Canadian Financial Assistance to the Fishing Industry

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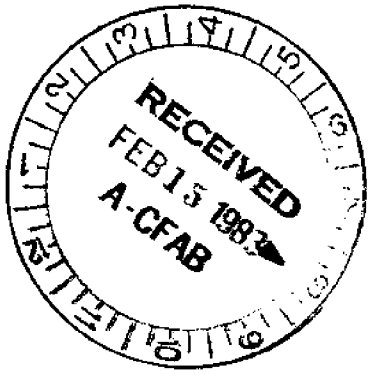

Center for Ocean Management Studies
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INTRODUCTION

Canada has an extensive array of programs of financial aid for fishermen and fish processors, at both the federal and the provincial levels. The programs are administered largely through the federal Department of Fisheries and Oceans and the provincial Departments of Fisheries. In addition, there are sources of assistance in the federal Departments of Regional Economic Expansion and Industry, Trade, and Commerce, among others.

The major sources of assistance consist of grants and low-interest loans for construction or purchase of vessels and acquisition of equipment, low-cost insurance, price support programs, regional development assistance, tax exemptions, and government-sponsored research and development.

The Canadian fishing industry is heavily dependent on the export market: approximately 80% of the 1980 seafood production of $1.34 billion (U.S. dollars) was exported, and over 50% of that went to the United States.[1] Moreover, much of the fishing industry is located in rural areas where fishing has few competing occupations. To help prevent wide fluctuations in incomes in these communities, as well as to maintain employment in more populated areas, the federal and provincial governments have developed a variety of aid programs, many of which have traditionally been directed at maintaining or expanding capacity, employment, income, and markets for output. Expanding markets for Canadian fish means expansion of export markets. Hence, assistance to the industry is largely intended to increase such sales, especially to the United States.

In 1978, partly under pressure from countervailing duty proceedings in the United States, the Canadian government substantially reduced the expenditure levels of many assistance programs for the industry.[2] What was estimated by the U.S. Treasury Department to be a total subsidy equal to approximately 17% of the value of exports to the United States as of March 31, 1978, declined to about 1.2% of export value at the end of 1978.[3] The subsidies eliminated were, for the most part, "direct" subsidies--per pound payments to fishermen and processors. The remaining assistance represented, according to information submitted in the 1979 U.S. International Trade Commission investigation, vessel construction subsidies and regional economic development assistance.

Although funding for some assistance programs did decline in 1978, substantial subsidies continue to be paid to many sectors of the industry. As in 1978, most aid is in the forms of vessel construction subsidies, aid for acquisition of various types of equipment (especially that which would maintain fish quality) and regional development incentives--many of which also benefit area industries other than fishing.

While direct payments to fishermen have been largely avoided by government agencies fearing countervailing duty action,[4] other forms of assistance exist in large amounts. During the 1980-82 fiscal years, for example, almost $20 million (U.S.) was spent under one progam subsidizing the construction of nearly 1,100 vessels.[5] Millions of dollars annually subsidize grants, low-interest and forgivable loans, interest rate subsidies, and so on, despite

the conciliatory cuts in program appropriations which occurred in 1978. To the extent that this aid has helped maintain production, it has increased or maintained exports to the United States at high levels.

The subsequent discussion attempts to review developments in the Canadian fishing industry and government assistance programs during recent years, since the 1978 and 1979 U.S. International Trade Commission reports, with a view to estimating the extent of financial assistance to the Atlantic fishing industry.

The results of the study indicate that while there are few "direct" subsidies paid to the industry in the form of per pound payments based on output, there are myriad sources of assistance for vessel and gear acquisition, insurance, fuel and supplies purchases, plant expansion, and other programs. While most of the subsidy programs involve relatively small expenditures by the government, in the aggregate the assistance provided to the industry is extensive. Indeed, it is likely that the inshore fleet in particular largely owes its existence to government assistance, and the tremendous growth in processing employment in recent years is also at least partly a result of substantial infusions of capital in this sector by both federal and provincial government agencies.

The following section describes the industry, as it currently stands as well as its recent history, with regard to structure, economic condition, and government regulation and policy toward the industry. Section II describes the various assistance programs available to the industry and attempts to estimate the per pound effects of two subsidies available to a typical Canadian fisherman. Where information is available, data concerning the fishing industry and assistance programs are presented (Canadian dollar values have been converted to U.S. dollar values, using average exchange rates for each year).

I. THE FISHING INDUSTRY

A. Structure

The Canadian fishing fleet is divided into two categories based on the size of the vessel in gross register tons (grt); that is, the total volume of the boat expressed in units of 100 cubic feet. Boats less than 25 grt are usually classed as inshore boats and include longliners, multipurpose vessels, small draggers, etc., and usually limit their fishing activity to within 12 miles of the shore. The offshore fleet is composed mainly of otter trawlers, draggers, and purse seiners, vessels that are 25 grt or larger.

The Atlantic Canada inshore fleet included almost 32,000 vessels in 1979,[6] the majority of which are very small boats operated by one or two individuals. These boats go out on day trips and sell their catch primarily to small processing plants or to firms that produce saltfish and other cured products. Inshore boats are the larger category of vessels in terms of absolute number of boats, making up approximately 96% of the Atlantic fleet in 1979 (Table 1).

The offshore fleet, vessels from 25 grt upward to 500 grt and larger, is made up of approximately 1,230 vessels, most of which are boats less than 150 grt [7] (roughly equivalent to boats less than 100 feet in length[8]). These boats, especially those over 150 grt, are for the greater part owned by the large processors and catch about 60% of the groundfish landed in the Atlantic provinces.[9]

Employment: Harvesting

Fishing is a major, if not the only, source of employment in many areas in the Atlantic provinces. In rural areas located far from population centers, and even in small coastal towns and cities, employment in fishing or in processing plants provides a major source of income. With few alternative jobs, such fishermen must be willing to accept a lower average income than their counterparts in urban Canadian centers or in the United States. Many fishermen work only a few months each year, collecting unemployment benefits during the "off-season," from about November to May. In the Atlantic provinces as a whole, fishing is the occupation of less than 2% of the combined labor force (Table 2). In Nova Scotia, however, about 10% of the labor force is engaged in fishing; in Newfoundland the proportion reaches 30%. Quebec has the lowest participation rate: 2% of the more than 2.6 million person labor force is engaged in fishing.

Provincial statistics on employment in fishing classify fishermen in one of two ways: on the basis of the number of months worked per year, and in terms of the proportion of income earned by fishing.[10] "Full-time" fishermen either fish more than 10 months per year, or earn more than 75% of their income by fishing. "Part-time" fishermen either work 5 to 10 months per year in fishing, or earn 25 to 75% of their income by fishing. "Occasional"

fishermen either fish less than 5 months a year, or earn less than 25% of their income as fishermen.[11]

In 1979, there were 55,885 registered fishermen in the Atlantic provinces.[12] For the four provinces for which 1980 data are available,[13] 18% of the total were full time; 20% were part time; and 62% were occasional fishermen (Table 3).[14]

When examined by province, the figures in Table 3 suggest certain characteristics of the provinces. The two largest provinces in terms of the fishing industry, Nova Scotia and Newfoundland, are widely different in the structure of fishing employment. In Newfoundland, over 75% of those employed as fishermen in this rural northern province are classified as occasional; full-timers account for only 3% of the total. In Nova Scotia, full-timers are nearly half of the total; occasional fishermen constitute less than 40% of total fishing employment. The majority of fishermen in New Brunswick are either full time (35%) or simply occasional fishermen (44%). Over half of the fishermen in Prince Edward Island are full time; the remainder are evenly split between part-time and occasional classifications.

As mentioned, the total number of fishermen in the Atlantic provinces was almost 56,000 in 1979. This represents more than a 50% increase from a quarter-century low of about 36,500 in 1974 (Table 3). The bulk of this increase occurred in Newfoundland, which accounts for almost 60% of total Atlantic employment in fishing.

Relatively few fishermen, especially in Newfoundland, are offshore fishermen. Determining their number requires calculations using the number of offshore vessels and the average crew per vessel. Assuming that offshore crews average 13 crew members and given, according to one source, that there were about 1,230 vessels in Atlantic Canada over 25 grt in 1979,[15] this gives a total of about 16,000 offshore fishermen, of whom most work full time. This leaves about 40,000 inshoremen, about 8,000 to 10,000 of whom are full time.

Employment: Processing

Currently, 466 firms operate 616 processing plants in the Atlantic provinces.[16] Of these, 226 plants, or 37%, are located in Newfoundland; 130 in Nova Scotia; 125 in Quebec; and 110 and 25 in New Brunswick and P.E.I., respectively.

Of the Atlantic provinces' labor force, 31,000 persons, or 0.9%, were employed in processing plants in 1980 (Table 3). There were 8,000 employees in Newfoundland--nearly 5% of the total work force in that province. In Nova Scotia, less than 2% work in processing. The total Atlantic provinces' processing employment of 30,702 in 1980 was almost 140% higher than the lowest employment level in the 1970s--less than 13,000 in 1975.

B. Economic Condition

Depending on the economic conditions affecting the supply and demand for fish at ex-vessel and processing levels, incomes in the industry wax and wane. During the late 1960s and the first half of the 1970s, while total gross revenues at not only the ex-vessel level but throughout the marketing chain

rose almost continuously, the quantity of landings in the saltwater fisheries on the Atlantic coast fell precipitously, from a high of nearly 2.9 billion pounds in 1968 to a low of 1.72 billion pounds in 1974, a drop of about 40%.[17] This "crisis" Fisheries and Oceans Minister LeBlanc blamed on foreign fishing, and stated that the 200-mile limit and "stringent federal management" have helped to create "dramatic resource improvements since 1974."[18] The "crisis" was appropriately named: in the mid-1970s, employment bottomed out in the Atlantic provinces, both in terms of the number of fishermen (36,464 in 1974, down 26% from a previous high of 49,335 in 1965) and employees in processing plants (12,916 in 1975). Between 1970 and 1974, the number of registered fishing vessels in Atlantic Canada fell 14%, to about 27,950 boats.

During the latter half of the 1970s, the fishing industry substantially recovered. Total Canadian landings in 1980 of about 2.8 billion pounds represented a rise of some 40% over 1974 levels. The marketed value of Canadian landings was $1.34 billion in 1980, 100% higher than the 1974 marketed value of about $658 million.

In 1980, the landed value of the Atlantic provinces' catch of over 2.5 billion pounds was $436 million, up 150% from 1974 (Table 5). The marketed value of Atlantic landings in 1980 was about $990 million, an increase of some 130% from 1974.

Recent sluggishness in the industry has been blamed by some on a combination of high interest rates, relatively low prices of fish substitutes, and the economic condition of the major market for Canadian fish, the United States. In fact, per capita consumption of fresh and frozen fish in the United States rose 3% in 1980, to eight pounds.[19] A significant factor working against U.S. imports may have been the drop in ex-vessel prices in New England. An index of average monthly prices of New England finfish (primarily groundfish) fell 5% during 1979-80,[20] and this may have cut into processors' demand for imported fish, especially in the markets for fresh whole and filleted fish. Cold storage holdings also fell significantly in 1980: total holdings of frozen fillets, steaks, and blocks fell by 40 million pounds, a drop of 23%.[21]

According to one Canadian source, an additional factor impinging on Canadian revenues during 1980 was the strength of the Canadian dollar relative to European currencies, the most relevant of which would be those of the North Atlantic nations. In fact, however, the U.S. value of the Canadian dollar rose less than 1% in 1980, and the performance of the Canadian dollar vis-a-vis her major rivals for the U.S. market was mixed.[22] (See Table 6). In 1981 and 1982, the Canadian dollar continued its six-year decline, from a 1976 value of U.S. $1.014 to below U.S. $0.80 in the summer of 1982. This, if anything, should have acted to boost Canadian sales of fish products to the United States, assuming that demand for fish in the United States is elastic.[23]

C. Government Policy and Management

In the late 1960s, the Atlantic fishing industry began to slide into a "depression," in terms of the volume of landings, which was to bottom out in 1974.[24] Landings fell nearly 40% in quantity from a previous high point in

1968. During this period, and throughout the recovery in the second half of the 1970s, Canadian regulatory and assistance policy was aimed at increasing domestic capacity, in both harvesting and processing.

There is little doubt that this objective was achieved, as the rise in landings, processing employment, and the number of vessels since 1974 suggests.

As a result of the "expansionist" government policy, however, there exist numerous problems in employment and incomes, both in harvesting and processing, stemming largely from overinvestment in vessels and plants relative to existing markets and to sources of raw material supplies. Indeed, there are few Canadian Atlantic fisheries where the stocks of fish are adequate to match the harvesting and/or processing capacity of the fishery.

In the harvesting sector, growth in the number of vessels, both inshore and offshore, has caused annual quotas in some fisheries to be filled well ahead of the end of the year, and, as a result, the offshore fleet is often forced to divert its effort to other fisheries. The inshore fleet, much of which is normally tied up during the winter months, can be forced to remain idle during some of the usually open season because of closed fisheries.

The processing sector suffers from the same ailment. The growth of the sector is controlled, like harvesting, through licensing regimes. However, for processing plants, licensing is controlled not at the federal level, as with harvesting, but at the provincial level. Like the harvesting sector, processors can carry considerable political clout, and a new plant in a rural area, providing a potentially large number of jobs, can be an attractive opportunity for a provincial government body.

Unfortunately, a number of factors can serve to constrain the utilization of the capacity provided by construction of numerous plants. If a plant is poorly situated vis-a-vis the location of fish stocks, it will be costly to provide sufficient raw material to keep the plant operating, and it may be run efficiently only in times of high demand or when there are gluts of fish. The location of water power and transportation facilities is important to the efficient operation of the plant. Poor planning with regard to these factors may result in insufficient utilization of the plant.[25]

In spite of these limiting factors, numerous plants, with capacity far in excess of actual output, dot the Atlantic coast. Many of these are concentrated in the hands of the very large processors, who also supply themselves with much of their own input needs through the operation of the large offshore trawlers. The market structure of the processing sector may help explain the existence of often high idle capacity. In an industry as concentrated as the Atlantic processing and marketing industry,[26] collusion may develop among the larger firms, and the possible existence of price-fixing arrangements (such as the Canadian Association of Fish Exporters) may help to prevent the competitive influence that would otherwise serve to drive out inefficient, underutilized plants. Furthermore, in an industry where brand loyalty can be an important means for securing customers, as is typical in a concentrated industry, firms may wish to ensure that they can boost production sufficiently to meet occasional peaks in demand.

As the licensing of plants is the domain of the provincial governments, restraining growth in processing capacity requires the cooperation of the five Atlantic provinces. If such cooperation is not forthcoming, financial assistance may very well continue to be paid out to unemployed plant workers and in support of underutilized plants that were previously thought to be eventually self-supporting.

As a result of continuing economic problems arising from excessive growth in the harvesting and processing sectors, the Canadian government has shifted its objectives from expansion of capacity to maintenance and expansion of markets. A comprehensive "quality improvement program" has been initiated, of which the assistance programs are a fundamental part.[27] The program's intent is the achievement, or at least the perception, of improved fish quality, thus securing markets and obtaining higher revenues per unit of product. The program's components include dockside and final product grading, vessel certification, regulation of handling and processing facilities, and others; yet the aspect central to this discussion is the financial incentives available for development of facilities that will tend to improve fish quality.

For example, the federal Fishing Vessel Assistance Program provides grants of 50% of acquisition cost (to a $1,000 maximum) of "approved" equipment that aids in maintaining fish quality. Examples of approved equipment include covers on open boats, fish handling equipment, toilets, etc.[28] Other assistance programs, such as vessel replacement aid, have been similarly designed to shift emphasis away from capacity expansion and toward raising revenues for a given catch.

Management of Canadian Fisheries

The Canadian government is heavily involved with regulation of fishing effort. These regulations are generally intended to:

> ...maintain fishery resources at levels that will generate the maximum continuing economic and social benefits (and) create the conditions necessary for the viable and stable commercial fishing sector and improved incomes.[29]

They include the usual forms of fisheries management: time and area closures, gear regulations, and licensing regimes.

Groundfish Management Plans. In an attempt to preserve stocks and improve the condition of the industry by protecting the inshore fisheries and reducing capacity, the federal government has for a number of years issued annual Groundfish Management Plans, which set forth total allowable catches (TAC) for each species in particular areas and specify the quotas allowed for Canadian fishermen. The TACs have been "set on a conservative basis, to permit rebuilding of the stocks," and have tended to aim toward protection of stocks by limiting offshore catches (for example, of cod, which migrate inshore during the warmer months of the year, when inshore fishermen also do much of their fishing).[30]

Unfortunately, the result, as expected, has often been a rush of effort on the stocks at the opening of the quota season, with a quick harvest of the quota. In 1981, for example, the quota for the offshore fishery for northern cod was caught in the first eight weeks of the year, causing some seasonally operated plants to be open in the winter months to handle the excess cod landings.[31] Such massive oversupply lowers prices for fish products that cannot be stored and raises costs by requiring substantial capacity in harvesting and processing to meet the peak load, while much of this capacity then remains unused for the rest of the year.

To prevent the problems resulting from fishery-wide quotas, the federal government has implemented a "company quota" system for offshore trawlers, effective in 1982. The offshore trawler fleet consists of 155 vessels 100 feet or longer, of which 121, or 78%, are owned by the four largest Canadian processing firms.[32] The 1982 plan allows for 96% of the total northern cod quota of 87,250 metric tons to be split among these four firms, with the remaining 3,500 metric tons to be reserved for the remainder of the industry.[33] This plan is designed to prevent the rush of effort by the trawlers and to spread landings more evenly throughout the year. The company quota system has been applied on a trial basis in 1982, and is applicable only to vessels over 100 feet in length.

As part of the management plans, quotas for gear types are determined for each fishery. In the plans, gear types are classified as either "fixed gear" (traps, weirs, gill nets, longlines, and handlines) or "mobile gear" (all otter trawls and Danish and Scottish seines).[34] In the 1982 plan, allocations of each species in each area were made to three classifications of boat size: vessels less than 65 feet, vessels between 65 to 100 feet, and vessels over 100 feet in length. For the two classes of boats less than 100 feet, specific allocations were made for vessels less than 65 feet using fixed gear (33% of the total Canadian quota); those using mobile gear (13%); vessels between 65 to 100 feet using fixed gear (0.4%); and those using mobile gear (3%).[35]

Setting quotas for specific gear types is the primary form of gear regulation. Other regulations include a net mesh size restriction that the federal government put into effect July 1, 1981, for most types of groundfish.[36] The minimum mesh size of 5.125 inches for all types of towed gear is "designed to enhance stocks and supply a better size and quality fish to the marketplace."[37]

Licensing programs. Licensing on the Atlantic coast has been in effect since the late 1960s, and was extended to all fisheries on the Atlantic coast in 1973. Anyone who wishes to fish commercially must obtain a Personal Fishing License; this includes not only the operator of a vessel but all crew members as well. The vessel must also be registered as a commercial fishing vessel. In addition, to fish a specific fishery a license must be obtained for that fishery. It is here that the greatest control by the government over fishing effort is found. Many major fisheries are restricted; most are limited in one form or another, preventing new entrants and limiting the capacity growth of existing fishermen.

After several years of a confusing licensing regime, resulting in a vast array of regulations that caused "considerable dissatisfaction amongst both resource users and managers,"[38] in 1981 the federal government instituted a new personal licensing system whereby licenses are issued to two groups of fishermen, full time and part time. In effect, a moratorium was put on new licenses for part-time fishermen, with any new licenses to be issued going to full-timers.[39] The fee for a personal fishing license is $20.[40]

Also in 1981 license fees for groundfish vessels (not having changed since 1974) were revised, in some cases drastically, to adjust to both the increased value of the fisheries and, perhaps more important, the increased administrative costs of the licensing program. Fisheries Minister LeBlanc noted that license fees had been nominal, especially for the offshore fleet,

relative to the economic gains that are possible from the fisheries.[41] The revised fees for inshore fishermen were delayed until 1982, as many fishermen had already received 1981 licenses and "in several areas, inshore fishing seasons overlap the calendar year."

In 1982, commercial fishing vessel registration cost $20, a flat fee. However, licenses to fish range from an inshore vessel license of $30 to a license of $200 for a 65- to 90-foot scalloper and a license of $2,000 for a 100- to 150-foot stern trawler. In 1980, all such licenses ranged from $5 to $20.[42]

The inshore fleet has traditionally been unregulated at the provincial level; instead it was faced with fleet-wide quotas administered by the federal government. Beginning in 1982, a program called "sector management," a part of the Atlantic Groundfish Management Plan, regulates the inshore fleet by restricting fishing to within one of three divisions, or sectors, of the Atlantic coast of Canada. These sectors are derived from the sectors outlined by the Northwest Atlantic Fisheries Organization, and each falls under one of three regional Fisheries and Oceans office jurisdictions: Newfoundland, the Gulf of St. Lawrence area, and the Scotia-Fundy region.[43]

The director-general of each region issues licenses to inshore fishermen allowing them to fish within that sector only. While the licenses are transferable within a sector, they cannot be tranferred between sectors. Thus, inshore fishermen, who hitherto could theoretically fish the entire Atlantic Canada coast, are now restricted to fishing within a given sector; on the other hand, they are in that way protected from competition from fishermen outside their sector.[44]

Despite provisions for limited overlapping of sector boundaries, the plan came under attack from most segments of the industry prior to its implementation in 1982. Fisheries and Oceans Minister LeBlanc is reported to have said that the sector management concept has wide support in the fishing industry.[45] Fishermen's and processors' groups and provincial governments, however, are said to be "vehemently" opposed to the plan for a variety of reasons, including "severely" restricted vessel mobility, which would allegedly injure inshore vessels of 45 to 65 feet and prevent much inshore fishing in the lucrative Gulf area, injuring small processors who depend on independent fishermen for their raw material.[46]

II. FINANCIAL ASSISTANCE TO THE FISHING INDUSTRY

Implementing alternative management regimes is one method the Canadian government has used to promote the fisheries and to enhance incomes in the industry. As concerns the United States, however, while management of Canadian fisheries does have some effect on the U.S. industry, a more important form of control over the Canadian industry is exerted through the provision of financial assistance by the government. By influencing start-up and operating costs of fishermen and processors, the government is able to direct effort to the fisheries and to effect changes in technology used by the fishermen--for example, through grants for vessel modification to improve efficiency. Much of the fleet, especially inshore fishermen, probably owe their continued existence to the various subsidy programs provided by agencies in the federal government and provincial departments of fisheries and loan boards, for without them it is likely that fixed costs of fishermen and processors, such as interest expenses, would be much higher for the average fisherman than they are now. Moreover, the continued operation of price support programs, primarily to processors of fish products, helps assure continued markets for the fisherman's catch.

A. Federal Assistance

The federal government provides the bulk of the financial aid available to the fishing industry. Federal programs are administered largely through the Department of Fisheries and Oceans, which operates in Atlantic Canada through three regional offices in Newfoundland, the Gulf area, and Scotia-Fundy. Other sources of federal assistance include the Departments of Regional Economic Expansion and Industry, Trade, and Commerce.

Grants

A cornerstone of the Canadian assistance programs is the Fishing Vessel Assistance Program, instituted in 1942. The program provides grants for construction or purchase of vessels less than 75 feet in length and various equipment, up to 25% of approved costs, to a maximum of $100,000 (Canadian dollars) for a wooden-hulled vessel and $125,000 for a steel hull.[47]

During the 1980-81 fiscal year, $7.2 million was spent for this program, aiding in the construction of 380 vessels (Table 9).

While the Fishing Vessel Assistance Program applies only to boats less than 75 feet long, indirect assistance is available to fishermen for the purchase of vessels 75 feet or greater. The Shipbuilder's Assistance Program, administered by the Department of Industry, Trade, and Commerce, provides grants for 9% of approved cost to shipbuilders.[48] "Approved cost" here refers to the least of three measures of cost: the audited cost; the amount received by the builder; and the maximum approved cost. It is presumed by the

administrators of the program that the subsidy to the shipbuilder is passed on to the customer of the shipbuilder.

In fiscal year 1982, $63 million was appropriated for this program, aiding not only the construction of large fishing vessels but of all types of large ships in Canada.[49] Funds from this program helped to construct 63 ships in the 1982 fiscal year.

A major component of the national drive to improve fish quality and thus expand markets and raise incomes is the government assistance available to fishermen for acquisition of approved equipment. Up to 50% of costs of approved equipment and materials, to a maximum of about $850 per vessel, is available from the federal government as part of the "quality improvement program."[50] Vessels from 45 to 75 feet long are eligible for subsidies for the purchase of such equipment as insulated fish containers, toilet and handwashing facilities, and other equipment that will aid in enhancing fish quality.

Loans

Many of the loans made to fishermen for the purposes of construction, purchase or repair of vessels, equipment and necessary buildings are guaranteed by the federal government under the Fisheries Improvement Loans Act. The act, which was initiated in 1955, provides for the government to guarantee loans made by private lenders to qualified borrowers for approved purposes.[51] The maximum repayment period is 15 years, and the maximum outstanding allowed per borrower of a guaranteed loan is $150,000 (Canadian).[52] The interest rate charged on these loans is prime plus 1%.[53]

Approximately 1,160 loans, averaging over $17,000, were made under this program during the 1981 fiscal year, for a total of nearly $20 million.[54] The majority of these loans (59%) were made for the acquisition of boats and engines and repairs. About 450 loans were made for the purchase of fishing equipment, and the remainder for building and construction. Of the 856 loans made in the Atlantic provinces, totaling almost $6 million, 494 ($2 million) were made in Newfoundland alone, most of them for the purchase of fishing equipment.[55]

Other Federal Assistance Programs: Price Support

The Fisheries Prices Support Board, instituted in 1947, is a government corporation whose responsibility it is to "support prices of fishery products where declines have been experienced" due to factors beyond the fisherman's control.[56] The Board determines "fair" returns for fishermen and makes up the difference between the fair price and the actual price received by the fisherman. The Board is also responsible for purchases of fish products for the government's international food aid programs.

While it is claimed there were no programs implemented explicitly for the purpose of price support in 1980-81, "due to favourable conditions for fishery products,"[57] the Board announced in December 1981 a $12.5 million program to support prices of frozen fillets and blocks of cod, haddock, ocean perch, and flounders at $1.20[58] per pound, "the average price at which the Board has determined such products were sold [during September 1-December 15, 1981]."[59] Payment of "not more than 17¢ per pound" was made to exporters

of the above products on sales made during that period.[60] Actual prices paid varied with the regions, and ranged from 8 to 15¢ per pound.[61] In addition, payment was made "of not more than 17¢ per pound on frozen fillets and blocks of ocean perch and flatfish (except halibut) held in inventory on December 16, 1981 by Canadian processors, up to a maximum of 7 million pounds of ocean perch and 10 million pounds of flatfish."[62]

On July 24, 1981, the Fisheries Prices Support Board announced a $12 million program for purchase of frozen haddock.[63] As a result of "a glut of haddock in the United States," haddock prices fell in 1981. The Atlantic Canadian haddock fishery "involves over 1,600 fishermen [and] more than 70 processing plants."[64] The Board planned to temporarily purchase one-third of the fishery's annual production (to be repurchased at cost by the processors when markets improved). The Board limited the purchase to 15 million pounds of frozen haddock.

The Board announced in June 1982 the continuation of a price support program for producers of canned mackerel.[65] The program, which has been budgeted between $1.7 and $2.1 million for each of the past several years, is "an attempt to relieve the economic pressure on some small-scale fishermen in Eastern Canada."[66] Processors will be paid $17.20 (Canadian) per case (81.9¢ per pound, net weight); the savings then "are meant to be passed directly to the inshore fishermen of [the Atlantic provinces]."[67] While the purchase will provide fish products for international food aid programs, it also "will ensure Canadian mackerel fishermen a continuing market for their catch, as well as increasing employment opportunities for Canadian plant workers."[68]

Regional Grants to Processors and Infrastructure

The Department of Regional Economic Expansion (DREE) is a federal agency "created to assist and encourage each region of Canada in realizing its economic and social potential."[69] DREE provides financial support through grants--both directly and through joint ventures with federal and provincial agencies--and acts as an advisory body developing plans for optimal development of the economies of various regions throughout Canada.

As regards the fishing industry, there have been many projects in some Atlantic provinces completed by DREE in recent years. For example, the development of ports and dockside facilities and promotion of fish consumption are a few recent activities. In a six-year joint venture with the Newfoundland government, ended in March 1981, DREE provided 90% of a $10 million development program during which were constructed several new water supplies, a cold storage facility, and landing facilities in Labrador.[70]

The 1981 fiscal year appropriation for the DREE-Newfoundland Cost Sharing Inshore Fishery Development Program was approximately $4.3 million, but, with the end of the DREE funding, the province's 1982 program budget was only $730,000. In addition to this, the Newfoundland Department of Fisheries capital projects appropriation of $2.1 million provided $575,000 for the Ice-making and Cold Storage Facilities Program, $385,000 for the Fish Handling Facilities Program, $125,000 for grants for fishermen's facilities, $125,000 for power to plants, and $82,000 for construction of roads to fish-handling facilities.[71]

A number of DREE "incentive grants" to businesses associated with fishing has been made recently, primarily to firms on the east coast. A total of $850,000 in direct grants and forgivable loans was provided by DREE to 15 firms for such purposes as construction, expansion, and modernization of plants and equipment.[72]

P.E.I. and the federal government are nearing the end of a 15-year Comprehensive Development Plan which, among other things, provides for the construction of bait sheds, haul-out slips, ice-making facilities, and other projects which are designed to "develop a self-sustaining industry that will result in higher levels of output and income to both fishermen and processors."[73] DREE's share of the plan's expenditures in 1980-81, which went for agricultural, forestry, and industrial development as well as fisheries improvement, amounted to over $25 million.[74]

B. Provincial Assistance

Financial assistance to the fishing industry is provided at the provincial level primarily through provincial Departments of Fisheries and their Fisheries Loan Boards, which provide grants, loans, and loan guarantees, primarily to the inshore fleet. In addition, technical and research assistance is made available by the provincial governments.

Grants

Widespread assistance is available in the form of grants for the purchase or construction of vessels. In Newfoundland, for example, a fisherman wishing to construct a vessel of 21 to 75 tons may obtain a grant of $1,300 (Canadian) per ton from the Department of Fisheries under the Fishing Ships Bounty Program.[75] For a 50-ton dragger, which might cost $300,000, the $65,000 grant covers over a fifth of the construction cost. Fifty vessels were provided with $1.9 million under this program in 1981.[76] Other Atlantic provinces also provide vessel acquisition assistance (Table 9).

Aid for the purchase of gear and equipment is also available from provincial governments. As part of the national drive to improve fish quality, the Nova Scotia Department of Fisheries provides 50% of the approved cost of fish-handling equipment, to a $12,000 maximum. "Typical costs of these improvements range from $10,000-$12,000 for a 45-foot vessel to $18,500-$21,000 for a 65-footer."[77] Thus, an inshore fisherman may easily take full advantage of this grant in an effort to enhance the marketability of his catch. More than 120 boats have been improved with the subsidized equipment since the program's inception.[78] New Brunswick has an identical program; the Department of Fisheries paid out approximately $130,000 for the subsidies in 1981.[79]

Provincial grants to processors are also available. In Nova Scotia, in a joint project between the federal and provincial governments, approximately $450,000 has been provided to three firms for acquisition of equipment.[80]

Loans

Each Atlantic province has a Fisheries Loan Board, which supplements the services of the federal loan program. For example, the Nova Scotia Loan Board provides direct loans at a 13% interest rate, requiring a 20% down payment. There are currently 2,200 outstanding loans.[81] "The Loan Board is continuing a policy of assisting with the upgrading and replacement of Nova Scotia's fishing fleet to promote efficiency, quality, and safety of operation, but within the confines of economic viability and business-like approach and the proper investment of taxpayers' money."[82]

The Newfoundland Loan Board provides funds directly for loans less than $50,000 (Canadian), and guarantees and subsidizes interest rates on loans in excess of that amount. The Board made 747 loans during 1981, averaging about $23,000 each, at an 8% interest rate.[83] Another Newfoundland program, the Loan Deficiency Guarantee Program, paid $3.4 million for loan defaults in 1981.[84]

C. Estimation of Fixed-Cost Subsidies in Harvesting

In the late 1970s, it was apparently assumed by the Canadian government that to a large extent subsidies would not be required to maintain the fishing industry once adjustment was made for the 200-mile limit. Yet both fixed-cost subsidies and subsidies based on output and variable costs continue to be paid in large amounts, in both the harvesting and processing sectors.[85] It is virtually a stated goal of operating subsidies to increase output and employment (and, in an industry whose primary market is the export market, this implies expanding exports).[86] Moreover, it is argued by some, fixed-cost subsidies, by lowering annual fixed-cost expenses (for example, interest payments), in the long run influence the level of gross revenues that allow the recipients of the subsidy to break even.[87]

The following is an attempt to estimate the per-pound-of-output effects of various federal and provincial subsidies on fixed costs of harvesters. Significant changes occurred with respect to these programs in 1982; because of this and the fact that most of the Canadian fleet was built prior to 1982 and had access to the subsidies then available, the effects on hypothetical vessels constructed in 1981 and 1982 will be compared. The method used will be a comparison of certain fixed costs of harvesting, both for a vessel with and for one without subsidies. The difference in annual fixed costs will represent the estimate of the annual subsidy to the operator of the hypothetical vessel.[88]

The vessel considered is a 54-foot Nova Scotia dragger, with a construction cost of $300,000, excluding gear.[89] The subsidies used include a grant from the federal Fishing Vessel Assistance Program (35% of cost in 1981, 25% in 1982), and a loan from the Nova Scotia Department of Fisheries (at 10% in 1981, 13% in 1982). The fixed costs include interest (the market rate is assumed to be 18%); depreciation (6.67% of cost net of the grant); and return

on equity (12%). (Equity is 50% of cost of an unsubsidized vessel and 25% for a subsidized vessel.) The data on financing of the subsidized vessel are below:

	1981	1982
FVAP Grant	$105,000	$ 75,000
NSDF Loan	120,000	150,000
Equity	75,000	75,000
	$300,000	$300,000

	Vessel with No Subsidy	Vessel with Subsidy 1981	Vessel with Subsidy 1982
Interest	$27,000	$12,000	$19,500
Depreciation	20,010	13,007	15,008
Return on Equity	18,000	9,000	9,000
Total	$65,010	$34,007	$43,508
Estimated Subsidy		$31,003	$21,502

Landings Level	Subsidy per pound 1981	1982
600,000 lbs.	5.2¢	3.6¢
650,000 "	4.8	3.3
700,000 "	4.4	3.1

If the volume of landings for the dragger is 650,000 lbs.,[90] then the 1981 subsidy of $31,003 averages 4.8¢ per pound, and the 1982 subsidy of $21,502 averages 3.3¢ per pound. If the average price received by the dragger for its landings is 25¢ per pound, the 1981 subsidy is equal to 19% of the price received; the 1982 subsidy equals 13% of price. To the extent that the portion of the fleet utilizing the subsidies did so prior to 1982 (which is overwhelmingly the case), the 1981 figures are more relevant.

These estimates refer only to the two fixed-cost subsidies considered in the example. They do not include the effects of gear acquisition subsidies, operating subsidies such as the price support programs described above, federal sales tax exemption on fuel and other purchases by fishermen, low-cost insurance, and other sources of aid that combine to make the above estimate purely a minimum estimate of the effects of subsidy programs on fish prices. A 4.8¢ per pound subsidy to a fisherman on landings of haddock, for example, converts to a 12¢ difference in price when the fish is filleted.[91] Added to the myriad other subsidies affecting the prices at which Canadian fishermen and processors can afford to sell their fish, the considerable potential effect on competition in the export markets becomes apparent.[92]

It is easy to overlook the potential impact on competition of any one subsidy program; most involve relatively low levels of government expenditures and are applied to localized areas. However, taken in the aggregate, it may be seen that the Canadian fishing industry is heavily subsidized even today, despite the claims of reductions in program appropriations in the late 1970s. As a result, the U.S. industry may be being "nickel and dimed" into depression by subsidized competition from Canadian exporters. This unfair competition has combined with occasional fluctuations in demand for fish which resulted from changes in general economic conditions, reduced species availability, and rising operating costs to create a very unfavorable economic picture for many U.S. fishermen.

APPENDIX. FINANCIAL ASSISTANCE AVAILABLE TO U.S. FISHERMEN

There are a number of federal programs that provide financial aid to U.S. fishermen. These programs, administered by the National Marine Fisheries Service, provide assistance for vessel construction, protection against destruction of gear, and insurance against foreign confiscation of vessels.

The two most extensive programs are the Fishing Vessel Obligation Guarantee Program (FVOG) and the Fishing Vessel Capital Construction Fund Program (CCF). FVOG provides loan guarantees to fishermen for the construction, repair, or modification of fishing vessels of 5 net tons or more. Up to 87.5% of the cost may be borrowed from private lenders under the program, although the usual NMFS requirement is a 25 to 30% downpayment.[93] As a result of the guarantee, borrowers are charged prime less 1% for their loans. As seen in Table A-1, 62 loans were approved under FVOG in 1981, for a total of $27.5 million. Note, however, the drastic fall in guaranteed loans since 1979.

Table A-1. Fishing Vessel Obligation Guarantee Program, approved loans and value, 1977-1981.

Year	Number of approved loans	Value of approved loans
1977	120	$23,900,000
1978	255	57,300,000
1979	325	109,800,000
1980	193	71,400,000
1981	62	27,500,000

Source: Financial Services Office, National Marine Fisheries Service

The CCF Program allows fishermen to obtain an effectively interest-free "loan" from the federal government for vessel construction or repair. A fisherman may defer payment of federal income tax on any portion of income earned from fishing and place that income in the Fund. When sufficient capital has been built up, the fisherman uses the funds for vessel construction. The depreciable value of the vessel is reduced by the amount of the investment from the Fund; in this way, by reducing depreciation charges and increasing taxable income from the vessel's operation, the deferred federal tax is repaid through the depreciable life of the vessel.

If a fisherman suffers damaged gear, as a result of offshore drilling activities or other causes, he may be reimbursed the market value of the damaged gear by the federal government through the provision of a grant covering the gear cost. In addition, a fisherman who loses his vessel through seizure by a foreign government may receive a grant covering the vessel's value from the federal government.

TABLES

Table 1. Registered fishing vessels in Atlantic Canada, by province and tonnage group, 1970-1980.

	Tonnage Group						
	<10	10-24	25-49	50-99	100-149	150+	Total
Nova Scotia							
1970	7,925	924	114	106	36	154	9,259
1971	7,723	952	106	102	32	152	9,067
1972	8,016	1,008	135	88	28	135	9,410
1973	7,594	978	131	86	28	135	8,952
1974	7,555	970	130	85	28	135	8,903
1975	7,282	970	124	80	21	135	8,612
1976	7,006	969	117	75	13	135	8,315
1977	NA	NA	NA	NA	NA	NA	NA
1978	4,872	1,633	147	98	22	144	6,916
1979	4,787	1,742	175	104	27	153	6,988
1980	4,872	1,904	218	116	33	121	7,302
Newfoundland							
1970	12,925	379	84	28	7	74	13,497
1971	12,160	402	91	30	4	69	12,756
1972	8,910	383	146	35	3	68	9,536
1973	9,325	382	192	53	3	70	10,025
1974	8,331	360	214	68	16	79	9,068
1975	10,393	316	237	62	7	84	11,099
1976	8,950	292	205	62	6	86	9,601
1977	13,069	393	250	74	11	86	13,883
1978	15,819	500	247	72	10	97	16,745
1979	17,744	911	262	83	8	89	19,097
1980	18,197	1,034	267	89	8	89	19,684
Prince Edward Island							
1970	2,331	21	1	6	--	11	2,370
1971	2,318	42	--	5	--	11	2,376
1972	2,405	99	--	4	--	8	2,516
1973	2,371	94	--	4	--	8	2,477
1974	2,349	90	--	4	--	8	2,451
1975	2,239	99	--	4	--	7	2,349
1976	2,126	108	--	3	--	5	2,242
1977	NA	NA	NA	NA	NA	NA	NA
1978	979	577	1	--	--	5	1,562
1979	878	685	1	--	--	5	1,569
1980	813	785	1	4	--	5	1,608

Table 1 (continued). Registered fishing vessels in Atlantic Canada, by province and tonnage group, 1970-1980.

	Tonnage Group						
	< 10	10-24	25-49	50-99	100-149	150+	Total
New Brunswick							
1970	3,135	841	126	56	26	21	4,205
1971	3,116	823	119	54	26	22	4,160
1972	3,010	861	116	58	20	23	4,088
1973	2,929	839	113	56	20	23	3,980
1974	2,855	830	110	57	20	23	3,895
1975	2,870	855	111	54	16	19	3,925
1976	3,287	937	134	55	17	16	4,446
1977	NA	NA	NA	NA	NA	NA	NA
1978	1,603	1,187	89	72	24	10	2,985
1979	1,599	1,268	86	77	23	20	3,073
1980	1,638	1,331	89	82	25	13	3,178
Quebec							
1970	2,797	122	66	31	20	16	3,052
1971	3,085	126	67	30	18	17	3,343
1972	3,077	127	62	30	19	17	3,332
1973	3,247	131	68	30	15	14	3,505
1974	3,359	150	71	29	14	13	3,636
1975	3,728	159	78	28	15	15	4,023
1976	3,728	160	73	31	14	8	4,014
1977	2,557	186	82	32	14	9	2,880
1978	2,199	193	75	29	16	8	2,520
1979	2,133	250	84	40	17	9	2,533
1980	NA	NA	NA	NA	NA	NA	NA
Atlantic Canada							
1970	29,113	2,287	391	277	89	276	32,383
1971	28,402	2,345	383	221	80	271	31,702
1972	25,409	2,478	459	215	70	251	28,882
1973	25,466	2,424	504	229	66	250	28,939
1974	24,449	2,400	525	243	78	258	27,953
1975	26,512	2,399	550	228	59	260	30,008
1976	25,097	2,466	529	226	50	250	28,618
1977	NA	NA	NA	NA	NA	NA	NA
1978	25,472	4,090	559	271	72	264	30,728
1979	27,141	4,856	608	304	75	276	33,260
1980	NA	NA	NA	NA	NA	NA	NA

NA - not available

Source: Economic Policy Branch, Fisheries and Oceans Canada, Annual Statistical Review of Canadian Fisheries (various issues)

Table 2. Employment in fisheries compared with total employment, Atlantic Canada, 1977-1980.

(in thousands)

	Primary Sector	% of Total	Secondary Sector	% of Total	Total Employment
Newfoundland					
1977	20	12%	7	4%	164
1978	26	16	8	5	165
1979	32	18	10	6	173
1980	35	19	13	7	186
Nova Scotia					
1977	NA	NA	5	2	294
1978	10	3	5	2	306
1979	11	4	6	2	314
1980	11	3	8	2	330
New Brunswick					
1977	NA	NA	3	1	225
1978	5	2	4	2	239
1979	5	2	4	2	248
1980	6	2	5	2	256
P.E.I.					
1977	NA	NA	1	2	45
1978	2	4	1	2	46
1979	2	4	1	2	46
1980	3	6	1	2	49
Quebec					
1977	5	0.2	1	0.04	2499
1978	6	0.2	2	0.1	2516
1979	6	0.2	2	0.1	2598
1980	6	0.2	3	0.1	2668
Canada-Total					
1977	NA	NA	23	0.2	9,634
1978	73	0.7	25	0.3	9,740
1979	84	0.8	28	0.3	10,325
1980	87	0.8	37	0.3	10,641

NA - not available

Source: Economic Policy Branch, Fisheries and Oceans Canada, Annual Statistical Review of Canadian Fisheries (various issues)

Table 3. Registered fishermen in Atlantic Canada, by province, 1970-1980.

	Nova Scotia	New Brunswick	P.E.I.	Quebec	Newfoundland	Atlantic-total
1970	11,018	5,081	2,801	5,092	17,765	41,757
1971	10,688	5,148	2,677	5,252	15,961	39,726
1972	11,735	5,067	3,210	5,277	14,452	39,741
1973	10,600	4,997	2,636	5,450	15,313	38,996
1974	10,460	4,898	2,610	5,703	12,793	36,464
1975	10,435	5,118	2,739	6,470	15,802	40,564
1976	10,409	6,076	2,866	6,083	15,351	40,785
1977	NA	NA	NA	4,752	20,243	NA
1978	10,311	4,748	2,061	4,929	26,484	48,533
1979	10,799	5,165	2,421	5,148	32,352	55,885
1980	11,432	5,753	2,657	NA	35,080	NA

Source: Annual Statistical Review of Canadian Fisheries (various issues)

Table 4. Employees in processing plants in Atlantic Canada, by province, 1970-1980.

	Nova Scotia	New Brunswick	P.E.I.	Quebec	Newfoundland	Atlantic-total
1970	4,513	3,237	780	1,541	5,458	15,529
1971	4,284	2,876	789	1,480	5,566	14,995
1972	4,815	3,327	771	1,366	5,227	15,506
1973	5,328	3,340	705	1,296	5,961	16,630
1974	4,451	2,799	540	1,275	5,171	14,236
1975	4,354	2,343	510	1,365	4,344	12,916
1976	4,554	2,886	480	1,041	5,777	14,738
1977	4,873	2,995	594	1,401	7,059	16,922
1978	5,551	3,563	674	1,734	8,161	19,683
1979	6,126	3,925	739	1,848	9,807	22,445
1980*	7,973	5,121	1,307	3,184	13,117	30,702

Source: Annual Statistical Review of Canadian Fisheries (various issues)

*Note: The 1980 data were based on the actual number of plant employees, whereas data for previous years were based on the average number of employees.

Table 5. Catches and values, saltwater fisheries, Atlantic Canada v. Total, 1955-81.

(quantity in millions of pounds, live weight; values in millions of U.S. dollars)

	Atlantic Canada			Canada - total		
	Quantity	Landed Value	Marketed Value	Quantity	Landed Value	Marketed Value
1955	1,464	$ 51.3	$ 106.2	1,974	$ 80.0	$ 168.5
1960	1,552	61.7	128.7	1,910	91.6	185.6
1965	1,959	90.5	186.9	2,607	134.5	270.2
1966	2,194	93.3	196.9	2,792	149.6	311.8
1967	2,294	96.0	193.9	2,646	142.0	290.8
1968	2,794	107.4	223.1	3,083	160.6	338.1
1969	2,662	112.1	251.6	2,857	156.1	333.3
1970	2,588	125.9	266.1	2,846	183.7	384.3
1971	2,413	132.0	313.3	2,663	190.0	432.3
1972	2,053	146.5	358.0	2,411	222.3	518.6
1973	1,959	170.2	460.3	2,364	299.9	743.8
1974	1,722	175.5	432.3	2,033	278.8	657.7
1975	1,775	187.6	475.3	2,069	265.9	639.4
1976	1,942	227.3	634.6	2,341	371.1	936.4
1977	2,211	271.3	706.0	2,662	429.3	1,049.3
1978	2,542	365.0	840.9	2,981	586.2	1,294.9
1979	2,729	433.6	983.3	3,072	717.5	1,466.3
1980	2,549	436.3	989.9	2,835	592.2	1,335.4
1981*	2,444	434.3	NA	2,662	552.3	NA

* - preliminary

Source: Annual Statistical Review of Canadian Fisheries (various issues). Quantities converted to pounds; values converted to U.S. dollars.

Table 6. Exchange rates of selected currencies, 1970-1982.

(in U.S. cents per unit of foreign currency)

	Canadian Dollar	Danish Krone	Norwegian Krone	U.K. Pound	Japanese Yen
1970	95.80	13.33	13.99	239.59	.2792
1971	99.02	13.51	14.21	244.42	.2878
1972	100.94	14.38	15.18	250.08	.3300
1973	99.48	16.60	17.41	245.10	.3692
1974	102.26	16.44	18.12	234.03	.3430
1975	98.30	17.44	19.18	222.16	.3371
1976	101.41	16.55	18.33	180.48	.3374
1977	94.11	16.66	18.79	174.49	.3734
1978	87.73	18.16	19.08	191.84	.4798
1979	85.39	19.01	19.75	212.24	.4583
1980	85.53	17.77	20.26	232.58	.4431
1981	83.41	14.02	17.46	202.43	.4543
1982:					
January	83.95	13.34	17.06	188.60	.4448
February	82.37	12.83	16.75	184.70	.4250
March	81.93	12.44	16.60	180.53	.4145
April	81.62	12.26	16.44	177.20	.4097

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletin (monthly).

Table 7. Catches and landed values by province, Canadian sea fisheries, 1977-1980.

(quantity in millions of pounds, live weight; value in millions of U.S. dollars)

		Groundfish	Pelagic & Estuarial	Shellfish	Total
Nova Scotia					
1977	Q	365.5	237.9	294.1	897.5
	V	41.9	12.2	69.5	123.6
1978	Q	452.2	228.2	300.5	980.8
	V	56.0	22.2	91.3	169.6
1979	Q	509.0	145,3	274.0	928.6
	V	68.5	19.0	103.3	190.8
1980	Q	577.0	211.4	174.6	963.0
	V	83.7	23.6	89.3	196.6
New Brunswick					
1977	Q	41.7	211.6	31.3	284.6
	V	3.8	13.6	15.5	33.8
1978	Q	38.6	257.3	37.9	333.8
	V	3.8	19.4	20.1	43.3
1979	Q	51.8	203.5	47.2	302.5
	V	5.7	16.1	23.9	45.7
1980	Q	46.1	138.6	47.6	232.3
	V	5.5	11.6	24.3	41.4
P.E.I.					
1977	Q	24.9	5.7	13.0	43.7
	V	2.1	1.2	10.2	13.3
1978	Q	32.0	8.8	15.9	56.7
	V	2.8	1.4	14.7	18.9
1979	Q	38.1	10.6	19.6	68.6
	V	3.7	1.6	17.5	22.8
1980	Q	44.2	11.8	17.8	73.8
	V	4.2	1.7	15.3	21.2

Table 7 (continued). Catches and landed values by province, sea fisheries, 1977-1980.

(quantity in millions of pounds, live weight; value in millions of U.S. dollars)

		Groundfish	Pelagic & Estuarial	Shellfish	Total
Quebec					
1977	Q	90.6	12.1	17.2	119.7
	V	10.1	1.7	7.2	18.9
1978	Q	110.2	17.9	20.5	148.6
	V	12.7	3.0	9.7	25.4
1979	Q	124.8	20.9	28.9	174.6
	V	16.3	3.2	14.3	33.9
1980	Q	124.7	22.2	32.3	179.2
	V	17.0	4.4	14.0	35.5
Newfoundland					
1977	Q	613.5	165.6	86.9	866.0
	V	56.2	10.4	11.8	78.3
1978	Q	716.5	178.8	127.7	1,022.9
	V	67.5	13.2	21.0	101.3
1979	Q	825.0	198.4	231.3	1,254.6
	V	83.1	17.4	32.9	133.4
1980	Q	839.0	149.4	112.1	1,100.5
	V	95.6	19.9	19.0	134.5
Atlantic Canada					
1977	Q	1,136.3	632.7	442.5	2,211.4
	V	113.9	39.0	113.1	265.9
1978	Q	1,349.4	690.9	502.2	2,542.3
	V	142.4	59.2	156.8	358.4
1979	Q	1,549.0	578.9	600.8	2,728.6
	V	177.3	57.4	192.0	426.6
1980	Q	1,630.9	533.4	384.4	2,548.7
	V	206.1	61.3	161.9	429.4

Source: Annual Statistical Review of Canadian Fisheries (various issues). Quantities converted to pounds; values converted to U.S. dollars.

Table 8. Inshore and offshore catches in Atlantic Canada, by major species, 1975-1980.

(quantity in millions of pounds, live weight; value in millions of U.S. dollars)

	Cod		Redfish		Flatfish		All Groundfish		Scallops		Lobster		All Fish and Shellfish	
	I*	O*	I	O	I	O	I	O	I	O	I	O	I	O
1975 Q	194.7	126.9	1.8	225.1	18.1	184.5	268.7	659.2	7.3	139.8	37.3	1.1	555.1	1,224.4
V	18.1	12.0	0.1	11.8	1.4	14.0	24.7	49.7	1.4	23.9	46.0	1.5	93.8	94.0
1976 Q	249.3	177.5	2.4	195.3	23.4	220.0	328.7	706.6	9.0	196.9	33.7	1.5	633.4	1,313.1
V	25.9	17.7	0.1	11.5	2.0	18.7	34.2	60.7	1.9	37.5	44.3	2.4	104.6	122.9
1977 Q	296.1	227.7	1.5	145.3	26.0	218.9	377.7	758.4	7.1	250.4	37.9	1.3	804.2	1,412.5
V	33.3	24.8	0.1	9.1	2.4	19.6	42.1	71.8	1.2	40.3	51.4	1.9	126.9	144.7
1978 Q	383.4	271.0	4.4	165.4	36.4	204.4	524.5	824.7	7.7	233.5	40.8	1.5	1,040.1	1,502.2
V	46.1	29.7	0.4	11.1	3.9	17.5	61.8	80.5	1.8	54.0	64.4	1.9	177.5	187.5
1979 Q	442.9	390.4	4.4	173.5	43.9	198.9	615.1	933.7	8.8	188.9	46.3	1.3	1,293.0	1,435.6
V	59.3	44.3	0.4	12.7	5.2	18.5	79.4	97.9	2.4	60.8	67.8	1.8	221.2	212.4
1980 Q	523.6	407.0	3.9	104.1	41.1	190.1	722.8	908.1	12.5	142.8	43.1	1.2	1,200.1	1,348.6
V	73.0	49.1	0.3	8.1	5.2	20.1	98.2	107.9	4.5	54.1	66.6	1.8	187.0	208.4

* - I = inshore (vessels 25 tons, except in Newfoundland, 65 feet in length)
O = offshore (vessels 25+ tons, except in Newfoundland, 65+ feet in length)

Source: Annual Statistical Review of Canadian Fisheries (various issues).
Quantities converted to pounds; values converted to U.S. dollars.

Table 9. Canadian federal and provincial subsidy programs and expenditures, 1979-1982 (annual expenditures in U.S. dollars).

Source of Subsidy	Type	Activity Subsidized	Maximum Amount Available	Terms	1979	1980	1981	1982
Federal:								
Fisheries and Oceans	Grant	Construction of vessels under 75'	$125,000 steel $100,000 wood	to 1982: 35% 1982: 25%	NA	$6.2 mill. 386 Atlantic boats	$7.1 mill. 324 boats	$6.1 mill. 380 boats
" "		maintenance of harbors			NA	NA	$1.3 mill.	$30.3 mill.
Industry, Trade and Commerce	Grant	Construction of vessels over 75'		9% of cost	$50.6 mill. 43 boats	$64.1 mill. 64 boats	$62.6 mill. 42 boats	$61.5 mill. 63 boats
					(for all ships, including fishing vessels)			
Fisheries and Oceans	Loan guarantees	construction or purchase of boats and equipment	to 1982: $ 50,000 1982: $150,000	prime plus 1% 15 year max.	$24.2 mill. for 1490 loans	$23.8 mill. for 1408 loans	$19.5 mill. for 1158 loans	NA
Fisheries Prices Support Board	Grant	production of frozen fillets and blocks	17¢ per pound	guarantee of $1.45/lb. min. price	NA	NA	$12.5 mill.	NA
" "	Grant	production of frozen haddock fillets			NA	NA	$11.7 mill.	NA
" "	Grant	production of canned mackerel	1979: 54.8¢/lb. 1980: 63.8¢ 1981: 74.8¢ 1982: 81.9¢ (net weight)		NA	$1.7 mill.	$2.1 mill.	$2.1 mill.

Table 9. (continued) Canadian federal and provincial subsidy programs and expenditures, 1979-1982 (annual expenditures in U.S. dollars).

Source of Subsidy	Type	Activity Subsidized	Maximum Amount Available	Terms	1979	1980	1981	1982
Provincial:								
Newfoundland								
Small Fishing Boat Bounty Program	Grant	construction of boats under 10 tons	$45-100		NA	$617,200 472 boats	$375,350 310 boats	NA
Fishing Ships Bounty Program	Grant	construction of boats between 10-75 tons	10-20 tons: $1,050/ton 21-75 tons: $1,300/ton		NA	$1.24 mill. 64 boats	$1.88 mill. 50 boats	NA
Rebuilding and Repair Bounty	Grant	for boats over 8 years old and registered in Nfld. over 4 years		35% of costs	NA	NA	NA	NA
Loan Deficiency Guarantee Program		Covers loan defaults			NA	NA	$3.3 million	NA
Fisheries Loan Board	Direct loans, guarantees	vessel construction	$50,000 for direct loans	12% (to 5/82: 8%)	NA	$10.2 mill., 585 direct: $4.8 mill., 24 loan guarantees	$17.5 mill. for all loans	NA
Inshore Fishing Gear Longliner Program	Grant	conversion of open boats to decked boats		lesser of either 30% of costs or $100/foot		NA	$80,650 for 55 boats	NA
Inshore Fishing Gear Program for Labrador	Grant	Acquisition of gear		30% of costs	NA	NA	$56,700 for 197 boats	NA

Table 9. (continued) Canadian federal and provincial subsidy programs and expenditures, 1979-1982 (annual expenditures in U.S. dollars).

Source of Subsidy	Type	Activity Subsidized	Maximum Amount Available	Terms	1979	1980	1981	1982
Nova Scotia								
Department of Fisheries	Grant	Equipment acquisition	$15,000	50% of costs	120 vessels equipped since program's inception (as of 2/15/82)			
"	Grant	Liferaft acquisition		50% of costs	NA	NA	$166,800	NA
Fisheries Loan Board	Direct loan	vessel acquisition		to 1982: 10% 1982: 13%	$26 mill. 607 loans	$45 mill. 852 loans	$32.9 mill. 738 loans	$14.3 mill. 382 loans
New Brunswick								
Department of Fisheries	Grant	Equipment acquisition	$15,000	50% of costs	NA	NA	$126,000	NA
"	Grant	vessel construction, research and development			NA	NA	141 boats constructed; $197,000 in R & D	NA
P.E.I.								
Department of Fisheries	Grant	Vessel construction	$3,000	15%	174 boats	$221,100 77 boats	$185,600 77 boats	$85,800 (11 months) 36 boats
"	Grant	Vessel modification	$10,000	25%	NA	NA	NA	$180,000 for both programs
"	Grant	acquisition of fish marketing equipment (e.g., display cases)	$5,000	50%				

Table 10. U.S. imports of selected fish products from Canada, quantities and values, 1978-1982.
(quantity in thousands of pounds; value in thousands of dollars)

Whole fresh:

Year		Herring	Cod	Haddock[1]	Flatfish
1978	Q	53,865	2,103	5,862	1,750
	V	5,809	627	2,363	495
1979	Q	29,238	3,763	6,591	2,872
	V	2,197	1,309	2,593	754
1980	Q	14,044	3,638	7,650	2,459
	V	1,104	1,271	3,176	746
1981	Q	7,519	7,368	15,784	3,760
	V	625	2,875	6,643	1,312
Jan.-May					
1981	Q	1,745	4,342	6,234	812
	V	163	1,778	2,761	337
Jan.-May					
1982	Q	717	5,116	7,122	856
	V	381	2,191	3,305	222

Whole frozen:

Year		Herring	Cod	Haddock	Flatfish
1978	Q	10,458	426	-0-	382
	V	3,506	201	-0-	350
1979	Q	10,741	1,260	646	517
	V	2,431	759	231	523
1980	Q	4,307	1,231	1,009	295
	V	1,346	802	223	366
1981	Q	5,497	858	331	346
		1,620	511	312	321
Jan.-May					
1981	Q	2,464	293	151	122
	V	741	190	177	63
Jan.-May					
1982	Q	2,130	563	86	185
	V	585	334	43	126

[1] includes haddock, hake, cusk and pollock.

Table 10 (continued). U.S. imports of selected fish products from Canada, quantities and values, 1978-1982.

Filleted, fresh:

Year		Atlantic Ocean Perch[1]	Cod	Haddock[2]	Flatfish
1978	Q	42,329	3,896	2,994	751
	V	39,830	4,199	3,145	1,023
1979	Q	40,244	7,447	3,632	1,186
	V	41,769	8,251	3,998	1,564
1980	Q	25,067	6,794	3,444	1,944
	V	23,908	7,474	3,927	2,770
1981	Q	39,328	8,488	5,765	3,068
	V	39,229	9,974	6,669	4,683
Jan.-May					
1981	Q	9,167	4,728	3,097	958
	V	9,271	5,842	3,763	1,525
Jan.-May					
1982	Q	8,780	5,498	1,941	412
	V	8,943	6,804	2,350	698

Filletted, frozen:

Year		Cod	Haddock[2]	Flatfish
1978	Q	35,450	16,283	50,120
	V	36,144	14,310	56,753
1979	Q	43,367	17,696	49,202
	V	44,729	16,674	62,617
1980	Q	43,807	16,646	39,267
	V	48,121	16,933	49,580
1981	Q	68,638	20,498	57,128
	V	82,112	20,822	77,462
Jan.-May				
1981	Q	28,901	9,261	21,615
	V	34,845	9,720	30,288
Jan.-May				
1982	Q	29,728	6,261	4,143
	V	35,788	6,244	5,680

[1] includes both fresh and frozen Atlantic ocean perch fillets.

[2] includes haddock, hake, cusk and pollock.

Table 10 (continued). U.S. imports of selected fish products from Canada, quantities and values, 1978-1982.

Blocks:

Year		Cod	Haddock	Pollock	Flatfish
1978	Q	65,556	2,119	1,608	14,472
	V	61,496	2,082	1,063	11,827
1979	Q	88,875	2,255	795	14,940
	V	89,135	2,402	603	15,051
1980	Q	85,580	2,506	2,162	12,372
	V	86,273	2,936	1,397	11, 44
1981	Q	75,192	8,165	1,927	11,232
	V	76,541	8,515	1,533	10,934
Jan.-May					
1981	Q	34,195	5,798	1,197	4,648
	V	36,015	6,295	918	4,472
Jan.-May					
1982	Q	20,607	336	1,792	897
	V	20,864	354	1,368	788

Source: Resource Statistics Division, National Marine Fisheries Service.

NOTES

1. Department of Fisheries and Oceans Canada, 1980 Annual Statistical Review of Canadian Fisheries, pp. 79, 130 (converted into U.S. dollars).
2. National Marine Fisheries Service, "Canadian Subsidies to the Fishing Industry" (1978), p. 1; "Certain Fish from Canada," U.S. International Trade Commission publication #919 (1978), pp. A-11-A-13; and "Certain Fish and Shellfish from Canada," U.S.I.T.C. publication #966 (1979), p. A-7.
3. "Certain Fish from Canada," op. cit., p. A-13.
4. Sou'wester, 8/15/81, pp. 2, 7.
5. Economic Programs Branch, Fisheries and Oceans, correspondence, 5/18/82.
6. Fisheries and Oceans, 1979 Annual Statistical Review of Canadian Fisheries, tables 77-81.
7. 1979 Annual Statistical Review, op. cit., tables 77-81.
8. Newfoundland statistics define an offshore vessel as one in excess of 100 feet in length.
9. 1979 Annual Statistical Review, op. cit., tables 39-43.
10. Nova Scotia, New Brunswick, and Prince Edward Island classify in terms of the percent of income earned; Newfoundland and Quebec, by the number of months worked.
11. Even though part-time or occasional fishermen may work only half of the year, it may be their only employment, as many fishermen are idle during winter months.
12. 1980 Annual Statistical Review, op. cit., table 77.
13. New Brunswick, Newfoundland, Nova Scotia, and P.E.I.
14. Fisheries and Oceans, 1980 Annual Statistical Review, table 78.
15. 1979 Annual Statistical Review, op. cit., tables 77-81.
16. Economic Policy Branch, Fisheries and Oceans, correspondence, 7/27/82.
17. Despite this drop, the value of Atlantic landings rose 48% (in Canadian dollars) from 1968 to 1974. During this period, Canadian landings as a whole fell 34%, to about 2 billion pounds; landed values rose 57%.
18. Sou'wester column by Fisheries Minister LeBlanc, 2/15/82, p. 1 of supplement.
19. National Marine Fisheries Service, "Fisheries of the U.S.: 1981," p. 90.
20. Ibid., p. 79.
21. Ibid., p. 49.
22. From 1979 to 1980, the Canadian dollar rose 2% against the Norwegian krone and 9% against the U.K. pound sterling, and fell 7% relative to the Danish krone and 3% relative to the Japanese yen. Calculated from Board of Governors of the Federal Reserve System, Federal Reserve Bulletin (monthly).
23. Several studies in the United States have concluded that demand for fish is, in fact, elastic. See, for example, Nancy Bockstael, "Fisheries Investment and Market Behavior," Ph.D. thesis, University of Rhode Island (1976), and sources cited therein.
24. Fisheries and Oceans, "Policy for Canada's Atlantic Fisheries in the 1980's: A Discussion Paper" (1981), p. 35.
25. C.M. Blackwood, Department of Fisheries and Oceans Canada, "Fish Processing Capacity of Plants in the Atlantic Region" (1974), p. 7.

26. About half of the Atlantic groundfish landed in Canada is landed by vessels operated by the integrated processors; in addition, they are the major processors or marketers of much of the landings of the independent fishermen.
27. See, for example, Fisheries and Oceans, "Quality Excellence in the '80's"; and "Policy for Canada's Atlantic Fisheries in the 1980's," op. cit., pp. 48-53.
28. Fisheries and Oceans, News Release, 12/14/81.
29. "Policy for Canada's Atlantic Fisheries in the 1980's," op. cit., p. 7.
30. Fisheries and Oceans, News Release, 2/10/81.
31. Ibid.
32. Fisheries and Oceans, "Background Notes on the 1982 Atlantic Groundfish Management Plan," p. 2.
33. Ibid.
34. See, for example, Fisheries and Oceans, "1982 Atlantic Groundfish Management Plan" (1981), p. 3.
35. Ibid.
36. Fisheries and Oceans, News Release, 5/23/80.
37. Ibid.
38. Fisheries and Oceans, News Release, 11/24/80.
39. The designation of "full-timer" vs. "part-timer" is based on Department records. Any fisherman not satisfied with his designation may appeal to local committees; these are made up of fishermen.
40. Fisheries and Oceans, News Release, 11/24/80.
41. Ibid.
42. Ibid.
43. Fisheries and Oceans, "Sector Management of Canada's Atlantic Fisheries: A Discussion Paper" (1981), p. 1.
44. It has been estimated that less than 5% of the inshore fleet previously fished across sector boundaries. "Policy for Canada's Atlantic Fisheries in the 1980's," op. cit., p. 7.
45. Sou'wester, 1/1/82, p. 2.
46. Sou'wester, 12/15/81, p. 5.
47. Economic Programs Branch, Fisheries and Oceans, correspondence, 5/18/82. This is as of 1982. Prior to this, a maximum of 35% of costs was available. The official reason for the cut was that a given program appropriation could benefit a greater number of fishermen.
48. Transportation Industries Branch, Department of Industry, Trade, and Commerce, correspondence, 6/25/82.
49. Ibid.
50. Fisheries and Oceans, News Release, 12/14/81.
51. Fisheries and Oceans, 1980-81 Annual Report of the Fisheries Improvement Loans Act, p. 1.
52. Ibid., p. 2.
53. Ibid. The "market" rate for these loans would be about prime plus 3%. Fisheries and Oceans Loans Administration, correspondence, 5/25/82.
54. 1980-81 Annual Report of the Fisheries Improvement Loans Act, table 1.
55. Ibid., table 4.
56. Fisheries Prices Support Board, Annual Report 1980-81, p. 5.
57. Ibid., p. 9.
58. $1.45 in Canadian dollars.

59. Order-in-Council of December 21, 1981, under the Fisheries Prices Support Act.
60. Ibid.
61. Fisheries Prices Support Board, correspondence, 4/29/82.
62. Order-in-Council, op. cit.
63. Fisheries and Oceans, News Release, 7/24/81.
64. Ibid.
65. Fisheries and Oceans, News Release, 6/16/82.
66. Ibid.
67. Ibid.
68. Fisheries and Oceans, News Release, 5/14/81.
69. Department of Regional Economic Expansion, 1980-81 Annual Report, p. i.
70. Ibid., p. 8.
71. Sou'wester, 10/15/81, p. 8.
72. Canadian Fishing Report, April 1982, p. 27, and May 1982, p. 24.
73. DREE, Annual Report 1980-81, p. 17.
74. Ibid.
75. Newfoundland Department of Fisheries, "Fishing Vessel Assistance Plan 1981."
76. Sou'wester, 3/15/82, p. 12.
77. Sou'wester, 2/15/82, p. 17 of supplement (converted to U.S. dollars).
78. Ibid., p. 28.
79. New Brunswick Department of Fisheries, 1981 Annual Report, p. 24.
80. Canadian Fishing Report, April 1982, p. 24.
81. Sou'wester, 6/1/82, p. 3.
82. Nova Scotia Loan Board Manager, quoted in Sou'wester, 3/15/81, p. 4 of supplement.
83. Newfoundland Department of Fisheries, correspondence, 5/17/82. As of May 1982, the Board's interest rate is 12%.
84. Ibid.
85. Fixed-cost subsidies to harvesters include aid for acquisition of vessels and equipment; those to processors include aid for acquisition of equipment. Operating subsidies are paid to fishermen through fish purchases and tax exemptions; processors receive similar assistance.
86. Fisheries and Oceans, News Release, 5/14/81.
87. Capalbo, Dirlam, Norton, and Wang, "Subsidies to the Canadian Groundfish Industry: Background Information for a Countervailing Duty Assessment," University of Rhode Island Agricultural Experiment Station Contribution #1738, June 1977.
88. The method used is taken from Capalbo et al., op. cit.
89. Fisheries and Oceans, "Costs and Earnings of Selected Fishing Enterprises in Nova Scotia: 1980" (1981), table 2. The original construction cost of the average 6-year-old dragger in the study of $184,896 at a 9% average annual rate of inflation roughly approximates a current cost of $300,000.
90. The landings level for the 54-foot dragger in the Nova Scotia study in 1980 was 687,192 pounds, at an average price of 24.6¢ per pound.
91. This assumes a round/fillet conversion factor of 0.4.
92. The Boston price of U.S. fresh haddock fillets in 1981 averaged $1.87 per pound (National Marine Fisheries Service, Fisheries of the U.S.--1981, pp. 82-83); this compares with an average price of imported Canadian fresh haddock fillets of $1.26 per pound (U.S.) in 1981 (Economic Policy Branch, Fisheries and Oceans, Canadian Fisheries: Exports, monthly).
93. Financial Services Office, National Marine Fisheries Service, Gloucester, Mass.