycle, necessitating management strategies which reflect an awareness of the vagaries of nature and demand by fishermen. Salmon, for example, may be at risk at the egg and larval stage from chemical pollutants or the physical destruction of rearing habitat, or they may be at risk at maturity when they are sought by man and other predators.

In addition to the benefits resulting from resource development, costs of externalities<sup>49</sup> are often associated with the exploitation of natural resources. In some cases, the social, economic or environmental costs resulting from resource development are significant. One of the negative environmental effects of resource development in British Columbia has been the deterioration of salmon habitat.<sup>50</sup> While it is generally believed that salmon habitat has deteriorated,<sup>51</sup> it is not known to what extent it contributed to the decline in salmon stocks.

Concurrent with the deterioration of salmon habitat was the development of an increasingly efficient salmon fleet. Despite an

attempt in the late 1960s to limit the size of the fleet through the license limitation program, harvesting capability increased and with it, the pressure on salmon stocks. While increasingly complex regulations governing fishing effort reduced this pressure somewhat, the results were not satisfactory in the long term balancing of supply and demand.

With the increased pressure on the resource, there was concern about the future of the salmon fishery by commercial fishermen, sports fishermen and native peoples, all of whom wished to maintain or increase their share of the catch. Thus with demand increasing, and natural salmon stocks at relatively fixed levels or in decline, fisheries managers were pressured to address a growing supply/demand imbalance. Perhaps the most viable method to solve this imbalance was to enhance the resource through hatcheries, stream rehabilitation, stream clearing and other methods. The technology and expertise to artificially increase salmon stocks was available in British Columbia and in the nearby states of Washington, Oregon and Alaska. A program of fish hatchery construction had begun in British Columbia in 1884<sup>52</sup> and had met with increasing success since that time.

On May 30, 1977 the federal Minister of Fisheries and Environment announced the implementation of the Salmonid Enhancement Program (SEP). The announcement followed the signing of a Memorandum of Understanding in December, 1975 by the Minister of Environment for British Columbia and the federal Minister of Fisheries and Oceans. The Memorandum formalized the cooperative arrangements essential for

the program to proceed, noting that the jurisdictional authority of each government made cooperation necessary. The funding of the program was to be shared, with the federal government providing most of the financing of projects. The Memorandum stipulated that the program be cost recoverable, and that revenues from license fees and landing charges would be applied to enhancement activities. The purpose of the program was to restore salmon stocks to their pre-1900 levels and to:

- (a) augment national and provincial income;
- (b) create employment opportunities for Canadians;
- (c) improve the economic opportunities for the Native Indian peoples, consistent with the need to preserve their social and cultural heritages;
- (d) foster development of economically disadvantaged communities or regions; and
- (e) increase and improve recreational opportunities.<sup>53</sup>

To attain these objectives the program was to be undertaken in two phases.

The Salmonid Enhancement Program is given direction from two sources: the Salmonid Enhancement Board; and the Salmonid Enhancement Task Group.<sup>54</sup> The Salmonid Enhancement Board is comprised of 12 members: three members are from the federal government, including the chairman of the Board; two members are from the provincial government; and seven members are from the private sector including, for example, the commercial fishing industry, the sports fishery, other resource industries and the public at large. The Board makes recommendations to each Minister on the policy and direction of each government's components of the program. The Task Group is comprised of 27 members chosen from various interest groups and regions in the province, and gives advice

to the Board<sup>55</sup> on existing or proposed projects and activities.

Phase 1 of the program established a target of increasing the production of salmon and sea run trout by 50 million pounds. This production was to be achieved by the following methods: (a) restoration of freshwater habitat through stream rehabilitation and obstruction removal; (b) the use of fishways to overcome barriers to spawning areas; (c) the development of artificial spawning channels; (d) the construction of hatcheries and other artificial rearing systems; and (4) lake fertilization to stimulate food production for young salmon. The commitment of funds for this phase of the program was: \$150 million from the federal government, and \$7.5 million from the provincial government. In general, the emphasis of phase 1 was on capital intensive projects through small scale construction, habitat rehabilitation and management. Assessment of the effectiveness of phase 1 is based on how well it met its objectives in terms of fish production and the five "accounts" mentioned above.

Prior to the commencement of phase 2, an evaluation of phase 1 is required. If phase 1 fails to meet its objectives by a substantial margin, the Salmonid Enhancement Board is empowered to recommend to the Minister of both governments that phase 2 be abandoned. If phase 2 is to proceed, the assessment phase provides the opportunity to undertake long-term planning for the continuation of the program.

Phase 2 of the Salmonid Enhancement Program is intended to remedy some of the production shortfalls which may develop in phase 1. The targeted production for phase 2 is to be generate 100 million pounds of

salmon and sea run trout over a 10 year period.<sup>56</sup> Many of the enhancement projects will be more labour intensive than those in phase 1.

With phase 1 of the program nearly complete,<sup>57</sup> some of the problems of the program are apparent. It has been noted, for example, that regional development and improvements to the well-being of native peoples have not evolved to any noticeable degree.<sup>58</sup> The Commission on Pacific Fisheries Policy noted that one of the major problems with phase 1 has been the erosion of funding for the program. According to the Commission, this erosion is due to: increases in construction costs; inflation; and the extension of time for phase 1 projects. It was assumed, for example, that phase 1 funding would entail an allocation of \$150 million in 1976 dollars over a five year period (1977-1984). In 1981, the purchasing power equivalent of the original allocation was \$78 million, or about 52% of the original allotment. Achievement of the phase 1 objectives has, as a result, been hampered by budget constraints.

Phase 1 projects have produced mixed success in achieving the five goals or accounts set for it. The results of the accounts are as follows: (a) increased national income—the targeted benefit-cost ratio was set at 1.5:1, the average at the end of 1981 was 1.3:1; (b) employment increase—the targeted number of person years was set at 458, which at the end of 1981 had been exceeded by 36%; (c) regional development—\$88 million of the targeted \$200 million had been realized; (d) benefits to native peoples—not realized because many projects were contracted out; (e) resource and habitat improvement—not determined

because of problems in measurement.<sup>59</sup> Despite some of the failings of phase 1 projects, the production capacity by the end of phase 1 is expected to be 43.4 million pounds, or about 87% of the target. The Commission on Pacific Fisheries Policy considered this production estimate to be highly satisfactory in view of eroded purchasing power of Salmonid Enhancement Program funds.<sup>60</sup> There are, however, a number of concerns regarding the program in general.

One of the major concerns with the Salmonid Enhancement Program relates to the possibility of replacing wild fish stocks with hatchery produced fish. One of the problems in this regard is the potential of hatchery stocks being genetically inferior to natural stocks and, as a result, more susceptible to disease. Another concern is the possibility that stocks enhanced by Canadian initiatives will be intercepted by foreign vessels, thus reducing the benefits derived from Canadian expenditures. An additional concern relates to the possibility that increasing the supply of the resource will lead to more capital investment by fishermen, thus exacerbating the difficult problem of fleet rationalization. In addition, there are a number of social considerations associated with enhancement activities.

One of the indicators of success of the program is predicated on the benefits to native peoples. The declining rate of participation of Indians in the west coast fishery is one of the problems that the program has attempted to solve. It appears, however, that the program will make entry into the fishery more difficult for younger Indians, while benefitting those Indians already in the fishery.<sup>61</sup> In addition,

the continuing employment for native peoples will be one-half of what was targeted.<sup>62</sup> The program, therefore, has not been as successful as expected in terms of benefitting native peoples.

The Enhancement program has resulted in some lobbying activity by interest groups that wish to see funds allocated for specific projects in some areas. Some groups, for example, have demanded a greater financial contribution by the Province of British Columbia,<sup>63</sup> while others have suggested their area of operation has not received adequate enhancement activity.<sup>64</sup> The allocation of Salmonid Enhancement Program funding has not been uniform along the coast largely because enhancement is not viable in some locations and because the objectives of the program vary according to the area involved. In the southern portion of the province, for example, satisfying recreational demand is more important than in the north.<sup>65</sup> In addition, there may be other constraints to the allocation of Salmonid Enhancement Program funds. It has been estimated, for example, that the Skeena and Nass River systems could provide up to 30% of British Columbia's enhancement opportunities,<sup>66</sup> however, funding has been somewhat restricted because a portion of enhanced stocks would be intercepted by Alaskan fishermen.

Despite some problems, phase 1 of the Salmonid Enhancement Program is generally considered a success by many in the industry. Funding for phase 1 remains a problem, however, the Minister of Fisheries and Oceans announced in May, 1983 that \$44 million would be allocated to continue this phase for another two years and to

facilitate detailed planning for phase 2. While the Salmonid Enhancement Board recommended to the federal and provincial governments that phase 2 be undertaken, a firm decision is not expected until 1985 or 1986.

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The Salmonid Enhancement Program reflects how cooperative fishery management arrangements may evolve when objectives are mutually agreed upon and jurisdictional responsibilities are not threatened. While the program is largely supported by federal contributions, the provincial role is significant because of the jurisdictional considerations involved with most enhancement projects. The level of stress and conflict associated with the Enhancement program, however, appears to be low. The nature of the Salmonid Enhancement Program agreement and the decision-making process which has evolved from it has precluded jurisdictional conflicts between the federal and provincial governments. In other areas of fishery management, however, federal-provincial tensions have resulted in conflict. The difficulties encountered in the management of fish habitat illustrate how stress and conflict may develop because of jurisdictional uncertainties.

### 3.4 HABITAT MANAGEMENT

#### 3.4.1 The Stellako River Log Drives (1965-1967)

The Stellako River log drive was perhaps the first major fisheries management conflict in British Columbia arising from forest harvesting practices. The log drive controversy exemplified how

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management of the fishery resource could be affected by decisions per-  
taining to resources under provincial control. It was perhaps inevitable that conflicts would arise in fisheries management, given the growth in provincial resource development in the early 1960s. The spawning habitat of the Stellako River was perceived by the federal Department of Fisheries as being threatened by some of this development.

The Stellako River, located in north central British Columbia (Figure 1), is a relatively short (13 km) river by provincial standards, flowing easterly from Francois Lake to Fraser Lake. The river had a long history of log driving prior to the conflict of the mid 1960s. Logs and railroad ties were driven on the river from 1914 to 1948, with some tie driving continuing until 1957. The log drives generally commenced in late spring and stopped in late August. Changing economic circumstances in the area resulted in the cessation of log drives in 1957.<sup>67</sup>

The construction of a new sawmill in Fraser Lake in the early 1960s revived interest in water transport of logs. The new mill centralized log sawing and pulp chipping in one location and consolidated the operations of a number of smaller mills operating in the area. A log drive on the Stellako River was proposed and was viewed as a temporarily expedient method of log transport. By utilizing the Stellako River as a transport medium, the costs of moving the logs was less than one-half of the cost of truck transport.<sup>68</sup> This cost advantage made river transport the preferred option, at least from the forest industry point of view. In July, 1964 Fraser Lake Sawmills of Fraser Lake, B.C., gave notice to the federal Department of Fisheries

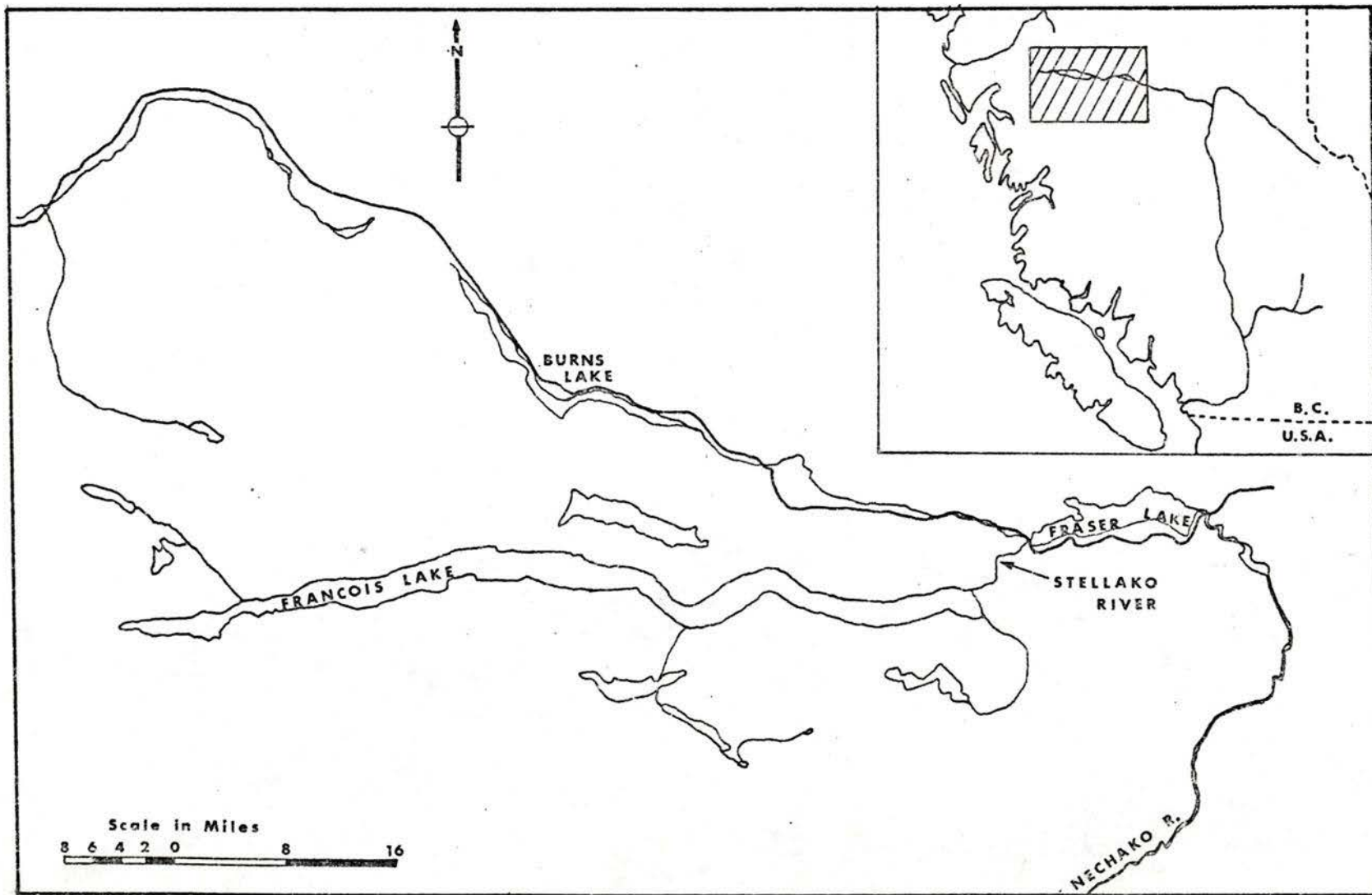


Figure 1. Location Map Stellako River

of its intent to resume log driving on the Stellako River in the spring of 1965. The Department of Fisheries at that time expressed concern about the possible impacts the log drive would have on the fishery resources of the Stellako River.

Concern about the fisheries of the Stellako River were based on the productivity of the system for both commercial and sports fisheries. The river was a spawning ground for sockeye salmon, chinook salmon, kokanee and rainbow trout. By far the most important species present in the system was sockeye salmon which had an average annual FOB plant value of \$1.2 million prior to 1965.<sup>69</sup> The sockeye salmon run was also important as a food source for native Indians along the Stellako River.<sup>70</sup> In addition, the Stellako River supported a sports fishery both in the river and in nearby Fraser Lake. While estimates of the economic value of the recreational fishery were not known, both federal and provincial fisheries agencies believed the river was important in meeting local demand.<sup>71</sup> The value of the river was, therefore, broadly based, providing economic, cultural and recreational benefits.

The federal Department of Fisheries' concerns about the 1965 log drive were based largely on the impact of the drive on sockeye spawning habitat. Historically, the Stellako River sockeye run had had large fluctuations, although it had gone into a general decline commencing in 1913. By 1946 the decline had apparently been arrested, however, runs were still cyclical due to the nature of the resource. It was noted that the decline of the sockeye run was coincident with the previous period of log driving on the river, although it was unknown

if these drives had been responsible for the reduced sockeye populations.<sup>72</sup> No studies had been undertaken into the physical impacts associated with the original drives.

The Stellako River log drive commenced June 6, 1965 and ended July 20, 1965. In reality there were two drives during this period: one drive began June 6, 1965 and ended June 30, 1965; a second, smaller drive began July 3, 1965 and ended July 20, 1965. The scheduling of the drive had been modified because of the objections of the Department of Fisheries. The Department issued an order which prohibited log driving during the period of sockeye fry emergence (prior to June 6) and at a later date when adults migrated into the Stellako spawning grounds (after July 20). While the scheduling of the drive attempted to minimize the negative impacts on the fishery, it was assumed that there would be some damage.<sup>73</sup> Both the federal Department of Fisheries and the International Pacific Salmon Fisheries Commission prepared to undertake studies after the drive to determine the impact of the compromise on the fishery.

The 1965 log drive became a political issue, revealing how conflicts may arise because of resource interdependencies. The provincial government was concerned that forest harvesting be carried out in an expeditious manner, while the federal government was concerned with preventing damage to the fishery resource. The provincial Forests Minister, at the time Ray Williston,<sup>74</sup> stated that he knew the Stellako River well and was not convinced that the log drive would harm fish, and consequently ordered the drive to proceed.

Several days after the drive commenced the British Columbia government was requested to "clarify its position" by the federal Fisheries Minister. The federal Fisheries Minister threatened legal action would be taken to stop the drive.<sup>75</sup> The drive went ahead as planned and no legal action was taken by the Department of Fisheries.

Upon the completion of the 1965 log drive, studies were undertaken to determine how much, if any, damage had occurred to the salmon habitat. In a report issued in 1966, the International Pacific Salmon Fisheries Commission stated there had been extensive damage to sockeye spawning grounds and it was recommended that the Stellako River log drive be discontinued.<sup>76</sup> The 1965 log drive had gouged and eroded the stream bed and in four sites under observation where 18,195 m<sup>3</sup> of spawning gravel had been removed. This represented 8.6% of the spawning habitat, however, it did not include other areas in the river which were more numerous but less severely scoured. In effect the loss of spawning area exceeded 8.6% because scouring took place at many sites not under observation.<sup>77</sup> According to the IPSFC report, further deterioration of the spawning grounds would be inevitable if the drive continued in following years.

After a study of the effects of the 1965 drive, the federal Minister of Fisheries issued an order which prohibited further log drives on the Stellako. In 1966, however, the Province of British Columbia again authorized a log drive on the Stellako River. This drive was carried out by the provincial Department of Forests because Fraser Lake Sawmills had failed to pay its stumpage to the province.<sup>78</sup>

Again, the log drive damaged the spawning beds, and again the Department of Fisheries did not challenge the legality of the drive's impact on the fisheries.

A log drive on the Stellako River was scheduled to commence again in June, 1967. Prior to the commencement of the drive, however, an agreement was reached between the Minister of Fisheries Canada (the Honourable H. J. Robichaud) and the Minister of Lands, Forests and Water Resources for the Province of British Columbia (the Honourable R. G. Williston). The agreement stated that: (1) the 1967 log drive would be carried out under Forest Service supervision in consultation with the Department of Fisheries; (2) a joint federal-provincial study would be undertaken to determine how to minimize the damage to the stream; and (3) a joint report would be made assessing any damage that had resulted. A Technical Sub-Committee was established and was comprised of four members, three of whom were provincial agency representatives.<sup>79</sup> Before the drive was undertaken, federal and provincial fisheries and forests personnel developed strategies which would reduce damage to the spawning grounds. The mitigation efforts included bank clearing, installing glance booms, driving the logs when water levels were high, releasing the logs at a controlled rate and locating crews in strategic locations where problems might develop. As a result of these measures, the 1967 log drive was cleaner and had less impact than the drives of the previous two years. A number of other factors further reduced the impact of the drive: the number of logs driven were smaller and fewer in number than in previous years;

many of the logs had little or no bark cover; and the Stellako River had an exceptionally high discharge in 1967.<sup>80</sup> Thus a number of circumstances, both natural and man-induced, mitigated extensive environmental impacts arising from the log drive.

It was apparent to the Department of Fisheries that the Stellako River log drive had resulted in damage to sockeye spawning grounds and that continuation of the drive would reduce the future fisheries values. Spawning sockeye had been displaced to less desirable spawning areas and it was likely that the salmon run would be reduced in the Stellako River as it had happened elsewhere.<sup>81</sup> The extent of the reduction, however, could not be accurately determined.

The 1967 log drive was the last one on the Stellako River. The economics of water transport made the drive no longer viable in the area and truck logging became more important. The value of the salmon and trout habitat of the Stellako River was demonstrated when, in 1982, the Province of British Columbia purchased 216 acres of river frontage on the Stellako. The purchase of this land through the Habitat Conservation Fund<sup>82</sup> was considered necessary to preserve some of the prime recreational land along the Stellako River and keep some critical fish habitat under public control.<sup>83</sup> Similar purchases have been made elsewhere in the province.

The Stellako River log drive was perhaps the first major fisheries/forest conflict in British Columbia that escalated to political spheres. The federal Department of Fisheries compromised on the issue and permitted the drive to take place when the impacts were uncertain.

In hindsight, it appears that all three log drives were detrimental to the fishery, with the 1965 drive probably the most damaging. While it was suspected that the drives would scour the spawning beds, deposit bark on some spawning areas and alter water chemistry, it was not known if the damage would be minor and/or temporary. The Province of British Columbia, while not directly challenging the Fisheries Act, doubted the ability of the Department of Fisheries to predict damage, and perhaps indirectly, questioned the management expertise of the department. It was perhaps fortuitous that the movement of logs by land became the preferred transport method, because in this instance, it likely precluded an escalation in conflict over fisheries values and forest harvesting practices. The compromise of the Department of Fisheries was likely based on jurisdictional uncertainties and not because of doubts about the impact the drive would have on fish habitat. As a result of the position taken by the Department, many in the industry questioned the resolve of the Department in protecting fish habitat. The perceived failure of the Department in the Stellako issue resulted in stress on the agency because it appeared that the Department was incapable of preventing or regulating activities which have negative spillover effects on the fishery. The high level of conflict which resulted from the Stellako controversy was based on jurisdictional uncertainties pertaining to habitat management. An additional source of stress on the Department arose because of its unwillingness to challenge the province over the drive and the appearance that a precedent had been established.

### 3.4.2 The Riley Creek Controversy (1978)

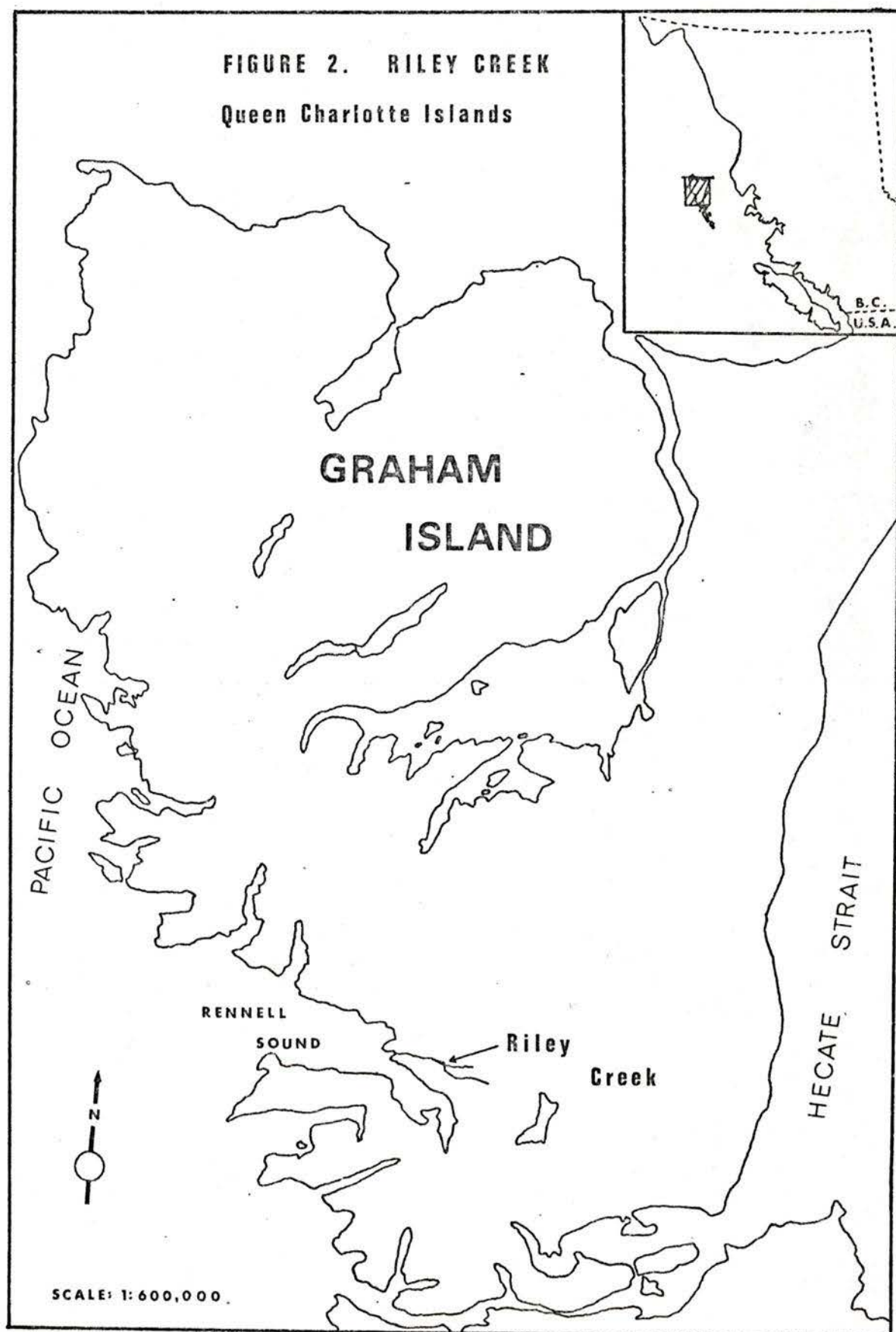
The forest industry is of paramount importance to the British Columbia economy, providing well over one-half of the value added in all industry groups.<sup>84</sup> For management purposes, the Province of British Columbia is generally divided into two forest regions based on topographic and climatic factors: the coastal unit; and the interior unit. Until 1972, the volume of timber harvested in the coastal unit exceeded that produced from interior forests.<sup>85</sup> Coastal forests, however, are generally more productive than those found in the interior, yielding an average nearly four times the volume of timber per hectare found in the interior.<sup>86</sup> One of the problems with coastal forest is that much of it is over-mature and impedes the growth of young forests which are capable of producing a greater yield of wood in a shorter period of time. Another problem relates to difficulties in gaining access to coastal timber.

The 27,200 kilometers of British Columbia coastline is generally characterized by steep slopes, numerous fjords and a relatively thin soil mantle overlying bedrock. Coastal ecosystems are particularly important to salmonid fisheries facilitating spawning, feeding and sea water acclimation during various stages of their life cycle. Protection of coastal salmonid habitat is therefore an important aspect of fisheries management. Providing this protection, however, is hampered by jurisdictional considerations and has resulted in stress on the Department of Fisheries and Oceans.

The Province of British Columbia has legislative jurisdiction over the lands and resources within the province by virtue of section 92 of the Constitution Act. This jurisdiction includes the coastal fore-shore and inland waters in the province. The provincial Ministry of Forests regulates forest harvesting in the province through a complex system of tenures. As part of this regulatory role, the Ministry is an inter-agency referral process whereby other federal and provincial agencies are given opportunity to comment on forest harvesting proposals. The referral process may result in the modification of a proposal in an attempt to mitigate some of the negative impacts which may result from forest harvesting. The decision to modify any proposal, however, is at the discretion of the managing agency. The Department of Fisheries and Oceans is routinely consulted when logging activity is believed likely to impact on fish or fish habitat. Periodically, conflicts develop where inter-agency cooperation is not viable. Such a conflict developed over forest harvesting and the protection of fish habitat in Riley Creek in late 1978.

Riley Creek is located on the southwest of Graham Island in the Queen Charlotte Islands (Figure 2). The area is part of the Coastal Western Hemlock (CWH) biogeoclimatic zone, receiving high annual precipitation, particularly during the winter months.<sup>87</sup> Riley Creek flows westward out of the Queen Charlotte Mountains, and is approximately 12 kilometers in length.

Riley Creek was designated an Environmental Protection Area (EPA)<sup>88</sup> by the provincial Ministry of Environment. This designation



requires that any resource proposals pertaining to an EPA be discussed through inter-agency provincial forums such as the Regional Resource Management Committee.<sup>89</sup> While the Fish and Wildlife Branch of the Ministry of Environment recommended that logging be disallowed in the Riley Creek area, the Department of Fisheries and Oceans gave approval to the logging proposal. The decision of the Department was reversed in late 1978, however, when a major rainstorm resulted in widespread slide activity in the Riley Creek watershed.<sup>90</sup> The combination of slope instability resulting from logging activity and excessive precipitation had contributed to the slope failures in the watershed. The Department therefore reversed its decision and banned logging of the remaining 40 acres of the Riley Creek watershed known as Cutting Permit 144.<sup>91</sup>

In early 1979 an on-site inspection by representatives from the Ministry of Forests, Ministry of Environment, Department of Fisheries and Oceans and Queen Charlotte Timber resulted in an agreement that further logging would not take place in CP 144. The Ministry of Forests subsequently reversed this decision and gave approval for logging to commence. The decision granting approval to log appeared to be in direct conflict with section 31(1) of the *Fisheries Act*, which states, "No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat." The decision granting approval to log appeared to be a challenge to this section of the Act. The conflict escalated in March, 1979 when Fisheries officers began to arrest loggers operating

in CP 144, charging them with violating section 31(1). In response to the arrests, the International Woodworkers of America, the union representing the loggers, threatened a province-wide walkout unless the Department of Fisheries and Oceans lifted the logging ban and dropped the charges against the loggers. During this time logging continued in CP 144. The dispute was settled when the Department of Fisheries and Oceans rescinded the logging ban order and dropped the charges against the loggers.<sup>92</sup> It has been suggested<sup>93</sup> that continued logging was viewed as the best solution in this situation because if logging had ceased, the remaining timber would have been blown down and would have required logging regardless.

The Riley Creek conflict exemplified the difficulties of fishery habitat management under conditions of jurisdictional uncertainty. The concern about fish habitat damage resulting from logging was perhaps justified because past logging practices had resulted in extensive damage to fish habitat.<sup>94</sup> It was not until 1932 that provisions for the protection of fish and fish habitat were enacted into law.<sup>95</sup> If enforcement of the *Fisheries Act* was based on strict interpretation of its provisions, it is probable that many resource developments since 1932 would have been prohibited. It is debatable, however, if section 31(1) of the Act would have gone unchallenged had it been rigorously enforced.

The confrontation that developed over logging in the Riley Creek watershed revealed some of the inadequacies of the *Fisheries Act*. The Act has been termed a "blunt instrument" by the Commission on Pacific

Fisheries Policy because the Department of Fisheries and Oceans has been unable to administer it consistently. The punitive nature of the Act and the prescriptive nature of many of its habitat protection regulations has likely contributed to this inconsistency. With a rigid approach to habitat protection, the Act does not provide for management flexibility and trade-offs with other resources. The strength of the Act therefore may result in greater discretionary decision making regarding its enforcement, as appeared to be the case with Riley Creek. The stress on the Department of Fisheries and Oceans in the Riley Creek case came primarily from two sources: (1) the demand by fishermen's groups that the Department enforce the habitat protection regulations set out in the *Fisheries Act*; and (2) the apparent inability of the Department to control the spillover effects resulting from forest harvesting in the Riley Creek watershed. The dilemma of the Department, therefore, involved placating fisheries interest groups by threatening to enforce a regulation of uncertain validity. The conflict which developed appeared to be based on a bluff by the Department of Fisheries and Oceans. It seems probable that should section 31(1) be used to regulate forest harvesting activities again, a legal challenge will result. The difficulties encountered in the regulation of forest harvesting activities is one aspect of fish habitat protection in the province. Stress on the Department of Fisheries and Oceans has also developed because of problems associated with mineral development.

### 3.4.3 The Amax Mines Controversy (1979)

Habitat protection presents one of the most difficult challenges in the management of the fishery in British Columbia. The threat to salmonid habitat often either involves a physical alteration of the habitat or a chemical change in habitat characteristics, or in some cases, both types of modification. The introduction of chemical pollutants in salmonid habitats presents a variety of regulatory problems, including, for example: the need to monitor discharges; the establishment of acceptable standards of effluent discharge; and the characteristics of the receiving environment. In addition, there is often uncertainty regarding the human and environmental costs associated with the introduction of wastes into freshwater or marine environments.

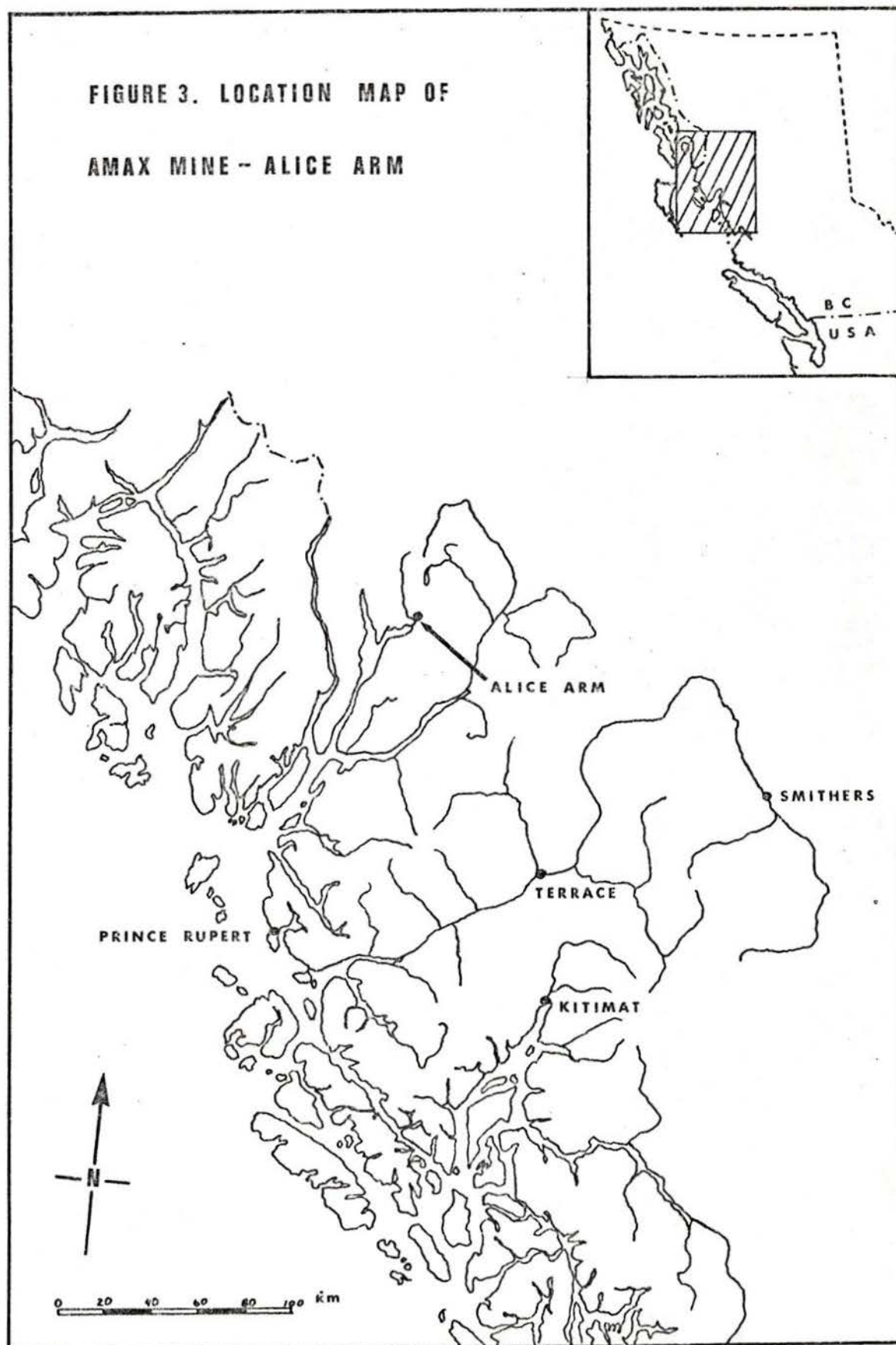
Waste products that result from human activity enter the receiving environment through point sources such as sewage outfalls, or through non-point sources such as surface and subsurface runoff which may contain fertilizers or pesticides. Some activities such as mining may generate pollution from both point and non-point sources, although generally mine waste is of the point form when it involves tailings produced from the milling of ore.<sup>96</sup> The waste from mining operations is of concern to fisheries managers because it may threaten fish habitat. Mines and mine milling operations discharge some of the most toxic pollutants in the Province of British Columbia<sup>97</sup> and are a significant threat to fish stocks in some locations.

The mining industry in British Columbia is of major importance to the provincial economy. With an annual value of production approximately \$3 billion, mining is second to the forest industry in terms of value to provincial resource industries. Further, mineral development is particularly important to some communities where it is the basis of the local economy. The development of mineral resources in British Columbia has not been without problems, however, as the controversy surrounding the Amax mine at Kitsault illustrates.

The Amax molybdenum mine at Kitsault is located on Alice Arm in northwestern British Columbia (Figure 3). Amax is the result of a merger in the 1950s between the American Metal Company and Climax Molybdenum. The company is a U.S.-based multinational with mines operating in Namibia, Australia and the United States. In 1972, the company's mine at Kitsault ceased operations because of a depressed world market for molybdenum.

In 1975, when molybdenum markets had improved, Amax announced it intended to reactivate the Kitsault mine. The proposal included utilizing a marine tailings disposal system for milling wastes.<sup>98</sup> In its application, Amax proposed to discharge tailings which would contain varying amounts of arsenic, radium 226, cadmium, mercury, nickel, copper, lead and zinc.<sup>99</sup> With the proposed waste disposal method using a marine receiving environment, the federal government became involved in the application. The company proposed resuming operations in August, 1980 with full operation by July, 1981. With ore reserves of nearly 100 million tons, it was estimated that the mine would operate

FIGURE 3. LOCATION MAP OF  
AMAX MINE - ALICE ARM



for 25 years<sup>100</sup> if market conditions were favourable.

In January, 1979 the Waste Management Branch of the provincial Ministry of Environment issued a discharge permit for the mine.<sup>101</sup> In April, 1979 a federal order-in-council gave approval to the application using a marine disposal system. With these permits, the company was given the authority to dump up to 12,000 metric tons of mine tailings daily for a period of 25 years. It was necessary that the federal permit be authorized through an order-in-council rather than normal permit approval procedures because the application proposed to exceed the normal requirements for heavy metal particulate levels. The exemption enabled the company to exceed the normal requirements by up to 8,000 times.<sup>102</sup> Subsequent to the granting of these discharge permits, controversy developed regarding the environmental and human impact of the mine tailings and over the process of granting approval to the discharge application. A number of fisheries, environmental, native Indian and church groups questioned the approval process in which permits are issued without a public hearing into the application.<sup>103</sup> The environmental concerns were perhaps related to the problems which had resulted from a similar tailings disposal method on Vancouver Island in the early 1970s.<sup>104</sup> In July, 1980 the Minister of Fisheries and Oceans announced that an internal investigation would be undertaken into the granting of the Amax permit. The announcement did not placate those groups demanding a public inquiry, and opposition to the waste disposal method continued. There was concern by some of the opponents to the permit that a precedent had been set which would enable other

companies to exceed federal regulations.

In early 1981, the Minister of Fisheries and Oceans announced that a three-man independent scientific panel had been established to review the Amax permit. The terms of reference of the panel required that it:

- (a) examine and advise on the adequacy of the Alice Arm tailings deposit regulations;
- (b) determine whether or not the planned tailings disposal methods would meet the terms and conditions of the regulations;
- (c) determine if the planned monitoring program was sufficient to detect violations or impacts on fish;
- (d) consult with interested agencies and parties about the issue; and
- (e) examine and recommend alternative disposal methods which could reduce or preclude hazards to the fish resource.<sup>105</sup>

The concern of the panel therefore was confined to the scientific or engineering aspects of mine waste disposal, and not broader issues which might result.

In response to the announcement that a scientific panel had been established, two groups which had been demanding a public inquiry into the permit announced they would boycott the panel's activities. The United Fishermen and Allied Workers Union and the Nishga Tribal Council, which represents native Indians in the Alice Arm area, stated their reasons for the boycott: the report of the panel would be submitted after the mine commenced operations; the panel was not empowered to close the mine down; there would be no public examination of the evidence presented to the panel, or power to subpoena experts for cross-examination; examination of the regulations would be restricted to the Alice Arm permits only, which are exceptions to national standards; and

the direction of the panel is restricted to fisheries values only, rather than to overall socio-economic impact.<sup>106</sup> The panel proceeded with its investigation without the participation or support of these and other fisheries and environmental groups.

In May, 1981 the Minister of Fisheries and Oceans issued an order to Amax to halt the dumping of tailings into Alice Arm. The monitoring of the company's discharge had revealed that tailings had been transported far from the point of discharge. The mine was given permission to commence operations one week later when it appeared that the company would be able to comply with the requirements of the discharge permit and contain the tailings to specified areas.

In July, 1981 the scientific panel appointed by the Minister of Fisheries and Oceans presented its report on the Amax mine. The panel stated that if the permit regulations were followed, no deleterious effects could be expected from the tailings discharge, although it was noted that cadmium, lead or zinc in solid form might be an exception to this conclusion. The panel noted, however, that cadmium, lead, zinc and all other metals present in the tailings are in concentrations equal to or less than local background conditions. The panel recommended that some changes to existing waste disposal practices be undertaken, and that in the future the developer undertake an environmental impact statement and provide for public review of it.<sup>107</sup> In essence, however, the panel concluded that if the company complied with the requirements of the discharge permit, there would be little or no risk to the marine environment.

The Amax mine at Kitsault ceased operation in November, 1982. A depressed world market for molybdenum had made the continued operation of the mine uneconomic. Despite the closure of the mine, many groups continued to press for a public inquiry into the granting of the company's discharge permits. The provincial Ombudsman investigated the granting of the provincial permit at the request of the Nishga Tribal Council, and recommended that the Ministry of Environment undertake a public investigation. The Ombudsman concluded that the Ministry of Environment did not give adequate notice to the Nishga regarding the Amax application,<sup>108</sup> and that the Ministry failed to consider the impact of the mine on the Nishga food fishery. The Minister of Environment rejected the suggestion that a public inquiry be undertaken into the provincial permit.<sup>109</sup> The Nishga Tribal Council, however, has threatened to undertake legal action to force the provincial government to hold a public inquiry.<sup>110</sup> The positions of all parties appear to have changed little since early 1979 when the first permit was granted.

The controversy regarding the discharge of mine tailings by Amax Mines does not appear to involve federal and provincial jurisdictional issues. The Amax issue is largely a result of perceived inadequacies in federal and provincial decision making processes regarding waste management. Perhaps concurrent with this perception is the complex issue of aboriginal land claims in the area where the mine is located. The opposition to the mine tailings discharge is widespread, however, involving a number of fisheries, environmental and church groups. With the issue not resolved, it will likely escalate as a public issue if the

mine is reactivated in the future, and present decisions regarding the disposal of mine tailings remain unaltered.

As a result of the terms of the permit and the process by which it was approved, it appeared to many in the fishing industry that there was collusion between the company and the Department of Fisheries and Oceans, despite the fact that approval for the federal waste discharge permit was politically determined. The widespread perception that the Department failed to protect fish habitat persists, contributing to stress on the Department. The Department has shown a willingness to protect habitat in other instances, however, as the Alcan controversy illustrates.

#### 3.4.4 The Aluminum Company of Canada (1980)

One of the most critical aspects of fishery management in British Columbia relates to the provision of adequate water levels for the fishery resource. Anadromous fish species such as salmon which spend much of their life cycle in saltwater, then return to fresh water to spawn, are dependent on a number of conditions or features in freshwater systems. While both freshwater and marine environments present a variety of threats to salmonid populations, the risks are increased in some freshwater systems because of competition for water resources. The demand for water in British Columbia increases annually, while the supply remains relatively fixed or static. Water resources are used for a variety of activities including, for example: industrial processing; agricultural activity; electrical power production; and

domestic consumption. In addition, water resources fulfil the requirements of a variety of wildlife and fish populations. With the supply of water becoming critical in some areas of the province, the regulatory dimension of water management has become increasingly important.

Regulating the manipulation of freshwater streamflows is particularly important to the management of salmonid fish habitat and is complicated by federal/provincial jurisdictional considerations.

Under section 92(5) of the *Constitution Act 1867*, the allocation of water resources in British Columbia is a provincial responsibility. The Water Management Branch of the provincial Ministry of Environment is given the authority for managing water resources in the province, and fulfils this mandate through the *Water Act*.<sup>111</sup> The *Water Act* is the provincial regulatory instrument for the use and development of streams, lakes and rivers in the province. The management of salmonid habitat may, as a result, be impacted by provincial decisions concerning water resources. The granting of a water license by the Province of British Columbia to the Aluminum Company of Canada illustrates how fisheries values may be affected by provincial actions.

The Aluminum Company of Canada is a subsidiary of Alcan Aluminum Limited, a Canadian-owned company. Alcan is a multinational company with operations in the United States, Jamaica, Ireland and Australia. In Canada, the company operates aluminum smelters in Quebec and British Columbia and in addition has fabricating plants in both provinces. In 1982, the Canadian operations of Alcan reported sales of \$2.38 billion, assets of \$3.52 billion and employed 24,000 people.<sup>112</sup> In British

Columbia the Alcan smelter is located at Kitimat on the north central coast of the province. The Kitimat plant is one of many large scale industrial developments which took place in British Columbia in the 1950s.

The establishment of an aluminum reduction plant in Kitimat involved one of the largest resource developments in British Columbia's history. In 1948, the government of the Province of British Columbia approached Alcan regarding the possible development of an aluminum smelter and hydroelectric power generating facility in the province. On December 29, 1950 the Province of British Columbia and the Aluminum Company of Canada entered into an agreement for the establishment of an aluminum smelter at Kitimat. Since an essential component of aluminum production is the availability of large amounts of electrical power, the agreement provided for the development of hydroelectric power near the Kitimat site. The hydroelectric project involved damming the upper portion of the Nechako River at an area known as the Grand Canyon, impounding a chain of lakes behind the reservoir, and diverting the impounded water westward through a 16 kilometer long tunnel to a powerhouse at Kemano. The diversion drops water nearly 790 meters to the powerhouse, which has an installed generating capacity of 896,000 kilowatts. The power is then transmitted 80 kilometers to the reduction facilities at Kitimat. The Kitimat smelter, which is located on tidewater, has been producing aluminum since 1954.<sup>113</sup>

The terms and conditions of the 1950 agreement between Alcan and the government of the Province of British Columbia have been contro-

versial. The agreement has been termed a "giveaway" by some<sup>114</sup> because it granted mineral and petroleum rights, free timber, cheap land, no requirements to provide adequate flows for the fishery resource, and a guarantee that should any provisions of the agreement conflict with present or future statutes, the agreement will not be invalidated by the conflict.<sup>115</sup> The Kemano project impounded water in the Nataalkuz, Ootsa, Whitesail, Tahtsa and Skins Lakes system. Approximately 60% of the former Nechako River flow at Cheslatta Falls is diverted to power the Kemano turbines, with the remaining 40% of the flow discharged through the Skins Lake spillway.<sup>116</sup> Seasonal variations in temperature and precipitation result in changes in the discharge at the Skins Lake spillway as priority is given to maintaining the flow to the Kemano powerhouse. In 1980, Alcan reduced the flow to the Nechako River system and a confrontation between the company and the Department of Fisheries and Oceans developed.

In early 1980 the Department of Fisheries and Oceans expressed concern that the Aluminum Company of Canada was causing fisheries problems in the Nechako River. The Department suggested that severe dewatering problems in the Nechako were the result of the company withholding water to generate hydroelectric power for the Kitimat smelter.<sup>117</sup> With extremely low flows in the Nechako, the thermal regime of the river was altered, presenting a threat to returning salmon. In June, 1980 the Minister of Fisheries and Oceans ordered Alcan to increase the discharge into the Nechako system from 500 cubic feet per second to 1,000 cubic feet per second. The company was given until July 1 to increase its

discharge or face court action. The company stated that it would not comply with the Minister's order because the water was needed for power generation. Further, the company suggested that the Minister lacked jurisdiction in the matter. In late July, the company briefly increased its discharge, then reduced it to 600 cubic feet per second. On August 1, 1980 the Department of Fisheries and Oceans applied to the British Columbia Supreme Court for an injunction compelling Alcan to comply with the Minister's order. The Department argued that Alcan was in violation of section 20(10) of the *Fisheries Act*<sup>118</sup> and should be forced to increase its discharge to ensure the survival of spawning salmon. Alcan maintained that the Minister's order exceeded federal powers granted under the *Constitution Act 1867*, and that it impinged on provincial jurisdiction over property and civil rights. The company argued that it had complied with the requirements of the water license which had been issued 30 years previous, and that reducing the flow to Kemano could result in a loss of production and layoffs in the Kitimat smelter.<sup>119</sup> In a judgment handed down August 5, 1980 the British Columbia Supreme Court held that Alcan must comply with the Minister's order and release some of the water held in the Kemano reservoir. While the conflict over regulating the discharge into the Nechako was settled, a new challenge to fishery habitat management developed, involving Alcan's proposal to build a new smelter in the province and with it, further hydroelectric power generating facilities.

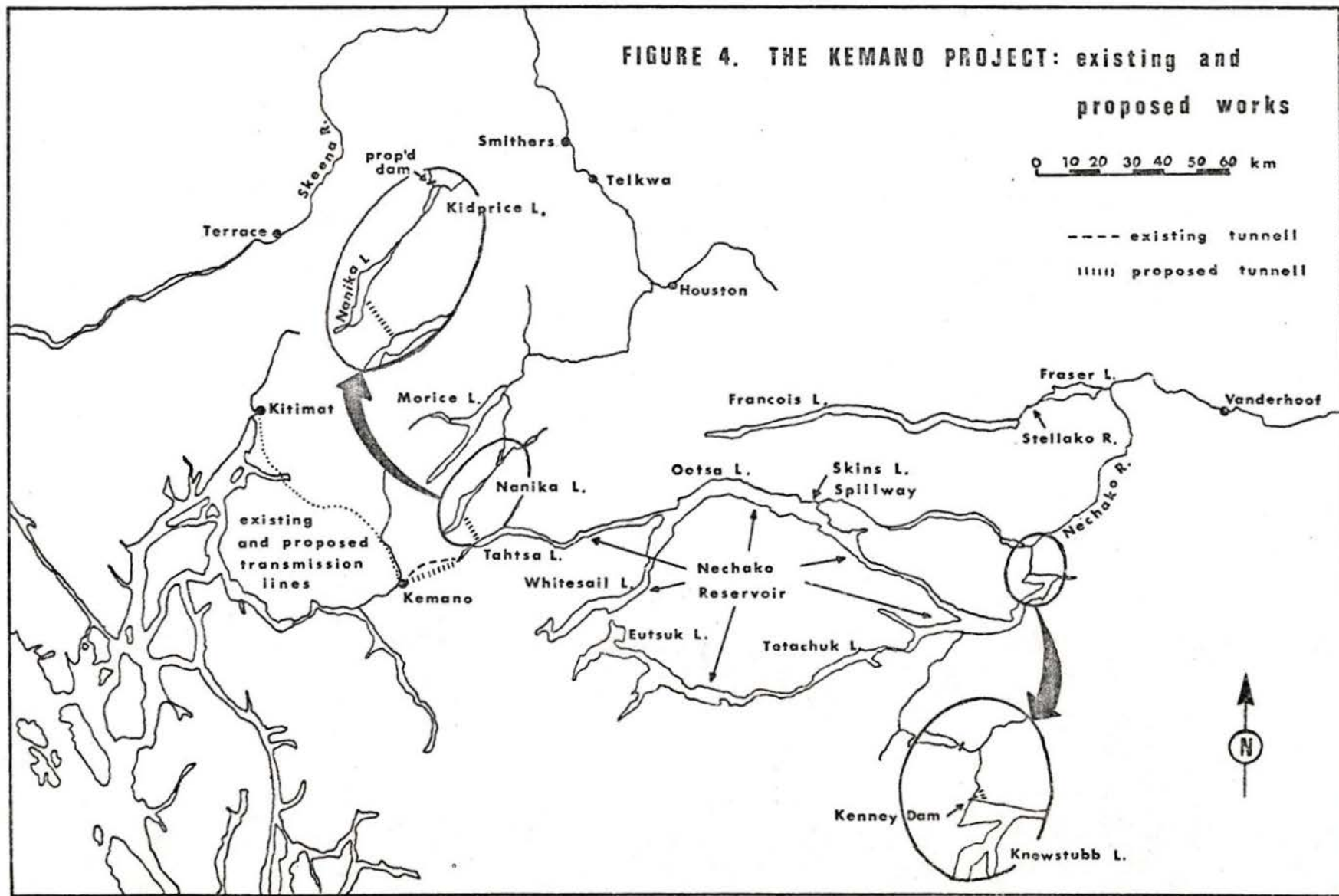
The projects undertaken by Alcan for hydroelectric power production at Kemano are one stage in the long term development of aluminum

production that the company has planned. The company has never fully developed the hydroelectric potential granted under the 1950 agreement with the Province of British Columbia. In the late 1970s the company began to evaluate potential sites for the location of one, and possibly two, new smelters in the province. The new site(s) would enable the company to complete a second phase of power development based on the 1950 agreement. The proposed development, known as the Kemano Completion Project,<sup>120</sup> will cost approximately \$2.5 billion when finished.

The main components of the Kemano Completion Project (Figure 4) involve: an aluminum reduction plant in the Vanderhoof area in north central British Columbia; a new power station at Kemano; a diversion tunnel from Nanika Lake to Tahtsa Lake; a dam on the Nanika River near Kidprice Lake; and additional transmission facilities from Kemano to Kitimat.<sup>121</sup> Commercial fishing organizations, environmental groups and others have expressed concern about the impact the proposed project may have on the fisheries resources of the area.

An important aspect of the Kemano Completion Project is the proposal to divert flows from streams which are tributary to the Fraser and Skeena River systems. Reaction to the proposal has resulted in the formation of local environmental interest groups<sup>122</sup> which, along with other fisheries, environmental and native groups,<sup>123</sup> are opposed to some or all aspects of the project. Further, the International Pacific Salmon Fisheries Commission has noted that in addition to thermal problems resulting from low water flows, other risks to fisheries

FIGURE 4. THE KEMANO PROJECT: existing and proposed works



include: the possibility of parasite introductions; increased predation; increased pollution; and a reduction in spawning area.<sup>124</sup> To reduce some of the opposition to the project, Alcan has proposed measures to lessen fisheries impacts.

Alcan has promised that it will compensate for the anticipated loss of rearing habitat from the project and will ensure there is no net loss of fish production when the project is completed. In addition, the company has stated that wild fish will remain dominant in those systems affected by the project.<sup>125</sup> Maintaining an adequate flow in both the Nechako and Nanika River systems is an additional concern of opponents to the project because of the commercial and food fishery values of those systems. A failure to ensure flows could again result in a confrontation between the company and the Department of Fisheries and Oceans. Alcan has proposed that flow figures be established in advance of construction, while the Department of Fisheries and Oceans maintains that discharge volumes be flexible to compensate for climatic variations.<sup>126</sup> It appears the issue of flow requirements will be resolved through bargaining between the two parties in an attempt to avoid a confrontation similar to that of 1980.

The preliminary planning report for the Kemano Completion Project was submitted to the British Columbia Utilities Commission in June, 1983 as part of the pre-application procedure necessary for an energy project certificate. The Utilities Commission will hold public hearings into the application and will likely receive representations from government agencies, environmental groups, native groups, fisheries organiza-

tions, and others who have concerns about the proposed project.

The conflict between Alcan and the Department of Fisheries and Oceans regarding streamflow regulation on the Nechako River reveals how the federal government may intrude on provincial jurisdiction for some fisheries issues. The control structure for the Kemano reservoir was authorized by the Province of British Columbia to regulate a resource in which the province has jurisdictional authority. The court decision regarding the operation of the structure held in favour of the federal government, although the water license had been granted to Alcan by the province. The government of the Province of British Columbia did not participate or intervene in the case, although the federal order appeared to impinge on provincial jurisdiction over water resources.

With both consumptive and nonconsumptive demand for water resources increasing annually, it appears inevitable that other conflicts similar to the Alcan case will develop. These conflicts may involve either the licensee and the Department of Fisheries and Oceans as in the Alcan case, or possibly the Province of British Columbia and the Department of Fisheries and Oceans. The trade-offs necessary to protect in-stream uses such as fisheries are likely to be determined through litigation if they cannot be accommodated by mutual agreement beforehand. There will be stress on the Department regardless of how it attempts to protect in-stream uses. Fisheries organizations, for example, will likely continue to demand the Department maintain fish habitat quality and will react to any threat of habitat degradation. The maintenance of quality fish habitat, however, will likely result in

confrontations with the private sector and perhaps with the government of the Province of British Columbia. It is debatable if litigation is the most effective method of concluding conflicts over fish habitat management. In addition to the uncertainties associated with litigating an issue, the lengthy process which is often involved may place the resource at risk. As a result, the Department may be under time pressure to resolve issues quickly, because of biological considerations (such as fry emergence or spawning migration). Time pressures therefore may result in compromises in management strategies, and the likelihood that some reduction in the resource base will occur. Compromise in habitat management concerns, therefore, is likely not acceptable to many fishermen's organizations, because it often results in the erosion of the resource base.

### 3.5 INTERNATIONAL MANAGEMENT ARRANGEMENTS

#### 3.5.1 The Declaration of a 200 Mile Limit

One of the most important aspects of international fisheries management relates to the control of access to ocean resources. For many coastal states, open access fisheries have contributed to crises in the supply of fish resources because of the common property nature of the resource.<sup>127</sup> In response to fishing pressure from nations with distant water fleets, many coastal states have asserted sovereignty of the ocean space and the resources therein to a distance of 200 nautical miles offshore. More than 70% of the world's coastal states

have declared 200 mile limits.<sup>128</sup> On July 1, 1977 the government of Canada proclaimed a 200 mile exclusive economic zone on both the east and west coasts of the country.

The 1977 Canadian declaration of a 200 mile limit followed similar declarations made in that year by the Soviet Union and the United States.<sup>129</sup> The intent of the Canadian declaration was to establish the geopolitical space necessary for the management of off-shore resources. In large part, the extension of jurisdiction was prompted by the fear that marine resources would be over-exploited by the growing fleet of foreign fishing vessels operating outside the Canadian territorial limit.<sup>130</sup> Like other coastal states which had declared a 200 mile limit, Canada justified its decision on conservation principles, specifically, the need to preserve and protect marine resources from foreign exploitation.

In addition to providing greater control over the rate of exploitation of fishery resources, it appeared that the 200 mile limit would benefit the domestic fishing industry. With a reduction in the size of the foreign fishing fleet, it was believed that Canadian fishermen would exploit those species sought by foreign vessels. It had been demonstrated in other jurisdictions that establishment of a 200 mile limit usually resulted in substantial economic benefits to the coastal state making the declaration.<sup>131</sup> It is perhaps for this reason that groups in the west coast fishing industry supported exclusive Canadian rights to the resources within the 200 mile limit.<sup>132</sup>

It is debatable if the benefits of extended jurisdiction on the west coast have been realized as anticipated. While there has been some attempt to diversify the harvest of fisheries resources, a number of factors appear to be constraining this process, including, for example: the costs of modifying vessels or purchasing new ones; market uncertainties; and fishermen's resistance to exploiting non-traditional fish species. In addition, the nature of the fleet impedes diversification into other fisheries because foreign vessels which operate in Canadian waters usually process their catch on the fishing grounds, while the domestic west coast fishing fleet is generally a small boat operation linked to onshore processing facilities.

While the Canadian extension of fisheries jurisdiction has ~~restricted the access of foreign fishing fleets~~, it has not resulted in ~~international conflicts as have happened elsewhere~~.<sup>133</sup> Canada has recognized there are equity considerations associated with the extension of jurisdiction and the exploitation of fish stocks within the new zone. Foreign states are granted access to fish resources within the Canadian 200 mile limit if: the resource is capable of sustaining exploitation; domestic fishermen are not capable or willing to exploit the resource; and if the applying nation satisfies other requirements established by the Department of Fisheries and Oceans.

The Canadian assertion of sovereignty to 200 miles offshore has increased federal control over the management of offshore resources and enhanced the potential of the domestic fishing industry. The new zone may provide some stability in the fishery, particularly if there is

diversification into the harvesting of less traditional fish species. At the time of the Canadian declaration, the 200 mile limit had become de facto international law, consequently the Canadian assertion of sovereignty was unopposed by other nations. Similarly, there was no opposition from domestic spheres to the declaration. With federal paramountcy in international affairs and the possibility of substantial benefits to the west coast fishing industry, the government of the Province of British Columbia supported the federal declaration. With extensive domestic support for the declaration and the growing international acceptance of the 200 mile limit, there was not a great deal of stress or conflict associated with the Canadian action. While the declaration did not create extensive domestic or international opposition, other policies pertaining to international fisheries management have been controversial and difficult to implement. The negotiation of a bilateral fishing treaty with the United States, for example, has been a more formidable task because of the interests and issues involved.

→ agree on something

### 3.5.2 The Canada-United States Fishing Treaty

One of the complicating features of fisheries management involves the mobile nature of the resource. Some fish species, such as salmon, are highly mobile throughout their life cycle. Management of such species often involves the establishment of international accords between coastal states. In the Canadian west coast salmon fishery, sockeye and pink salmon are managed under a bilateral agreement with the United States through the International Pacific Salmon Fisheries

Commission (IPSEFC). While these two species are managed under the IPSEFC, coho, chum and chinook salmon are managed independent of any international treaty. As an anadromous species, salmon born in the streams and rivers of Canada and the United States migrate to the ocean where they spend most of their adult life, returning to freshwater to spawn. During their adult life, salmon stocks of both countries intermingle on the high seas, following specific migration patterns during their maturation.<sup>134</sup> As well, salmon of both countries intermingle in the coastal waters and inside passages of each country when they return to freshwater to spawn. Controlling the exploitation of these intermingling stocks has become an increasingly controversial aspect of west coast fishery management because fishermen from both Canada and the United States intercept fish destined for the other country.

The interception problem has existed since salmon were first commercially exploited in British Columbia in the 1800s. Initially, the interception of salmon stocks appeared to favour American fishermen who, by fishing at the entrance of Puget Sound, were able to catch salmon destined for Canadian spawning grounds in the Fraser River system.<sup>135</sup> By the late 1960s the interception problem had become more pronounced, with American fishermen intercepting Canadian fish destined for the Fraser River and the transboundary rivers along the Alaskan panhandle, and Canadian fishermen harvesting fish migrating to the rivers of the states of Washington, Oregon and Alaska. Advancements in fishing technology had contributed to the interception problem by enabling a growing portion of the salmon fleets of both countries to

operate on fishing grounds far seaward of traditional inshore areas. Associated with the improved mobility of the salmon fleet was an increase in harvesting efficiency which resulted in greater pressure on salmon stocks.

In June, 1971 the governments of Canada and the United States reached agreement on a set of principles pertaining to salmon interceptions by the two countries. While the principles were agreed to, an accord was never signed, and the interception problem remained. During the period 1971-1974 Canadian interceptions of U.S.-destined fish amounted to 18%-20% of the total landed value of salmon in British Columbia. Similarly, fishermen from Washington, Oregon and California intercepted Canadian salmon equivalent to 29%-35% of the landed value of salmon to those states, while in Alaska the value of intercepted salmon destined for coastal British Columbia rivers was 11%-14% of the landed value of the southeastern Alaskan salmon fishery. In addition, Alaskan fishermen intercepted transboundary river salmon with a landed value equivalent to 4%-8% of the total value of the southeast Alaskan salmon catch.<sup>136</sup> Negotiations concerning the interception problem continued throughout the 1970s, while the problem appeared to be getting worse.

In late 1982 negotiators for the governments of Canada and the United States initialled a treaty which provided for the management of Pacific salmon stocks. Some of the provisions of the treaty included: replacement of the International Pacific Salmon Fisheries Commission with a new binational organization to be known as the Pacific Salmon

Commission; joint participation in salmonid enhancement projects for transboundary rivers; American fishermen are to receive 37.5% of the salmon harvested from Canadian transboundary rivers which drain into the Pacific Ocean; and harvest ceilings for chinook salmon are to be established, with the 1983 catch to be lower than 1982.<sup>137</sup> The proposed treaty represented a major step toward addressing the problems of international fishery management, although difficulties in implementing the treaty remained.

While the treaty had been given tentative approval by American and Canadian negotiators, there was opposition to it. Some Canadian opponents to the treaty viewed it as inequitable because it required Canadian fishermen to reduce their catch more than American fishermen. Canadian critics of the proposed treaty argued that the interception imbalance favoured American fishermen, and that despite harvest reductions by both countries, American fishermen would be comparatively better off under the proposed agreement.

Subsequent to the approval given by Canadian and American negotiators, the treaty required ratification by the Senate in the United States and by the federal Cabinet in Canada. With jurisdiction of commercial fisheries a state, not a federal, responsibility in the United States, unanimous approval by all the states involved in the treaty is generally considered to be a prerequisite for ratification by the U.S. Senate. While Washington, Idaho and Oregon approved the treaty, it was not ratified because of reservations held by the State of Alaska. At the end of 1983 the treaty had not been ratified and

fishery management plans were to be undertaken outside the treaty framework. In early 1984 negotiations resumed but an agreement was not reached. It appears likely that a treaty will not be approved until late 1984 at the earliest.

The negotiation of a bilateral fisheries agreement evolved largely as a result of the growing pressures on fish stocks due, in part, to stock interceptions. The control of salmon interceptions is desirable because it will provide for more precise harvest and escapement figures and will reduce some of the uncertainties involved with the management of the resource. The treaty negotiations have been ongoing for over a decade largely because of data inadequacies and disagreements over the interpretation of interception figures. Without a treaty, a fish "war" is a possibility, in which both countries would intercept significantly more of the other's salmon than is the case at present. At present, the level of stress on the Department appears to be high, due largely to: (1) the time pressure associated with concluding the new arrangements, because should a fish war develop, it will likely result in overharvesting of fish stocks; and (2) the nature of the treaty—it must not appear to place Canadian fishermen at a disadvantage. If negotiations fail to conclude an agreement, the competition for fish stocks will increase, and the salmon stocks of both countries may be over-exploited. One of the objectives of the proposed treaty is to prevent a conflict of this nature, while providing a framework for fisheries management that is beneficial to both the United States and Canada.

### 3.6 WEST COAST FISHERIES POLICY ISSUES AND DIRECTIONS: AN OVERVIEW

The foregoing examples illustrate some of the problems present in the west coast commercial fishery, although the list is far from complete. The Department of Fisheries and Oceans, which is largely responsible for the management of the fishery, has attempted, with varying degrees of success, to remedy some of these problems. In some cases, however, attempts to solve the problem have compounded management difficulties. The failure to reduce fishing effort in the salmon fishery through incremental adjustments in the kind and amount of effort, for example, has increased regulatory complexity, failed to stabilize fishermen's incomes, exacerbated the problem of over-capitalization and failed to reduce pressures on the resource. While social and political considerations may preclude the consideration of some policy options for reducing the salmon fleet, many in the industry are not satisfied with present licensing arrangements. It is likely, however, that new directions in fisheries policy will evolve from this consensus of dissatisfaction and from conflicts over various other aspects of fishery resource management.

In 1976 the government of Canada published a document which purported a major shift in emphasis in the management of the commercial fisheries in Canada.<sup>138</sup> The new policy noted that in the future, "The guiding principle in fishery management no longer would be maximization of the crop sustainable over time but the best use of society's resources."<sup>139</sup> The new policy specified that, prior to any harvest,

management is to be undertaken with the following priorities in mind:

- (1) preservation of the resource through conservation principles;
- (2) consideration of Native food fishing requirements; and (3) satisfaction of the needs of the commercial and recreational fisheries.

While these policy priorities were intended to give a new direction to fisheries management, the Department of Fisheries and Oceans has been slow to respond, and has acknowledged that current management is undertaken in reverse order of the priorities of the new policy.<sup>140</sup> While it is debatable if there will be a substantial change in management direction to conform to the new policy, it is likely there will be new approaches taken to some of the persistent problems in the industry. Perhaps the greatest impetus to change past management approaches to fisheries issues has come from the recommendations of the Commission on Pacific Fisheries Policy.

One of the more critical aspects of fishery resource management in British Columbia relates to the preservation and rehabilitation of fish habitat. The Commission on Pacific Fisheries Policy, recognizing the importance of habitat management in the fishery, recommended that a habitat inventory program be undertaken to determine the extent and condition of fish habitat in the province.<sup>141</sup> The Commission recommended that the proposed inventory program be a joint federal-provincial undertaking because both the commercial and the sports fisheries are likely to benefit. Further, the Commission advised formalizing the present referral system for habitat management. Habitat protection will likely be a major problem for future fisheries management. An

additional problem in fisheries management which has broad social and legal implications relates to Native Indian fishing rights.

Native Indian participation in the fishing industry presents perhaps one of the most complex policy issues in the Pacific fishery. Indian fishing rights are a contentious issue in the fishery, and are part of the unresolved question of aboriginal rights and land claims of native peoples in British Columbia. The Commission on Pacific Fisheries Policy noted that the legal framework for Indian fisheries is ambiguous and incoherent, and recommended that Indian fisheries policy be reformed to, among other things, provide a specific quantity of fish for each Indian band involved in the fishery.<sup>142</sup> According to the Commission, there is a need for new policies to be directed toward achieving the following objectives: (1) the clarification and strengthening of Indian fishing rights; (2) greater Indian involvement in fishery management; (3) provision of opportunities for Indians to take advantage of their rights to fish; and (4) improvements in the administrative and enforcement arrangements governing Indian fisheries.<sup>143</sup> The present policies regarding the native food fishery are perhaps reflective of the need for a new approach to Indian involvement in the fishing industry.

One of the most controversial fishery management problems in the west coast fishery involves the management of the Indian food fishery.<sup>144</sup> The present policy of the Department of Fisheries and Oceans stipulates that fish harvested in the food fishery are not to be sold, traded or bartered. These restrictions on the use of fish taken under food fishery permits have resulted in confrontations between Indians and the

Department. Enforcement officers of the Department have in the past confiscated fish and private property alleging that the provisions of the food fishery permits were being violated. Native groups have argued that the restrictions on the Indian food fishery are unfair because fish have traditionally been used as items of trade. The issue has had a high public profile, and has strained relations between native groups, the Department of Fisheries and Oceans, and some commercial fishing organizations. The problem will likely persist until the issue of Indian fishing rights is settled.

An additional policy issue that remains unresolved in fishery management relates to the level of participation of commercial fishing groups in the decision making process. At present, the Minister's Advisory Council is the major consultative forum for policy formulation, although some species-specific and area-specific boards and committees are also partly comprised of industry groups. The Commission on Pacific Fisheries Policy noted, however, that there is no advisory group for the Indian fishery or for habitat management, and recommended the establishment of an advisory process in these areas. It is possible that improvements in communication between fishery managers and the recipients of fishery policy will reduce the confrontational aspect often characteristic of present management/industry relations.

The conflicts between the government of the Province of British Columbia and the government of Canada reflect the need for improved communications between the two parties. Although both governments may pursue legitimate objectives based on constitutional responsibilities,

federal-provincial conflicts have resulted in a variety of social, economic and environmental costs. There is a growing need for the establishment of consultative forums to improve communication and facilitate bargaining and trade-off decision making in fisheries issues.

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As the foregoing cases indicate, stress on the Department of Fisheries and Oceans originates from a variety of sources. There is stress on the Department from within the industry, particularly from fishermen's organizations which monitor the effectiveness of the Department. For example, two major concerns of fishermen's organizations are: (1) the process of rationalizing the primary sector of the salmon fishery; and (2) the management of fish habitat. Many of the groups within the industry have pressed the Department for an acceptable policy which would rationalize the salmon fleet, although such a policy has yet to be developed. In addition, there is stress on the Department because many in the industry believe the Department has failed to protect the resource base through the protection of fish habitat. Factors external to the fishing industry have also resulted in stress on the Department. The negative spillovers from some resource uses, for example, have tested the credibility of the Department's habitat protection regulations, and appear to have reduced the power and effectiveness of the Department in matters pertaining to habitat management. The Riley Creek controversy is illustrative of the apparent ineffectiveness of the Department. The case studies described in this chapter indicate the nature of some of the issues involved in the

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management of the commercial fishery and show how stress on the Department of Fisheries and Oceans has arisen. The following chapter analyzes the role of stress and conflict in these cases.

ENDNOTES—CHAPTER III

<sup>1</sup>The issues described are by no means a complete documentation of the problems that are or have been present in the commercial fishery; however, they are believed to be indicative of some of the major policy challenges in the fishery.

<sup>2</sup>It is often difficult to treat one aspect of the fishery in isolation from other fishery management considerations. Enhancing the salmon resource by increasing hatchery production may not be wise if there are no assurances of water quality and quantity.

<sup>3</sup>This activity creates what is known as a stock externality, whereby each vessel's catch affects the total fish biomass and as a result, the future catches of all other vessels. See: C.W. Clark, "Towards a Predictive Model for the Economic Regulation of Commercial Fisheries," *Canadian Journal of Fisheries and Aquatic Sciences* 37, No. 7 (July 1980):1111-1129.

<sup>4</sup>There may be some validity to this assertion, because regulations to limit the salmon harvest have been in effect since 1882 for the Fraser River and 1887 for the Skeena River. See: R. Hilborn and R.M. Peterman, "Changing Management Objectives," in *Pacific Salmon: Management for People*, edited by D.V. Ellis, Western Geographical Series (Victoria: University of Victoria, 1977), pp. 68-98.

<sup>5</sup>For a more detailed description of the state of the fishery during the time, see: B.A. Campbell, "License Limitation Regulations: Canada's Experience," *Journal of the Fisheries Research Board of Canada* 30, No. 12 (Dec. 1973):2070-2076; or G.A. Fraser, "Limited Entry: Experience of the British Columbia Salmon Fishery," *Journal of the Fisheries Research Board of Canada* 36, NO. 7 (July 1979):754-763.

<sup>6</sup>The economist was Dr. Sol Sinclair.

<sup>7</sup>There were more than 6,100 vessels in the industry in 1969. See: The Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 102.

<sup>8</sup>See, for example: S.H. Gordon, "An Economic Approach to the Optimum Utilization of Fisheries Resources," *Journal of the Fisheries Research Board of Canada* 11, No. 10 (Oct. 1954):442-457.

<sup>9</sup>Hence it is also known as the "Davis Plan."

<sup>10</sup> A third phase of the Davis Plan was directed at improving the standards of vessels (including safety) and improving the quality of the catch. A fourth phase, which was never pursued, was to be directed at relaxing some of the regulations on fishing effort. Relaxing some of the regulations was not viable, however, because although the fleet size was reduced, the catching capability of the fleet had increased over time.

<sup>11</sup> A third category established a "C" class of vessels, which were those ships which had not caught any fish for the two years prior to the program and could not fish for salmon in the future.

<sup>12</sup> In April of 1974 the "buy-back" program went into moratorium, having retired 354 "A" licensed vessels or 5.7% of the fleet. See: E. Wilson, "License Limitation by Buy-Back: Do Results Justify a Second Round?", *Western Fisheries* 91, No. 3 (Dec. 1975):12.

<sup>13</sup> R.S.C. 1970, Ch. 29.

<sup>14</sup> With tonnage additive, one new vessel may replace more than one vessel being retired. This is referred to as "pyramiding" in the industry.

<sup>15</sup> Pacific Fishery Registration and Licensing Regulations, Consolidated Regulations of Canada, 1978, C. 824.

<sup>16</sup> See sections 3.2.2 and 3.2.3 for a description of some of the inadequacies of current licensing arrangements.

<sup>17</sup> The United Fishermen and Allied Workers Union (UFAWU), for example, stated at the outset of the license limitation program that the license should be on the fisherman and not on the boat. The Union's position has not changed in the intervening years since the license limitation program was announced; however, the Department of Fisheries has rejected this approach as being administratively unworkable and benefitting a select group.

<sup>18</sup> See section 3.6 for an overview of the Commission's recommendations.

<sup>19</sup> Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*.

<sup>20</sup> Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 79.

<sup>21</sup>Dr. Peter Pearse, a University of British Columbia economist, was the Commissioner, thus the final report of the Commission is often referred to as the "Pearse Report."

<sup>22</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 77.

<sup>23</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, pp. 87-88.

<sup>24</sup>This would include species such as halibut, cod, sablefish and rockfish.

<sup>25</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, Appendix A, p. 267.

<sup>26</sup>This revenue was from licenses for all species, including salmon.

<sup>27</sup>The Commission recommended that a royalty be paid by all fishermen, not only those involved in the salmon industry.

<sup>28</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 110.

<sup>29</sup>The problem that results from this consensus is how to equitably reduce this excess capacity among the various gear types in the fishery.

<sup>30</sup>Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 115.

<sup>31</sup>In the terms of reference the final report was to be presented not later than December 31, 1981, however, this deadline was somewhat optimistic, given the complexity of issues involved. Similarly the interim report of the Commission which was due in August 1981 was presented late.

<sup>32</sup>See, for example: *The Vancouver Sun*, Sept. 28, 1982, p. A1; Sept. 29, 1982, p. B1; Nov. 25, 1982, p. A20; Nov. 26, 1982, p. A12; Jan. 8, 1983, p. C12; Feb. 16, 1983, p. A9; Feb. 19, 1983, p. A8; *The Vancouver Province*, Jan. 24, 1983, p. D1; Jan. 28, 1983, p. A5. Also see: *The Fisherman*, Dec. 10, 1982, p. 1.

It is interesting to note that one of the positive aspects of the opposition to the Pearse Report was that it resulted in some degree of

consensus among the various groups in the fishery. The consensus of dissatisfaction with the licensing recommendations of the Pearse Report was manifested in the formation of the Western Fishermen's Federation, an umbrella organization comprised of most commercial fishery organizations and others. The United Fishermen and Allied Workers Union which represents nearly six thousand fishermen and shore-workers is not a member of the Federation. The WFF held conferences on the recommendations of the Pearse Report in an attempt to provide alternate solutions to those proposed by Pearse, and to voice its concern about the direction of fisheries policy and management.

<sup>33</sup>*The Vancouver Sun*, Sept. 28, 1982, p. A1.

<sup>34</sup>These groups included: the Native Brotherhood of British Columbia; the Pacific Coast Fishing Vessel Owners Guild; the Pacific Coast Salmon Seiners Association; the Pacific Trollers Association; the Pacific Gillnetters Association and others.

<sup>35</sup>The Progressive Conservative Party and the New Democratic Party.

<sup>36</sup>See, for example: *The Vancouver Sun*, Feb. 19, 1983, p. A8; Feb. 23, 1983, p. A4; Feb. 26, 1983, p. A5.

<sup>37</sup>The study was actually commissioned by the Honourable Romeo LeBlanc, who preceded the Honourable Pierre De Bane as Minister of Fisheries and Oceans. In addition to reviewing licensing in the salmon fishery the committee was also concerned with the roe herring fishery. See section 3.2.3 for an overview of the committee's salmon licensing recommendations.

<sup>38</sup>Only the problems of reducing the salmon fleet will be addressed here.

<sup>39</sup>Hereinafter referred to as the Committee.

<sup>40</sup>Fleet Rationalization Committee, *Report*, Vancouver, B.C., Nov. 1982.

<sup>41</sup>The five members of the Committee included a processor from Port Hardy, a board member of the Prince Rupert Fishermen's Cooperative and a fisherman from Sechelt, Prince Rupert and Campbell River.

<sup>42</sup>Fleet Rationalization Committee, *Report*, p. 2.

<sup>43</sup>Gear restrictions, for example, were considered counter-productive only if more were developed, but the present restrictions were viewed as bearable by the industry. Personal quotas were rejected as a rationalization measure because the Committee felt enforcement would be extremely difficult. See: Fleet Rationalization Committee, *Report*, pp. 3-15.

<sup>44</sup>Fleet Rationalization Committee, *Report*, p. 2

<sup>45</sup>Fleet Rationalization Committee, *Report*, p. 59.

<sup>46</sup>The small boat fleet would include: trollers; gillnetters and combination vessels.

<sup>47</sup>Fleet Rationalization Committee, *Report*, pp. 71-72.

<sup>48</sup>Fleet Rationalization Committee, *Report*, pp. 58, 71.

<sup>49</sup>See, for example: O'Riordan (1971), Mitchell (1979).

<sup>50</sup>This deterioration may occur at various scales, from large hydroelectric development to local logging activities. This is not to suggest that all development is detrimental to salmon stocks, but rather the aggregate effect of some activities may reduce fish populations.

<sup>51</sup>Larkin (1979) has suggested that natural salmon stocks will likely continue to undergo a long, slow decline because of this deterioration and other factors.

<sup>52</sup>See: Larkin (1979), and Needler (1979).

<sup>53</sup>Federal-Provincial Agreement: Salmonid Enhancement Program. Memorandum of Agreement signed by the Minister of Fisheries and Environment for Canada and the Minister of Environment for British Columbia, March 1, 1979, p. 1.

<sup>54</sup>While the Memorandum of Agreement did not specify that the Task Group would be created, it stated that the Board may appoint advisory groups to serve as forums for public discussion and advice.

<sup>55</sup>The Commission on Pacific Fisheries Policy was critical of this arrangement. According to the Commission, the lines of responsibility are awkward and deserve reconsideration. See: The Commission on Pacific Fisheries Policy, *Conflict and Opportunity*, p. 111.

<sup>56</sup> Recommendation to the federal Minister of Fisheries and Oceans and provincial Minister of Environment by the Salmonid Enhancement Board. Source: The Commission on Pacific Fisheries Policy, *Conflict and Opportunity*, p. 111.

<sup>57</sup> Phase 1 was to be terminated in March 1984; however, in May 1983, it was extended for another two years.

<sup>58</sup> Salmonid Enhancement Program, *Annual Report*, 1980 and 1981.

<sup>59</sup> Salmonid Enhancement Program, *Annual Report*, 1981.

<sup>60</sup> The Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 49.

<sup>61</sup> See, for example: McKay (1977).

<sup>62</sup> The Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 50.

<sup>63</sup> Brief by the Pacific Trollers Association to the Commission on Pacific Fisheries Policy, Exhibits #77 and #77a.

<sup>64</sup> Brief by the Central Native Fishermen's Cooperative to the Commission on Pacific Fisheries Policy, Exhibit #139.

<sup>65</sup> See, for example: MacLeod (1977).

<sup>66</sup> *B.C. Business* 8, No. 1 (Jan. 1980):99.

<sup>67</sup> See: Federal-Provincial Fisheries Committee, 1969.

<sup>68</sup> Federal-Provincial Fisheries Committee, 1969.

<sup>69</sup> Federal-Provincial Fisheries Committee, 1969.

<sup>70</sup> International Pacific Fisheries Commission, *Effects of Log Driving on the Salmon and Trout Populations in the Stallako River*, p. 6.

<sup>71</sup> International Pacific Fisheries Commission, *Effects of Log Driving . . .*, p. 8.

<sup>72</sup>International Pacific Fisheries Commission, *Effects of Log Driving*. . . .

<sup>73</sup>International Pacific Fisheries Commission, *Effects of Log Driving*. . . .

<sup>74</sup>The Honourable Ray Williston was the Minister of Lands, Forests and Water Resources.

<sup>75</sup>*Western Fisheries*, 1966.

<sup>76</sup>International Pacific Fisheries Commission, *Effects of Log Driving*. . . .

<sup>77</sup>International Pacific Fisheries Commission, *Effects of Log Driving*. . . .

<sup>78</sup>*Western Fisheries*, 1966.

<sup>79</sup>Federal-Provincial Fisheries Committee, 1969.

<sup>80</sup>Federal-Provincial Fisheries Committee, 1969.

<sup>81</sup>For example, salmon runs in the Birkenhead River, Nadina River and Chehalis River declined after spawning fish were displaced from their selected spawning beds. See: International Pacific Salmon Fisheries Commission, *Effects of Log Driving*. . . .

<sup>82</sup>The Habitat Conservation Fund is a provincially financed fund used to purchase deeded (private) land which has significant fish and/or wildlife values. A panel comprised of members from the academic community, the public and resource managers determines the allocation of funding.

<sup>83</sup>D. Abelson, personal communication.

<sup>84</sup>Province of British Columbia, Ministry of Industry and Small Business Development, *British Columbia Facts and Statistics* (Victoria: Queen's Printer, 1980).

<sup>85</sup>A.H.J. Dorsey, et al., *Salmon Protection and the B.C. Coastal Forest Industry: Environmental Regulation as a Bargaining Process*, p. 14.

<sup>86</sup>Province of British Columbia, Ministry of Industry and Small Business Development, *The Manual of Resources*, p. 16.

<sup>87</sup>See: K.W.G. Valentine et al., *The Soil Landscapes of British Columbia*.

<sup>88</sup>An EPA is generally used to categorize areas which have high fish and/or wildlife values and may include for example: fish spawning areas; ungulate wintering sites; wildlife migration corridors or water-fowl habitat.

<sup>89</sup>The RRMC is a committee of senior provincial resource managers. Among its functions the RRMC makes decisions on issues which have reached an impasse in lower levels of decision making. If a decision cannot be reached at the RRMC, it is often elevated to the next level of decision making, the Environmental and Land Use Technical Committee (ELUTC). Recent provincial policy developments appear to have cancelled RRMCs throughout the province.

<sup>90</sup>See, for example: R. Overstall, "Rennell Sound: The End of Multiple Use?" *Telkwa Foundation Newsletter* 2, No. 5 (April 1979).

<sup>91</sup>R. Overstall, "The Battle of Rennell Sound," *The Fisherman* 44, No. 16 (July 30, 1979).

<sup>92</sup>It is interesting to note that there were charges laid subsequent to the dropping of charges by the Department of Fisheries and Oceans. A commercial fisherman initiated legal action under section 31(1) against Queen Charlotte Timber, a senior member of the British Columbia Ministry of Forests, and an official of the Department of Fisheries and Oceans. The issue was not pursued because crown counsel entered a stay of proceedings. The B.C. Attorney General stated that the stay of proceedings was entered because there was a statutory defence under section 31(2) which states that no person contravenes section 31(1) if the activity has been authorized by the Department of Fisheries and Oceans. In this case the authority had been granted. To some extent, therefore, the private action reflected the belief that the Department was not adequately protecting fish habitat.

<sup>93</sup>R. Overstall, "The Battle of Rennell Sound."

<sup>94</sup>The Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 21.

It is interesting to note that in May 1980, the Minister of Fisheries and Oceans and the provincial Ministers of Forests and Environment announced a four-year, \$800,000 federal-provincial study assessment and

rehabilitation program for logging areas in the Queen Charlotte Islands. One of the objectives of the program is to study damage to fish habitat arising from natural processes and from logging activity. In addition to documenting the detrimental effects of landslides on salmon habitat, the program will rehabilitate some areas where damage has occurred. See: *The Fisherman*, May 16, 1980, p. 3.

<sup>95</sup>P. Scott and W. Schouwenburg, "Environmental Foresight and Salmon: New Canadian Developments," p. 126.

<sup>96</sup>This is not always the case, however, because coal mines would probably introduce waste by non-point methods such as coal particles suspended in surface water runoff.

<sup>97</sup>The Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 21.

<sup>98</sup>The initial application, which was also made in 1975, was for disposing of the tailings by pumping them into nearby Lime Creek; however, the company later revised this in favour of a marine disposal system.

<sup>99</sup>*B.C. Gazette*, 1981, p. 1502.

<sup>100</sup>*The Fisherman*, May 20, 1980, p. 8

<sup>101</sup>The permit was issued under the *Waste Management Act*, R.S.B.C. 1979, 428.5.

<sup>102</sup>See, for example: *The Vancouver Sun*, June 24, 1983; *The Victoria Times-Colonist*, June 24, 1983.

<sup>103</sup>*The Fisherman*, May 20, 1980, p. 8; *The Globe and Mail*, March 3, 1983, p. 12.

<sup>104</sup>In 1971 a marine discharge permit was issued to Utah Mines enabling that company to dispose of mine tailings into Rupert Inlet on Vancouver Island. Subsequent studies of the dump site revealed that the tailings were not confined and that the local marine habitat had been significantly altered. See: *The Fisherman*, July 25, 1980, p. 7.

<sup>105</sup>Press release, Department of Fisheries and Oceans, Feb. 12, 1981.

- <sup>106</sup> Press release, Nishga Tribal Council, Feb. 13, 1981.
- <sup>107</sup> *The Vancouver Sun*, July 29, 1981, p. 12; *The Fisherman*, Aug. 7, 1981, p. 1.
- <sup>108</sup> The notice of the permit application was printed in one issue of the *British Columbia Gazette* and one issue of the *Prince Rupert Daily News*. See: *The Victoria Times-Colonist*, March 5, 1983, p. 4.
- <sup>109</sup> *The Vancouver Province*, March 4, 1983.
- <sup>110</sup> *The Vancouver Province*, March 4, 1983.
- <sup>111</sup> R.S.B.C. 1979, Ch. 429.
- <sup>112</sup> Aluminum Company of Canada Ltd., *Kemano Completion Project: Preliminary Planning Report*, report submitted to the British Columbia Utilities Commission, June 1983.
- <sup>113</sup> Aluminum Company of Canada Ltd., *Kemano Completion Project*.
- <sup>114</sup> *The Vancouver Sun*, Aug. 20, 1973.
- <sup>115</sup> Save the Bulkley Committee, *Kemano 2: What About It?* (Smithers, B.C.: The Committee, 1980).
- <sup>116</sup> *The Fisherman*, Aug. 22, 1980, p. 5.
- <sup>117</sup> See, for example: *The Vancouver Sun*, Feb. 22, 1980.
- <sup>118</sup> Section 20(10) of the *Fisheries Act* states: "The owner or occupier of any slide, dam or other obstruction shall permit to escape into the river bed below the said slide, dam or other obstruction, such quantity of water, at all times, as will in the opinion of the Minister, be sufficient for the safety of fish and for the flooding of the spawning grounds to such depth as will, in the opinion of the Minister, be necessary for the safety of the ova deposited thereon."
- <sup>119</sup> *The Victoria Times*, Aug. 2, 1980, p. 3.
- <sup>120</sup> The company has revised its proposal since it was first announced. Initially the project was known as Kemano II and involved more diversion projects than in the present proposal. The Kemano II

project was shelved in August 1980, but was later modified and re-activated to become known as the Kemano Completion Project.

<sup>121</sup>Aluminum Company of Canada, *Kemano Completion Project*.

<sup>122</sup>The Houston-based Father Morice Outdoor Recreation Society, and the Smithers-based Save the Bulkley Committee are two local groups concerned with the potential impact of the Kemano Completion Project.

<sup>123</sup>Some of the groups include: The United Fishermen and Allied Workers Union; the Gitksan Carrier Tribal Council; the Nechako Neyenkut Society; the Telkwa Foundation; and the Native Brotherhood of British Columbia.

<sup>124</sup>*The Vancouver Sun*, Dec. 10, 1983, p. E11.

<sup>125</sup>*The Vancouver Sun*, May 10, 1983, p. 4.

<sup>126</sup>*The Globe and Mail*, Feb. 12, 1983, p. 8.

<sup>127</sup>See, for example: L.K. Boerema and J.A. Gulland, "Stock Assessment of the Peruvian Anchovy and Management of the Fishery," *Journal of the Fisheries Research Board of Canada* 30, No. 12 (1973):2226-2235; R.C. Hennemuth, "Management of the Sea Herring Fisheries in the Northwest Atlantic," *Journal of the Fisheries Research Board of Canada* 30, No. 12 (1973):2444-2451.

<sup>128</sup>M. Johnson and B. Zacher, *Canadian Foreign Policy and the Law of the Sea* (Vancouver: University of British Columbia Press, 1977).

<sup>129</sup>The United States and the Soviet Union declared a 200 mile limit on March 1, 1977 and January 1, 1977 respectively.

<sup>130</sup>See, for example: P. Copes, "Canada's Atlantic Coast Fisheries: Policy Development and the Impact of Extended Jurisdiction," *Canadian Public Policy* 4, No. 2 (Spring 1978):155-171; K. Kucas, "The 200 Mile Zone: Canada's New Frontier," *Fisheries* 3, No. 6 (Nov.-Dec. 1978):27-30.

<sup>131</sup>C.L. Mitchell, "Bioeconomics of Commerical Fisheries Management," *Journal of the Fisheries Research Board of Canada* 36, No. 6 (June 1979):699-704.

<sup>132</sup>S. Sinclair, *A Licensing and Fee System for the Coastal Fisheries of British Columbia* (Vancouver: Department of Fisheries and Oceans, Dec. 1978); p. 51.

- 133 See, for example: D.C. Edmonds, "The 200 Miles Fishing Rights Controversy: Ecology of High Tariffs," *Inter-American Economic Affairs* 26, No. 4 (Spring 1973):3-18; B. Mitchell, "Politics, Fish and International Resource Management: The British-Icelandic Cod War," *The Geographical Review* 66, No. 2 (April 1966):127-138.
- There have been some disagreements with the United States regarding the boundaries of the 200 mile limit. See, for example: M.P. Shepherd, *The Canada-United States Salmon Interception Problem 1879-1979*, May 27, 1980 (mimeographed).
- 134 See, for example, R. French et al., *Distribution and Origin of Sockeye in Offshore Waters of the North Pacific Ocean*, Bulletin 34, International North Pacific Fisheries Commission, New Westminster, 1976.
- 135 M.P. Shepherd, *The Canada-United States Salmon Interception Problem*, p. 1.
- 136 M.P. Shepherd, *The Canada-United States Salmon Interception Problem*, pp. 31-32.
- 137 Canada, Department of Fisheries and Oceans, *Treaty Between the Government of Canada and the Government of the United States concerning Pacific Salmon (Draft)*, Dec. 23, 1983.
- 138 Environment Canada, Fisheries and Marine Service, *Policy for Canada's Commercial Fisheries* (Ottawa: Minister of Supply and Services, 1976).
- 139 Environment Canada, Fisheries and Marine Service, *Policy for Canada's Commercial Fisheries*, p. 53.
- 140 Canada, Department of Fisheries and Oceans, *Presentations to the Commission on Pacific Fisheries Policy*, p. A5.
- 141 Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 23.
- 142 Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 181.
- 143 Commission on Pacific Fisheries Policy, *Turning the Tide: A New Policy for Canada's Pacific Fisheries*, p. 185.
- 144 The issue, which generally involves the harvesting of salmon in inland locations, has made the determination of future harvest levels more difficult because it increases the error in escapement estimations.

## CHAPTER IV

## FISHERIES MANAGEMENT: CONFLICT ASSESSMENT AND CONCLUSIONS

4.1 INTRODUCTION

As has been demonstrated, there are a variety of issues which have resulted in stress and conflict in the management of the west coast commercial fishery. The Department of Fisheries and Oceans, which has the primary role in fisheries management, is responsible for determining the direction of the industry and the day-to-day aspects of the management of the resource. As a result of this role, the Department is pressured to satisfy the expectations and demands of a broad range of groups within the industry, in addition to considering the domestic and international ramifications of its policies. The operating environment of the Department has, as a result, become more complex and stressful as attempts are made to reconcile a number of diverging management roles and objectives among the groups involved.

Policy issues in the west coast fishery are influenced by a variety of interrelated economic, political and environmental considerations. The interrelationship between economic and environmental factors can be illustrated when, for example, a natural event such as a landslide subsequently reduces salmon stocks by obstructing fish passage thereby having an economic impact on those harvesting the resource. Another example of a similar nature would be when political or administrative

decision generate negative external environmental effects and again reduce fish stocks. A decision to permit offshore oil and gas exploration and development, for example, may result in some costs being imposed on the fishing industry. As a result of these interrelationships, fisheries management has become more demanding and complex, and the response of the Department of Fisheries and Oceans becomes more critical if the industry is to remain viable. The ability of the Department to address some management issues is constrained, however, by the power it has to regulate or control the resource and activities which impact on the resource. The relationship between decision making power and conflict development is evident in a number of areas of fishery policy in British Columbia.

Some aspects of fishery management appear more likely to result in conflict behaviour between the federal and provincial governments than do others. As Table 4-1 indicates, the level of conflict in fisheries management in British Columbia is generally greatest when both the federal and provincial governments have a high degree of authority in an issue and different objectives are pursued. The table identifies conflict from a federal-provincial perspective and indicates that conflict is most frequent when provincial objectives and activities based on property rights are not coincident with federal objectives and activities which are based on legislative rights. The table shows the degree of jurisdictional authority that both the federal and provincial governments have in the cases described in Chapter Three. The degree of authority is based on the roles established under the *Constitution Act*,

TABLE 4-1: ASPECTS OF FEDERAL-PROVINCIAL FISHERY MANAGEMENT CONFLICTS IN BRITISH COLUMBIA			
Aspects	Degree of Jurisdictional Authority		Level of Conflict
	Provincial	Federal	
Habitat Issues:			
- Stellako River	High	High	High
- Riley Creek	High	High	High
- Amax	High	High	High
- Alcan	High	High	High
Licensing Policy:			
- Davis Plan	Low	High	Low
Resource Enhancement:			
- SEP	Moderate/High	High	Low
International Aspects:			
- 200 Mile limit	Low	High	Low
- U.S.-Canada treaty	Low	High	Low

1867. The level of conflict associated with each case study was determined subjectively: a low level of conflict resulted when litigation did not occur and did not appear likely to take place; a moderate level of conflict involved the threat of litigation which never materialized; a high level of conflict resulted when the issue was litigated and threats were exchanged. Although the table is based on a subjective evaluation of the issues, it appears that conflict is often associated with the extent to which one level of government has jurisdictional authority in an issue. For example, the Davis Plan was a federal initiative in the management of the primary sector (where provincial involvement is limited) which did not threaten or impinge upon provincial jurisdiction in other areas such as forestry, consequently the level of conflict was

low. The Salmonid Enhancement Program also has had a low level of conflict associated with it, although both the federal and provincial governments have jurisdictional concerns with many of the projects of the program. It is likely that the lack of conflict in the enhancement program is because there are mutual benefits to the parties involved, provincial financial involvement is small, and the program generally does not threaten provincial interests in other resource areas. Conflict appears to be most common where habitat management issues are involved. In the Alcan case, for example, the conflict developed because provincially authorized activities were a threat to salmon stocks and an apparent violation of the *Fisheries Act*. Jurisdictional responsibilities that separated water management from fisheries management were shown to be inappropriate for practical resource management.

#### 4.2 CONFLICTS IN THE PRIMARY SECTOR OF THE SALMON FISHERY

Some of the policies either implemented or proposed to rationalize the west coast salmon fleet have resulted in conflict between the Department of Fisheries and Oceans and commercial fishermen's organizations. When the Davis plan was first announced, there was a widely recognized need to control the size and capacity of the fleet. The Davis plan was an attempt to address the problems with the salmon fleet and thereby reduce the tension between the Department and those dependent on the resource. The tension in the industry at that time had developed largely because of declining fishermen's incomes due in part to the state of the resource and the increased cost of fishing. The objective

of the Davis plan was to control fishing privileges because it was widely believed that by reducing access to the resource, those involved with catching salmon would not have to compete with an increasing number of new fishermen. This objective was widely supported by most of those in the industry at that time.

At present there remains a great deal of tension between salmon fishermen and the Department of Fisheries and Oceans, largely because of the failings of the Davis plan. There are still "too many boats chasing too few fish" and fishermen's incomes are still subject to wide fluctuations. The licensing recommendations of the Commission on Pacific Fisheries Policy appear to have exacerbated the tensions between the Department and commercial salmon fishermen, although one of the objectives of the Commission was to recommend strategies to stabilize the industry and increase fishermen's incomes. Many organizations within the industry were highly critical of the licensing recommendations of the Commission. The tension and opposition which developed as a result of the Commission's licensing recommendations were manifested by, among other things, the formation of an interest group coalition designed to represent industry views on the proposed licensing policy. The recommendation of competitive bidding for salmon licenses created conflict because of the actions of one party--the Commission--and was perceived to be injurious and obstructive to the livelihood of fishermen. With the rejection of the recommendation for competitive bidding for salmon licenses by the Minister of Fisheries and Oceans, the conflict appears to have de-escalated. It is likely, however, that a new licensing

policy will be forthcoming, and increased tension between the two parties will result.

*Identified*

The appointment of the Commission on Pacific Fisheries Policy appeared, in part, to be an attempt to reduce the tension present in the fishery by utilizing the power of an expert in addressing policy problems in the industry. The Commissioner was a credible expert, with strong academic credentials and previous experience in a similar inquiry into provincial forest policy in British Columbia. Subsequent to the release of the Commissioner's report, however, opponents to the recommendations contained in the report questioned the ability of the Commissioner to understand the issues and problems within the industry and the implications of his recommendations.

The Government of the Province of British Columbia has little control over the development of federal policies regarding the rationalization of the salmon fleet. With management of the primary sector of the salmon fishery a federal responsibility, the Province of British Columbia has not articulated a policy on licensing in the salmon fishery. Further, the province has not endorsed or opposed any existing or proposed licensing policy. As a result of this, there is no indication of conflict or tension between the Government of the Province of British Columbia and the Government of Canada regarding the rationalization of the salmon fleet.

#### 4.3 CONFLICTS IN RESOURCE ENHANCEMENT

The establishment of the Salmonid Enhancement Program can be viewed, in part, as an attempt to reduce tension or stress between users and managers of the salmon resource. It is suggested that tension has developed between the two parties because of the biological and economic variabilities and uncertainties associated with the exploitation of the resource. The program reflects an awareness of the need to develop strategies which affect the state of the resource and, in particular, address the problem of a declining resource base. It is probable that some of the impetus for the enhancement program came from the realization that the license limitation program would be insufficient to reverse the trends in the fishery.

There appears to be very little federal-provincial discord in the Salmonid Enhancement Program, perhaps because it is mutually beneficial to the sponsoring governments. It is debatable if the present form of the program could have been undertaken by the federal government alone because federal agencies do not appear to have the degree of control over the resources involved. Provincial support and participation were desirable because the program impinges on provincial property rights. With projects undertaken on a cost-recoverable basis, the benefits anticipated for native peoples, sports fishermen and commercial fishermen, there is an incentive for federal-provincial cooperation in the program.

While conflict does not appear to have developed regarding the nature and intent of the Salmonid Enhancement Program, it is present

among the user groups involved, particularly the sports and commercial fishermen. With both sports and commercial fishermen desiring increased access to enhanced stocks, their actions are often mutually incompatible, given the resource base. In addition, there is growing competition among the various gear types within the commercial fishery, and between native and non-native fishermen. Resolution of conflicts between the various groups involved in the fishery is likely to be based on a procedural conclusion in the form of a regulatory response by the Department of Fisheries and Oceans. This response will probably involve restricting the kind and amount of effort of one or more of the groups involved. Given the anticipated production increases as a result of the program, it is likely that competition between the groups will increase, and with it, the scale and frequency of conflict.

The Salmonid Enhancement Program is an innovative attempt to develop the potential of the salmon resource in British Columbia and appears to have generated few conflicts regarding its implementation or objectives. To some extent this lack of conflict can probably be attributed to the decision making process within the program and the participation of a broad spectrum of groups in this process. The joint involvement of both the federal and provincial governments, and the pragmatic inclusion of user groups and the general public in decision making has likely prevented tensions which might have otherwise developed had the program been implemented by one agency. While it is ironic that the success of the program may escalate conflicts between user groups in the fishery, the conflicts are somewhat separate from the program.

#### 4.4 CONFLICTS IN HABITAT MANAGEMENT

Of all areas of fisheries policy, fishery habitat management has produced the most federal-provincial conflict. Habitat management conflicts between the Government of Canada and the Government of the Province of British Columbia appear to have developed largely because of the competition for limited interdependent resources. This competition for the exploitation and management of resources has resulted in incompatibilities of use, and federal-provincial discord regarding priorities of use. The basis of habitat management conflicts in the west coast fishery appears to be that some resource use decisions which are supported by provincial property rights are incompatible with fishery management objectives based on federal legislative rights. Provincial decisions regarding water quality and water quantity, for example, may interfere with federal objectives regarding the quality of fish habitat. The possibility that provincial decisions may interfere in an area of federal responsibility suggests that the federal Department of Fisheries and Oceans does not have the degree of control necessary to fulfil its habitat management objectives. Further, the habitat management conflicts which have developed may not directly involve the Province of British Columbia but result from provincially authorized activities such as waste discharge, timber harvesting or the allocation of water resources. As a result of resource use decisions of this nature, an individual or firm may comply with provincial requirements, but contravene federal statutes or regulations. Some of the habitat management conflicts described above appear to have developed from these circumstances.

As Table 4-2 illustrates, conflicts based on the management of fish habitat in British Columbia vary in their nature and outcome. While the cases described do not encompass all habitat management conflicts, they are indicative of some of the problems which have developed. The table relates whether or not conflict was primarily between the Department of Fisheries and Oceans and the private sector or between the Department and the Government of the Province of British Columbia. The conflict is then categorized as involving water quality or water quantity concerns, or a combination of both. The next two columns relate whether or not a threat was issued by the Department of Fisheries and Oceans and if it was defied or complied with. The next two columns indicate an escalation in the conflict by relating if the second party issued, and then carried out, a counter-threat. The eighth column relates which party appeared to submit or withdraw from the conflict. The last column indicates how the conflict was concluded.

The Stellako River log drive was probably the first major fishery habitat management conflict to develop between the federal Department of Fisheries and the Province of British Columbia. Tension between the two parties arose because each was attempting to exercise its authority over incompatible resource uses. The conflict developed because it was believed by the Department of Fisheries that the log drive would damage fish habitat. Both parties were competing for the use of a resource—the Stellako River. Essentially, the positions taken were: (a) if the log drive was undertaken, it could have a negative impact on fisheries values; and (b) if maintaining fisheries values prevented the drive,

TABLE 4-2: ASPECTS OF FISHERY HABITAT CONFLICTS IN BRITISH COLUMBIA

	DFO Conflict with Public/Private Sector	Nature of Conflict		Threat Issued by DFO	Threat Defied	Counter-threat Issued to DFO	DFO Threat Carried Out	Counter-threat Carried Out	Submitting Party	Type of Conclusion		
		Water Quality	Water Quantity							Procedural		Other
										Compromise	Award	
Stellako River	Public/Private			Yes	Yes		No		? <sup>A</sup>	Yes		
Riley Creek	Private			Yes	Yes	Yes	Yes	No	DFO			Conquest/Avoidance
Amax	Private			Yes	? <sup>B</sup>		Yes		Company	Yes		
Alcan	Private			Yes	Yes	Yes	Yes	Yes and No	Company		Yes	

A—Both parties appeared to compromise and submit.

B—It was likely that the violation of the discharge permit was accidental and not a conscious attempt to defy the DFO.

additional costs would be imposed on the company or the province. As a result of this competition, the conflict which developed was two-sided. Both sides in the conflict were under pressure to continue their respective courses of action: the Department of Fisheries was obligated to prevent the log drive because it coincided with salmon spawning activity and would likely destroy some spawning beds; the logging company and the provincial Department of Forests were under pressure to transport the logs for processing when conditions were suitable. The Department of Fisheries threatened to take legal action to prevent the drives, however, the threat was defied, and no litigation took place. It is difficult to establish which party in the conflict submitted: the Department of Fisheries for failing to enforce its order prohibiting the drive, or the Province of British Columbia for modifying the drive at the request of the Department of Fisheries. It appears that the final log drive was a compromise for both parties, and further conflict was avoided because changing economic circumstances resulted in the drive being discontinued.

The Riley Creek conflict developed because the actions of one party—the logging company—were perceived to be injurious to, and interfering with, coastal fish habitat. The logging operation in the Riley Creek watershed was initially approved by the Department of Fisheries and Oceans, however, this decision was later reversed and further logging was prohibited. The logging company was threatened with legal action if it did not comply with the prohibition order. The conflict escalated when the company defied the threat by the Department. The Department responded by carrying out its threat, charging company

employees with contravening the *Fisheries Act*. The conflict became more complicated when a third party, the labour union representing the charged employees, became involved. The union issued a counter-threat to the Department of Fisheries and Oceans which appeared to be effective because the Department withdrew and the conflict was concluded.

The habitat management conflict which developed because of the waste discharge from the Amax mine at Kitsault was not as confrontational as some other conflicts in British Columbia. The issuing of the discharge permit to the company was controversial and resulted in strong opposition from within the industry and from environmental, religious and native groups. It seems likely that a great deal of the tension and opposition which developed was more concerned with the nature of decision making than with the actions of one party in the issue. The Department of Fisheries and Oceans had threatened the company with closure of the mine if the provisions of the waste discharge permit were not complied with. When the company violated the terms of the permit, it appeared to have defied the threat, and was temporarily forced to close. The level of tension between the company and the Department of Fisheries and Oceans in this case appeared to be relatively low. There was, however, a high level of stress on the Department because of the opposition to the mine by various interest groups. The tension in the Amax case developed because of the special considerations given the company by the Department of Fisheries and Oceans. The tension developed because of the nature of the discharge permit, the process by which it was approved, and because the company violated the terms of the permit. The reaction of the

opponents to the mine suggested that by granting the company a special permit, the Department was not protecting fish habitat. While the issue has stabilized because of events external to the conflict, it is conceivable that the issue will again escalate onto the public agenda if the mine is reactivated.

The conflict between the Aluminum Company of Canada and the Department of Fisheries and Oceans was perhaps the most significant habitat management conflict in recent British Columbia history. The issue involved concerns over both water quality and water quantity. The threat issued by the Department of Fisheries and Oceans was based on the Minister's order requiring the company to increase the discharge from its control structure. The order was not complied with—a defiance situation—and the company issued two counter-threats: (1) compliance with the order would result in a loss of production and, probably, a loss of jobs; (2) it maintained that the order was not legitimate because the matter was a provincial concern and that prior to complying with it, the constitutionality of the order would have to be determined in court. The issue was litigated, thus the threat by the Department was carried out, as was one of the counter-threats by the company. The other company counter-threat regarding the loss of jobs, was never explicit, and was not carried out. The conflict was concluded through a settlement because the Department of Fisheries and Oceans was awarded the authority to force the company to comply with the Minister's order. The award supported the Department's contention that increased flows were necessary to facilitate migration and to provide for the thermal

requirements necessary for salmon survival.

The resolution of habitat management conflicts through procedural means appears to be the most common strategy employed in the cases described above. It is suggested that the award form of procedural conclusion is not a satisfactory method of accommodating different objectives which are often present in resource management decision making. Utilizing the judicial system to determine priorities in habitat management is the most common method of award conclusions. With each judicial decision case-specific, a decision in one case may not be applicable to other habitat management issues because of variations in the nature of the problem involved. As a result of these discrete circumstances, concluding federal-provincial conflicts over the management of fish habitat may delay decision making and generate confusion among the groups involved. Determining habitat conflict outcomes by award therefore is often an incremental and inequitable method of addressing habitat issues.

While much of the federal-provincial discord in fishery habitat decision making has developed from differing management objectives, the basis of the conflicts is largely jurisdictional. The management of fisheries habitat in British Columbia is primarily a federal responsibility, however, the Province of British Columbia has proprietary rights over land and water resources, consequently provincial decisions may affect the condition of fish habitat. Conversely, habitat altering activities which are proscribed by the federal *Fisheries Act* may appear to be an impingement on provincial jurisdiction. Jurisdictional

intrusions, whether real or perceived, are a consequence of federal-provincial interactions in fishery habitat management. Conflicts have escalated when the actions of either Government of the Province of British Columbia or the Government of Canada are perceived to be a threat by the other party, and the party that initiated the action appears vulnerable to a jurisdictional challenge. While jurisdictional realities may preclude single agency control of fish and fish habitat management, some adjustments to present administrative arrangements may help prevent future conflicts.

It is possible that some fishery habitat conflicts develop because firms in the private sector attempt to take advantage of jurisdictional uncertainties associated with the management of fish habitat. In the Alcan case, for example, the company stated that, in its view, the Department of Fisheries and Oceans had no authority to compel the company to increase its discharge into the Nechako River. While the case was settled in favour of the Department, the position of Alcan appeared to be that it had not violated any federal regulations because it was complying with provincial regulations. It is debatable if jurisdictional uncertainties are perceived to provide an opportunity for a firm to commit its resources when there may be a high risk of failure because of the broad powers of the *Fisheries Act*. It is plausible, however, that in some cases, the private sector may believe that jurisdictional uncertainty, in conjunction with other factors such as conflicting scientific evidence regarding habitat impacts, is sufficient to test federal regulations.

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The conflicts which have developed over the management of fish habitat in British Columbia indicate there are inadequacies in those federal-provincial institutional arrangements designed to prevent conflict escalation. Present arrangements do not appear to sufficiently accommodate multiple objective management strategies. As has been alluded to, formal mechanisms for habitat management have yet to be developed. The inter-agency referral system, while perhaps sufficient for local decision making involving small scale activities, does not facilitate the inter-group bargaining and tradeoff decision making necessary with larger resource developments. There is a need, therefore, to reassess management relationships to avoid or reduce conflicts in the administration of fish habitat and the regulation of competing resource uses. It is suggested that a consultative forum such as an inter-agency task group would provide for improvement in the management of fish habitat.

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#### 4.5 CONFLICTS IN INTERNATIONAL FISHERY MANAGEMENT

As noted in the previous chapter, there is a great deal of discord in the management of salmon stocks belonging to either the United States or Canada. Competition for salmon stocks has contributed to the growing problem of stock interceptions and has injured the domestic fisheries of each country. The interception problem is extant in both countries and has been exacerbated by improvements in fishing technology. The problem of stock interceptions has increased tensions between the fishermen of both countries and increased stress on those responsible for the manage-

ment of fish stocks. The conflict has, in the past, escalated to the point where fishermen of both countries threatened to increase their interceptions of the other country's stocks. A fish war did not materialize, however, and the conflict stabilized while negotiations continued. The product of the international negotiations is the presently unratified treaty between the United States and Canada.

*which is not being argued*

Both the United States and Canada have revealed a willingness to seek a solution to the interception problem, as the draft treaty indicates. As part of this search for a solution to the problem, the treaty recommends the creation of an organization which, to some extent, would be conflict dependent. The proposed Pacific Fisheries Commission would be primarily concerned with the developing procedural resolutions to international fishery management conflicts. In addition, the proposed treaty recommends compromises in concluding conflicts over the allocation of the catch between Canada and the United States. At present, ratification of the treaty is stalemated. It is possible that if the conflict over management of some binational fish stocks is not resolved by the 1984 salmon fishing season, or soon thereafter, tensions will increase and the conflict will escalate.

// There appears to be little conflict between the Government of the Province of British Columbia and the Government of Canada in the development of international fisheries management policy. The federal government has plenary authority in negotiating international agreements and in the management of the primary sector of the salmon fishery, with provincial involvement limited to an advisory role similar to that of

user groups in the fishery. Thus, while representations from the Government of the Province of British Columbia are considered, federal objectives are paramount in determining the direction of management.

Similarly, there is little indication of tension between the Government of the Province of British Columbia and the Government of Canada regarding the 200 mile limit. With federal paramountcy in international relations, the Declaration was a federal initiative and was supported by the province. Three factors likely mitigated federal-provincial discord over the Declaration: (1) the likelihood that the benefits arising from the Declaration would be realized largely within British Columbia; (2) the Declaration did not threaten or conflict with provincial resource jurisdiction; and (3) federal jurisdiction in this area is clearly defined. It is probably that the lack of conflict between the Government of Canada and the Government of the Province of British Columbia will continue in the future.

#### 4.6 MANAGEMENT IMPLICATIONS OF WEST COAST FISHERY CONFLICTS: A SUMMARY

As the foregoing indicates, management of the west coast fishery is distinguished by issues of differing complexity and conflicts of varying intensity. It has become increasingly difficult for fishery managers to satisfy all the interests and expectations within the industry. With pressures increasing on fishery resources, conflicts have developed in a number of policy areas. The conflicts which have developed have had both positive and negative impacts on the management of the resource.

One of the positive aspects of conflicts in the management of the fishery is that they have provided an incentive to seek solutions to the problems that exist in the industry. The salmon interception problem, for example, has stimulated efforts to develop mutually acceptable restrictions on the fishing effort of Canadian and American fishermen. Similarly, conflicts have arisen regarding the allocation of access to fish resources by various gear types which have resulted in efforts being made to determine the appropriate structure of the salmon fleet. In general, however, fishery management conflicts appear to have produced few short term social, economic or environmental benefits to the industry.

Fishery management conflicts that have developed between the federal and provincial governments are largely a result of responsibilities assigned under the *Constitution Act, 1867*. The conflicts between the Government of Canada and the Government of the Province of British Columbia have occurred because of jurisdiction in a dispute. Jurisdictional responsibilities assigned under the Act are not based on biophysical realities because they fail to recognize resource interrelationships present in many aspects of fishery management. Provincial decisions allocating water resources, for example, are not an attempt to manage fish stocks, while federal fish habitat protection requirements are not an attempt to manage provincial forests. The discord in fish habitat management appears to have developed because the negative impacts resulting from the decisions of one party are perceived to be an intrusion into the jurisdiction of the other party. Thus it seems plausible to suggest that the conflicts that have developed are related

to jurisdictional responsibilities but are not necessarily a deliberate intrusion into another's jurisdiction. The conflicts in fishery management that are jurisdictionally based are generally the result of fish resources being affected by activities in which the Province of British Columbia has a jurisdictional privilege. The problems are greatest, therefore, when the parameters of authority are vague, overlapping and imprecise.

Despite extensive resource development in the Province of British Columbia, and the competition often present between fisheries and other resources, relatively few major conflicts have developed. It is suggested that one reason there are not more conflicts in the management of the fishery is the discretionary enforcement of the habitat protection provisions of the *Fisheries Act*. The Act is proscriptive and punitive in nature, and uncompromising in outlook, and as a result, the development of cooperative arrangements in the management of fish habitat is constrained. It is probable that if the Act were rigorously enforced, jurisdictional conflicts would increase significantly.

Jurisdictional uncertainties and the possibility of conflict development have likely constrained the scope of decision making in the commercial fishery. Some salmonid enhancement projects, for example, have been postponed because project benefits would be shared among those who have not contributed to the enhancement program, specifically, American fishermen. Permitting non-Canadian fishermen the opportunity to benefit from the enhancement program would likely result in protests from domestic fishermen and possibly the general public. It is possible

that the federal government is taking a more aggressive posture in some areas where its jurisdictional authority is unclear, such as with habitat issues. It could be argued, for example, that had the Government of the Province of British Columbia intervened on behalf of the Aluminum Company of Canada, the conflict over water discharges into the Necahako River would not have been litigated. Conversely, it is possible that rather than risk precipitating a conflict, there are instances where the federal government withdraws or postpones taking action. In some cases, however, conflict avoidance decisions may be reversed because of pressures from interest groups in the fishing industry.

Interest groups have a major role in west coast fishery management. Groups within the commercial fishery represent a variety of gear types and fishermen and as a result, express a different view on some of the policies of the Department of Fisheries and Oceans. It appears, however, that consensus among these groups frequently develops when fisheries resources are perceived to be threatened by the actions of another party. In addition, fishery interest groups monitor the policy responses of the Department of Fisheries and Oceans, opposing those decisions which appear to threaten their position within the industry. As a consequence, the Department is often pressured to reverse policies that threaten the status quo. In addition, the Department may be criticized by interest groups when it appears that it has not fulfilled its organizational objectives, for example, in habitat protection. It is probable that the relationship between the Department of Fisheries and Oceans and interest groups within the fishery will become increasingly strained as competition

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for fishery resources increases and the resource base declines.

With much of the conflict in fishery management related to jurisdictional responsibilities, consideration should be given to the possibility of the Province of British Columbia expanding its role in some areas of management. While it has periodically been suggested that the management of the resource should be delegated to the Province, it is unlikely this will occur. There is, for example, strong opposition from within the industry regarding provincial control of the fishery, largely because there is a widespread perception that should tradeoffs be made between fisheries values and other resource uses such as forestry, the fishing industry will invariably suffer. Further, the Government of Canada is opposed to provincial control of the fishing industry for a number of reasons, including: British Columbia's lack of competence in the management of marine resources; the international dimension of management requires federal involvement; and the province's vested interests in other resources which may conflict with fisheries management objectives. While there is speculation regarding the possibility of exclusive provincial control in the commercial fishery, the Government of the Province of British Columbia has not publicly stated its views on the matter. Although it is unlikely the federal government will delegate its responsibilities in the management of the fishery to the province, there appears to be a need for the province to undertake a greater role in some areas of fishery management, such as habitat protection.

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The resolution of federal-provincial conflicts through the judicial system is, to some extent, a reflection of institutional inadequacies in developing mechanisms for conflict avoidance. Concluding conflicts through litigation indicates that different resource use priorities cannot be reconciled through present institutional arrangements, consequently the intervention of a third party is necessary. As has been alluded to, judicial decisions are case-specific, thus clarification of federal and provincial management roles evolves incrementally. It seems preferable, therefore, to develop processes whereby differing policy objectives and priorities of resource use can be accommodated before conflicts escalate.

The development of a variety of conflicts in the west coast commercial fishery has stressed decision making structures to the extent that crisis management appears increasingly common. Many of the policy responses of the Department of Fisheries and Oceans to fishery problems appear to be ad hoc adaptations to crises or conflicts, and do not address, in a comprehensive manner, the sources of the problem. The reactive nature of present fisheries management is not conducive to the development of management strategies which anticipate resource issues and accommodate the variety of interests involved. As a result, there is anxiety and tension within the industry: some industry groups are frustrated with what is perceived to be agency incompetence and inflexibility in objectives; native groups are frustrated with an apparent lack of sensitivity to aboriginal concerns; and relations with the Government of the Province of British Columbia are strained because of

a perceived lack of awareness of local problems and priorities, and interference in provincial affairs. There is a need therefore to reduce tension and stress in the present management environment.

Consultative forums, which provide input in a number of policy areas such as fleet reduction, salmonid enhancement or area management have had varying success in addressing some of the issues in the fishery. The Salmonid Enhancement Program, for example, has been relatively successful despite its financial constraints, perhaps because decision making within the program is broadly based. In other policy areas such as fleet rationalization or habitat management, decision making appears to be largely within one agency, and a high degree of tension is present. It is likely, however, that the conflicts and tensions within the industry will stimulate change within present structures of decision making in some areas of fishery management. In habitat management, for example, a senior level formal consultative process between the Governments of Canada and the Province of British Columbia appears necessary to avoid the confrontational aspect of present habitat management.

One of the major challenges in present fisheries management relates to the need to accommodate the tension and stress prior to conflict development. There is a need to develop new management arrangements that reflect administrative, jurisdictional and environmental realities, and that avoid the crisis oriented, confrontational approach characteristic of present management. Without institutional adaptations, the future of the west coast fishery will remain uncertain and crises and conflicts will continue.

#### 4.7 CONCLUSIONS

Many of the theoretical propositions pertaining to stress and conflict appear to explain the reasons for the discord in the management of the west coast fishery. Where conflict has developed in the fishery, it is the result of competition for resources or power or both. The conflicts in the fishery are not one-sided, rather they originate from interactions which involve incompatible objectives. This incompatibility appears to be the result of uncertainties in jurisdictional authority, particularly where habitat management issues are involved. Further, with the extent of fish habitat-altering activities within the Province of British Columbia, the supposition that many conflicts are latent appears plausible.

It appears that both content and volume stress are present in many aspects of fishery management. The stress on the Department of Fisheries and Oceans originates from a variety of sources: the demands of commercial fishermen, for example, may result in time pressure on the Department which produces volume stress; or stress may be content-related because the Department is perceived to be incapable of managing the fishing fleet or fish habitat. In some cases, stress on the Department develops because there is insufficient information to develop effective management responses. For example, it may be difficult to prove conclusively that the alteration of fish habitat presents a threat to fish, thus the Department may hesitate in prosecuting potential violators of the *Fisheries Act*. While there may be well-documented scientific evidence regarding some habitat-altering activities such as

the modification of thermal regimes of streams or the effects of toxic chemicals on fish, the threat to fish from the deposition of logging debris in streams may be more difficult to document. Conflicting scientific information may, therefore, constrain management responses and result in content stress on the Department. The Department may be forced to compromise on an issue or withdraw from a conflict, an indication that its search behaviour determined that the barriers to action were too high and management options were limited. While the concept of stress is an important aspect of conflict theory, it is difficult to determine what role it may have in conflict development. In fishery management, much of the stress on the Department of Fisheries and Oceans may be routine, arising from the demands of the user groups involved in the industry. Stress, however, may develop from crisis, such as the sudden decline of a fish stock or the collapse of a particular market. Thus while the literature identifies the causal factors of stress, there is no classification system based on the nature and extent of stress. The concept of stress might benefit from the development of a typology which distinguishes routine stress from stress that is more crisis oriented. It appears that both types of stress are present in the west coast commercial fishery. In addition, it is difficult to state conclusively when stress occurs; at best there are only proxy indicators of its development, including, for example, public statements regarding organizational functioning, or the issuance of threats. Again, the literature appears vague on how stress-inducing behaviour is manifested.

As a general conclusion, it appears that conflict theory and its related concepts help explain or describe the reasons for many developments in west coast fisheries management. Fisheries management is a broad and complex area of research, however, while the cases described in this study are simplified. Many of the conflicts in the fishery, for example, involve more than two parties, and are influenced by a variety of factors, including, for example: political considerations; economic impacts; institutional constraints; personal motivations; or scientific uncertainty. Research which attempts to understand the nature and origin of fisheries management conflicts should, from an academic and practical standpoint, concentrate on a limited number of case studies because of the complexity of the issues involved. Such research could, for example, concentrate on the role of interest groups in a particular issue, or the role of experts in conflict resolution. It is probable, however, that because of the imprecision of many conflict concepts and the complexity of the issues involved, fisheries management research will continue to be descriptive or analytical rather than predictive in nature.

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Title of Thesis/Dissertation

JURISDICTIONAL CONFLICTS IN RESOURCE MANAGEMENT: PERSPECTIVES

ON THE CANADIAN WEST COAST COMMERCIAL FISHING INDUSTRY

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