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Economic Overview of the Fishing Industry in Atlantic Canada

Economic and Commercial Analysis
Report No. 5

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Canada

Economic Overview of the Fishing Industry in Atlantic Canada

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ECONOMIC OVERVIEW OF THE FISHING INDUSTRY IN ATLANTIC CANADA

I. The Importance of the Fisheries in Canada

The fishing industry in Canada makes a significant economic contribution in coastal areas of the country. Although the commercial fishery contributes less than 0.5 percent to the Canadian Gross Domestic Product (GDP), the fishing industry is an important economic sector in Atlantic Canada. Between 1977 and 1988, the value of output from the fishing industry grew 57 per cent (constant dollars), compared to growth in overall Atlantic GDP of 42 per cent over the same period.

The fishing industry's contribution to Gross Provincial Product (GPP) in Newfoundland is the highest in Canada at about 15 percent of the goods-producing sector. The fishing industries in P.E.I. and Nova Scotia have the next highest contributions, at about 13 percent and 11 percent respectively.

The fishing industry in Atlantic Canada provided jobs for approximately 65,000 registered fishermen in 1988 as well as over 40,000 jobs in fish processing. The dependence on jobs in the fishing industry ranges from a high of 25 per cent on the south coast of Newfoundland to a little over 2 per cent in large cities like Halifax. The fishing industry is responsible for over ten per cent of all jobs in Atlantic Canada.

II. Growth Since 1977

In 1977, Canada extended its fisheries jurisdiction from 12 to 200 miles and many benefits have followed. Quota allocations to Canadians grew rapidly since 1977 and those going to foreign fleets declined. Foreign quota allocations in Canadian waters now consist exclusively of fish which are surplus to Canadian industry's needs.

The increases in Canadian quota since 1977 have generated increases in fisheries employment, investment and incomes. A snapshot of recent changes is provided in Table 1. The industry is now about one-third larger in terms of employment than it was before extension of jurisdiction but we are now reaching the limits of our fisheries resources. The current challenge is to manage the fishing industry on a self-sustainable basis as we as we approach the limits that can be sustained by the existing fisheries resources.

TABLE 1

FISHERY PROFILES BY PROVINCE, 1983 AND 1988

	1983	1988
Nova Scotia		
No. of registered fishermen	12,543	16,321
No. of registered vessels	6,266	6,288
No. of plant workers (PY)	9,700	10,900
Landings (000t)	426	489
Landed value ($ million)	277	436
Production value ($ million)	499	801
New Brunswick		
No. of registered fishermen	6,567	7,903
No. of registered vessels	2,820	2,735
No. of plant workers (PY)	6,481	7,080
Landings (000t)	108	150
Landed value ($ million)	79	116
Production value ($ million)	315	380
Prince Edward Island		
No. of registered fishermen	3,182	4,929
No. of registered vessels	1,488	1,471
No. of plant workers (PY)	1,356	1,440
Landings (000t)	40	40
Landed value ($ million)	43	65
Production value ($ million)	86	90
Quebec		
No. of registered fishermen	6,676	6,808
No. of registered vessels	3,681	2,847
No. of plant workers (PY)	1,843	2,340
Landings (000t)	78	88
Landed value ($ million)	56	99
Production value	119	210
Newfoundland		
No. of registered fishermen	28,074	29,830
No. of registered vessels	16,520	17,149
No. of plant workers (PY)	10,620	11,160
Landings (000t)	456	551
Landed value ($ million)	167	300
Production value ($ million)	456	710
Atlantic		
No. of registered fishermen	57,024	65,791
No. of registered vessels	30,775	30,490
No. of plant workers (PY)	30,000	32,920
Landings (000t)	1,108	1,317
Landed value ($ million)	622	1,016
Production value ($ million)	1,475	2,191

Source: Department of Fisheries and Oceans. 1988 figures are preliminary.

Number of Fishermen

Since 1977, the number of licensed fishermen in Atlantic Canada increased by about 50 per cent, to nearly 66,000 in 1988. Nineteen out of twenty licensed fishermen operate seasonally from privately owned vessels less than 100 feet in length. They account for 60 per cent of landings. The remaining fishermen operate year-round from company-owned fishing trawlers (over 100 feet).

Fishing Incomes

The period 1986-1988 has proven the most prosperous in history for the Atlantic fishery. Prices and earnings reached record highs, and catches were generally good. Some market softening has occurred in 1989, but this is still a good year compared to most.

There is considerable variability in fishermen's incomes in Atlantic Canada, depending on species fished, season length, gear used, and so on (see Table 2). Fishermen who hold restricted licenses like lobster, purse seine or mobile gear tend to outperform the average substantially. Nova Scotia fishermen earn the highest average incomes in Atlantic Canada, grossing over $28,000 on average in 1988. In contrast, Newfoundland inshore fishermen, with short seasons and limited species availability, earn the lowest fishing incomes, grossing an average of under $11,000 in 1988.

From Table 2 it is clear that in every Atlantic province, fishermen earned considerably more in 1988 than they had in 1984, although the diversity across the region remains apparent.

The table also demonstrates that in the poorest fisheries, income from unemployment insurance benefits is a much larger share of total incomes than in the more lucrative fisheries. While dependence on unemployment insurance varies considerably across the Atlantic provinces, it has increased slightly in most areas between 1984 and 1988. In 1988, the average fisherman in Newfoundland derived about 36 per cent of total income from unemployment insurance, up from 34 per cent in 1984. In Nova Scotia the portion of fishermen's total incomes derived from unemployment insurance was 15 per cent in 1984 and 17 per cent in 1988.

The average annual incomes in Table 2 mask the smaller fleet segments throughout Atlantic Canada which provide high incomes to captains and crews. In Table 3, the average income of each fleet in Scotia-Fundy is shown. The highest incomes on average are earned by trawlers more than 100 feet and inshore draggers. These incomes compare favourably to incomes earned by skilled and semi-skilled workers anywhere in Canada.

TABLE 2

INCOME SUMMARY, ALL ACTIVE FISHERMEN, BY PROVINCE

	Nova Scotia	New Brunswick	Prince Edward Island	Quebec	Newfoundland
			1988		
Gross Fishing Income	$28,406	$24,221	$22,302	$24,981	$10,979
Fishing costs	(9,823)	(11,126)	(8,418)	(13,299)	(3,385)
Other Employment Income	3,223	2,501	1,488	1,974	2,294
Regular UI	876	3,493	2,036	957	1,133
Fisherman's UI	3,671	3,979	4,500	5,384	4,392
Total Income	$26,353	$23,068	$21,098	$19,997	$15,513
			1984		
Gross Fishing Income	$21,373	$16,749	$15,768	$11,298	$8,703
Fishing costs	(8,438)	(7,113)	(7,375)	(5,813)	(3,380)
Other Employment Income	2,397	1,760	1,014	1,645	1,214
Regular UI	555	1,134	1,294	1,254	713
Fisherman's UI	2,141	2,751	3,262	2,237	2,685
Total Income	$18,028	$15,281	$13,963	$10,621	$9,935

Source: 1984 Survey of Atlantic Fishermen, Economic and Commercial Analysis Series, Department of Fisheries and Oceans, Survey and Statistics Report No 37. November 1987; and preliminary information from the 1988 survey of Atlantic Fishermen.

TABLE 3

SCOTIA-FUNDY GROUNDFISH: ANNUAL INCOMES* FROM FISHING - 1988

	Captains	Crew
Inshore Generalists	$15-30,000	N/A
Inshore Specialists		
Longliners and Gillnetters		
- 35 - 44 ft.	26,000	$14,500
- 35 - 64 ft.	24,500	16,000
Draggers		
- 35 - 44 ft. (NE)	31,000	15,000
- 35 - 44 ft. (SW)	53,000	29,000
- 45 - 64 ft. (SW)	74,000	28,000
Offshore		
Trawlers (>100 ft.)	$70-90,000	$24-50,000**

* Net incomes before tax
** Trawler crews range from deckhands to ship's officers

Source: DFO Survey, unpublished data, 1989

Fleet Size

Expectations of larger catches after extension of jurisdiction led to a rapid increase in the catching capacity of fishing vessels. Even though the total number of licensed fishing vessels in Atlantic Canada has remained stable since the early eighties at about 31,000, its catching capacity (once account is taken of new technologies and increased size of vessel) is considerably greater than it was in 1977. In some fleet sectors in Atlantic Canada, notably the groundfish fleet in Scotia-Fundy, overcapacity has become a serious problem.

The Processing Sector

Processing plants are licensed by the provinces and are subject to a variety of regulatory regimes. Plants are also licensed by the federal government to ensure that they meet national health standards. The number of federally registered fish plants in Atlantic Canada increased from about 500 in 1977 to almost 900 in 1988 (see Table 4).

As the number of fish plants grew, so did fish processing employment. The total number of person years in fish processing increased from about 25,000 in 1978 to nearly 33,000 in 1988. Most fish processing jobs in Atlantic Canada are seasonal. A person year of employment therefore provides about 1.2 to 1.5 jobs, so that means as many as 50,000 jobs in 1988.

In general, offshore plants provide processing employment that lasts for most of the year. Inshore plants have a relatively short operating season except in Nova Scotia where the inshore fishery also operates almost year-round. The pattern for 1986 is provided in Table 4.

Average plant worker incomes are highest in Nova Scotia. In 1988 average annual incomes from all sources of inshore plant workers averaged $12,000-13,000 while their offshore colleagues earned $18,000-20,000.

III. <u>The Current Situation</u>

Since 1977 the Atlantic fishing industry has grown and prospered as it exploited the fish resources inside the 200-mile limit. The evidence is clear, however, that the fish resource cannot sustain continued growth at the previous pace. The exploitation limit is now being reached in many fisheries.

TABLE 4

PROFILE OF THE ATLANTIC FISH PROCESSING INDUSTRY

SIZE OF ATLANTIC FISH PROCESSING INDUSTRY, BY PROVINCE, 1988

Province	Number of Processing Plants	Number of Fish Processing Jobs
Newfoundland	240	11,100
Prince Edward Island	50	1,440
New Brunswick	175	7,080
Québec	96	2,300
Nova Scotia	315	10,000
	876	32,800

* Person-year equivalents

PROCESSING EMPLOYMENT: AVERAGE NUMBER OF WEEKS PER JOB

	Inshore	Offshore	Average
Newfoundland Region	19.9	42.5	28.1
Gulf Region	15.7	21.2	16.2
Quebec Region	20.1	20.1	20.1
Scotia-Fundy Region	38.4	52.0	44.5

Source: DFO Unpublished plant surveys, 1983, 1986

Indeed, in some fisheries, the bouyant markets of 1986-88 may have masked the reality of the resource limit being reached. The unprecedented strong prices could have effectively offset the effects of overcapacity that resulted from reaching that limit.

In 1989, the new reality is more apparent. Markets are somewhat weaker than previously although they are still good by historical standards. The combined effect of prices which have fallen from their record highs and reduced fish landings is being felt by the Atlantic industry. As an example, Figure 1 displays the case for groundfish in the Scotia-Fundy region. The stock decline in 1986 and 1987 is clearly displayed against the tremendous upward price swing during the same period. Not until 1989 have the two trends begun to move in the same direction.

IV. Market Overview

The Atlantic fishery has traditionally been cyclical. The causes of these cycles are complex and usually outside the control of the fishing industry. In the early 1980s the economic recession, coupled with high interest rates, high oil costs and weak prices caused a financial crisis in the industry. The major firms found themselves in serious financial difficulties. The industry refinanced and restructured largely with government assistance in 1983-85.

By 1988, industry production on the Atlantic was valued at $2.2 billion. Over 80 per cent was exported. Exports to the United States account for about 60 per cent of total fish exports. For certain species the U.S. is even more important. Over 80 per cent of groundfish exports and about 75 per cent of lobster exports go to the U.S. The Japanese market is the second most important, accounting for 22 per cent of Canadian exports (by value).

The Canadian fishing industry is heavily dependent on exports and is a price-taker in world markets. Many factors will continue to influence the value of the Canadian fisheries:

1. **The U.S. market.** Since the U.S, is our largest market, any change in the demand for Canadian fish will have major effect on the Canadian industry. The per capita demand for fish in the U.S. now appears to be levelling off, following a major increase in the mid-1980s due to health-consciousness. Moreover, new fish such as orange roughy and Alaskan pollock are entering the American market, in direct competition with Canadian fish (see Figure 2).

2. **The value of the Canadian dollar.** Most Canadian fish products are exports, and sales overseas are priced in foreign currencies. The stronger our dollar, the lower the returns to the Canadian industry.

FIGURE 1

Rising Price Masks Stock Decline

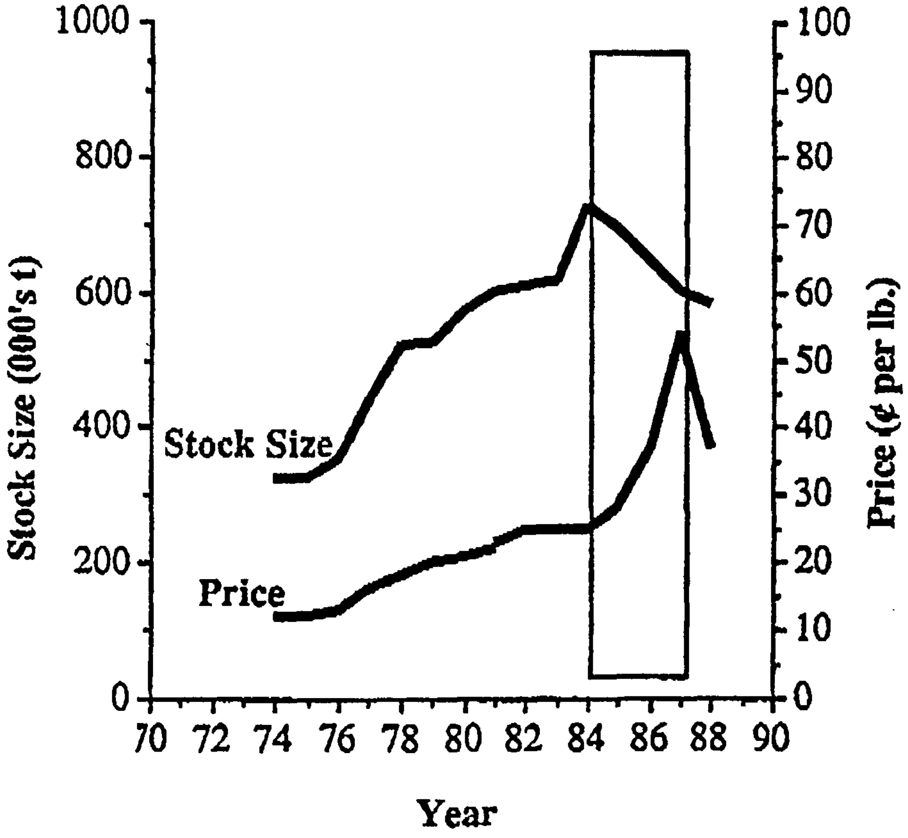
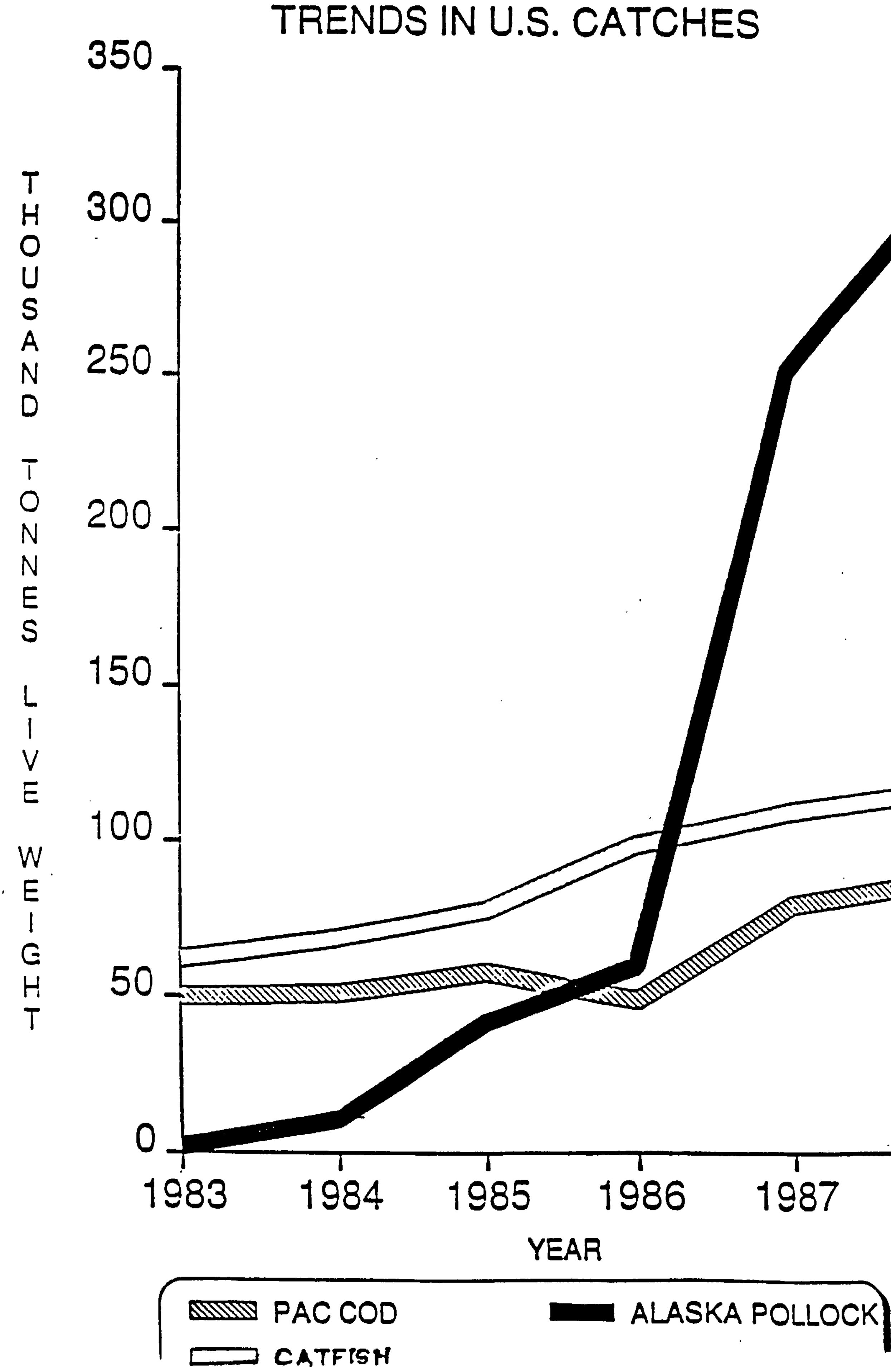


FIGURE 2


TRENDS IN U.S. CATCHES
THOUSAND TONNES LIVE WEIGHT
350
300
250
200
150
100
50
0
1983
1984
1985
1986
1987
1988
YEAR
PAC COD
ALASKA POLLOCK
CATFISH

3. **Canadian catch rates** may not be as high over the next few years as previously for all stocks.

A summary of major Canadian fish markets is contained in the Appendix to this paper.

V. Conclusion

The fishing industry plays a significant part in the economy of Atlantic Canada. The industry is cyclical. Fluctuations in product prices and resource availability are part of the industry environment in every sector. The industry has grown rapidly over the past 12 years, and may now be reaching the limits that can be sustained by the existing fish resource. In the 1990s, the fishing industry may not sustain the same growth that it has since 1977, but it will continue to be a source of significant employment and wealth generation in Atlantic Canada.

APPENDIX

ASSESSMENT OF MARKET PROSPECTS IN THE ATLANTIC FISHERIES

The following assessment describes some specific Atlantic fisheries. While these assessments may reflect inherent problems, they are of an order different from the situation in 2J3KL and Scotia-Fundy which are subject to separate assessments by dedicated study teams.

ASSESSMENT BY SPECIES

Crab (Landed value: $100 million)

The crab fisheries are concentrated primarily in the Gulf of St. Lawrence and the northeast coast of Newfoundland. They expanded rapidly in the early 1980's, fuelled by rapid increases in market prices. This expansion has been followed in some areas by an equally rapid decline in catch. The situation became particularly acute in 1989 in northeastern New Brunswick, Iles de la Madeleine and the Gaspé region of Quebec. In these areas, the fishery was closed at the end of May after six weeks fishing in 1989, due to a high incidence of white (moulting) crab and very poor catch rates. Fish plants in Gaspé and northeastern New Brunswick were forced to close, resulting in 650 midshore fishermen and hundreds of plant workers failing to qualify for unemployment insurance benefits.

The federal and provincial governments have responded to this situation by announcing assistance programs aimed at qualifying workers for unemployment insurance. A $2.5 million initiative was announced for the Quebec region by the Honourable Monique Landry and $3.5 million in assistance was provided to fishermen and plant workers in northeastern New Brunswick.

These actions have addressed the immediate crises for 1989; however, crab landings are not expected to increase next year, which will likely result in similar difficulties. Moreover, crab processing capacity in these areas was designed for higher landings and a product mix that was more labour intensive than is required today. In the next few years, fishing vessels will need to be tied up and some plants will have to remain closed.

Cod in the Gulf of St. Lawrence (Landed value: $32 million)

Catches of cod in the Gulf of St. Lawrence (4RS,3PN) have declined from highs of more than 100,000 mt in the early 1980's to approximately 50,000 mt in 1988. Since 1984, the quota of fixed gear has not been met and quota transfers have been made in favour of the mobile gear fleet. The fixed gear sector was particularly hard hit this year. In addition, catch rates for the mobile gear sector were substantially less than previously. The cod fishery in the Gulf is important to fish processing plants in western Newfoundland (e.g., Port aux Basques, Rose Blanche), the Quebec north shore, Iles de la Madeleine and Gaspé. Plants have been operating at a much reduced capacity. CEIC programs, such as Job Development, Skills Investment and Community Futures have been effective in bridging between social insurance and fishery income.

Cod stocks in these areas are not expected to increase in the short term.

Shrimp (Landed value: $60 million)

The Atlantic shrimp fisheries, which have been concentrated in northeastern parts of the Gulf of St. Lawrence and northeastern Newfoundland and Labrador, have generally increased since 1984. Returns to fishermen and processors have been particularly strong in the last two years, resulting in a great increase in demand for shrimp fishing licences from all segments of the industry.

Market demand has not kept pace with the increased supply. Prices dropped early in 1989 and have continued to fall in the spring and summer. This has caused some hardship for plants that specialize in shrimp, (particularly small plants in the Gaspé region of Quebec).

Lobster (Landed value: $264 million)

Lobster landings in the Gulf of St. Lawrence have increased significantly over the past ten years. Lobster is sold in various product forms - live, whole frozen, and canned. Most lobster products enjoyed steadily increasing prices, up to 1989. This year, market prices have dropped, particularly for small lobsters (canners). This has affected processors and fishermen in eastern New Brunswick and Prince Edward Island who specialize in this size of lobster. Two lobster processing plants have closed in 1989 - one in Prince Edward Island and another in New Brunswick.

The Fishery Council of Canada (FCC) has been monitoring the lobster situation. They are concerned about the rapid build up in inventory in France and Japan; however, inventories are now beginning to move and the FCC is predicting that prices will return to historic levels in 1990.

A regulatory issue that affects lobster sold by Canadian fishermen relates to the increase in the minimum size of lobster that may be imported into the US. For conservation reasons, the US government is planning to increase the size of lobster that can be caught or imported into the US. This has already created a problem for some fishermen and fish processors in Quebec, PEI and New Brunswick who have had to find alternate markets for small-sized lobsters harvested by Canadian fishermen. In the long run, however, there may be significant benefits to the industry. Immature lobsters will no longer be harvested, so the stocks could be more stable. Moreover, large lobsters generally return higher prices to fishermen than smaller ones. Discussions are now underway with industry on how best to implement the changes.

Herring (Landed value: $40 million)

Atlantic herring landings have increased steadily in the past five years, but herring markets have changed dramatically over that period. In the 1960's, most Atlantic herring was sold as fish meal. More recently, Atlantic herring roe has found new markets in Japan.

A decline in European markets has made the Japanese roe market increasingly important to Atlantic herring processors. In 1989, inventories in Japan are at high levels, and demand is relatively weak. Contracts were late in being negotiated for the 1989 production, and the start of herring roe fishing was delayed. Prices and quantities of roe sold are likely to be down during 1989-90 as Japanese buyers take advantage of their monopoly position. This may create problems for some smaller herring processors in New Brunswick who do not have established, long-term customers.

Scallops (Landed value: $86 million)

Landings of Atlantic scallops, originating primarily in Nova Scotia, increased 40 per cent from 1983 to 1987. Landings in 1988 were approximately the same as 1987. This rapid increase resulted in a price decline. Prices are expected to remain below the peaks of 1987 and 1988 as long as supplies remain strong.

Atlantic Salmon (Landed value wild and farmed: $42 million)

The only commercial fishery for Atlantic salmon is in Newfoundland and Labrador. Most Atlantic salmon (70 per cent in 1988) is now raised through aquaculture in net pens located in the Bay of Fundy and parts of Nova Scotia. Production from these farms totalled 2,500 mt in 1988, up from virtually nothing several years ago and now estimated to reach 5,000 mt by 1989.

Worldwide production of Atlantic salmon has increased dramatically, led by Norway, which has recently increased production from 55,000 mt in 1987 to 80,000 mt in 1988. Norwegian production is expected to reach approximately 160,000 mt in 1989.

Prices for Atlantic salmon have dropped 30 per cent during the past year. The price outlook for 1990 is for continued declines. Consolidation of smaller aquaculture firms in the industry will likely result in a more competitive Canadian industry in the long term.

The recreational salmon fishery in Atlantic Canada is emerging as an important component of the overall salmon industry. With the recovery of wild Atlantic salmon stocks in the past two years, the number of fish available for angling is increasing, as is the resulting economic contribution that this sector can make to the Atlantic economy.

Capelin (Landed value: $29 million)

Capelin is an abundant species, for which the TAC is based on market conditions. In 1988 about 35,000 tonnes of capelin were landed. Roe capelin is shipped frozen to Japan, at roughly $680/tonne, down about 7 per cent from last year. Canada now enjoys a temporary monopoly on world capelin markets because Norway's Barents Sea stock has been closed due to overfishing.

Flatfish (Landed value: $40 million)

Landings are down slightly in 1989 from about 78,000 tonnes last year. Demand in the US, the major market, is stable, however, and prices have remained steady since the beginning of the year. Flatfish markets generally follow groundfish markets and, accordingly, are below the peaks of 1987.

Redfish (Landed value: $24 million)

Landings in 1989 are down some 10 to 12 percent from last year's level of about 35,000 tonnes, although roughly half of the available quota will likely remain uncaught. Prices remain steady. Buyers are continuing to purchase only on an "as-needed" basis, even though inventories are at a two-year low. Accessing the lucrative, high-quality Japanese market has proved difficult to Canadian producers.