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Economic and Commercial Analysis of Groundfish in Quebec, 1991

Economic and Commercial Analysis
Report n° 108

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Canada

Economic and Commercial Analysis of Groundfish in Quebec, 1991

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SOMMAIRE EXECUTIF

Au cours de la dernière année, les prix des principaux produits de morue ont atteint de nouveaux sommets. La diminution importante de l'offre a été le facteur déterminant de cette évolution. Pendant ce temps, de nouvelles sources d'approvisionnements et de nouveaux produits viennent modifier de façon notable les habitudes de consommations américaines de produits de la mer. Entre temps, l'industrie québécoise compose depuis quelques années avec une ressource de plus en plus limitée. Les usines n'utilisent qu'un faible pourcentage de leur capacité et l'on a déjà entrepris la rationalisation de ce secteur. Pour leur part, les pêcheurs améliorent sensiblement leur sort en 1991, bien que dans la plupart des cas, le niveau de rentabilité soit encore fragile.

ABSTRACT

Over the past year, prices of the main cod products have climbed to new highs. A major decrease in supply was the determining factor in this trend. During this time, new sources of supply and new products have significantly altered American consumption of sea products. The industry in Quebec has had to deal with an increasingly declining resource over the past few years. Processing plants are working at only a fraction of their capacity, and rationalization has already begun in the sector. Fishermen, on the other hand, made considerable gains in 1991, although in most cases their profitability is still somewhat shaky.

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INTRODUCTION

This report is intended to inform those involved in the Quebec fisheries industry of the groundfish situation in the province and its economic impact on stakeholders whose activities depend mainly on this group of species.

The economic and commercial analysis focusses mainly on cod. There are two reasons for this. The first has to do with the importance of this species for the groundfish industry in Quebec. Although the proportion of cod in total groundfish landings in Quebec has declined in recent years, this species remains the most important in the group, with 56% of total volume.

The second reason is related to markets. Cod is taken to a certain extent as a standard for setting the price of other competitive species. It thus becomes possible to identify major trends in these markets based on changes in the demand for cod. The trend in cod products on the market is representative of changes in demand trends and thus enables us to illustrate and explain their impact on the Quebec groundfish industry.

We take this opportunity to thank the Statistics Division of Quebec Region, which through its cooperation made possible the preparation of this report.

1. BACKGROUND

a) Destination of Quebec exports

Overall, it is estimated that at least 70% of Quebec's production of groundfish products is exported to other countries.

Of these exports, 84% is destined for the American market. The American market absorbs almost all exports of frozen products, while it competes with the European market for exports of salted and/or dried products. The American market has become a more important factor in 1989 and 1990, since in 1988 it accounted for only 65% of Quebec's groundfish exports.

QUEBEC GROUNDFISH EXPORTS IN 1990
main destinations

	Cod	Redfish	Flounder	Others	Total
United States	83%	98%	100%	48%	84%
Europe	16%			1%	11%
Asia		2%		2%	1%
Others	1%			50%	4%
Total	34,4M$	8,0M$	4,7M$	4,0M$	51,1M$

Source: Statistics Canada

This growth in the American market is mainly the result of a decline in our exports of dry salted products to the European market.

b) Trends in Quebec cod exports

The U.S. provides the main market for Quebec cod products. With 83% of the total, the U.S. absorbs almost all exports of frozen products, with the U.K. and France lagging far behind. Italy and Portugal are the main importers of lightly salted cod products.

The relatively favourable situation on the American market during 1990 is mainly responsible for the significant rise in the value of our exports of cod products, which rose from $25.3 million to $34.2 million from 1989 to 1990, for an increase of 35%. This is the highest level recorded in recent years.

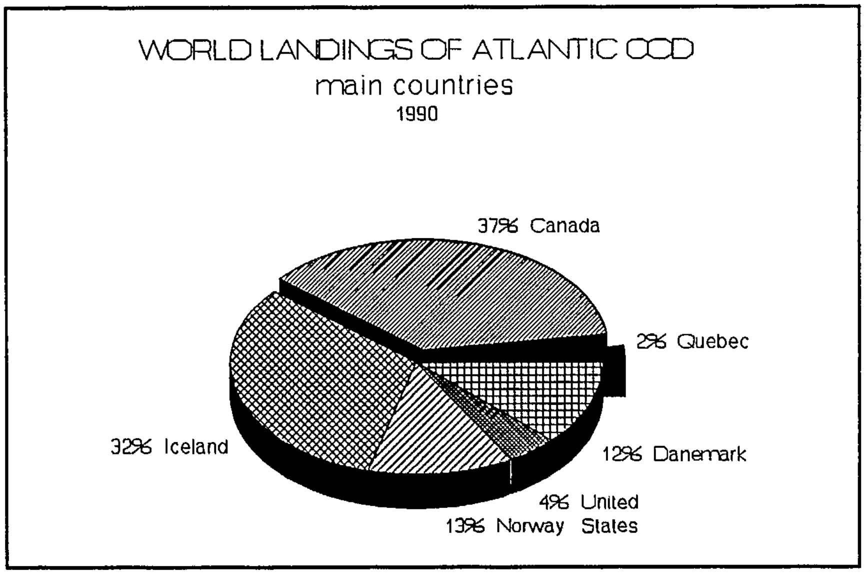
In the sections that follow, we will examine the supply and demand components that most influence the American market by examining in detail the market for cod products.

2. SUPPLY OF GROUNDFISH

In this section, we will look at supply components that have an impact on our main export market, the U.S.

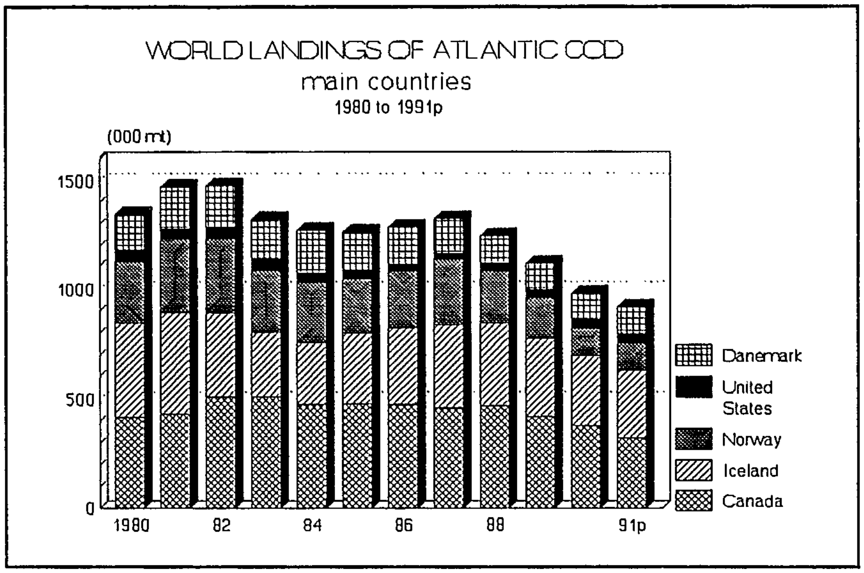
a) World cod supply

FIGURE 1



Canada contributes a major share of the world supply of Atlantic cod. With landings of nearly 400,000 t, Canada accounts for 39% of landings by the five main suppliers. These, with landings of 980,000 t, account for 65% of world landings.

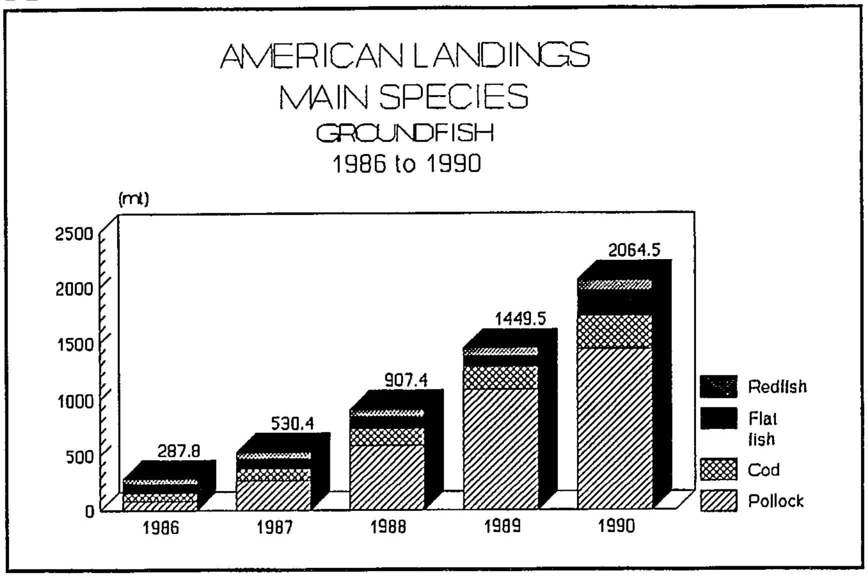
FIGURE 2



In recent years, landings of Atlantic cod by the main producing countries have decreased steadily. After remaining in the 1.3 million tonne range from 1981 to 1987, landings began to decline and, for the past two years, have failed to reach the million tonne level. This trend is a good indication of the problems caused by overfishing the main world stocks of Atlantic cod. Fortunately, recent scientific data on these stocks suggest that landings could recover in the mid-term.

b) U.S. landings

FIGURE 3

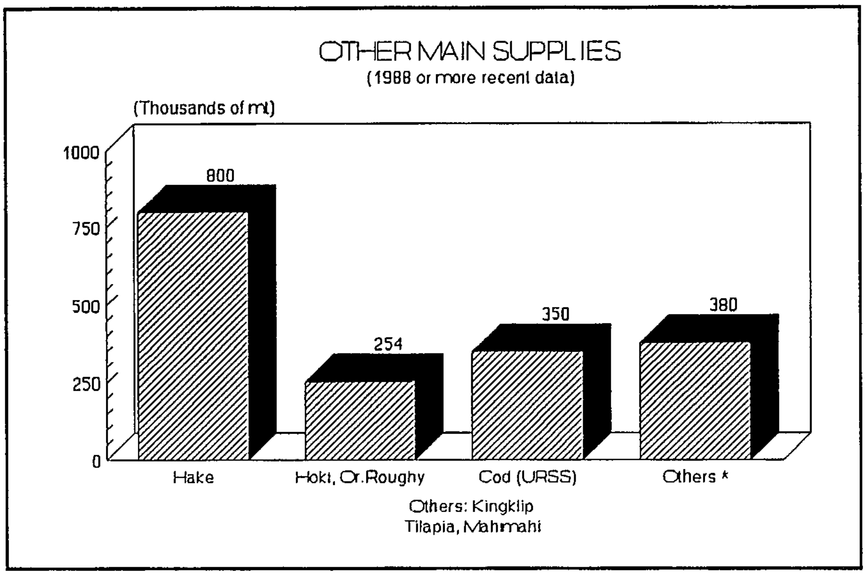


Increased U.S. participation in the Alaska fishery is still having a major influence on the American market. In less than 5 years, U.S. groundfish landings rose from 287,800 t in 1986 to over 2 million t in 1990. The main species involved in this increase are pollock, Alaska cod and various species of flatfish. In the section on demand, we will be looking at the impact of these species on the American market.

c) Other main supply sources

Space limitations make it unfeasible to list all the species or alternate sources of supply that influence the American market, so we will simply look at the most important.

FIGURE 4



The various species of hake have significant potential for supplying the American market, notably hake from Argentina and Uruguay and hake from Chile and Peru. Including American landings, this group of species represents a potential of 800,000 t. Landings have been stable in recent years, although there are already fears of overfishing.

Hoki and Orange Roughy from Australia and New Zealand are another major source of raw materials. Orange Roughy has been an unqualified success on the U.S. market since 1987. In terms of supply, these two species are currently experiencing some problems due to overfishing, and quotas have consequently been cut.

Although it might seem inopportune to refer here to the current upheavals in the USSR, they may nevertheless have a major impact in coming years. Freer trade between the U.S. and various Soviet (or even independent) republics might give the Americans access to some of the Atlantic cod production from that part of the world. For certain republics, cod would provide a good source of hard currency.

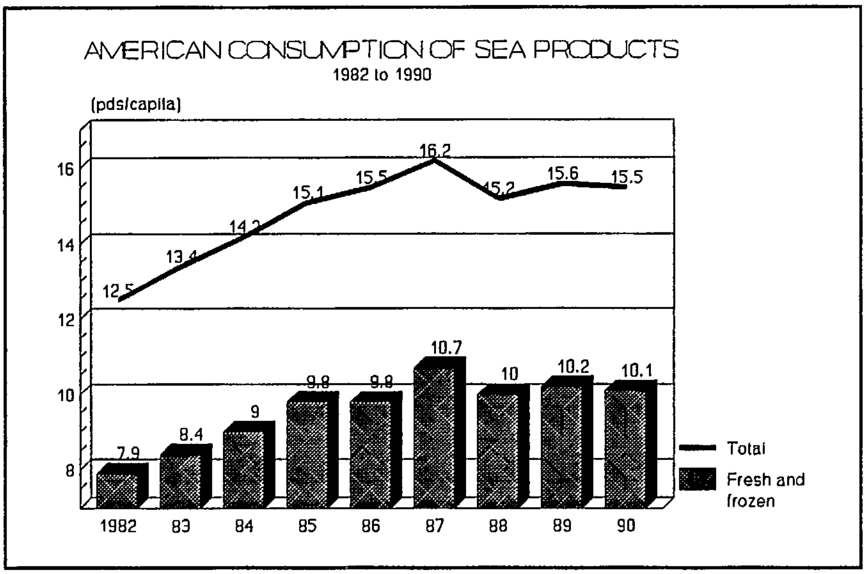
To a lesser extent, some other species are offered on the U.S. market and could, in the long term, improve their position in that market, for example Kingklip, Tilapia and Mahimahi. The last two species have good aquaculture potential, and it would not be surprising to see them develop in the same way as catfish. Catfish is growing steadily, and we will look in detail at its impact in our analysis of U.S. demand.

To summarize, the U.S. has major potential in Alaska, and the use they make of this resource might have a significant impact on our own products. To a lesser extent, we should also be alert to penetration by products from South America and Australia/New Zealand.

3.TRENDS IN AMERICAN DEMAND

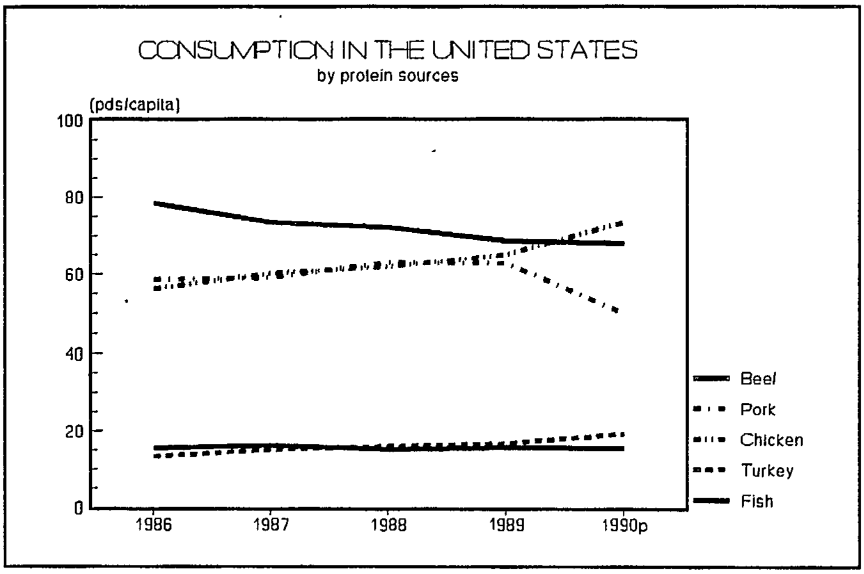
a) Consumption of sea products

FIGURE 5



American per capita consumption of sea products has declined for the second time in four years. It is, however, important to note that the decline was only 0.1 lb/capita. Some observers of the American scene feel that this performance is somewhat encouraging, given that we were in the midst of a recession. In absolute terms, and taking into consideration the increase in population, this per capita drop nevertheless represents an overall increase in U.S. consumption of sea products of 15 million pounds.

FIGURE 6



We should, however, point out that sea products are not the big winners in the shift to healthier eating in recent years. U.S. consumption of various types of protein indicates a massive shift to chicken and turkey since 1986. Preliminary figures for 1990 show that chicken has become the main source of animal protein, while turkey has now moved ahead of sea products. Pork and beef consumption is declining significantly.

b) Changes in demand for fresh and frozen products

Since 1987, a record year for seafood consumption in the U.S. with 16.2 lb./capita, major changes have occurred in the category of fresh and frozen products. Let us look at those changes that had an impact on demand for our products.

- The losers

Between 1987 and 1990, cod and flatfish lost ground. Cod, which nevertheless ranked third among products consumed in the U.S., dropped from 1.68 lb./capita in 1987 to 1.38 lb. in 1990. It should be added that Alaska cod accounts for an increasing share of this consumption, thus masking the major decline in Atlantic cod.

Flatfish was the fifth most commonly consumed product in 1987 with 0.727 lb./capita, but is now eighth with consumption of 0.57 lb./capita. Here again, it should be noted that Alaska flatfish have been accounting for an increasing proportion of this consumption.

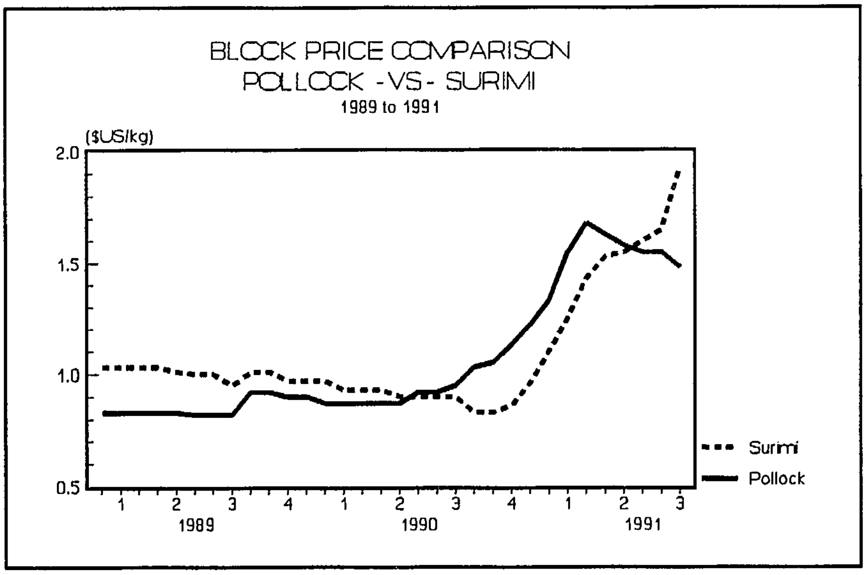
In both cases, Alaska has had a significant impact. For our cod, it should be added that the decrease in world landings has forced the American market to turn to other sources of supply.

- The winners

Three species now hold a special place in U.S. eating habits. Pollock, salmon and catfish currently rank fourth, fifth and sixth respectively as the most heavily consumed species in the U.S.

As mentioned above, greater American participation in the Alaska fishery has had a direct impact on the U.S. market. The major pollock resource (1.4 million t) is still mainly used for the production of surimi. However, 1990 is a striking example of the American potential for modifying their production to take advantage of new opportunities.

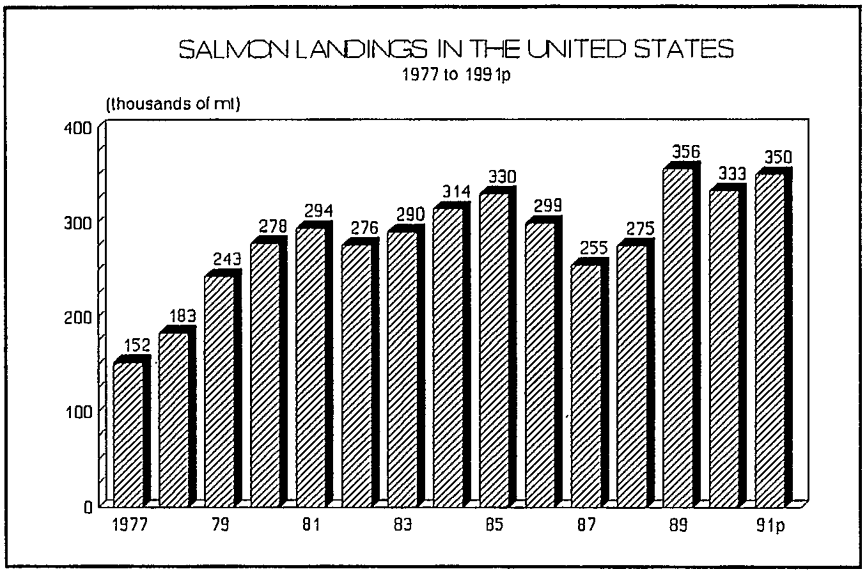
FIGURE 7



Given the price advantage for frozen pollock products over surimi in 1990, U.S. production of frozen products rose from 41,900 t in 1989 to 93 400 t in 1990, an increase of 123%. If we look at the figures for U.S. consumption by species, we see that per capita consumption of pollock increased from 0.89 lb./capita in 1987 to 1.27 lb. per capita in 1990.

For 1991, it is still too early to tell what influence the major increase in the price of surimi will have. At last word, the prices of frozen products on the European market were still high enough to attract U.S. production of pollock to this production line.

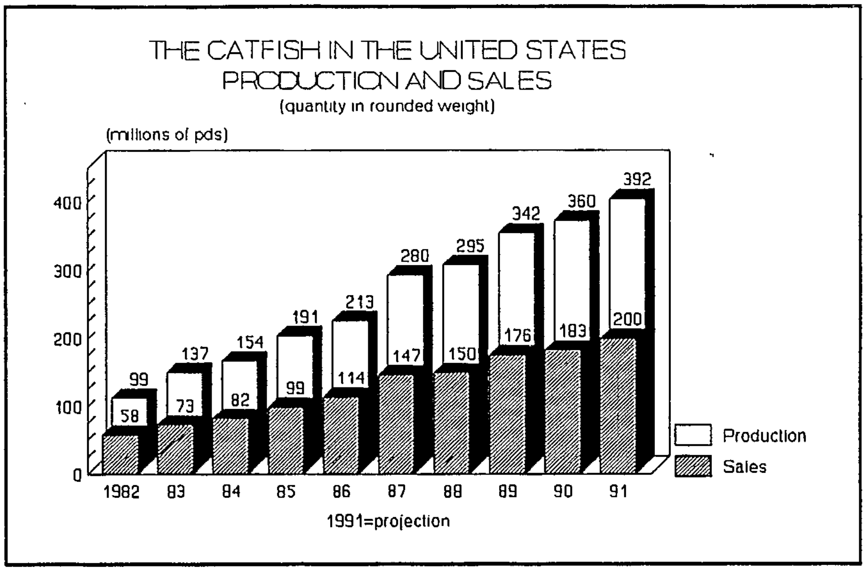
FIGURE 8



Salmon is not a direct competitor for our groundfish. It does, however, account for an increasing share of U.S. consumption of sea products and thus competes with all sea products. Over the past three years, the average annual U.S. landings of salmon were 346,000 t, compared to 276,000 t during the previous three-year period. The impact of aquaculture is also noteworthy, since the price of salmon has increased steadily over the past few years.

At the risk of repeating ourselves, we must again mention the success story of catfish in the U.S. In only ten years of commercial sales annual production is in the 400 million pound range, half of which was sold in 1990. Of the 183 million lbs. sold, 87 million were in the form of fresh or frozen fillets.

FIGURE 9



A study specifically on catfish[1] showed that these species, mainly produced in Mississippi, Arkansas, Alabama and Louisiana, has not really penetrated the northeastern U.S. market. It nevertheless appears that it is only a question of time, and the study points out the real advantages of catfish over cod (continuous supply, quality control, well-defined marketing strategy and significant financial benefit).

As far as the other species mentioned in connection with supply are concerned, they will probably never make the list of most heavily consumed products in the U.S., but they are still species which compete with our products. We will have an opportunity to situate them more precisely when we take a closer look at the markets for groundfish fillets and frozen blocks.

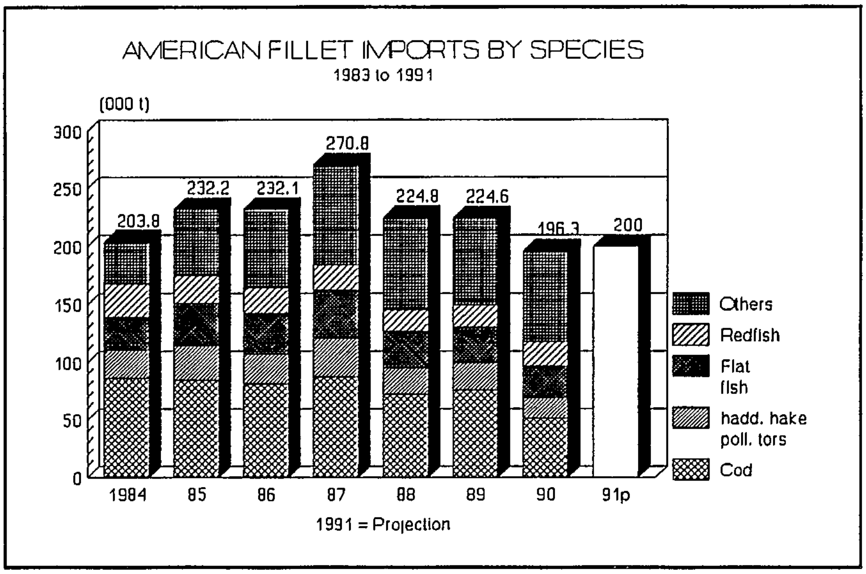
To summarize, analysis of U.S. demand shows that it has not increased significantly over the past few years, and the U.S. has become more self-sufficient through major landings in Alaska and aquaculture (catfish) production. The proportion of Atlantic cod and flatfish in U.S. consumption is on the decline.

[1] Barnett, J. A Review of the U.S. Farm-raised Catfish Industry and its Implications for Canadian Groundfish Exporters, Economic and Commercial Analysis Report No. 52, July 1990, 46 p.

4. U.S. MARKET FOR GROUNDFISH FILLETS

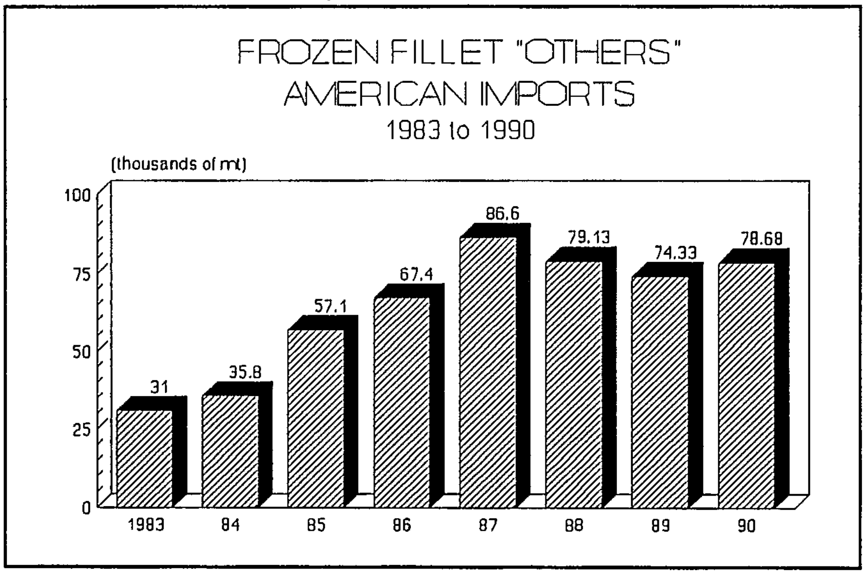
a) U.S. imports

FIGURE 10



After reaching record levels in 1987, U.S. imports of fish fillets declined to previous years' levels at 225,000 t. At present, they seem to be stabilizing at about 200,000 t. The decreased supply of cod has been felt to a great extent. As well, the contribution of fillets from Alaska has been considerable, since imports of haddock, pollock, hake and cusk now account for less than 10% of the total.

FIGURE 11



It is noteworthy that the proportion of imports of non-traditional species[2] rose from 24% of the total in the period of 1984 to 1986 to over 36% for 1988-1990. This category includes such species as Hoki, Orange Roughy and Kingklip. The case of Orange Roughy is particularly indicative, since New Zealand has been exporting some 17,000 t of fillets to the U.S. since 1987. Hoki is not as popular in the U.S., and it is much in demand in Japan, where it is seen as a substitute for pollock in the production of surimi.

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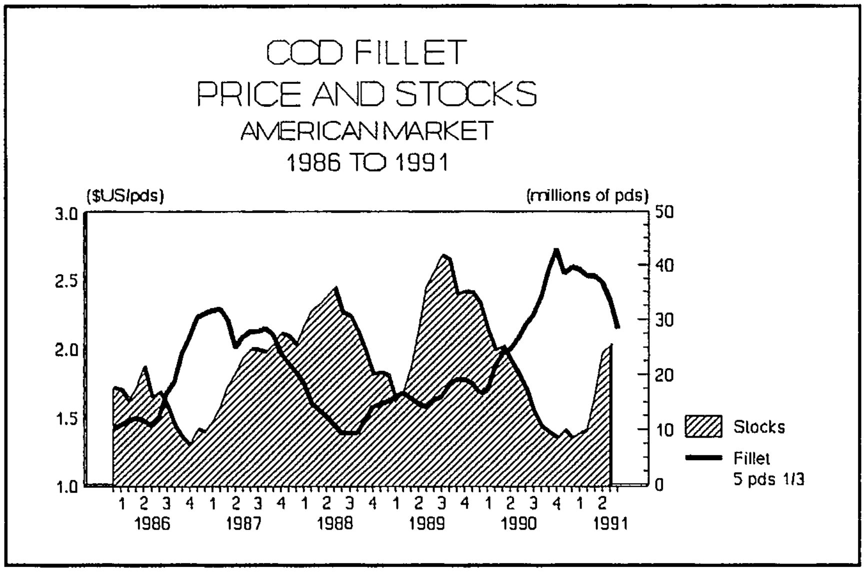
[2] Excluding cod, haddock, pollock, hake, flatfish and ocean perch.

b) U.S. prices and stocks of cod fillets

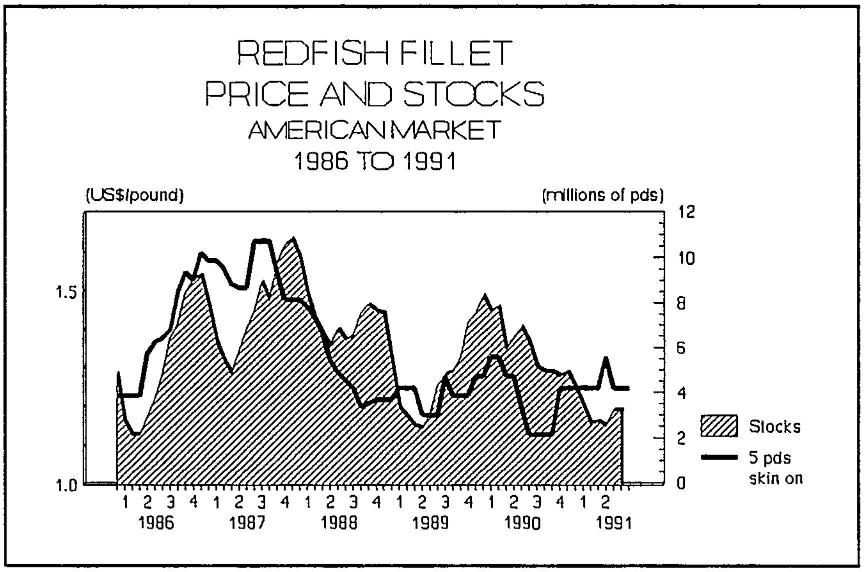
FIGURE 12



Trends in U.S. stocks and prices of cod fillets since the beginning of 1990 are inversely proportional. The price of cod fillets has peaked, while stocks are at their lowest level. Since early 1991, stocks have begun to rise, and the price has consequently started to come down. At the time of writing, there is strong pressure to bring prices back to the early 1991 level. At mid-September, the price was back up to $US 2.38/lb.

c) U.S. prices and stocks of ocean perch fillets

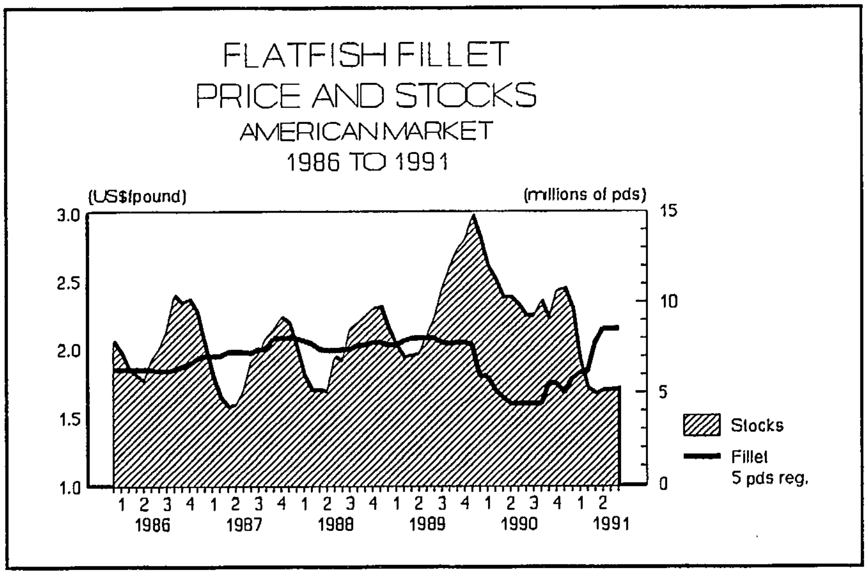
FIGURE 13



Prices and stocks of ocean perch are not in the same relation as those for cod. U.S. stocks are currently very low, and prices do not seem to be taking off. At $US 1.25/lb., demand is simply not high enough to put pressure on the price, and there is no indication of any recovery in the short term.

d) U.S. prices and stocks of flatfish fillets

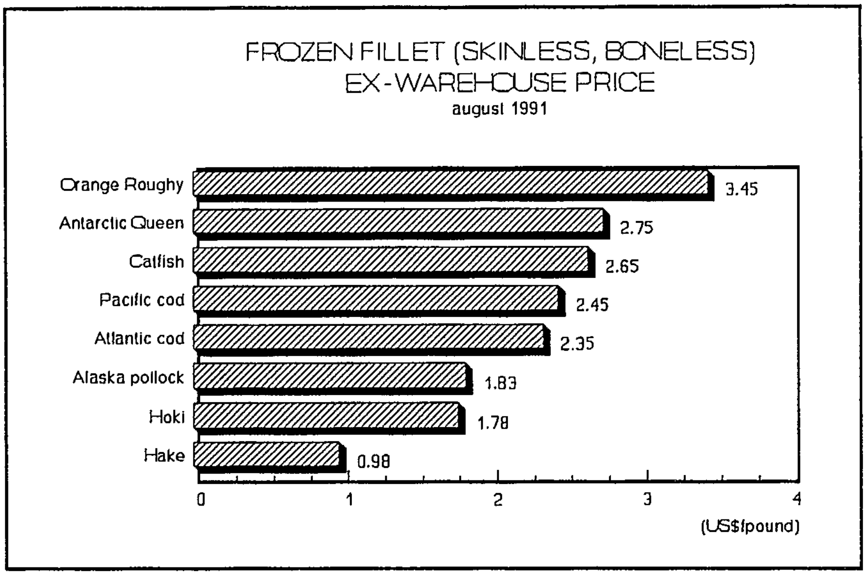
FIGURE 14



The market for flatfish fillets in general was fairly slow in 1990. After several years of stability from 1986 to 1989, the price of flatfish fillets dropped significantly in 1990 as a result of abnormally high stocks. The situation returned to normal in 1991. Current stock levels are comparable to those of 1986-1989, and this has of course pushed prices up, with the current level being as high as $US 2.15/lb., the highest in recent years.

e) Comparative prices of fillets

FIGURE15



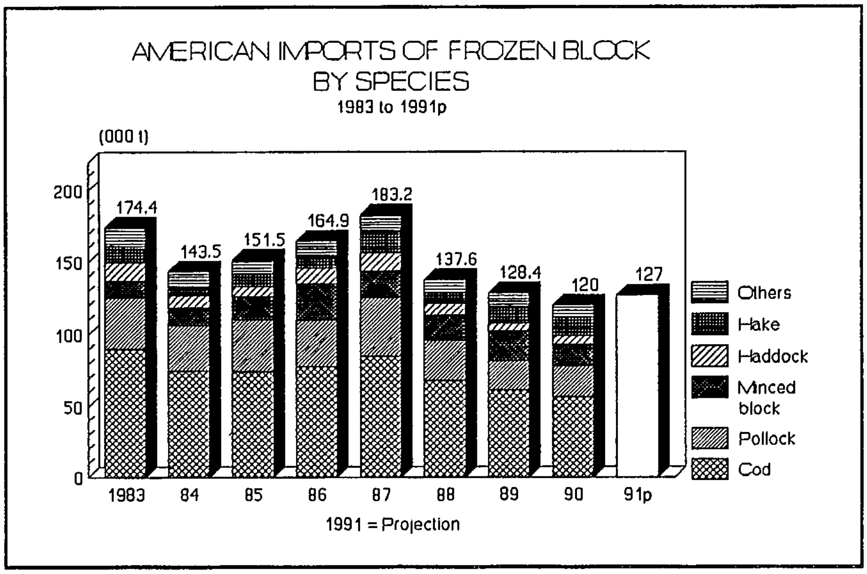
Although there is no exact comparison, this type of exercise nevertheless enables us to situate the price of our cod fillets in relation to certain substitutes. At the present time, cod is favoured over Orange Roughy, Atlantic Queen and catfish. It should, however, be noted that these species, which are positioned on the up-scale market, are characterized by fairly limited volume or by continuous supply with the quality control of farm-raised products. Conversely, cod is at a disadvantage compared to pollock, hoki and hake. These three species have problems of quality and acceptability on the market, and are all attractive for the production of surimi.

We should mention in concluding that this is merely a comparison of price, which does not take into account such aspects as taste, quality, etc., nor does it take into consideration fluctuations over time. When world cod stocks make it possible to increase catch levels, it will be interesting to see how cod is repositioned on the fillet market and how prices for other fillet products react.

5. U.S. MARKET FOR FROZEN GROUNDFISH BLOCKS

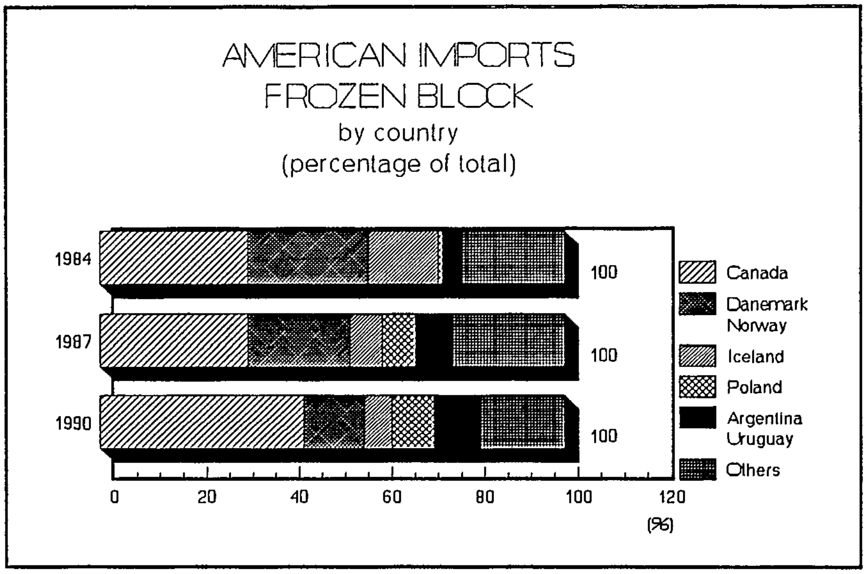
a) U.S. imports of blocks

FIGURE 16



American imports of groundfish blocks appeared to increase slightly in 1991, following three years of decline. Examining imports by species gives no indication of major changes in recent years, apart from a decrease in imports of cod blocks as a result of declining world landings.

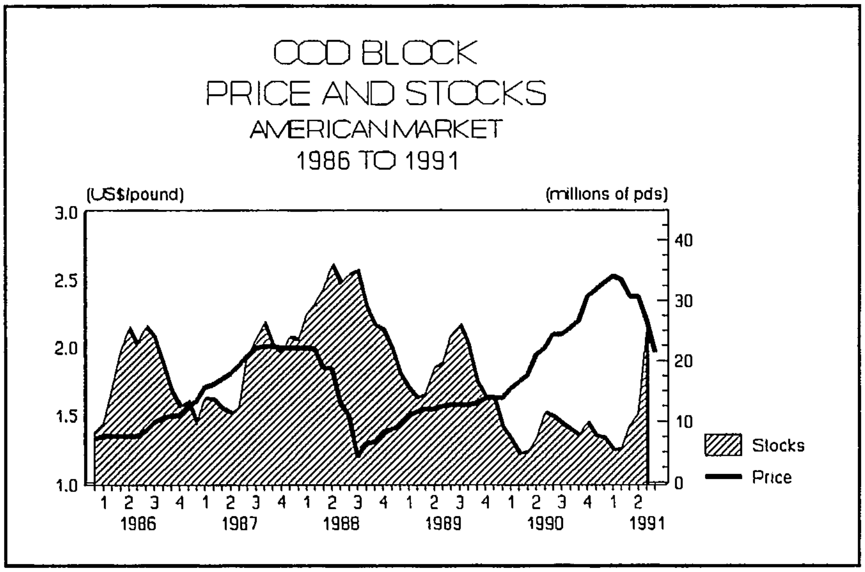
FIGURE 17



Analysis of U.S. supplies of blocks by country of origin, however, yields quite interesting results. The first thing noted is a major increase in the Canadian share of U.S. imports. Poland with pollock and Argentina and Uruguay with hake are also winners in the changes that occurred between 1984 and 1990. The big losers are the Scandinavian countries (Denmark and Norway), as well as Iceland. These countries have directed much of their production of blocks to the European market to take advantage of high prices on that market.

b) U.S. cod block prices and stocks

FIGURE 18

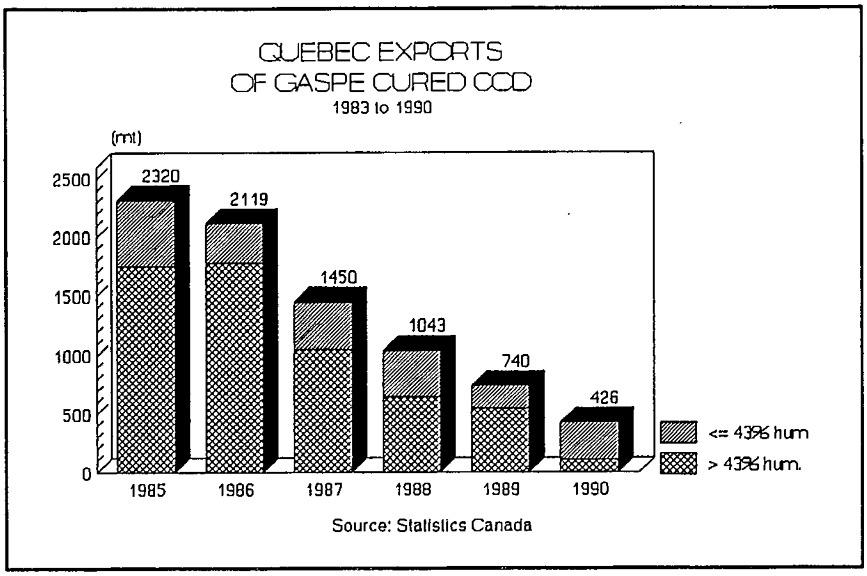


The U.S. market for cod blocks was very active during 1990. From August 1988 to February 1991, prices increased steadily, from $US 1.20/lb. to a high of $US 2.50/lb. Over the past 18 months, stocks have been very low, contributing to the rise in prices. Prices dipped during the summer months, falling below the $2 mark during August 1991. At the present time, prices are rising and seem likely to reach $2.50 again in the short term.

The market for blocks may be summarized by saying that 1990 was a particulary good year for cod and prices have currently started rising again after a decline early in 1991. In the longer term, we should be on the watch for penetration of this market by hake from South America and the possible return of the Scandinavians should European prices start to fall.

6. DRY SALTED MARKET

FIGURE 19



In looking at dry salted products, we will concentrate on specifically Quebec products, i.e. Gaspé cured.

Trends in the volume of Quebec exports of lightly salted "Gaspé cured" products show that this industry sector has been losing ground for the past few years. However, a look at the unit value of these exports shows us that the price of Gaspé cured products has been rising significantly over the last two years, on both the American and Italian markets. On the American market, the price of lightly salted 48% dried cod has increased by 24% in two years, while the Italian market showed a rise of 40% during the same period.

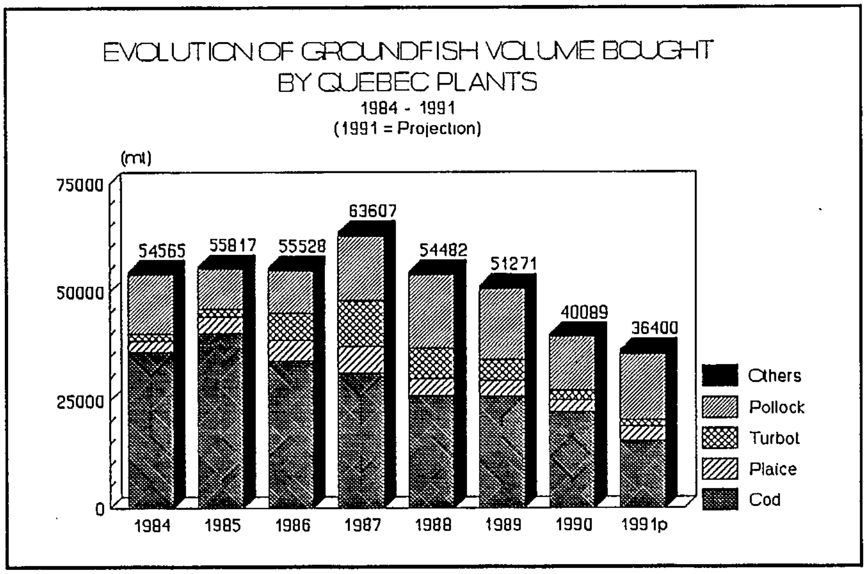
We thus see that the main problem for Quebec producers lies in their ability to obtain supplies of raw materials, and not in the demand for their products. It seems likely that producers will be unable to fill the orders they have received in 1991.

Quebec producers of salted products will have to find a solution to their supply problem in the foreseeable future if they are to keep their share of the market.

7. SITUATION IN THE PROCESSING SECTOR

a) Supply of groundfish to fish plants

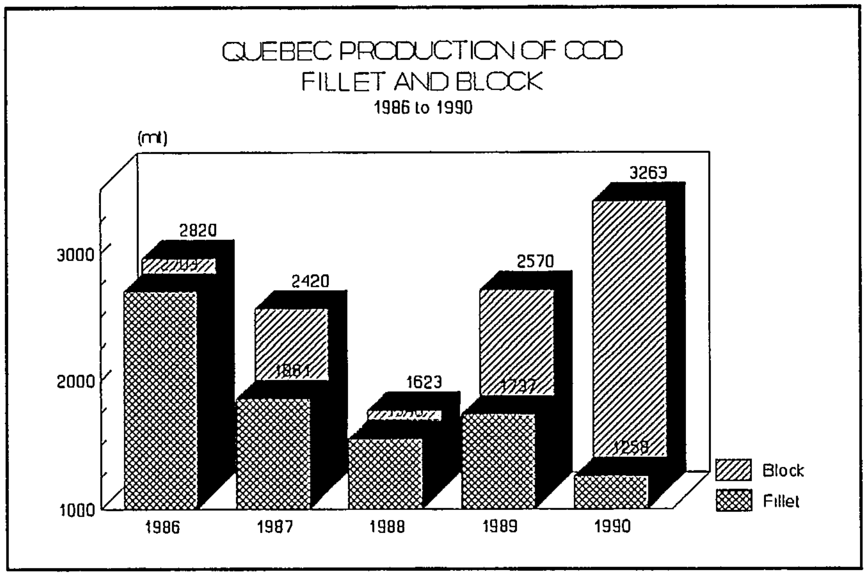
FIGURE 20



Fish plants have been severely affected by decreased landings since 1987, when supplies peaked at nearly 64,000 t. Preliminary figures for 1991 confirm the downward trend. It is estimated that supplies of groundfish have decreased 43% in the four-year period. This trend would have been even more pronounced had supplies of redfish not increased.

b) Production

FIGURE 21



Over the past two years, the situation for frozen cod blocks has been particularly favourable. It is noteworthy that Quebec plants have responded to market demands by orienting their production increasingly towards this product. Between 1988 and 1990, Quebec plants doubled their production of cod blocks, while production of fillets decreased by 20% during the same period.

c) **Operating margin**[3]

The operating margin is the difference between the selling price of a given quantity of product on the market and the raw materials used to produce it. It represents what remains per unit produced to pay production costs, after deduction of the cost of raw materials.

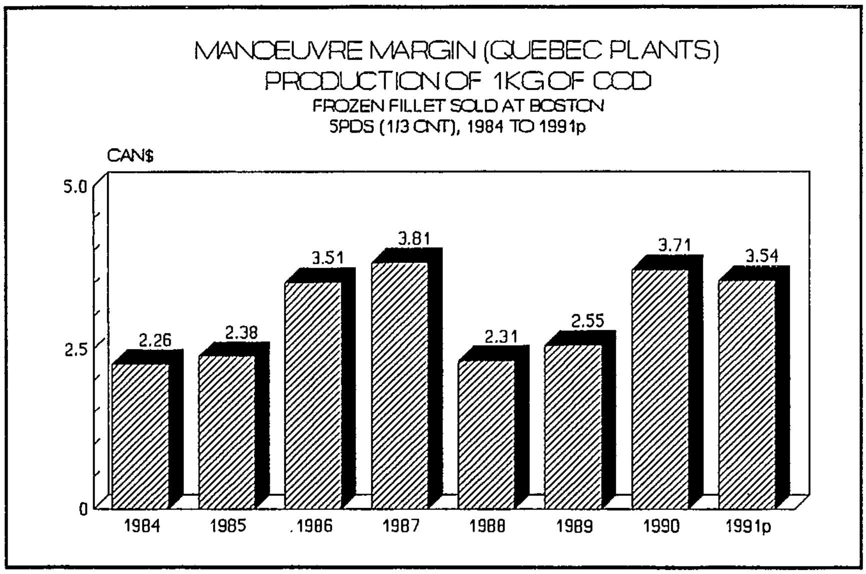
It should be clearly understood that the operating margin should not be seen as a measure of the financial soundness of processing plants. It simply shows whether it is more profitable to produce a given product under the same conditions from one year to another.

We will confine ourselves here to examining the operating margin resulting from production of the two main Quebec products, frozen cod fillets and frozen cod blocks.

- Cod fillets

The operating margin for production of a kilo of cod fillets sold in 5-lb. packages (1/3 cnt) on the Boston market declined slightly in 1991, to 1986 levels; however, this index does not take into consideration the major decrease in landings between 1986 and 1991, nor of increased production costs.

FIGURE 22



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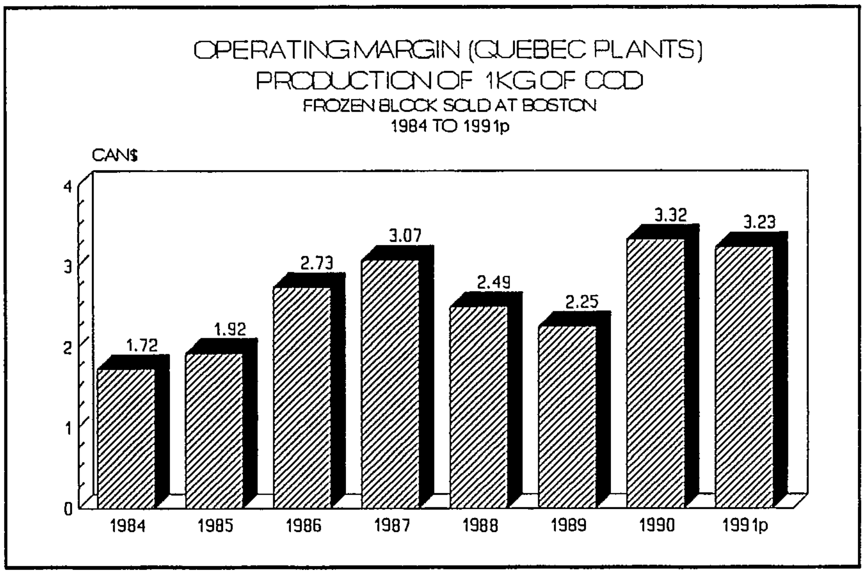
3 The operating margin replaces the "gross margin" used in previous reports. It is hoped this change will make the concept clearer to our readers.

- **Cod blocks**

FIGURE 23



The trend in the operating margin for production of a kilo of cod blocks sold in Boston is similar to that for cod fillets, except for the fact that, at $3.23, it is currently higher than the 1987 level of $3.07. This is partly due to the major shift towards production of this product.

On the whole, we may conclude that the situation of fish-packing plants is more difficult today than in the mid 1980s, when the operating margin was lower. The significant decrease in supplies has forced plants to spread their fixed costs over a smaller quantity of finished products. In addition, variable operating costs have more than likely increased from 1986 to 1991.

This situation is conceivably due to rationalization in this sector of the industry.

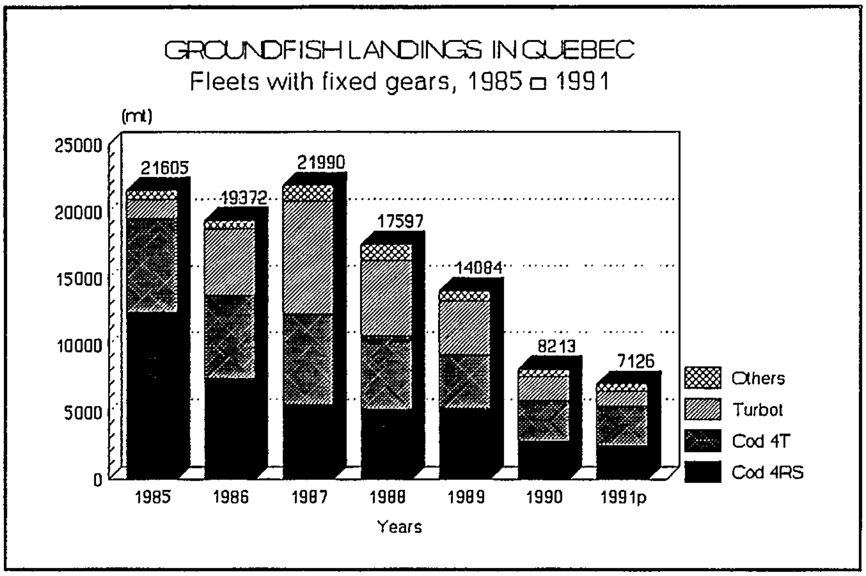
8. IMPACT ON THE FISHING SECTOR

Declining supplies to fish plants are mainly due to the decrease in cod quotas and the significant drop in landings of some major species. The most direct impact, and not the cause, is the decrease in the number of fishermen involved in the primary sector.

a) Fleets with fixed gear

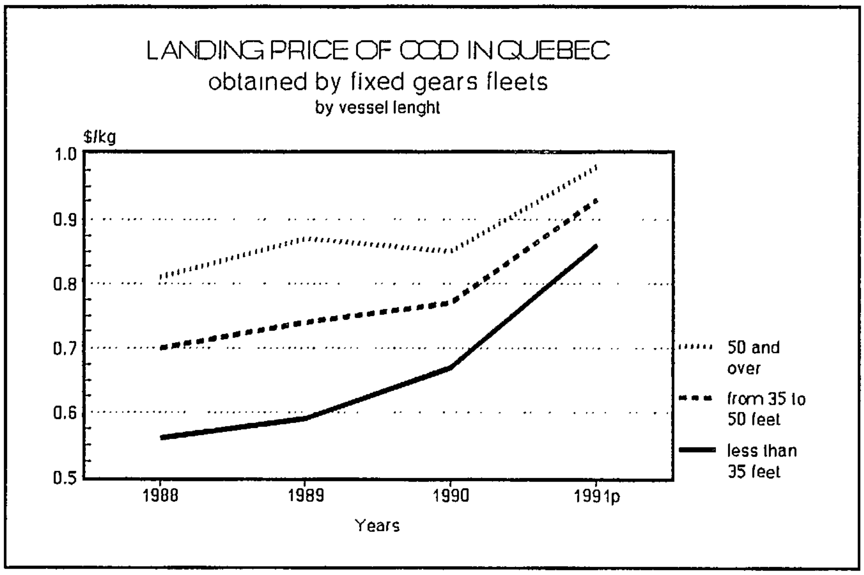
Groundfish landings by fishing fleets using fixed gear have dropped more than 70% since 1987. Turbot is now only a shadow of its 1987 self, while Gulf cod stocks are providing much lower yields than in previous years.

FIGURE 24



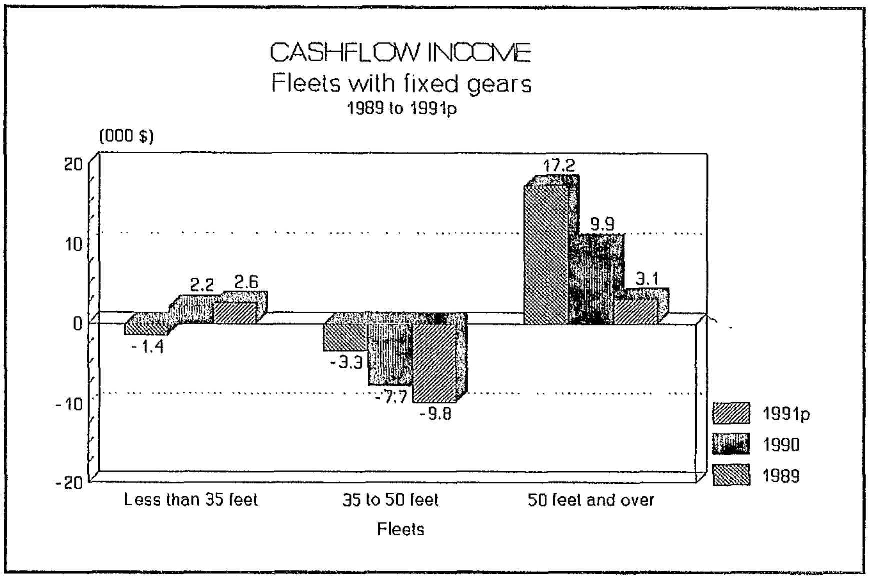
An analysis of the price paid for cod in the various length categories of vessels with fixed gear shows that there is still a difference in price between longline cod and gillnet cod, and that the price has increased considerably in 1991. It has, however, been observed that the gap has been narrowing over the past two years.

FIGURE 25



Increase competition by fish plants for raw materials and the significant decrease in landings of larger cod (which command higher landings prices) may be responsible for this change.

FIGURE 26



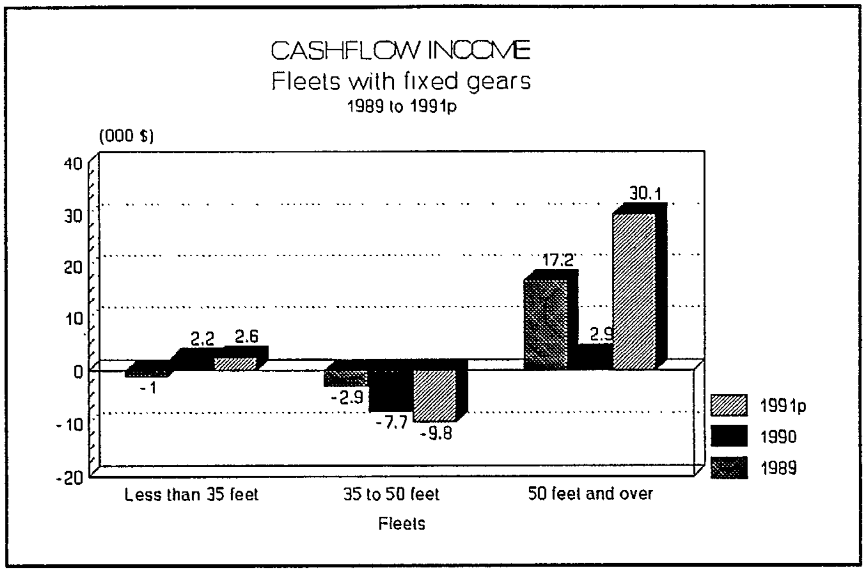
Strangely enough, fleets with fixed gear have not all been affected to the same extent by dwindling stocks. While the fleet of vessels under 35 feet in length has just managed to cover its costs for the past two years, the 35-50 foot fleet is now in serious trouble, recording an increasing operating deficit for the third year in a row. The large longliner fleet (50 feet and over), still operates profitably but, with a very small margin of profit.

It should be noted that these results are averages for Quebec as a whole. This point is of even greater importance this year given the disastrous season looming on the Lower North Shore. At the time of writing, few fishermen and fish plant workers in this area could hope to accumulate enough weeks of work to qualify for unemployment insurance.

b) Fleets with mobile gear

We will look at three fleets with mobile gear, the Magdalen Islands Scottish seiner fleet, trawlers under 50 feet in length and the fleet of trawlers 50 to 65 feet in length under enterprise allocation.

FIGURE 26



Strangely enough, fleets with fixed gear have not all been affected to the same extent by dwindling stocks. While the fleet of vessels under 35 feet in length has just managed to cover its costs for the past two years, the 35-50 foot fleet is now in serious trouble, recording an increasing operating deficit for the third year in a row. The large longliner fleet (50 feet and over), on the other hand, has considerably improved its profitability. This improvement is due to a major increase in the price of cod and a decrease in operating costs because of reduced fishing effort.

It should be noted that these results are averages for Quebec as a whole. This point is of even greater importance this year given the disastrous season looming on the Lower North Shore. At the time of writing, few fishermen and fish plant workers in this area could hope to accumulate enough weeks of work to qualify for unemployment insurance.

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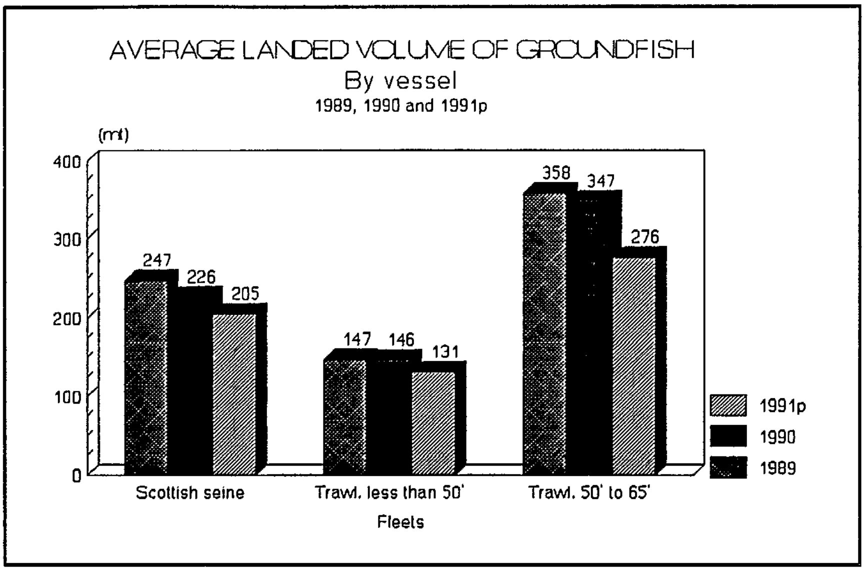
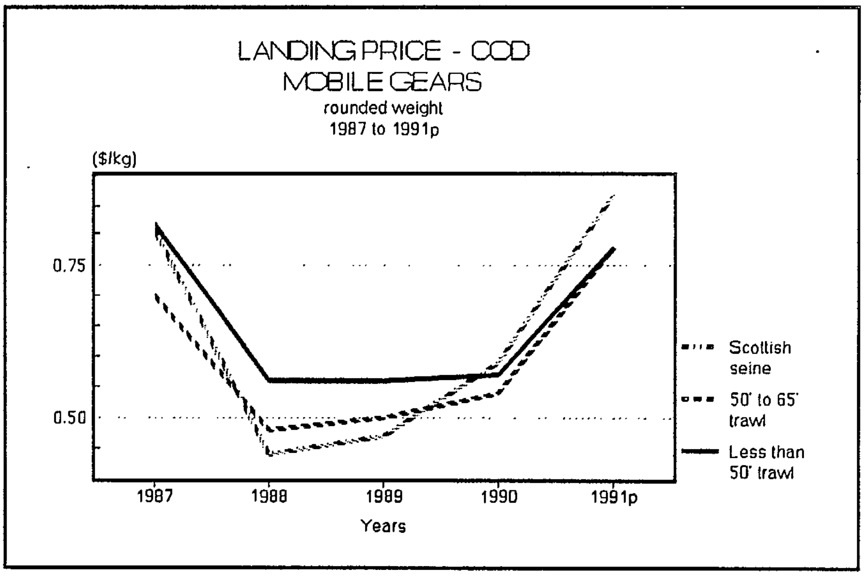
FIGURE 27



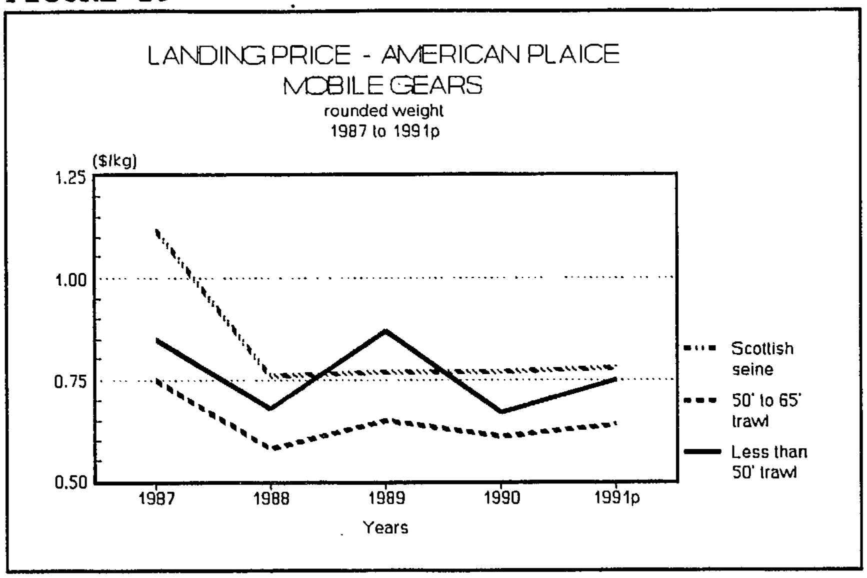
Over the past three years, the volume of groundfish landings by vessels with mobile gear has also declined. In 1991, it is predicted that the heaviest decrease will be that of trawlers 50-65 feet in length, which might amount to over 20%. Corresponding decreases for the seiner fleet and trawlers under 50 feet in length are 9% and 10% respectively.

FIGURE 28



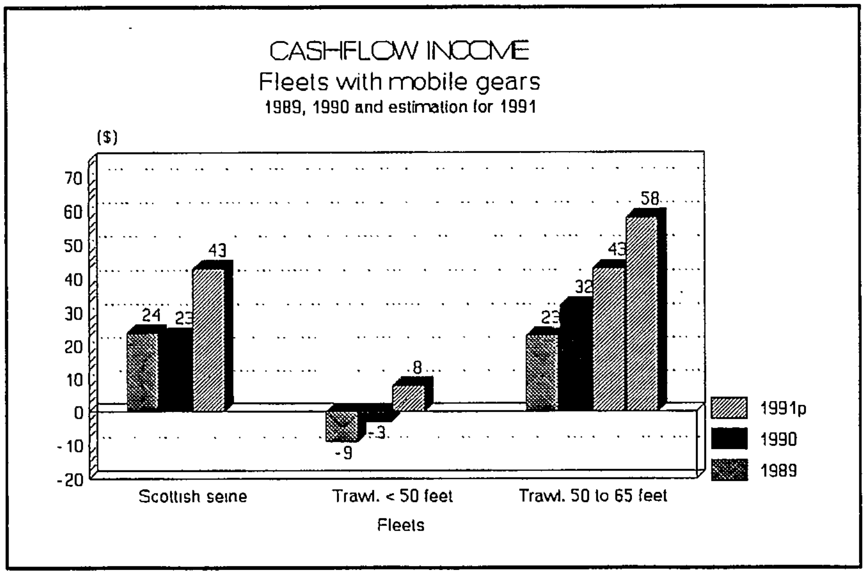
These decreases in average landing volumes are nevertheless largely compensated for by the increase in landing prices. This is the case for cod, for example, where the landing price rose from around $0.55/kg (round weight) in 1990 to over $0.75/kg in 1991. It is also noteworthy that the price differential between the two trawler fleets, which favoured vessels under 50 feet, has decreased gradually in recent years and disappeared completely in 1991.

FIGURE 29



The situation for American plaice is also noteworthy. With the exception of 1989, when the price paid to trawlers under 50 feet was higher than for seiners, we can see the price variance due to differences in the quality of plaice landed by each of these fleets. For 1991, all fleets with mobile gear recorded slight increases in the price of American plaice.

FIGURE 30



In the final analysis, we may conclude that the increase in prices had a greater impact on the profitability of fleets than the decrease in landings. Seiners saw their cash flow rise from $23,000 to over $43,000, while trawlers under 50 feet showed a positive cash flow for the first time in three years. The case of trawlers with quota allocations is more complicated. The provincial government has announced a temporary relief program for 1991 to assist owners of boats built after December 1987 who are experiencing serious problems meeting their financial obligations. The program enables these owners to make payments (for insurance, interest and capital) equal to only 20% of their fishing earnings compared to the normal payments which under present conditions might be as high as 45% of their fishing earnings.

The average cash flow of this fleet for 1991 will depend on the number of vessels that take advantage of the program. Under these conditions, we have decided to illustrate the average cash flow resulting from this program, compared to a uniform payment of 20% of fishing earnings for all vessels in this fleet. Based on these two scenarios, the average cash flow of this fleet would be between $43,291 and $58,331.

APPENDICES

Table 1

QUEBEC EXPORTS OF GROUNDFISH PRODUCTS
BY DESTINATION
1990

(in thousands of Canadian dollars)

Species\ Market	Cod	Rockfish	Flatfish	Turbot	Others	Total
United States	28,589.2	7,849.5	4,654.2	772.2	1,120.6	42,985.7
Europe	5,497.1	10.5	0	0	50.2	5,557.8
Asia	135.7	147.7	0	0	64.0	347.4
Others	187.1	19.6	0	0	1,975.6	2,182.2
Total	34,409.1	8,027.2	4,654.2	772.2	3,210.4	51,073.2

Source: Statistics Canada

Table 2

WORLD LANDINGS OF ATLANTIC COD
BY SELECTED COUNTRY
1977-1991p

(thousands of tonnes, live weight)

Year	Canada	Denmark	Iceland	Norway	U.S.	Total
1977	235.4	153.5	329.7	426.5	34.3	1,179.4
1978	296.4	133.0	319.7	403.9	39.2	1,192.2
1979	370.2	136.6	360.1	334.3	44.4	1,245.6
1980	418.0	164.4	429.1	281.2	53.6	1,346.3
1981	432.6	194.6	460.6	338.9	45.6	1,472.3
1982	510.7	193.1	382.3	344.4	47.4	1,477.9
1983	509.0	185.6	293.9	284.0	51.0	1,323.5
1984	474.9	182.7	281.5	276.4	43.9	1,259.4
1985	480.5	163.9	322.8	247.8	37.6	1,252.6
1986	474.7	145.8	365.9	269.5	27.7	1,283.6
1987	457.4	143.7	389.6	304.0	26.8	1,321.5
1988(prel.)	471.1	121.4	375.8	256.6	34.5	1,259.4
1989(prel.)	422.0	120.0	336.4	187.0	35.6	1,101.0
1990(prel.)	381.8	82.5	314.3	123.0	41.0	942.6
1991(proj.)	350.0	80.0	300.0	135.0	41.0	906.0

Sources: FAO Yearbooks for the years 1977-86
Canada - Department of Fisheries and Oceans
Denmark, Norway and Iceland - National governments
U.S. - FAO and U.S. Department of Commerce

Table 3

U.S. LANDINGS[1]
MAIN GROUNDFISH SPECIES
1986 - 1990

(in thousands of pounds)

Species	1986	1987	1988	1989	1990
Cod					
Atlantic	61,134	59,100	76,073	78,423	95,881
Pacific	104,443	170,611	267,205	372,137	544,203
Flatfish					
Atlantic	106,000	93,670	90,836	68,995	72,723
Pacific	63,688	106,041	137,784	133,494	429,795
Atlantic					
Ocean perch					
Redfish	6,576	4,202	2,350	1,392	1,322
Rockfish[2]	107,614	137,863	135,945	155,955	231,439
Pollock					
Atlantic	54,469	45,645	33,052	23,249	21,042
Pacific	130,424	552,048	1,257,251	2,361,988	3,157,406
Hake	44,836	56,696	31,580	31,280	36,526
Whiting	39,924	34,673	35,569	39,353	44,500
Haddock	10,968	6,673	6,429	3,808	5,440
Sablefish	84,868	102,698	107,511	97,590	89,802
Others[3]	33,750	30,629	31,731	33,495	29,004
Total	926,385	1,476,656	2,294,924	3,476,327	4,829,537

1. Also include Gulf of Mexico
2. Includes other rockfish
2. Includes Lingcod, cusk, grouper and croaker

Source: Fisheries of the United States, annual reports

Table 4

U.S. CONSUMPTION OF SEA PRODUCTS
1982 - 1990

(in lb. per capita)

Year	Population	--------- Consumption ---------			
	(millions)	Fresh and frozen	Canned	Salted/ dried	Total
1982	229.9	7.9	4.3	0.3	12.50
1983	232.0	8.4	4.7	0.3	13.40
1984	234.8	9.0	4.9	0.3	14.20
1985	237.0	9.8	5.0	0.3	15.10
1986	239.4	9.8	5.4	0.3	15.50
1987	241.5	10.7	5.2	0.3	16.20
1988	243.7	10.0	4.9	0.3	15.20
1989	246.6	10.2	5.1	0.3	15.60
1990	249.2	10.1	5.1	0.3	15.50

Source: Fisheries in the United States 1988
Seafood Trend 14 May 1990

Table 5

CONSUMPTION OF SPECIES
MOST IN DEMAND IN THE U.S.

1987 - 1990

(in pounds par capita)

Species	1987	1988	1989	1990
Tuna	3.500	3.600	3.900	3.700
Shrimp	2.300	2.400	2.300	2.200
Cod	1.680	1.710	1.700	1.380
Pollock	0.890	1.180	1.400	1.270
Salmon	0.428	0.443	0.470	0.730
Catfish	0.600	0.600	0.690	0.700
Mussels	0.662	0.612	0.610	0.610
Flatfish	0.727	0.619	0.570	0.570
Scallops	0.322	0.314	0.330	0.300
Crab	0.323	0.327	0.290	0.290
Total	11.432	11.805	12.260	11.750
Total U.S. consumption	16.200	15.200	15.600	15.500
10 Main products in % of the total U.S. consumption	70.6%	77.7%	78.6%	75.8%

Source: U.S. National Fisheries Institute

Table 6

U.S. PRODUCTION OF POLLOCK
1988 - 1990

(in metric tonnes)

FORM	1988	1989	1990
Fillet/block	33,500	39,100	75,100
Surimi	58,200	104,600	179,400
Sliced	0	2,400	13,600
Eggs	1,260	6,700	12,600
Round (gutted & headed)	800	400	4,700
Meal	10,000	15,900	57,100
Total	103,760	169,100	342,500

Source: National Marine Fisheries Services (United States)

Table 7

SALES OF CATFISH
BY U.S. PRODUCERS
1986 - 1990

(in millions of lbs)

Year	TOTAL SALES	FILLETS			FILLETS IN % OF TOTAL SALES
		FRESH	FROZEN	TOTAL	
1986	113.89	14.64	27.38	42.02	37%
1987	146,50	19.54	34.85	54.39	37%
1988	149.56	23.37	40.83	64.20	43%
1989	176,29	32.78	47.84	80.62	46%
1990	183.15	34.02	52.94	86,96	47%

Source: US Department of Agriculture
National Agricultural Statistics Service
Monthly Catfish Report

Table 8

U.S. IMPORTS OF FILLETS
BY SPECIES
1984 - 1990

(in thousands of tonnes)

Species	1984	1985	1986	1987	1988	1989	1990
Cod	86.20	84.80	81.60	87.50	72.21	76.25	51.73
Haddock[1]	24.50	29.80	26.30	33.80	23.65	23.83	17.74
Flatfish[2]	21.10	26.70	29.90	33.50	26.74	26.64	24.18
Turbot	7.60	9.70	4.70	7.90	4.03	3.48	3.18
Ocean perch	28.60	24.10	22.20	21.80	19.00	20.13	21.33
Others[3]	35.80	57.10	67.40	86.60	79.13	74.33	78.22
Total	203.80	232.20	232.10	271.10	224.76	224.66	196.38

1. Also includes pollock, hake/whiting and cusk
2. Also includes Atlantic halibut
3. Also includes Orange roughy and varies species of the rockfish family, etc,

Source: Economic and Commercial Analysis
DFO - Ottawa
U.S. National Marine Fisheries Services

Table 9

U.S. IMPORTS OF COD FILLETS
BY COUNTRY OF ORIGIN
1984 - 1990

(in thousands of tonnes)

Country	1984	1985	1986	1987	1988	1989	1990
Fresh cod							
Canada	6.80	8.00	9.20	9.00	9.37	8.99	6.56
Others	0.20	0.40	0.20	0.20	0.06	0.12	0.05
Total	7.00	8.40	9.40	9.20	9.43	9.11	6.61
Frozen cod							
Canada	46.90	41.40	40.50	41.10	37.41	42.02	29.73
Iceland	20.10	22.20	22.00	23.10	18.30	19.66	13.13
Denmark	5.40	5.70	3.80	4.80	2.85	2.01	0.69
Norway	3.50	3.80	2.30	4.20	2.75	2.26	0.79
Others	3.30	3.30	3.60	5.10	1.47	1.19	0.78
Total	79.20	76.40	72.20	78.30	62.78	67.14	45.12
Grand Total	86.20	84.80	81.60	87.50	72.21	76.25	51.73

Source: Economic and Commercial Analysis
DFO - Ottawa

Table 10

U.S. IMPORTS OF COD FILLETS
BY COUNTRY OF ORIGIN
January - June 1986 - 1991

(in metric tonnes)

Country	1986	1987	1988	1989	1990	1991
Canada	28,317	29,854	25,600	29,340	19,260	16,192
Denmark	2,501	3,402	1,517	1,250	335	86
Norway	1,662	3,157	2,303	1,860	n.d.	n.d.
Iceland	11,265	10,606	10,020	8,950	8,081	6,327
Others	1,862	2,655	781	800	1,207	1,691
Total	45,607	49,674	40,221	42,200	28,883	24,296

Source: Boston Blue Sheet
Fisheries Market News Report

Table 11

U.S. IMPORTS OF BLOCKS
BY COUNTRY OF ORIGIN
1983 - 1990

(in thousands of tonnes)

Country	1983	1984	1985	1986	1987	1988	1989	1990
Canada	56.20	45.60	47.70	56.40	59.00	57.22	55.16	52.56
Iceland	27.40	21.60	25.20	19.20	12.12	9.39	9.92	7.31
Norway	12.00	8.80	4.70	10.00	12.36	9.06	2.67	2.26
Denmark	24.20	28.80	24.00	21.50	28.05	19.69	15.60	13.67
Poland	0.70	0.70	8.20	8.50	12.88	5.80	6.46	10.47
Japan	4.90	3.70	6.00	10.90	4.33	2.39	5.36	2.04
Korea	25.90	23.10	22.30	22.50	32.81	23.29	13.92	10.68
Others	23.10	11.20	13.40	15.90	21.67	10.72	19.40	20.98
Total	174.40	143.50	151.50	164.90	183.22	137.56	128,49	119 97

Source: Economic and Commercial Analysis
DFO - Ottawa
Fisheries Market News Report - 1990

Table 12

U.S. IMPORTS OF BLOCKS
BY SPECIES
1984 - 1990

(in thousands of tonnes)

Species	1984	1985	1986	1987	1988	1989	1990
Cod	75.30	74.60	78.30	85.30	68.14	61.51	56.78
Haddock	8.60	7.40	11.10	12.40	8.10	5.78	6.28
Flatfish	4.60	3.80	2.90	4.10	3.31	3.39	3.42
Turbot	1.70	1.30	0.80	1.00	0.34		
Pollock	31.50	36.00	31.60	40.50	27.90	20.76	21.87
Grouper	5.40	8.60	7.30	14.90	7.56	11.00	12.83
Rockfish	1.70	0.60	0.80	1.30	0.61	0.46	0.70
Chopped meat	11.70	15.40	25.00	18.10	17.29	19.88	14.23
Others	3.00	3.80	7.10	5.60	4.31	5.72	3.88
Total	143.50	151.50	164.90	183.20	137.56	128.50	119.99

1. Also includes Pacific cod

Source: Economic and Commercial Analysis
DFO - Ottawa
Fisheries Market News Report (1990)

Table 13

U.S. IMPORTS OF BLOCKS OF COD
BY COUNTRY OF ORIGIN
1983 - 1990

(in thousands of tonnes)

Country	1983	1984	1985	1986	1987	1988	1989	1990
Canada	42.70	31.70	33.40	40.60	42.90	41.48	38.98	39.22
Iceland	10.80	10.20	15.70	12.70	6.30	5.59	5.31	3.26
Norway	6.10	5.30	2.10	6.30	7.30	5.15	1.41	0.35
Denmark[1]	18.10	21.40	19.30	13.90	21.70	13.28	13.37	11.86
Poland	0.40	0.70	0.60	0.30	0.00	0.07	0.04	0.00
Japan	0.90	0.40	0.20	0.10	0.10	0.03	0.05	0.02
Korea	3.00	2.30	1.40	2.90	5.00	1.82	1.06	0.96
Others	7.80	3.30	1.90	1.50	2.00	0.72	1.29	1.12
Total	89.80	75.30	74.60	78.30	85.30	68.14	61.51	56.79

1. Includes Faroe Islands

Source: Economic and Commercial Analysis
DFO - Ottawa

Table 14

U.S. IMPORTS OF BLOCKS OF COD
BY COUNTRY OF ORIGIN
January - June 1986 - 1991

(in metric tonnes)

Country	1986	1987	1988	1989	1990	1991
Canada	22,818	18,351	21,275	18,810	15,582	13,146
Denmark	11,263	13,996	12,770	9,680	5,702	9,820
Iceland	7,946	2,952	2,615	2,270	1,433	1,746
Norway	3,960	4,268	4,259	1,390	42	922
Rep. of Korea	1,876	2,494	1,461	930	164	456
Others	1,576	944	517	970	2,216	1,605
Total	49,439	43,005	42,897	34,050	25,139	27,695

Source: Boston Blue Sheet
Fisheries Market News Report - 1990 et 1991

Table 15

U.S. MONTHLY INVENTORY
COD BLOCKS AND FILLETS
January 1985 - July 1991

(in millions of pounds)

Month	1985	1986	1987	1988	1989	1990	1991
Cod blocks							
January	16.8	8.5	9.8	23.7	18.0	9.2	7.75
February	17.6	10.0	14.0	27.9	15.6	7.3	7.52
March	16.0	15.3	13.8	29.8	14.0	4.9	5.52
April	16.5	21.8	12.3	32.3	14.8	5.2	5.63
May	19.7	25.6	11.5	36.1	19.1	7.3	9.60
June	21.7	22.8	12.5	33.0	19.9	11.6	11.48
July	20.2	25.8	21.0	34.6	24.5	11.6	11.63
August	19.2	24.2	23.7	35.1	26.2	11.0	8.44
September	14.7	19.7	26.5	29.2	22.9	9.8	
October	12.5	15.2	22.8	26.2	16.7	8.8	
November	8.2	12.6	21.6	25.3	14.3	7.9	
December	9.5	13.5	24.1	22.3	14.2	10.0	
Cod fillets							
January	31.0	17.8	9.8	25.7	20.0	33.1	8.67
February	25.1	17.4	11.8	29.0	15.3	28.4	9.60
March	25.3	15.5	14.3	31.8	17.1	24.7	10.25
April	26.2	17.6	18.2	32.9	21.4	25.3	16.39
May	32.2	21.6	20.4	34.4	28.3	22.8	24.21
June	30.4	16.1	23.3	36.0	36.3	20.3	25.54
July	37.2	17.0	24.9	31.5	38.9	17.6	27.03
August	33.9	14.6	24.7	30.8	41.9	13.4	28.11
September	35.0	10.9	24.3	28.2	41.1	10.7	
October	31.3	8.8	25.8	24.5	34.8	9.7	
November	26.9	7.4	27.7	20.3	35.3	8.7	
December	24.2	10.3	27.2	20.6	35.2	10.2	

Source: DFO - Economic and Commercial Analysis Ottawa

Table 16

MONTHLY PRICE
OF COD FILLETS (5 LB 1/3 COUNT)
January 1986 - September 1991

Month	1986	1987	1988	1989	1990	1991
In U.S. dollars						
January	1.42	2.26	1.83	1.62	1.68	2.60
February	1.45	2.28	1.75	1.65	1.70	2.58
March	1.48	2.29	1.61	1.68	1.88	2.53
April	1.50	2.21	1.56	1.64	1.97	2.53
May	1.48	2.01	1.51	1.60	2.00	2.48
June	1.44	2.09	1.45	1.58	2.08	2.35
July	1.51	2.13	1.39	1.63	2.18	2.15
August	1.68	2.13	1.39	1.65	2.25	
September	1.76	2.15	1.39	1.74	2.38	
October	1.97	2.10	1.48	1.78	2.58	
November	2.09	1.97	1.58	1.78	2.73	
December	2.23	1.90	1.60	1.75	2.55	
In Canadian dollars						
January	2.00	3.07	2.35	1.93	1.97	3.01
February	2.03	3.04	2.22	1.96	2.03	2.98
March	2.07	3.01	2.01	2.00	2.22	2.93
April	2.08	2.91	1.93	1.95	2.29	2.92
May	2.04	2.70	1.86	1.91	2.35	2.85
June	2.00	2.80	1.76	1.89	2.44	2.69
July	2.08	2.82	1.69	1.93	2.52	2.47
August	2.33	2.82	1.70	1.94	2.57	
September	2.44	2.82	1.70	2.06	2.76	
October	2.74	2.75	1.78	2.09	2.99	
November	2.90	2.59	1.92	2.08	3.18	
December	3.07	2.48	1.91	2.03	2.96	

Sources = Boston Blue Sheet (1986 - 1988)
Seafood Price Current (1989 to 1991)

Compilation: Economic Services Division
DFO - Quebec Region

Table 17

MONTHLY PRICE
OF COD BLOCKS
January 1986 - September 1990

Month	1986	1987	1988	1989	1990	1991
In U.S. dollars						
January	1.33	1.61	2.00	1.43	1.63	2.48
February	1.35	1.71	2.00	1.50	1.70	2.53
March	1.35	1.73	1.99	1.53	1.75	2.50
April	1.35	1.77	1.85	1.55	1.80	2.38
May	1.35	1.81	1.85	1.55	1.95	2.38
June	1.35	1.87	1.59	1.57	2.00	2.20
July	1.39	1.94	1.50	1.58	2.10	1.97
August	1.45	2.00	1.20	1.58	2.10	
September	1.48	2.01	1.30	1.58	2.15	
October	1.50	2.01	1.31	1.59	2.20	
November	1.50	2.00	1.38	1.63	2.38	
December	1.56	2.00	1.40	1.63	2.43	
In Canadian dollars						
January	1.87	2.20	2.57	1.70	1.91	2.87
February	1.89	2.28	2.53	1.78	2.03	2.92
March	1.89	2.27	2.48	1.83	2.06	2.89
April	1.87	2.33	2.29	1.84	2.09	2.74
May	1.86	2.43	2.29	1.85	2.29	2.74
June	1.88	2.50	1.93	1.88	2.35	2.52
July	1.92	2.57	1.81	1.87	2.43	2.26
August	2.01	2.65	1.47	1.85	2.40	
September	2.06	2.64	1.60	1.86	2.49	
October	2.08	2.63	1.58	1.87	2.55	
November	2.08	2.63	1.68	1.90	2.77	
December	2.14	2.61	1.67	1.89	2.82	

Sources = Boston Blue Sheet (1986 - 1988)
Seafood Price Current (1989 to 1991)

Compilation: Economic Services Division
DFO - Quebec Region

Table 18a

QUEBEC EXPORTS OF LIGHTLY SALTED COD
WITH OVER 43% MOISTURE CONTENT
1985 - 1990

Country	1985	1986	1987	1988	1989	1990
Value of exports (in thousands of dollars)						
United States	7,149	7,038	5,265	2,670	2,349	0
Italy	789	1.068	1,432	616	466	769
Others	0	289	0	187	39	118
Total	7,938	8,395	6,697	3,473	2,854	887
Volume of exports (in metric tonnes)						
United States	1,586	1,461	888	541	474	0
Italy	166	210	166	73	57	95
Others	001	106	0	35	14	15
Total	1,753	1,777	1,054	649	545	110

Source: Statistics Canada

Table 18b

QUEBEC EXPORTS OF LIGHTLY SALTED COD
WITH 43% MOISTURE CONTENT OR LESS
1985 - 1990

Country	1985	1986	1987	1988	1989	1990
Value of exports (in thousands of dollars)						
United States	1,070	81	186	300	106	680
Italy	1,535	1,834	3,066	2,725	920	1607
Others	1	0	210	79	175	0
Total	2,606	1,915	3,462	3,104	1,201	2,287
Volume of exports (in metric tonnes)						
United States	228	18	24	54	18	119
Italy	338	324	352	306	112	197
Others	1	0	20	34	65	0
Total	567	342	396	394	195	316

Source: Statistics Canada

Table 19a

QUEBEC PRODUCTION OF COD
BY TYPE OF PRODUCT
1985 - 1990

Products	1986	1987	1988	1989	1990
Volume of production (in metric tonnes)					
Fresh					
Gutted	1,321,2	1,279.6	808.7	1,869.9	2,260.8
Fillets	521.1	317.5	453.2	317.3	805.6
Others	64.3	100.1	8.7	19.9	10.9
Total	1,906.6	1,697.2	1,270.6	2,207.1	3,077.3
Frozen					
Fillets	2,181.8	1,542.6	1,095.2	1,419.4	452.4
Blocks	2,820.2	2,420.0	1,622.6	2,569.7	3,263.0
Others	622.2	773.7	1,290.4	3,674.2	1,934.9
Total	5,624.2	4,736.3	4,008.2	7,663.3	5,650.3
Gaspé cured					
Very dry	433.8	822.9	556.3	333.0	427.3
Dry	2,636.8	1,655.2	2,296.0	2,286.2	800.1
Total	3,070.6	2,478.1	2,852.3	2,619.2	1,227.4
Lightly salted	200.4	346.4			
Heavily salted	1,533.5	1,463.5	1,295.7	1,880.1	839.3
Total salted	1,733.9	1,809.9	1,295.7	1,880.1	839.3
Others	1.5	0.4	0.1	5.9	214.3
Total others	1.5	0.4	0.1	5.9	214.3
Total	12,336.8	10,721.9	9,426.9	14,375.6	11,008.6

Source: Statistics Division
DFO - Quebec Region

Table 19b

QUEBEC PRODUCTION OF COD
BY TYPE OF PRODUCT
1985 - 1990

Products	1986	1987	1988	1989	1990
Value of production (in thousands of dollars)					
Fresh					
Gutted	1,343.1	1,707.7	541.2	1,163.2	2,669.3
Fillets	1,798.2	1,877.1	1,629.8	1,342.8	3,849.2
Others	43.8	99.2	35.4	52.2	44.7
Total	3,185.1	3,684.0	2,206.4	2,558.2	6,563.2
Frozen					
Fillets	9,421.7	8,481.2	3,875.0	6,196.7	1,953.7
Blocks	11,723.9	13,282.7	5,759.3	6,833.4	13,611.4
Others	964.5	2,427.1	391.3	1,862.1	264.3
Total	22,110.1	24,191.0	10,025.6	14,892.2	15,829.4
Gaspé cured					
Very dry	2,192.6	6,021.6	4,397.8	2,199.9	2,849.4
Dry	12,053.4	9,196.7	11,966.9	10,188.3	4,767.6
Total	14,246.0	15,218.3	16,364.7	12,388.2	7,617.0
Lightly salted	887.7	1,407.8			
Heavily salted	3,649.3	5,361.2	3,558.5	5,150.3	2,996.9
Total salted	4,537.0	6,769.0	3,558.5	5,150.3	2,996.9
Others	18.6	3.9	1.6	37.3	81.7
Total others	18.6	3.9	1.6	37.3	81.7
Total	44,096.8	49,866.2	32,156.8	35,026.2	33,088.2

Source: Statistics Division
DFO - Quebec Region

Table 20

PROFIT MARGIN OF QUEBEC PLANTS
INVOLVED IN PROCESSING COD PRODUCTS
1984 - 1990

(in $Can/kg)

Product/Year	Selling price of product	Cost of raw materials	Profit margin
Cod fillet	(5 lb\1-3 cnt)		
1987	6.21	2.40	3.81
1988	4.19	1.89	2.30
1989	4.37	1.82	2.55
1990	5.37	1.86	3.51
1991			
Cod blocks			
1987	5.47	2.40	3.07
1988	4.38	1.89	2.49
1989	4.07	1.82	2.25
1990	5.11	1.86	3.25
1991			
Lightly salted cod	(43% moisture		
1987	8.72	3.35	5.37
1988	8.72	3.41	5.31
1989	8.21	3.47	4.74
1990	7.51	3.50	4.01
1991	n.d.	n.d.	n.d.
Lightly salted cod	(over 43%	moisture	
1987	5.93	3.89	2.04
1988	4.93	3.55	1.38
1989	4.96	2.78	2.18
1990	7.22	2.84	4.38
1991	n.d.	n.d.	n.d.

Sources: Boston Blue Sheet
DFO - Statistics Division, Quebec Region
DFO - Economic Services Division, Quebec Region

Table 21

**QUEBEC LANDING PRICES
BY GROUNDFISH FLEET
BY SPECIES**

(in $ per kilo rounded weight)

Species/Year	Trawlers	Scottish seiners	Longliners 35'	Longliners 35' - 50'	Longliners 50'+
Cod					
1985	0.43	0.36	0.40	0.50	0.52
1986	0.48	0.67	0.53	0.55	0.57
1987	0.71	0.81	0.83	0.79	0.84
1988	0.49	0.44	0.56	0.70	0.81
1989	0.50	0.47	0.60	0.74	0.87
1990	0.54	0.59	0.67	0.77	0.85
1991p	0.78	0.87	0.86	0.93	0.98
American plaice					
1985	0.41	0.40	0.39	0.40	0.37
1986	0.55	0.72	0.51	0.60	0.52
1987	0.75	1.12	0.68	0.86	0.71
1988	0.64	0.76	0.74	0.72	0.72
1989	0.71	0.77	0.76	0.77	0.77
1990					
1991p	0.57	0.77	0.74	0.69	0.64
Turbot					
1985	0.56	-	0.64	0.66	0.55
1986	0.72	-	0.82	0.82	0.82
1987	1.23	-	1.29	1.34	1.28
1988	0.52	-	0.72	0.73	0.69
1989	0.83	-	0.99	1.01	0.96
1990	1.17	-	1.23	1.27	1.21
1991p	1.40	-	1.43	1.42	1.42

Sources: DFO - Statistics Division, Quebec Region

Table 22

LANDINGS BY QUEBEC GROUNDFISH FLEETS
WITH FIXED GEAR
1985 - 1990

(in thousands of tonnes)

Species	1985	1986	1987	1988	1989	1990
Cod						
4RS	12.48	7.49	5.51	5.19	4.74	2.87
4T	7.03	6.27	6.82	5.48	3.80	2.97
Rockfish 4RST	0.05	0.08	0.36	0.26	0.28	0.14
American plaice 4T	0.57	0.53	0.83	0.81	0.39	0.29
Witch flounder 4TS	0.00	0.00	0.00	0.00	0.00	0.00
Newfoundland halibut 4RST	1.47	5.00	8.47	5.72	3.96	1.80
Total	21.60	19.37	21.99	17.46	13.17	8.07

Source: DFO - Annual Quota Reports

Table 23

LANDINGS BY QUEBEC GROUNDFISH FLEETS
UNDER 100' IN LENGTH, WITH MOBILE GEAR
1985 - 1990

(in thousands of tonnes)

Species	1985	1986	1987	1988	1989	1990
Cod						
4RS-3Pn	5.76	7.50	7.45	3.59	4.75	4.17
4T	16.46	12.36	10.86	12.07	11.63	12.13
Rockfish 4RST	0.85	1.11	2.05	1.16	2.26	1.42
American plaice 4T	1.75	2.00	2.45	1.73	1.31	1.32
Witch flounder 4RS	0.03	0.02	0.03	0.03	0.10	0.04
Newfoundland halibut 4RST	0.56	1.22	2.23	1.32	0.67	0.28
Total	25.41	24.21	25.07	19.90	20.72	19.36

Source: DFO - Annual Quota Reports

Table 24

CASH FLOW[1]
QUEBEC GROUNDFISH FLEET
1989 - 1991p

Fleets	1989	1990	1991p
Fleets with fixed gear			
Longliners			
under 35 feet	-1,439	2,213	2,618
35 - 50 feet	-3,314	-7,679	-9,757
50 feet and over	17,184	9,856	30,127
Fleets with mobile gear			
Trawlers			
under 50 feet	-9,428	-3,321	7,825
50 - 65 feet	23,330	32,164	42,989
Scottish seiners	23,857	22,833	43,291

N.B. **The average cash flow of trawlers 50 to 65 feet in length for 1991 will vary from $43,291 to $58,331, depending on the number of vessels eligible for the provincial government temporary relief program.**

1. Cash flow represents the salary of the skipper-owner of a fishing enterprise.

Source: DFO - Economic Services Division, Quebec Region
Costs and Earnings, 1986 and 1989;
Economic Performance of Fishing fleets for 1989 and 1990, with adjustments to the end of August 1990;
Projections for 1991

Table 24

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DIVISION DES SERVICES ECONOMIQUES

ECONOMIC SERVICES DIVISION

Ministère des Pêches et des Océans - Région du Québec
Department of Fisheries and Oceans - Quebec Region

(NOVEMBRE 1991)

Liste des rapports d'étude		List of studies	
1982		**1982**	
82-1	Répertoire des programmes d'aide gouvernementale à l'industrie des pêches au Québec; 101 pages (non disponible).	82-1	-
1983		**1983**	
83-1	Processus d'évaluation et de prise de décision pour l'attribution des permis de pêche pour les bateaux de 45 pieds et plus; Document de travail; 13 pages; (non disponible).	83-1	-
83-2	Répertoire des programmes d'aide gouvernementale à l'industrie des pêches au Québec; 183 pages (non disponible).	83-2	-
1984		**1984**	
84-1	Répertoire des programmes d'aide gouvernementale destinés à l'industrie des pêches maritimes du Québec; ISBN-0-662-92919-5; 67 pages (non disponible).	84-1	Guide to Government Assistance Programs for the Quebec Marine Fishing Industry; ISBN-0-662-92919-5; 60 pages (not available).
84-2	Simulation comptable du pêcheur côtier; 15 pages (non disponible).	84-2-3	Fisherman's Accounting Exercise; 15 pages; (not available).
84-3	Simulation comptable du pêcheur hauturier; 15 pages (non disponible).		

84-4 Le registre comptable du pêcheur; 50 pages.

84-4 Fisherman's Accounting Register; 50 pages; (not available).

1985

85-1 L'industrie des pêches maritimes du Québec: Description statistique; ISBN 0-662-93183-1; 184 pages.

85-1 The Maritime Fisheries Industry of Quebec: Statistical Description; ISBN-0-662-93183-1; 184 pages (not available).

85-2 Répertoire des programmes d'aide gouvernementale destinés à l'industrie des pêches maritimes du Québec; ISBN-0-662-93438-5; 77 pages.

85-2 Guide to Government Assistance Programs for the Quebec Marine Fisheries Industry; ISBN-0-662-93438-5; 70 pages; (not available).

85-3 Étude de rentabilité de la flotte de pêche au crabe du Québec: 1984; 47 pages (non disponible).

85-3 Study on the Viability of the Quebec Crab Fleet: 1984; 47 pages (not available).

85-4 Étude de rentabilité du secteur de la transformation du crabe des neiges au Québec: 1984; 38 pages.

85-4 Economic Performance for the Crab Processing in Quebec: 1984; 35 pages (not available).

85-5 Coûts et revenus des bateaux de pêche sélectionnés du Québec: 1984; 113 pages.

85-5 Cost and Earnings for Selected Fishing Boats in Quebec: 1984; 113 pages.

85-6 Étude de rentabilité: crabiers côtiers-Estuaire du Saint-Laurent et Moyenne Côte-Nord: 1984; 68 pages (non disponible).

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85-7 Description de la flotte de pêche du Québec: 1984; 51 pages.

85-7 -

85-8 Impact de l'addition de nouveaux permis semi-hauturiers dans la pêche au crabe du sud-ouest du Golfe; Document de travail; 25 pages (non disponible).

85-8 -

1986

Étude de rentabilité des composantes de l'industrie des pêches maritimes québécoises liées aux chalutiers de moins de 100 pieds: 1985

Profitability Study on Various Components of Quebec Maritime Fishing Industry which are Associated with Trawlers under 100 feet in length: 1985

86-1 Volume 1 Les crevettiers; ISBN-0-662-93853-4; 71 pages.

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86-10 -

1987

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87-2 Données techniques et financières sur les cordiers du Québec: 1985; ISBN-0-662-94151-9; 34 pages (non disponible).

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