Fisheries and Oceans

1993-94 Estimates

Part III

Expenditure Plan

The Estimates Documents

The Estimates of the Government of Canada are structured in three Parts. Beginning with an overview of total government spending in Part I, the documents become increasingly more specific. Part II outlines spending according to departments, agencies and programs and contains the proposed wording of the conditions governing spending which Parliament will be asked to approve. The Part III documents provide additional detail on each department and its programs primarily in terms of the results expected for the money spent.

Instructions for obtaining each volume can be found on the order form enclosed with Part II.

Available in Canada through

Associated Bookstores and other booksellers

or by mail from

Canada Communication Group – Publishing
Ottawa, Canada K1A 0S9

Catalogue No. BT31-2/1994-III-56
ISBN 0-660-57926-X

1993-94 Estimates

Part III

Fisheries and Oceans

Preface

This Expenditure Plan is designed to be used as a reference document. As such, it contains several levels of detail to respond to the various needs of its audience.

The Plan is divided into three sections. Section I presents an overview of the Program and a summary of its current plans and performance. For those interested in more detail, Section II identifies, for each activity, the expected results and other key performance information that form the basis for the resources requested. Section III provides further information on costs and resources as well as special analyses that the reader may require to understand the Program more fully.

Section I is preceded by details of Spending Authorities from Part II of the Estimates and Volume II of the Public Accounts. This is to provide continuity with other Estimates documents and to aid in assessing the Program's financial performance over the past year.

The Department's activity structure is described in Section I, pages 13 and 14. This Expenditure Plan provides information according to this activity structure.

This document is designed to permit easy access to specific information that the reader may require. The table of contents provides a detailed guide to the information contained in each section, and a financial summary in Section I provides cross-references to the more detailed information found in Section II. In addition, references to where the reader may find more details on items of particular interest are provided throughout the document and in the index, at the end of this document.

For the purposes of this Expenditure Plan, resources devoted to enforcement activities are displayed under Fisheries Operations. During 1993-94, enforcement activities will be consolidated under one sector reporting to the Assistant Deputy Minister of Regulatory and International Affairs. Corresponding changes will be incorporated in the 1994-95 edition of the Department's Expenditure Plan.

Table of Contents

Spending Authorities

A. Authorities for 1993-94 5

B. Use of 1991-92 Authorities 7

Section I
Program Overview

A. Plans for 1993-94 and Recent Performance

1. Highlights 9
2. Financial Summaries 11

B. Background

1. Introduction 12
2. Mandate 12
3. Program Objective 13
4. Program Organization for Delivery 13
5. Nature of Activities 15

C. Planning Perspective

1. The Commercial Fisheries 16
2. The Aquaculture Industry 20
3. The Oceans Sector 21
4. The Recreational Fisheries Industry 22
5. Initiatives 23
6. Update on Previously Reported Initiatives 26

D. Program Effectiveness

1. Pacific Licensing, Allocation and Regulations Development 29
2. Region of Scotia-Fundy — Helicopter Review 30
3. Physical and Chemical Sciences 30
4. Real Property Management 31
5. Management of Overtime 32
6. Service Standards Development 32

Section II
Analysis by Activity

A. Science 33
B. Fisheries Operations 48
C. Inspection 75
D. International 82
E. Corporate Policy and Program Support 90

Section III
Supplementary Information

A. Profile of Program Resources
1. Financial Requirements by Object 103
2. Personnel Requirements 104
3. Capital Expenditures 105
4. Transfer Payments 111
5. Revenue 115
6. Loans, Investments and Advances 116
7. Net Cost of Program 117
8. Financial Information by Activity, Explanation of Change 118
B. Fisheries and Oceans' Fleet 121
C. Selected Program Reports
1. The Northern Cod Adjustment and Recovery Program (NCARP) 122
2. Reforming Licensing and Allocation 123
3. Aboriginal Fisheries 124
4. Quebec Federal Fisheries Development Program (QFFDP) 125
5. Fishery Development Agreements and Programs (Cooperation Agreements) 126
6. Dockside Monitoring 130
7. Test Fishing 131
D. Index of Selected Program Reports from Previous Expenditure Plans 133
E. Relationship of Program Objective to Legislation 134

Glossary 135

Index 139

Spending Authorities

A. Authorities for 1993-94 — Part II of the Estimates

Financial Requirements by Authority

Vote	(thousands of dollars)	**1993-94 Main Estimates**	1992-93 Main Estimates
1	Operating expenditures	**565,251**	599,851
5	Capital expenditures	**106,683**	99,578
10	Grants and contributions	**245,570**	41,732
(S)	Minister of Fisheries and Oceans — Salary and motor car allowance	**51**	51
(S)	Liabilities under the Fisheries Improvement Loans Act	**200**	1,000
(S)	Contributions to employee benefit plans	**38,037**	48,504
Total Department		**955,792**	790,716

Votes — Wording and Amounts

Vote	(dollars)	**1993-94 Main Estimates**
Fisheries and Oceans		
1	Fisheries and Oceans — Operating expenditures, Canada's share of expenses of the International Fisheries Commissions, authority to provide free accommodation for the International Fisheries Commissions, authority to make recoverable advances in the amounts of the shares of the International Fisheries Commissions of joint-cost projects.	**565,251,000**
5	Fisheries and Oceans — Capital expenditures and authority to make payments to provinces or municipalities as contributions toward construction done by those bodies and authority for the purchase and disposal of commercial fishing vessels.	**106,683,000**
10	Fisheries and Oceans — The grants listed in the Estimates and contributions.	**245,570,200**

Program by Activities

(thousands of dollars)	1993-94 Main Estimates				
	Budgetary				1992-93
	Operating	Capital	Transfer Payments	**Total**	Main Estimates
Science	197,156	7,027	730	**204,913**	229,171
Fisheries Operations	199,964	10,805	225,692	**436,461**	257,886
Inspection	33,973	1,215	—	**35,188**	37,994
International	6,779	—	—	**6,779**	4,818
Corporate Policy and Program Support	165,467	87,636	19,348	**272,451**	260,847
	603,339	106,683	245,770	**955,792**	790,716

B. Use of 1991-92 Authorities — Volume II of the Public Accounts

Vote	(dollars)	Main Estimates	Total Available for Use	**Actual Use**
	Budgetary			
	Fisheries and Oceans			
1	Operating expenditures, Canada's share of expenses of the International Fisheries Commissions, authority to provide free accommodation for the International Fisheries Commissions, authority to make recoverable advances in the amounts of the shares of the International Fisheries Commissions of joint-cost projects	587,318,000	604,090,254	**575,459,578**
5	Capital expenditures and authority to make payments to provinces or municipalities as contributions toward construction done by those bodies and authority for the purchase and disposal of commercial fishing vessels	103,966,000	96,629,731	**77,685,075**
10	The grants listed in the Estimates and contributions	22,140,000	69,361,301	**52,846,979**
(S)	Minister of Fisheries and Oceans — Salary and motor car allowance	51,100	55,358	**55,358**
(S)	Liabilities under the Fisheries Improvement Loans Act	1,000,000	—	**—**
(S)	Contributions to employee benefit plans	46,098,000	50,567,790	**50,567,790**
(S)	Federal Court Awards	—	150,410	**150,410**
(S)	Refund of amounts credited to revenue in previous years	—	97,430	**97,430**
	Total Program — Budgetary	**760,573,100**	**820,952,274**	**756,862,620**

Use of 1991-92 Authorities — Volume II of the Public Accounts (Cont'd)

Vote	(dollars)	Main Estimates	Total Available for Use	**Actual Use**
	Non-budgetary			
L38b	Advance to Fishing Vessel Insurance Plan for Assistance	—	150,000	—
L23b	Canadian Saltfish Corporation — Loans to the Corporation and guarantees for loans pursuant to the Saltfish Act. Aggregate of all amounts borrowed by the Corporation limited to $50,000,000. (Net)	—	18,600,000	**1,400,000**
L30b	Freshwater Fish Marketing Corporation — Loans to the Corporation and guarantees for loans pursuant to the Freshwater Fish Marketing Act. Aggregate of all amounts borrowed by the Corporation limited to $16,900,000. (Net)	—	4,400,000	**(3,900,000)**
	Total Program — Non-budgetary	**—**	**23,150,000**	**(2,500,000)**

Section I
Program Overview

A. Plans for 1993-94 and Recent Performance

1. Highlights

The Northern Cod Adjustment and Recovery Program (NCARP): The two-year moratorium on the northern cod fishery announced on July 2, 1992, was accompanied by a comprehensive compensation and adjustment package, made public on July 17, 1992. NCARP is designed to address the immediate income and adjustment needs of fishermen and plant workers made idle by the closure of the northern cod fishery. The objective of NCARP is to emerge from the moratorium with a more economically viable and environmentally sustainable northern cod fishery.

Under NCARP, some 18,000 fishermen and plant workers affected by the moratorium are receiving income replacement payments ranging from $225 to $406 per week until the re-opening of the fishery, scheduled for May 1994. An integral component of NCARP is the provision for displaced individuals to choose from a variety of alternative training and skills development programs to assist them in preparing to work outside the fishery and for those who choose to remain in the fishery to upgrade skills.

Other important elements of NCARP include proposals to introduce early retirement opportunities for older fishermen and plant workers, retirement of fishing licences for those who choose to leave the fishery and vessel support payments to assist owners to maintain and store their vessels and gear during the moratorium. Further information on NCARP may be found in the sections entitled "Initiatives" (page 23), "Analysis by Activity" (page 95), and "Selected Program Reports" (page 122).

Atlantic Fisheries Licensing Policy: The two-year northern cod moratorium and the crisis in the Atlantic groundfish fishery have highlighted the need to establish a better balance between the resource and the number of fishermen dependent on it for their livelihood.

Licensing policy will be used to define a new basis for limited entry into the industry and to reduce the number of licences already issued. See the section entitled "Initiatives" (page 24) for more details.

Fisheries Resource Conservation Council: Achieving adjustment, recovery and long-term stability in the fishery requires major changes in the way fisheries management decisions are taken and in the role of industry in these decisions. In the area of stock assessment, the Minister announced, on December 18, 1992, the establishment of the new Fisheries Resource Conservation Council. This initiative will make the fishing industry a full partner with scientists in the process that generates resource assessment and translates these assessments into conservation actions. See the section entitled "Initiatives" (page 24) for more details.

Habitat Management/Sustainable Development: The Department is committed to the concept of sustainability. Productive fish habitat is essential to sustainability. Habitat Management will 1) develop a national policy and action plan on sustainable fisheries, 2) implement an enhanced fish habitat program and 3) develop partnerships with provincial governments to protect and enhance fish habitat. Further information may be found in the section "Analysis by Activity" (pages 60 and 97).

Canada-European Community Fisheries Relations: Following diplomatic, public information and international law initiatives by Canada, the European Community (EC) has moved toward improving conservation outside Canada's 200-mile zone. The EC accepted eight of 11 Northwest Atlantic Fisheries Organization (NAFO) decisions for 1992 and made further improvements to control fishing by its vessels in the NAFO Regulatory Area in 1992, including timely fishery closures. The EC accepted all NAFO Total Allowable Catches and quotas for 1993 and a ban on fishing 3L cod outside 200 miles for 1993. The EC also indicated a greater appreciation of the need to prevent re-flagging by its vessels to avoid controls on their fishing in the northwest Atlantic.

In 1993-94, the Government will pursue additional improvements to the NAFO system of international control and enforcement, and a reduction of fishing by non-member vessels. The Government will also seek continued EC compliance with NAFO decisions, including a 3L cod moratorium, and undertake bilateral discussions with the EC on its northwest Atlantic fisheries in 1993 and beyond.

Foreign Fishing Panel: On December 18, 1992, the Minister announced the creation of a Foreign Fishing Panel composed of representatives of the fishing industry, the provinces and the federal government. This new panel will give stakeholders direct input into decisions on foreign fishing in Canadian waters.

Reforming Licensing and Allocation: On November 26, 1991, the Minister announced the beginning of public consultations on a proposal to reform the administration of commercial fisheries management. He has proposed the creation through legislation of two new regional Boards to manage, under ministerial policy direction, licensing and resource allocation for the Atlantic and Pacific marine commercial fisheries. A public document outlining the details of the proposal will be released in 1993. See the section entitled "Selected Program Reports" (page 123).

Aboriginal Fisheries: On June 29, 1992, the Minister announced the Aboriginal Fisheries Strategy, a seven-year national program to be implemented in areas where the Department manages the fishery, in British Columbia, the Atlantic provinces and the Arctic. The Strategy includes several important policy initiatives to improve Aboriginal involvement in the management of Aboriginal fisheries. The Strategy is designed to integrate Aboriginal people into the management of the fishery, and provide immediate economic benefits to Aboriginal communities. Agreements are being negotiated with Aboriginal groups to increase self-management of Aboriginal fishing, to define allocations and to test new policies such as the sale of fish taken in Aboriginal fisheries. Agreements also include cooperative management programs to enhance fish stocks and improve fish habitat. The Aboriginal Fisheries Strategy will also maintain stability and profitability in the fishing sector as Government works to resolve Aboriginal rights and related issues. See the section entitled "Selected Program Reports" (page 124).

2. Financial Summaries

Figure 1: Financial Requirements by Activity

(thousands of dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Main Estimates 1992-93	Actual 1991-92
Science	**204,913**	209,723	229,171	222,142
Fisheries Operations	**436,461**	433,620	257,886	258,699*
Inspection	**35,188**	34,894	37,994	36,472
International	**6,779**	6,668	4,818	5,401
Corporate Policy and Program Support	**272,451**	270,433	260,847	234,149*
	955,792	955,338	790,716	756,863
Human Resources (FTE**)	**6,075**	6,200	6,194	5,995

* **Transfer from Fisheries Operations to Corporate Policy and Program Support - Actual 1991-92** — Reflects a transfer of $1,155K from Fisheries Operations to Corporate Policy and Program Support relating to Habitat Management and Sustainable Development actual expenditures. This transfer is not reflected in the Public Accounts and is a retroactive adjustment to allow for consistent presentation.

** **Full-time equivalents** — Full-time equivalent (FTE) is a measure of human resource consumption based on average levels of employment. FTE factors out the length of time that an employee works during each week by calculating the rate of assigned hours of work over scheduled hours of work. FTEs are not subject to Treasury Board control but are disclosed in Part III of the Estimates in support of personnel expenditure requirements specified in the Estimates. Figures include 10 exempt staff and two Order-in-Council appointments.

Figure 2: 1991-92 Financial Performance by Activity

(thousands of dollars)	1991-92			
	Main Estimates	Total Available for Use	Actual	**Change from Main Estimates**
Science	219,408	228,837	222,142	**(2,734)**
Fisheries Operations	239,415	272,426*	258,699**	**(19,284)**
Inspection	39,207	38,075	36,472	**2,735**
International	4,957	5,275	5,401	**(444)**
Corporate Policy and Program Support	257,586	276,339*	234,149**	**23,437**
	760,573	820,952	756,863	**3,710**
Revenue Credited to the Consolidated Revenue Fund	40,447	n/a	37,203	**3,244**
Human Resources (FTE)	6,075	6,182	5,995	**80**

* **Transfer from Fisheries Operations to Corporate Policy and Program Support - Total Available for Use** — Reflects a transfer of $889K from Fisheries Operations to Corporate Policy and Program Support relating to the total available for use for Habitat Management and Sustainable Development.

** See the first note under Figure 1.

Additional information may be found in the section entitled "Financial Information by Activity, Explanation of Change," on page 118.

B. Background

1. Introduction

Canada is a coastal state with vital sovereign interests in three bordering oceans. Canada has the world's longest coastline and second largest continental shelf. Its 200-mile Exclusive Fishing Zone, declared in 1977, represents 27% of Canada's territory. Many major cities are coastal ports or are located on the St. Lawrence Seaway, the world's longest and most heavily used waterway. One-quarter of Canada's Gross National Product (GNP) is based on foreign trade, more than half of which is transported by water. Weather and climate, which are driven by ocean processes, determine the location and success of our important fishing, agriculture and forestry industries. Canada's fishing industry is a major exporter of fisheries products and the mainstay of hundreds of small communities in coastal areas. Canada is richly endowed with freshwater resources: 7.5% of the country's surface area is covered by freshwater, representing 16% of the world's total surface area of freshwater.

The clients of the Department are well defined and include the following:

- **the Canadian public,** which expects its fisheries resource and fish habitat to be managed responsibly and conserved for present and future generations. It also expects wholesome fish products, safe harbours, reliable navigational charts and a scientific capacity to deal with environmental and resource issues of local, regional, national and international concern;

- **the fish harvesting and processing sectors,** including 87,000 commercial fishermen; Aboriginal people fishing for food, societal and ceremonial purposes; 1,500 aquaculturists; 1,100 importers; the equivalent of 36,000 full-time plant workers; and over 6,000,000 recreational fishermen. They expect a fair and equitable share of the fishery resource and involvement in regulations governing their activities; and

- **the oceans manufacturing and services industries,** with approximately 500 firms and 8,100 employees making major contributions to strategic sectors of the ocean economy, such as offshore petroleum development. They expect leadership from the government in the development of Canada's oceans economy.

2. Mandate

While other government departments contribute to the management of Canada's water-based activities, Fisheries and Oceans is the only federal department with resource-management responsibilities with a primary focus on water and the resources it contains. Fisheries and Oceans has responsibility for all matters respecting oceans not by law assigned to any other department.

Parliament's jurisdiction over sea-coast and inland fisheries, public harbours and navigation in marine and inland waters is established by the Constitution Act. The direction of this responsibility and the extent to which it is exercised by the federal government have been determined by judicial interpretation, agreements with provinces and the evolution of public policy. Some provinces have been delegated varying degrees of administrative responsibilities. Page 134 illustrates the relationship between the Program's objective and those Acts forming the Department's legislative base.

3. Program Objective

The objective of the Program is to undertake policies and programs in support of Canada's economic, ecological and scientific interests in the oceans and inland waters; to provide for the conservation, development and sustained economic utilization of Canada's fisheries resources in marine and inland waters for those who derive their livelihood or benefit from these resources; and to coordinate the policies and programs of the Government of Canada respecting oceans. Sub-objectives for each activity are set out in Section II.

4. Program Organization for Delivery

The consolidated departmental activity structure groups operations into the following activities: Science, Fisheries Operations and Inspection. Each is directed by an Assistant Deputy Minister (ADM) to ensure that it is managed as a national program with clear and effective linkages to government priorities. In addition, departmental international activities are directed by an ADM. Responsibility for Corporate Management is shared by the Senior Assistant Deputy Minister, responsible for both Corporate and Capital Assets Management, and an Assistant Deputy Minister, responsible for Policy and Program Planning. The activity structure and corresponding resource profile are shown in Figure 3 and Figure 4, respectively.

The Program is delivered in the following six Fisheries and Oceans regions, each headed by a Regional Director General in regional headquarters: Newfoundland Region — St. John's, Newfoundland; Scotia Fundy Region — Halifax, Nova Scotia; Gulf Region — Moncton, New Brunswick; Quebec Region — Quebec City, Quebec; Central and Arctic Region — Winnipeg, Manitoba; and Pacific Region — Vancouver, British Columbia.

Figure 3: Activity Structure

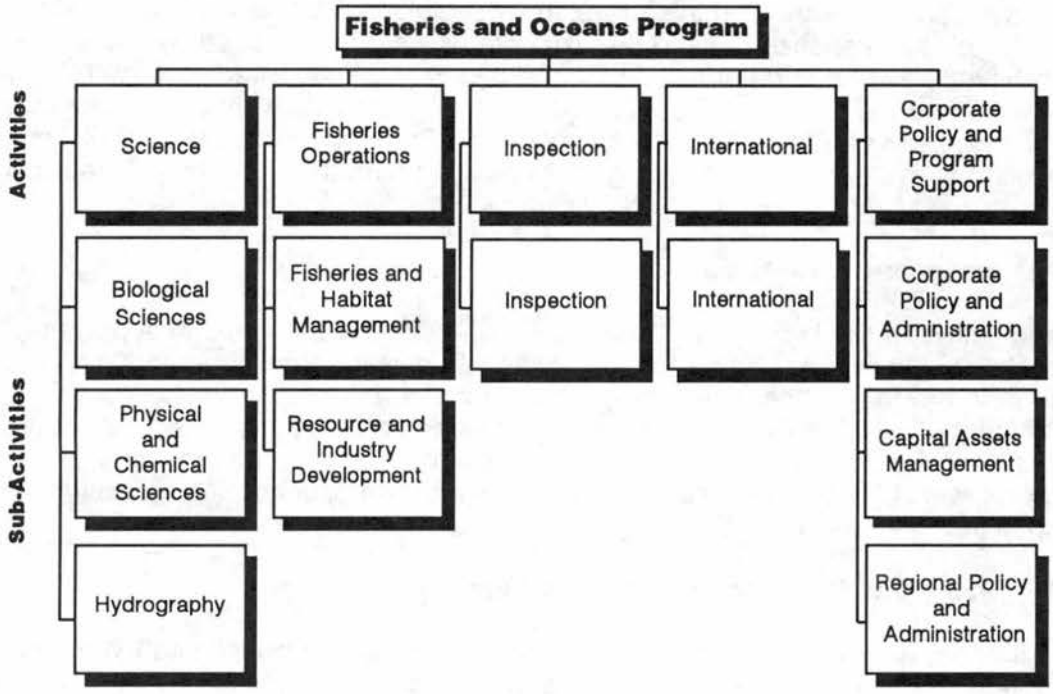
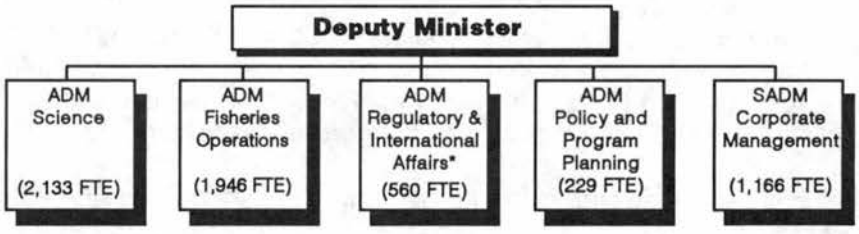


Figure 4: Resource Profile, 1993-94 Main Estimates



						Activity Totals
Science	204, 913 (2,133 FTE)					204, 913 (2,133 FTE)
Fisheries Operations		436,461 (1,946 FTE)				436,461 (1,946 FTE)
Inspection			35,188 (525 FTE)			35,188 (525 FTE)
International			6,779 (21 FTE)			6,779 (21 FTE)
Corporate Policy and Program Support			2,552 (14 FTE)	41,341 (229 FTE)	225,611 (1,166 FTE)	269,504 (1,409 FTE)
Sub-total	204,913	436,461	44,519	41,341	225,611	952,845 (6,034 FTE)
Corporate Executive					2,947 (41 FTE)	2,947 (41 FTE)
Total	204, 913	436,461	44,519	41,341	228,558	955,792 (6,075 FTE)

* For the purposes of this Expenditure Plan, resources devoted to enforcement activities are displayed under Fisheries Operations. During 1993-94, enforcement activities will be consolidated under one sector reporting to the Assistant Deputy Minister of Regulatory and International Affairs. Corresponding changes will be incorporated in the 1994-95 edition of the Department's Expenditure Plan.

5. Nature of Activities

As described below, the Department's activities are operational, science-based, capital-intensive and highly decentralized, and they have significant economic and regional impacts.

Operational: The Department's scientists conduct research and provide scientific advice; fishery officers enforce regulations; fish inspection officers monitor fish and fish products; departmental officials study proposals with a possible impact on fish habitat; staff at all levels consult with the public; hydrographers survey navigable waters and prepare and publish charts and other reference works; field staff manage the Fishing Vessel Insurance Program, including the appraisal of vessels and the settlement of claims; and departmental officials negotiate land purchases and contract for the design, construction and maintenance of small craft harbour installations and shore facilities.

Science-based: Fisheries management requires a sound knowledge of the factors influencing the quantity of fish stocks and their migratory and spawning habits; habitat management is based on research concerning the impact of physical and chemical changes on fish habitat; the health and safety of fish consumers calls for a knowledge of the levels of toxic substances in fish and fish habitat and the tests for such substances; the regulation of offshore petroleum development requires a broad array of information on current, ice and waves; and the nature of the Department's Science activities requires extensive cooperation internationally on matters such as global climate change.

Capital-intensive: The Department's extensive capital asset base (estimated replacement value of over $4.75 billion) is integral to its operations. The assets include 2,127 harbours, which support and service commercial and recreational craft; 264 vessels used in support of scientific research and enforcement activities; an equipment inventory of over 96,000 items; and buildings and works at 780 installations. (In addition, the Department occupies 311 facilities provided by Public Works Canada.) The vessels in the departmental fleet range from large scientific research and fisheries patrol vessels to small fisheries management vessels. Among the items in the equipment inventory are vehicles, sophisticated scientific and laboratory equipment, radio communication equipment, a wide range of EDP equipment from laptops to mainframes, sophisticated cartography equipment, office furniture and a wide variety of operational support equipment. Buildings and works include world-class research centres in the biological, physical and chemical sciences and oceanography — for example, the Bedford Institute of Oceanography, in Dartmouth, Nova Scotia, and the Maurice Lamontagne Institute, in Quebec — and enhancement facilities, in support of the Salmonid Enhancement Program.

Decentralized: The Department has a major presence throughout Canada, with 89% of its staff employed in the regions. Apart from small craft harbours, there are 310 locations, mainly offices, laboratories and hatcheries which are staffed on a permanent basis as well as a large fleet of crewed vessels operating in all waters under Canadian jurisdiction.

Economic and Regional Impacts: The Department directly affects the livelihood of Canadians through the conservation of the fisheries resource for present and future generations; the allocation of the fisheries resource among competing user groups; the construction and maintenance of small craft harbours; the inspection of fish and fish products; the generation of scientific information to assist in the regulation of offshore petroleum development; and the transfer of technology to help build a viable oceans industry.

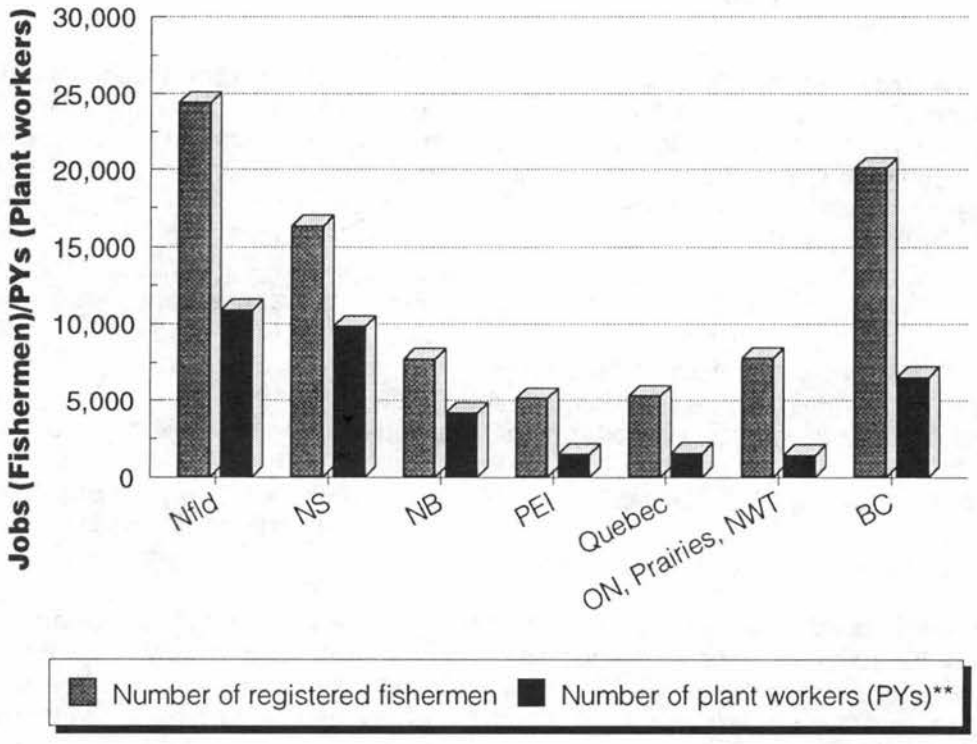
C. Planning Perspective

1. The Commercial Fisheries

Importance of the Fisheries: Commercial fishing is an important industry in the economies of coastal provinces, northern communities and parts of Quebec such as the North Shore and the Gaspé.

Commercial fishing activity is concentrated in communities along the Atlantic and Pacific coasts as well as around the Great Lakes and Lake Winnipeg. It provides employment for more than 87,000 fishermen and the equivalent of 36,000 full-time plant workers and is virtually the only economic activity in an estimated 1,500 communities. Figure 5 displays 1991 employment levels in fisheries by province.*

Figure 5: Employment in Fisheries by Province, 1991

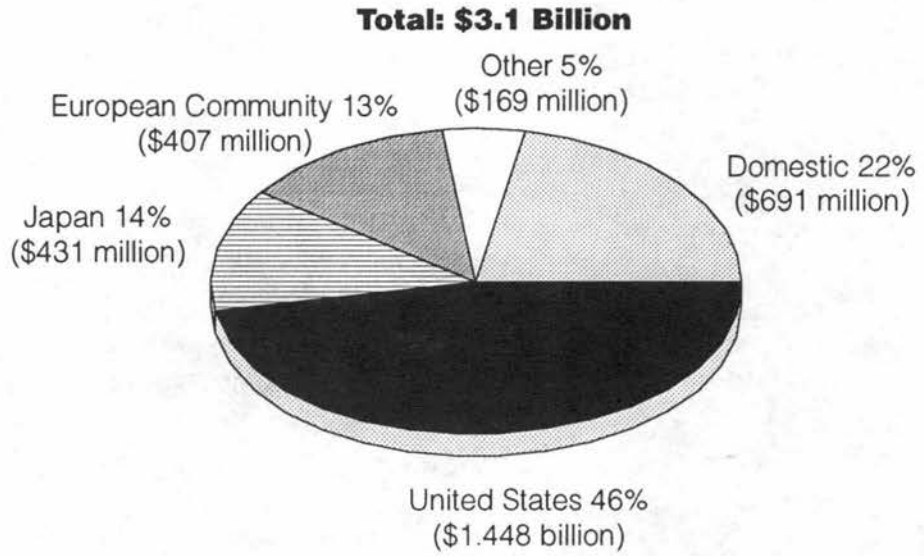


** PYs refer to person-years.

* In 1992-93, a significant decline in the level of employment in the Atlantic region is expected as a result of the two-year northern cod fishery moratorium and declines in the Atlantic groundfish fishery.

Value of Production: In 1991, industry production was valued at $3.1 billion. Of this, $2.5 billion — over 78% — was exported; exports to the United States alone totalled $1.5 billion. The distribution of Canadian fisheries products is displayed in Figure 6. Canada ranks sixteenth in the world in terms of tonnage of fish landings but is a major world exporter of fish products.

Figure 6: Distribution of Canadian Fisheries Products, 1991



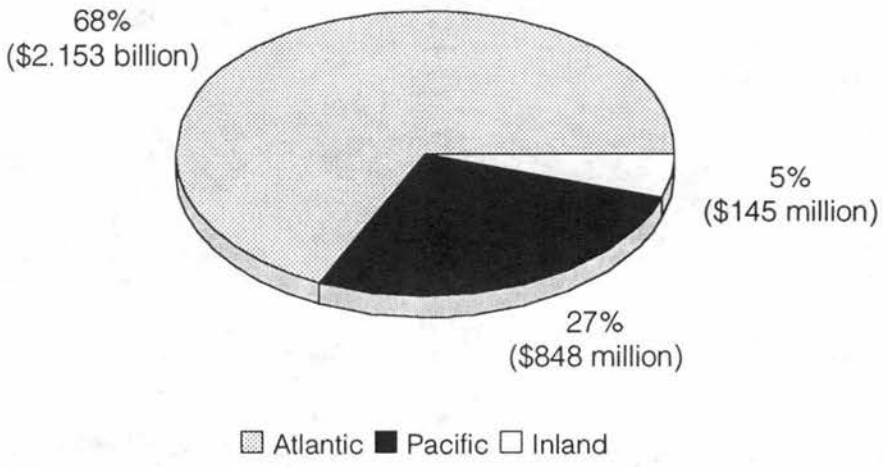
Atlantic: The Atlantic fishery is Canada's largest, with total production of more than $2.2 billion in 1991. Groundfish accounted for 55% of total landings by volume. Approximately 95% of the 58,900 registered fishermen operate seasonally from privately owned vessels less than 100 feet in length and account for 54% of total landings by volume. The remaining fishermen operate year-round from company-owned fishing trawlers. The processing sector on the Atlantic coast employed about 59,000 people and consisted of over 900 establishments, of which only 35% operated year-round. With the recent fishing moratorium on northern cod and declines in other Atlantic groundfish stocks, this sector is undergoing a significant downward adjustment. Three integrated companies — National Sea Products (NSP), Fishery Products International (FPI) and Clearwater Fine Foods — accounted for well over 50% of total production.

Pacific: On the Pacific Coast, the fishing industry employs approximately 20,000 fishermen and 6,500 plant workers. Fishing activity is concentrated around the Lower Mainland and Prince Rupert, with over 90% of canning capacity occurring in these areas. The production of the Pacific fishery in 1991 was valued at about $848 million. Salmon accounted for over 26% of landings by weight and over 46% of total landed value in 1991. The harvesting sector is composed largely of vessels under 100 feet in length, and processing-sector ownership or financial control over segments of the fleet is significant. Processing occurs in approximately 241 plants, most of which are seasonal. The major markets for Pacific region exports are Japan, Australia and Britain.

Inland: Inland fisheries employ about 8,400 fishermen and 1,400 plant workers. Inland fisheries generated production valued at about $145 million in 1991. The predominant species are white-fleshed freshwater fish. Processing occurs at 200 plants, most of which are small packing operations. The major processor is the Freshwater Fish Marketing Corporation (FFMC), a federal Crown Corporation headquartered in Winnipeg.

Figure 7 depicts the value of fisheries production in the Atlantic, Pacific and Inland fisheries.

Figure 7: Value of Fisheries Production, 1991



Resource Outlook: Several major groundfish stocks on the Atlantic coast have experienced marked declines since 1989. These declines follow several years of growth in the mid-to-late 1980s. A two-year moratorium on the harvesting of the region's most important stock, northern cod, was announced in July 1992 following scientific advice which indicated that there had been a sudden and sharp decline in the stock biomass. Particulary worrisome was the virtual disappearance of the spawning stock. The dramatic decline of the northern cod stock has been attributed to several factors, including changing environmental conditions and fishing pressures. The 1993 Groundfish Management Plan announced significant reductions in the Total Allowable Catches (TACs) for other important Atlantic groundfish stocks and the introduction of measures to sharply reduce fishing mortality among small fish. While 1993 groundfish TAC reductions applied throughout the Atlantic, the largest reductions occurred in the Gulf of St. Lawrence and the eastern Scotian Shelf.

The snow crab stock in the Gulf of St. Lawrence is just beginning to recover after having declined to a historic low in the recent past, and requires careful management. The offshore capelin fishery in the Canadian zone declined in 1991. Landings in pelagic fisheries will continue to be variable because of uncertain stock recruitment and markets.

Resource prospects for major shellfish species are varied. Recent increased lobster landings are mainly the result of increases in the commercial stock. Shrimp landings have more than doubled since 1984, and further increases in landings will depend more on the economics of harvesting than on the availability of the resource. Most commercial concentrations of snow crab are now exploited beyond target levels, and future landings must be kept below the historical high levels seen in the early 1980s.

In the Pacific, the "salmon cycle" can cause significant resource fluctuations from year to year. While salmon harvests have been increasing in the past 17 years, they remain highly variable. During this period, harvests ranged from a maximum of 107,000 tonnes in 1985 to a low of 36,000 tonnes in 1975. Salmon landings fell from 95,000 tonnes in 1990 to approximately 85,000 tonnes in 1991.

West coast herring catches in 1991 were more than 41,000 tonnes, up marginally from the 1990 levels. Catches for 1992 are expected to be slightly lower than those for last year.

Pacific groundfish stocks generally remain in good condition. Halibut abundance has entered a natural decline after peaking in 1988, when landings were 7,802 tonnes. Halibut catches declined from over 4,700 tonnes in 1990 to 4,000 tonnes in 1991. The Department is undertaking measures to promote an expansion of domestic processing of Pacific hake which would secure a corresponding reduction in direct sales of unprocessed fish.

Production in Pacific shellfish fisheries has grown substantially since 1981. However, 1991 landings of 11,200 tonnes were approximately 42% lower than the 1990 level of over 19,300 tonnes. A trial program to implement individual quotas in the geoduck clam fishery was implemented in 1989, and similar arrangements are being explored for possible implementation in other shellfish fisheries.

Market Demand: Demand for fish products should continue to increase as the global need for protein grows. Markets are becoming more competitive as a greater number of species and products are being offered to meet shifting consumer preferences. Markets once characterized by national borders have become international, with buyers from many nations competing for supplies. Trade liberalization and fisheries developments in Russia and China, coupled with aggressive export activities, will create new market conditions that should continue to evolve into the next century.

The United States remains the prime export market for Canadian fish and seafood. In 1991, 63% of the tonnage of all exports was sent to the United States, valued at $1.5 billion. While per capita consumption in this market levelled off during the latter part of the 1980s, moderate increases are projected to the year 2000. However, the Canadian industry will have to emphasize product development, promotion of further processed products and cost competitiveness if it is to maintain its market share and remain profitable. The Americanization of the Alaska pollock stock is making great inroads in the U.S., with adverse impacts on the Canadian groundfish market presence. The success of export sales will continue to be based on our ability to maintain our market shares in traditional products, and expand markets for

underutilized species and value-added products which will satisfy the increasingly sophisticated tastes of consumers.

Industry Outlook: Following record price and revenue levels to fishermen in 1987-88, the fishery experienced a number of economic and biological shocks from 1989 to 1991. Fuel costs increased, the Canadian dollar appreciated and the landed value of most species fell. With the U.S. economy's slow recovery from the recession and the drop in the value of the Canadian dollar relative to the U.S. dollar, demand conditions for most Canadian seafoods have improved.

U.S. markets for groundfish have been improving slowly over the past two years or so in terms of price, but not tonnage. Inventories of cod stocks are remaining low. This shortage of fish has had a positive effect on price. The shortage of cod from Canadian fisheries is expected to continue beyond 1993 because of the temporary closure of the northern cod fishery and TAC reductions in many other cod fisheries.

In contrast to the three previous years of heavy catches and weak markets, landings were down considerably in B.C.'s salmon fisheries in 1992 and markets have improved. The 1993 year is not expected to present resource problems in B.C., as it is in the Northwestern United States. Catches of chinook and coho in 1992 were close to predictions, and sockeye catches exceeded the forecast, although pink and chum catches were below expectations. Negotiations on the Canada-U.S. salmon treaty, which is up for renewal in 1993, will be conducted.

The salmon aquaculture industry is expected to have a better year in 1993 because of the decline in European production which is resulting in higher prices. Market conditions for Pacific herring roe have also shown more strength in 1992.

Mexico is becoming a targeted seafood market with the signing of the North American Free Trade Agreement and recent changes in Mexican law. Mexico currently exports substantially more seafood than it imports.

2. The Aquaculture Industry

Recognizing Canada's potential to be a leading world aquaculture producer, the Department has consulted with industry and the provinces to develop an Aquaculture Strategy to help position the sector for the turn of the century. The Department has the critical role of encouraging private-sector development in the aquaculture sector by creating a climate for entrepreneurship and innovation.

As the lead federal agency for aquaculture development, the Department maintains ongoing dialogue and serves as a coordinating body among industry, provincial governments and other federal departments and agencies. This is essential if Canada's potential in this highly competitive industry is to be realized.

At a time when globalization of markets is posing challenges for most resource-based nations, Canada has produced an exciting contender in this new and sustainable resource-based industry. In 1984, total output from commercial aquaculture operations in Canada was valued at $7 million. By 1992, industry output had increased to an estimated value of more than $220 million, or approximately 6%

of the landed value of Canadian fisheries. Additionally, the supply and services sector of the aquaculture industry generated more than $266 million in domestic and export sales last year. Recent forecasts suggest that by the year 2000, the Canadian aquaculture industry could reach annual values of $500 million to $1 billion.

Aquaculture is also recognized as a growing source of employment and offers the possibility for social and economic improvement in communities with limited employment alternatives. In 1991, aquaculture provided more than 5,200 jobs — some 2,800 in the production sector and 2,400 in the supply and services sector. These figures could double before the end of the decade. Quite clearly, aquaculture has developed into a major player in the Canadian fisheries.

The Department's scientific efforts have made a major contribution, enabling the industry to reach its present level. The Department remains active in many areas of importance to the development and competitiveness of the Canadian aquaculture industry.

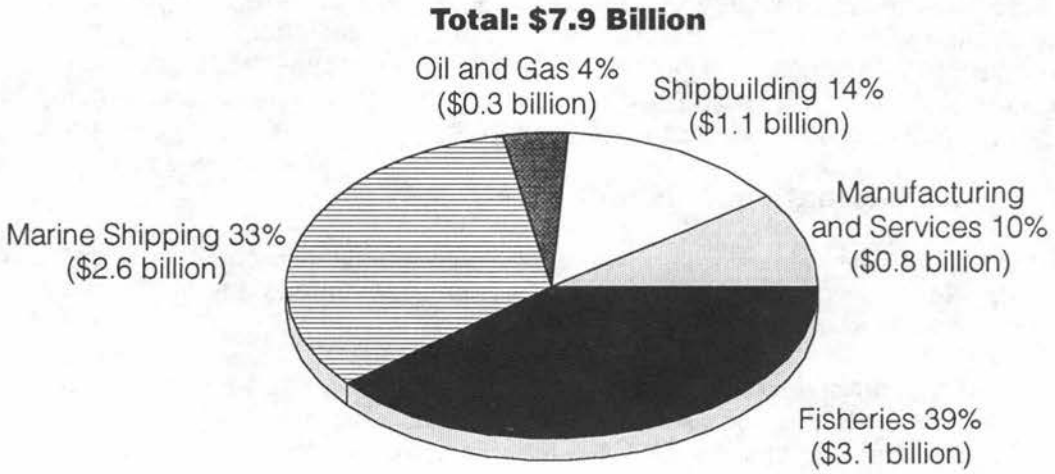
Today, the Department supports the aquaculture industry in a number of areas, including policy analysis and advocacy, industry development, inspection, science, habitat protection and cooperation agreements.

As aquaculture increases in importance in the Canadian economy, the Government of Canada will continue to work with it in meeting its changing needs.

3. The Oceans Sector

The oceans sector generates more than $7.9 billion of Canada's gross national product and more than 165,000 jobs. Figure 8 illustrates the components of this sector.

Figure 8: Oceans Sector — Value of Output by Industry Sub-sector



Oceans Manufacturing and Services Sub-sector: This dynamic segment of Canada's oceans industries comprises approximately 440 companies employing some 8,100 persons. Sales from these companies were approximately $763 million in 1989. Exports of oceans products and services in 1989 were more than $420 million, about 55% of total revenues.

About one-third of oceans services and manufacturing firms are located on the Atlantic coast of Canada, one-third on the Pacific coast and one-third in Central Canada.

Canadian firms in this sub-sector have an international reputation for excellence in oceans-related science, technology and engineering. Products range from oceanographic and hydrographic instruments to marine-related remote sensing, submersibles and seabed systems. An area of growing prominence is information-related services, including data capture and interpretation.

The offshore oil and gas industry is currently in a slump which affects all parts of the oceans sector; nevertheless, the future for this industry is bright. The Hibernia oil field, off the coast of Newfoundland, may be an important catalyst in the revitalization of this sub-sector.

Science and Technology (S&T) Expenditures: Departmental research establishments have contributed significantly to the emergence of the oceans industry sector. The Bedford Institute of Oceanography, in Nova Scotia, and the Institute of Ocean Sciences, in British Columbia, are the two largest facilities. World-class centres are also located at the Maurice Lamontagne Institute, in Quebec, and the Freshwater Institute, in Manitoba. Although most S&T activities and expenditures for the Government as a whole occur in Central Canada, the majority of S&T expenditures within the Department occur in the coastal areas of the country. These departmental expenditures have generated notable spin-off industries.

Because of the richness of this sub-sector's potential and the range of oceans-related issues, a coordinated approach is required to maximize economic benefits. In cooperation with other federal departments, the Department is promoting the strengthening of Canadian private-sector expertise in oceans-related science, technology and engineering through support of industry-led projects advancing marine instrumentation, robotics and other technologies.

4. The Recreational Fisheries Industry

Canada's recreational fishing industry contributes significantly to national economic activity. More than five million Canadians and one million tourist anglers fished in marine and inland waters in 1990.

The Atlantic coast offers many recreational fishing opportunities, even though some remain underdeveloped. Anglers fish for bluefin tuna, as well as mackerel, cod, pollock, flounder and striped bass. On the Pacific coast, anglers fish mainly for chinook, coho and pink salmon and steelhead trout. They also catch halibut, rockfish, lingcod and other saltwater species.

Significant as Canada's ocean fisheries are, 90% of recreational fishing takes place in freshwater, closer to inland population centres. Anglers pursue about 50 species in freshwater such as trout, walleye, northern pike, bass, smelt and perch. Salmon, muskellunge and steelhead, a seagoing rainbow trout, are pursued by more experienced freshwater anglers.

In 1990, anglers spent approximately $2.8 billion on goods and services directly related to their angling activities. Resident anglers spent close to $2.2 billion of this amount. Visiting anglers spent $600 million in Canada, thus contributing significantly to Canada's foreign exchange revenues from tourism. In 1990, anglers invested over $5.3 billion in boats, motors, camping gear, special vehicles and other durable goods. In sum, anglers spent a total of approximately $8.1 billion on goods and services related, in whole or in part, to their angling activities. In a 1990 survey, anglers indicated that $4.7 billion, or 58%, of these expenditures were directly related to their fishing activities.

The recreational fishing industry includes lodge operators, outfitters and guides, charter boat operators, equipment manufacturers and retailers, boat and boating equipment suppliers, and a host of other commercial activities across the country. The money spent by anglers to go fishing is estimated to generate $3.8 billion in economic activity and to support over 90,000 jobs in Canada.

5. Initiatives

For 1993-94, the Department will pursue the following initiatives.

The Northern Cod Adjustment and Recovery Program (NCARP): On July 2, 1992, the federal government announced a two-year moratorium on the northern cod fishery until the spring of 1994 to rebuild the northern cod stock following a sudden and sharp decrease in the stock biomass. A comprehensive income replacement and adjustment package was put in place to address the hardship of individuals and communities affected by the moratorium.

The objectives of NCARP are twofold: to respond to the immediate income and adjustment needs of fishermen and plant workers during the moratorium and to emerge from the moratorium with a more economically viable and environmentally sustainable northern cod fishery.

NCARP provides for

- temporary emergency assistance payments of $225 per week followed by income replacement payments ranging from $225 to $406 per week for the duration of the moratorium for some 18,000 fishermen and plant workers reliant on northern cod;

- training accompanied by income assistance for up to three years for those who wish to acquire a skill or trade outside the fishery;

- training accompanied by income assistance for those who wish to remain in the fishery to upgrade technical skills in support of full-time professionalization and certification in the fishery;

- an early retirement program for older fishermen and plant workers and a licence retirement program for fishermen;

- assistance to owners of inshore vessels idled by the moratorium to defray some of the costs associated with maintenance and storage of those vessels;

- study of harvesting practices with respect to the use of otter trawls, gillnets and cod traps to help achieve a sustainable fishery over the long run; and

- exploration of means to assist the processing sector to maintain a core capacity and employment in cooperation with the Province of Newfoundland, which has primary responsibility for the processing sector.

Atlantic Fisheries Licensing Policy: The two-year northern cod moratorium and the crisis in the Atlantic groundfish fishery have highlighted the need to establish a better balance between the resource and the number of fishermen dependent on it for their livelihood.

Licensing policy will be used to define a new basis for limited entry into the industry and to reduce the number of licences already issued.

Beginning in 1994, commercial licences will be held only by professional/certified fishermen with a permanent and full-time attachment to the fishery. Qualifying as a professional/certified fisherman will require a process of professionalization and certification. The Department, in collaboration with Employment and Immigration Canada, will consult and work with the provinces and the industry to move toward a professional/certified system across Atlantic Canada and to develop training programs for fishermen. Inter-provincial standards are required to ensure consistency and fishermen's mobility. A grandfathering provision will be introduced for those fishermen who already meet the criteria by virtue of their longstanding attachment to the fishery. Policies related to transferability, linkages to the licensing system in other fisheries and the rules governing Individual Transferable Quotas (ITQs) will all be reviewed as part of the overhaul of the current groundfish licensing system in Atlantic Canada.

As a first step in this process, groundfish licences which were inactive in 1991 and 1992 will not be reissued in 1993. This measure is designed to freeze the existing licensing situation pending the consultations on a professional/certified licensing system.

Fisheries Resource Conservation Council: Achieving adjustment, recovery and long-term stability in the fishery requires major changes in the way fisheries

management decisions are taken and in the role of industry in these decisions. For the area of stock assessment, the Minister announced, on December 18, 1992, the establishment of the new Fisheries Resource Conservation Council. This initiative will make the fishing industry a full partner with scientists in the process that generates resource assessment and translates these assessments into conservation actions.

A central thrust in creating the council is the integration of industry experience and scientific advice.

The council replaces CAFSAC, the Canadian Atlantic Fisheries Scientific Advisory Committee, and AGAC, the Atlantic Groundfish Advisory Committee, for the purposes of recommending harvest levels and conservation measures.

Under the present system, the scientific advice, methodology and research of the Department are not subject to public review before Total Allowable Catches (TACs) are proposed. CAFSAC recommends TAC levels before the operational and economic realities of the fishery are considered. AGAC, for its part, generally lacks sufficient scientific expertise to deal with complex models and methodology, in order to assess the TAC advice. Thus, fishermen are not involved in management decisions affecting conservation of the resource.

The Fisheries Resource Conservation Council would address these deficiencies by bringing together industry, departmental science and external scientific expertise in one management body:

- to advise the Minister on research and assessment priorities;
- to review departmental data and advise on methodologies;
- to review scientific stock advice, through a process of public hearings; and
- to make formal recommendations to the Minister on TACs and conservation measures.

Industry members will be chosen on merit and their standing in the fisheries community, not as representatives.

The council will deal with research, methodologies for stock assessment and proposed TACs for all Atlantic stocks, beginning its work in 1993 on the conservation of Atlantic groundfish.

It will make public recommendations to the Minister on conservation measures, including TACs, restrictions on fishing gear, closed areas and seasons and other measures.

The council will be composed of scientists from the Department, external experts and individuals from Atlantic Canada and Quebec who are knowledgeable about the fishery and the practical implications of fisheries conservation decisions.

The five eastern provinces and the Government of the Northwest Territories will each be invited to name an observer to the council.

Aboriginal Fisheries Strategy: The Aboriginal Fisheries Strategy is a program for the negotiation of agreements with First Nations in British Columbia, the Atlantic provinces and Arctic Canada on Aboriginal involvement in all aspects of fisheries and fish habitat management and on participation by First Nations in commercial fishing and related economic opportunities. During 1992, agreements were reached with a large number of groups, improving management of Aboriginal and other fisheries and delivering many economic benefits to Aboriginal communities. The Department will build upon the accomplishments of the first year of the Aboriginal Fisheries Strategy by negotiating wider ranging agreements. In response to the report of the Pearse Inquiry into shortfalls in salmon reaching spawning beds in the Fraser River in early 1992, a number of measures will be introduced regarding Aboriginal fishing through cooperation with First Nations, particularly where pilot projects for the sale of fish taken in the Aboriginal fishery are allowed. These measures will include greater efforts to reach agreements with all First Nations, control of fishing, regulation of fish buyers and recording of sales, increased monitoring and enforcement, and increased training for departmental field staff and Native guardians.

6. Update on Previously Reported Initiatives

The following is the status of initiatives identified in previous Expenditure Plans. A costing of previously reported initiatives is displayed in Figure 9.

Figure 9: Cost of Previously Reported Initiatives

(thousands of dollars)	Cumulative Expenditures to March 31, 1992		Forecast 1992-93		**1993-94**		Future Years' Requirements	
	$	FTE	$	FTE	**$**	**FTE**	$	FTE
Atlantic Fisheries Adjustment Program	64,581	162	33,619	65	**34,123**	**100**	31,502	100
Canada-U.S. Pacific Salmon Treaty	66,844	488	1,037	75	**10,337**	**76**	10,337	76
Strengthened Inspection Services Program	11,400	67	4,900	28	**5,000**	**28**	5,000	28
Inuvialuit Final Agreement and Wildlife Protection	3,656	—	1,445	—	**1,497**	**—**	—	—
Aboriginal Fisheries (Strategy)	9,491	—	19,500	—	**18,650**	**—**	58,400	—
Incomes and Adjustment Task Force	—	—	3,000	5	**—**	**—**	—	—
Recreational Fisheries	—	—	4,000	6	**4,950**	**8**	20,150	8

Aboriginal Fisheries: As a result of the success of the cooperative management program implemented in 1991, the Department has launched an expanded program, the Aboriginal Fisheries Strategy, which is reported as a separate initiative this year. Interim policies on the management and enforcement of Aboriginal food fisheries, with particular reference to areas where agreements under the Aboriginal Fisheries Strategy have not yet been reached, are being finalized, subject to consultation with Aboriginal peoples. In future Expenditure Plans, this previously reported initiative and the new initiative, the Aboriginal Fisheries Strategy, will be reported as one initiative.

Incomes and Adjustment: The Atlantic catch failure of 1991, the recent northern cod moratorium and significant reductions in other groundfish stocks have emphasized the need to solve the income security difficulties the fishing industry has long faced. In response to this need, the Department, in collaboration with Employment and Immigration Canada, formed a Task Force on Incomes and Adjustment for the Atlantic Fishery. This Task Force has been asked to advise on the development of a Comprehensive Strategy on Incomes and Adjustment in the Atlantic Fishery. The Task Force is expected to report in early 1993.

Recreational Fisheries: The Department, in cooperation with the Atlantic Canada Opportunities Agency, will finalize and implement initiatives for recreational fisheries development through cooperation agreements with the Atlantic provinces. Initiatives include commercial salmon licence cancellation to ease harvesting pressure on salmon, stock enhancement for salmon and other key sports fish, habitat restoration, small business development and public awareness promotion (see page 71 for further details on this initiative).

Quality Management Program (QMP): The QMP became a regulatory requirement on February 1, 1992. All federally registered fish processing plants (1,220) have developed and implemented an in-plant QMP as a condition of their federal plant registration. The implementation of the Program has permitted the Inspection Sector to reduce inspection effort on those plants that successfully execute their QMP. The resources gained through QMP are redirected into areas of high risk and low compliance. Now that the implementation phase has been completed and QMP is an integral part of overall operations, it will no longer be reported as an initiative in Expenditure Plans.

Atlantic Fisheries Adjustment Program (AFAP): On May 7, 1990, the federal government announced a five-year, $584-million fisheries adjustment program for Atlantic Canada to address major challenges facing the Atlantic fishing industry. These challenges include a declining resource base, chronic overcapacity in both the harvesting and processing sectors and the need for diversification. The Department will continue to implement this Program in 1993-94, focusing on the following three major components of the Program:

- **rebuilding fish stocks** — implement, primarily for northern cod, new conservation measures to protect young fish; maintain expanded surveillance, enforcement and dockside monitoring activities; strengthen compliance with fisheries management regulations; and implement science programs focusing on northern cod, Northern Gulf cod, Scotia Shelf groundfish and snow crab;

- **adjusting to current realities** — implement, where feasible, Individual Quotas (IQs) in fisheries management; implement a professionalization and certification program for fishermen to upgrade skill requirements; and implement, in cooperation with the provinces, an adjustment program for permanently laid-off older fish plant workers and trawlermen (several of these program elements have been expanded in NCARP; see page 122); and

- **economic diversification** — promote the consumption of fish in the domestic market and stimulate new product development; assist the development of underutilized species, with a focus on processing in redundant fish plants; support the aquaculture sector through scientific research and development; and promote further fisheries development.

Accomplishments

- The Plant Workers Adjustment Program was developed and federal/provincial agreements have been signed with Newfoundland, New Brunswick and Nova Scotia. The program has been operational since late 1991/92 and more than 350 eligible clients have been certified or are pending certification under the Program.

- In the harvesting sector, the Department has developed dockside monitoring programs in selected Individual Quota (IQ) fisheries in Scotia-Fundy and Gulf and assisted groups of fishermen to test and adopt more conservation effective fishing gear. The professionalization initiative for Atlantic fishermen has progressed well with several joint government/fishermen projects underway. Increased emphasis on diversification efforts has resulted in the start-up of more industry initiated projects in underutilized species, new exploratory fisheries, new product and processing developments and increased aquaculture activity.

- Under this Program, a total of 429 projects involving more than $243 million has been approved to date.

AFAP will continue until completion of the Program on March 31, 1995.

Canada-U.S. Pacific Salmon Treaty: This Treaty, signed in 1985 after 15 years of negotiation, established fundamental principles for the conservation and management of Pacific salmon stocks. Annual negotiations to settle fishing regimes cover a large number of salmon intercepting fisheries in Canada and the U.S. for various durations. The 1992-93 round of negotiations is expected to be particularly difficult since it is the first time that major provisions concerning the U.S. harvest of Fraser River pinks and sockeye have been re-negotiated since 1985. The issue is made more complex because of the deliberate over-harvest by the U.S. in 1992 of its ceiling for Fraser River sockeye. A number of other important issues are also due for renegotiation, including coho and chinook catch limits and transboundary river harvest shares.

Strengthened Inspection Services Program: The enhancement of the Operations Infrastructure, i.e., management information, technology transfer, training, and equipment necessary to strengthen the delivery of the Inspection Services Program, is scheduled to be completed by the end of the 1992-93 fiscal year. These enhancements are incorporated in ongoing program delivery.

Inuvialuit Final Agreement and Wildlife Protection: The Department continued the implementation of the fisheries provisions of the Inuvialuit Final Agreement. As Indian and Northern Affairs Canada is the lead department for this agreement and reports on this initiative through both its Part III and in a separate annual report to Parliament, the Department of Fisheries and Oceans will not be reporting this as an initiative in future Expenditure Plans.

D. Program Effectiveness

The following reviews are not intended to cover the entire effectiveness of the Program: this is accomplished by evaluating the various activities of the Program over a five-to-seven-year cycle. These reviews are examples of those undertaken during the last fiscal year and which report on the effectiveness of specific aspects of the Program. Other accomplishments of the Program are included in the section entitled "Analysis by Activity."

1. Pacific Licensing, Resource Allocation and Regulations Development

There are unique aspects to the management of each of the various species fished commercially on the Pacific coast. Case studies undertaken under the auspices of the Department showed that openness from the beginning of the fisheries planning process and the early involvement of fishermen in the process seemed to improve their acceptance of the outcome. For example, the herring fishery is assessed as being well managed. The key to the success in this fishery seems to be the open consultation process and firm management coupled with a reasonably sound biological base.

A significant finding of the program effectiveness study is that the specific regional licensing and resource allocation objectives and associated activities need to be clarified for both employees and client groups. This is a time of rapid change and fierce competition for access to a very valuable resource. Consequently, there is ample opportunity for misunderstanding, frustration, mistrust and confusion.

Regulations are one of the cornerstones of fishery management, yet they may take some time to develop and to come into force. As a result, the process for developing these regulations is sometimes not as effective as possible for dealing with unanticipated in-season crises. Other nations (New Zealand, Australia, U.S., U.K.) have fisheries legislation that allows Ministers and officials to react quickly to in-season problems. The Department is looking at ways that will allow it to also be in an improved position to provide for the implementation of management plans on as timely a basis as possible.

2. Region of Scotia-Fundy — Helicopter Review

A review of the effectiveness and efficiency of using a helicopter for fisheries patrol was conducted. A helicopter, on an exclusive-use basis, was acquired for a three-year period ending in March 1992. Annual patrol costs were approximately $1.7 million.

The helicopter commenced operations in April, 1989. From then until August, 1991, it flew 572 flights totalling 1,499 hours. These included 472 flights for fisheries patrol and 39 for search and rescue.

From the geographic perspective, most patrol flights (49%) were "offshore." From the activity perspective, most flights (38%) were aimed at enforcing "closed areas and times." Only a small portion of flights were focused on "habitat" (6%) and "sovereignty" activities (e.g., Georges Bank, 4%). The helicopter spent 40% of patrol hours on groundfish and 33% on shellfish.

A total of 231 potential violations were identified by Fishery Officers using the helicopter from April 1989 to August 1991. Many of these violations would probably not have been detected without a helicopter. Of this figure, 134 have been identified as actual violations. Of these, 47 have resulted in charges being laid, which have led to 10 convictions and 7 acquittals. There remain 30 cases pending before the courts. The types of violations include fishing in closed areas and illegal foreign fishing, both of which can have a significant negative impact on fishery resources.

These statistics, however, illustrate only portions of the helicopter's effectiveness. They do not take into account the possible deterrent effect of the use of the helicopter (i.e., its speed, manoeuvrability and ability to gather evidence at night). A number of offences may have been prevented because of the presence, or the possibility of the presence, of the helicopter.

From April, 1989, to August, 1991, the helicopter flew about 85 hours related to Search and Rescue (SAR) missions. While this role is clearly only a secondary task, it appears that it is performed well. There have been few disruptions to patrol schedules because of SAR missions (0 in 1989, 5 in 1990 and 1 to August 31, 1991).

3. Physical and Chemical Sciences

A management audit was conducted on the Department's Physical and Chemical Sciences (PCS) program, which provides research, data management and information/advisory services in support of fisheries management, offshore development, climate prediction, pollution control, habitat protection, marine services, coastal engineering, defence and shipping.

The review noted that strategic planning was variable from region to region and recommended a national, inter-regional planning group to develop a national program strategy. The strategy should deal with all of the resource issues affecting the program, and the planning group should enhance coordination, cooperation and decision making on the core research program. Other recommended management actions include the development of memoranda of understanding with research

partners, a national project information system, improved financial management information, continued use of internal and external peer reviews and development of performance measurement indicators. Actions in response to recommendations have been undertaken.

The review noted that 57% of the program's operating budget came from sources external to the Department, such as special government-approved programs. Regardless of funding sources, all projects fell within the mandate and objectives of the Department. Although the use of external funds ensures a direct response to government priorities (e.g., the Green Plan, Energy Research and Development Program), it leaves the long-term internal funding base somewhat unstable.

Because of the age distribution of scientists, the review identified a need for improved succession planning and a strategy for the orderly maintenance of intellectual resources, including both expert knowledge and informal scientific networks.

4. Real Property Management

A review of real property management was carried out in the Department during 1991-92. The Department has a dual role in the management of its real property holdings. The Department is a tenant for all general-purpose space in Crown-owned or private-leased buildings (311 locations) which are acquired through Public Works Canada at an annual rental value of $18 million. The Department is also the custodian (owner) of 780 special-purpose facilities ($1 billion replacement value), including major institutes (e.g., the Bedford Institute of Oceanography), laboratories, hatcheries and cabins. Apart from Small Craft Harbours facilities, there are 310 locations, mainly offices, laboratories and hatcheries which are staffed on a permanent basis. (Some statistics reported here vary from the review itself because of the passage of time, the updating of the Department's real property inventory and disposal of certain properties.)

The review also found that the Department has made progress in managing its real property holdings more effectively over the years; however, the review did identify opportunities for the Department to become more efficient and effective in the management of its holdings. These include conducting regular reviews of its holdings and identifying those surplus to operational requirements, a number of which the review identified. Subsequent to the audit, progress has been made with regard to verifying the facility inventory to incorporate ongoing disposal activities.

5. Management of Overtime

Following initiatives undertaken by the Department, the upward trend in overtime costs that had occurred from 1986 to 1991 was discontinued. In 1991-92, managers were challenged to reduce their overtime costs by 20%. They accepted this challenge and in fact exceeded the target. Overtime costs in the Department decreased by 26.3% in 1991-92 compared to 1990-91. This represents a decrease of $7 million in overtime expenditures, resulting in the availability of additional funds for other areas of high priority, all without any noticeable deterioration in levels of service.

The steps taken by the Department to curb the trend of increased overtime expenditures are just the beginning. Senior managers are being encouraged to continue to identify areas where improvements in overtime costs and better management of overtime utilization are possible. A new automated reporting system provides regular reports on overtime usage. With these timely reports, managers are able to closely monitor and more effectively manage overtime usage in their areas.

6. Service Standards Development

The February 1992 budget established service standards development as a key element of improving service to the public. In response to the government's commitment in this regard, the Department developed a preliminary list of departmental services, identified specific client groups who are recipients of these services and identified program areas for which service standards have been developed. Further work will be undertaken in 1993-94 to build upon service standards for Hydrographic Services and Fish Inspection Services. Standards development will involve consultation with service users. Other service areas will be pursued once the initial work with Hydrographic and Inspection Services has been completed and assessed.

Section II
Analysis by Activity

A. Science

Objective

To ensure that scientific information of high international standards is available to the Government of Canada for use in developing policies, regulations and legislation regarding the oceans and aquatic life, and to other government departments, private industry and the public for use in planning and carrying out aquatic activities.

To provide and communicate a reliable scientific basis for the management of fisheries and fish habitat and for aquaculture; to acquire and communicate scientific information on the impact of deleterious substances on fish, fish habitat and aquatic ecosystems; to describe and understand climate and the processes of the ocean, their influence on fish stocks and their interaction with the atmosphere; to describe and quantify marine environmental parameters relevant to marine engineering, transportation and other activities; to chart Canadian waters for the purpose of safe navigation, to facilitate fishing activities and to assist coastal and offshore development; to develop and refine methodology and technology necessary to carry out the Department's scientific role and to transfer relevant technology to Canadian industry to develop the private sector's capability; to facilitate and coordinate the Government's marine science programs in collaboration with interested departments through the Interdepartmental Committee on Oceans (ICO).

Resource Summaries

The Science Activity represents approximately 21% of the Department's total 1993-94 financial resources and 35% of its total human resources.

Figure 10: Activity Resource Summary

(thousands of dollars)	**Main Estimates 1993-94**		Forecast 1992-93		Main Estimates 1992-93	
	$	**FTE**	$	FTE	$	FTE
Biological Sciences	**116,429**	**1,168**	116,445	1,209	125,978	1,215
Physical and Chemical Sciences	**51,893**	**535**	54,337	553	59,691	556
Hydrography	**36,591**	**430**	38,941	437	43,502	439
	204,913	**2,133**	209,723	2,199	229,171	2,210

Details on year-over-year changes of the Science Activity may be found in Section III, Figure 39, pages 118 and 119.

Figure 11: 1991-92 Financial Performance

(thousands of dollars)	1991-92		
	Actual	Total Available for Use	Main Estimates
Biological Sciences	126,946	130,591	126,192
Physical and Chemical Sciences	54,460	55,445	51,575
Hydrography	40,736	42,801	41,641
	222,142	228,837	219,408

Description

The management of the Science Activity is achieved through three sub-activities: Biological Sciences, Physical and Chemical Sciences and Hydrography.

Biological Sciences: This sub-activity is responsible for conducting stock assessments and related research on all major fisheries resource species to provide the scientific basis for managing the fisheries resource for its sustained utilization. Research is also conducted on the dynamics of marine and freshwater ecosystems. In addition, this sub-activity is responsible for research and experimental development to provide the necessary scientific advice and services for aquaculture in Canada; for augmenting the production of wild stocks of fish, aquatic invertebrates and marine plants; and for curbing the introduction and spread of communicable fish diseases. In the area of fish habitat, this sub-activity is responsible for the development of scientific knowledge and the provision of scientific advice and services needed for managing the habitat of fish, aquatic invertebrates, marine mammals and marine plants.

Physical and Chemical Sciences: This sub-activity is responsible for the Department's physical oceanographic research program and related data management services in support of fisheries management, offshore development, climate prediction, marine services, coastal engineering, defence and shipping. Research subventions to universities and ship support are reported under this heading. The chemical sciences component of this sub-activity includes research and monitoring relating to the distribution, pathways and fate of chemicals in marine and freshwater ecosystems, the controlling processes, and the toxicity of chemicals to aquatic organisms and ecosystem effects. Its purpose is to anticipate and respond to chemical crises and to provide advice to the Department's fish habitat managers and to other regulatory agencies.

Hydrography: The Canadian Hydrographic Service (CHS) is responsible for conducting field surveys and gathering relevant data on tide, water levels and currents, and for compiling and publishing accurate charts and navigational

publications of Canadian and adjacent international waters. In addition, CHS participates with Energy, Mines and Resources Canada in geophysical mapping and prepares the resulting geophysical maps for those engaged in offshore development and for maritime boundary negotiations. Technology is developed to increase the accuracy and efficiency of data collection and chart production. Developments in technology are subsequently transferred to the private sector where feasible.

Performance Information and Resource Justification

The results of work by this Activity are

- increased understanding and the provision of scientific information, advice and services related to the biology and exploitation of the fisheries resource; marine and freshwater ecology and habitat; and aquaculture and resource development. These results are applied toward the effective management of the fisheries resource and its habitat;

- increased understanding of ocean phenomena/processes and the effects of contaminants on aquatic organisms and ecosystems and the provision of related scientific information, data and advice in support of the management and development of freshwater and marine resources;

- production of up-to-date navigational charts, ocean maps and related navigational publications and advice on Canadian and adjacent international waters; and

- the development of technology relevant to all three sub-activities and the transfer of proven new technology to Canadian industry, particularly in the areas of aquaculture and resource development, ocean sciences, hydrography and charting.

The results of this Activity are further elaborated in Figure 12.

Figure 12: Science, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
GENERAL			
		Communication	
Encourage the development of closer ties between the science community and its clients through enhanced scientific dialogue, improved communications and participation of fishermen in scientific programs.	Improve client services and responsiveness to client needs generally: achieve a more active partnership with DFO clients; strengthen private sector alliances to improve the competitiveness of Canadian industry; pursue initiatives within PS2000; provide feedback to fishermen who have collected information for DFO.	Conducted client consultations on the annual regional workplans. Made use of client advisory committees to oversee major research programs. Encouraged input of fishermen's knowledge into stock assessments. Presented/explained specific assessments to numerous fishermen's groups. Maintained ongoing contact with the fishing and aquaculture industries and with proponents of activities that impact on fish habitat. Provided feedback to fishermen in Atlantic Canada through reports on scientific results, newsletters and visits to fishing communities. Also communicated via the media, special publications and videos.	Maintain client services and responsiveness to client needs generally: seek active partnerships with DFO clients; strengthen private sector alliances to improve the competitiveness of Canadian industry; pursue initiatives within PS2000.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Aboriginal Issues		
	Improve the effectiveness of efforts on Aboriginal issues: coordinate Science data needs with Native co-management initiatives; increase the number of salmon stocks assessed; play a stronger role in consulting, developing and delivering cooperative projects with Native bands; improve data bases, assessment methodology and quality of advice with regard to Arctic fisheries conservation of resources and toxic chemicals in key species of food fish and marine mammals.	Increased the number of Atlantic salmon stocks assessed from 10 in 1990 to 34 in 1991 in relation to conservation requirements for stocks on which new Aboriginal food fisheries were expected to develop. Expanded salmon monitoring in partnership with Aboriginal groups. Conducted extensive analysis of the status of salmon stocks in the Nass River (northern B.C.) in relation to the Nishga'a land claim negotiations. Completed a baseline population study of Arctic char on the Yukon North Slope as a joint project under the Inuvialuit land claim settlement. Conducted a study on census methodology and population parameters of ringed seal at Resolute Passage and Cumberland Sound required for management of the Aboriginal harvest.	Coordinate Science data needs with Native co-management initiatives; play a strong role in consulting, developing and delivering cooperative projects with Native bands; improve data bases, assessment methodology and quality of advice with regard to Arctic fisheries resources.
	Oceans Development		
Review Oceans Strategy: clarify the role of DFO in sustainable development of the oceans economy; identify and market opportunities to transfer DFO-developed oceans-related technology to the private sector and manage the intellectual property involved.	Undertake consultations concerning the proposed *Canada Oceans Act*; continue to promote a more competitive oceans industry; continue to identify and market opportunities to transfer DFO-developed oceans-related technology to the private sector and manage the intellectual property involved.	Consultations on the *Canada Oceans Act* were delayed pending Law of the Sea court decisions. A brochure promoting DFO technology and R&D assistance programs in Canada was developed and distributed to the Canadian oceans industry. Management of DFO's intellectual property and technology transfer initiatives continued.	Undertake consultations concerning the *Canada Oceans Act*; continue to promote a more competitive oceans industry; continue to identify and market opportunities to transfer DFO-developed oceans-related technology to the private sector and manage the intellectual property involved.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
BIOLOGICAL SCIENCES			
		Resource Assessment	
Acquire relevant scientific information and provide credible, accurate and timely scientific advice and forecasts on the status of fish populations (diadromous and freshwater fish, groundfish, pelagic fish, invertebrates, marine mammals and marine plants) in response to ongoing fishery management requirements. Continue research on factors influencing the survival of young fish to improve population forecasts for important commercial species.	Improve the ability to assess stocks of key species: improve salmon stock assessments; develop improved sampling regimes and undertake studies which bolster the quality of stock assessments; respond to demands for more site-specific data on distribution, abundance and movements of key species to define local conservation requirements. Improve understanding and forecasting of impacts of oceanographic conditions and environmental changes on fish abundance, particularly the variations in recruitment.	Assessed all major stocks of exploited species of anadromous fish, marine fish, invertebrates, mammals and plants in Canada's Atlantic, Pacific and Arctic waters, as well as freshwater fish in the Yukon and N.W.T. Provided relevant scientific advice to fisheries managers. Conducted research on the population parameters of numerous stocks. Developed improved trawl sampling regimes for shrimp and cod in the northern Gulf of St. Lawrence and for shrimp off Labrador to reduce the variance in biomass estimates. Made advances in survey methodologies for groundfish, e.g., use of hydroacoustics and of devices to measure the performance of research trawls during towing. Completed a five-year study in the central Arctic on the impact of different harvesting strategies on lake whitefish. Conducted a first-time survey of deep-water Greenland halibut from Grand Banks north to Davis Strait. Studied the impact of enhanced Pacific salmon on Native stocks and the effects of variability of ocean conditions on fish populations off S.W. Vancouver Island, Georgia Strait and on various stocks in Atlantic Canada.	Improve the ability to assess stocks of key species: improve salmon stock assessments; undertake studies which bolster the quality of stock assessments; respond to demands for more site-specific data on distribution, abundance and movements of key species to define local conservation requirements. Improve understanding and forecasting of impacts of oceanographic conditions and environmental changes on fish abundance, particularly the variations in recruitment. Establish effective delivery of scientific analysis and related information to the Atlantic Fisheries Resource Conservation Council. This will make industry a full partner in the development of scientifically based conservation measures.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Atlantic and Quebec Fisheries Adjustment Programs			
Implement Year 2 of the 5-year Science component of the Atlantic Fisheries Adjustment Program (AFAP) on northern cod, Scotian Shelf groundfish, grey seals and sealworm, Gulf snow crab, northern Gulf cod and aquaculture; implement Year 2 of the Quebec Fisheries Adjustment Program (QFFDP).	Implement Year 3 of the Science component of AFAP on northern cod, Scotian Shelf groundfish, grey seals and sealworm, Gulf snow crab, northern Gulf cod and aquaculture; implement Year 3 of QFFDP.	Undertook studies in support of rebuilding fish stocks under AFAP, with focus on northern cod, Scotian Shelf groundfish, grey seals and sealworm, Gulf snow crab, northern Gulf cod and aquaculture to develop future employment opportunities. Under QFFDP, conducted studies on underexploited species and on the culture of snow crab and cod.	Implement Year 4 of the Science component of AFAP on northern cod, Scotian Shelf groundfish, grey seals and sealworm, Gulf snow crab, northern Gulf cod and aquaculture; implement Year 4 of QFFDP.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
		International Fisheries	
Conduct research and provide professional expertise in support of international activities, including international fisheries management, transboundary stocks, the driftnet issue, negotiations on an International Convention on Bio-diversity and preparations for the United Nations Conference on Environment and Development (UNCED).	Address international fisheries issues: provide scientific input needed to support new and existing international agreements; increase efforts to acquire information on the abundance of Greenland halibut and Pacific hake; provide scientific information to support Canadian efforts to resolve the high profile issues of foreign overfishing (especially cod and flounder on the Grand Banks) and the use of driftnets.	Continued to provide scientific data, stock assessments and advice on the consequences of fisheries management options in support of Canada's involvement in international fisheries conventions and in international science organizations and agreements. Prepared documentation and briefings for the Canada-France Maritime Boundary Arbitration and for the 8th conference of the parties to the Convention on International Trade in Endangered Species — Fauna and Flora (CITES). Aided negotiations of the Convention on Bio-diversity and UNCED regarding sustainable development. Supported negotiations with the U.S.A. on sharing the transboundary Pacific hake stock; and for negotiations to control international overfishing of cod and other groundfish outside the 200-mile zone on the Grand Banks. Reached international agreement to phase out the Pacific high-seas squid drift-net fishery. Signed a treaty with the U.S.A., China and Japan that establishes the North Pacific Marine Science Organization to promote and coordinate marine science research and the collection and exchange of relevant information and data.	Provide scientific input needed to support existing and new international agreements and to address issues as they develop.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Aquaculture			
Conduct research in aquaculture sciences, and transfer appropriate domestic and imported technologies to the aquaculture industry and enhancement programs; implement responses to DFO's Aquaculture Strategy; continue the process of amending fish health protection regulations and developing policies on introductions and transfers; minimize risk of crossbreeding of cultured stocks with wild stocks; monitor wild and cultured stocks of finfish and shellfish for diseases; and conduct biotechnology research in aquaculture.	Conduct research in aquaculture sciences, and transfer appropriate domestic and imported technologies to the aquaculture industry and enhancement programs; implement responses to DFO's Aquaculture Strategy; continue the process of amending fish health protection regulations and developing policies on introductions and transfers; minimize risk of crossbreeding of cultured stocks with wild stocks; monitor wild and cultured stocks of finfish and shellfish for diseases; and conduct biotechnology research in aquaculture.	Conducted research to improve the profitability of aquaculture of salmonids, a number of marine finfish and shellfish species, and walleye, with focus on nutrition, genetics, physiology, culture systems, vaccines and biotechnology. Provided scientific and technical advice to the aquaculture industry and to agencies and groups undertaking salmonid enhancement projects. A patent application is being processed for the DFO-developed technology on the DNA probe for determining the sex of chinook salmon. Developed and transferred to industry a screening method for bacterial kidney disease in fish. Administered the Fish Health Protection Regulations. Worked with the U.S.A. and Mexico on a continental approach to fish health protection under the North American Free Trade Act (NAFTA). Participated in various initiatives to minimize introductions and transfers of unwanted species and genetic strains, including genetically engineered strains. Implemented a new departmental policy that requires national review of proposals to import salmonids from outside North America.	Conduct research in aquaculture sciences, and transfer appropriate domestic and imported technologies to the aquaculture industry and programs to enhance wild stocks. Continue the process of amending fish health protection regulations to be completed and implemented in 1994. Minimize the risk of crossbreeding of cultured stocks with wild stocks through development and application of policies controlling the introduction and transfer of aquatic organisms. Monitor wild and cultured stocks of finfish and shellfish for diseases. Conduct biotechnology research relevant to aquaculture, including production of sterile salmon. Develop a policy on genetically modified aquatic organisms.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Salmon Enhancement			
Supplement natural Atlantic salmon production through regional enhancement programs, in cooperation with resource management and habitat protection efforts and, where possible, involving the private sector and agencies such as the Atlantic Canada Opportunities Agency (ACOA) and the Canada Employment and Immigration Commission (CEIC).	Supplement natural Atlantic salmon production through regional enhancement programs, in cooperation with resource management and habitat protection efforts and, where possible, involving the private sector and agencies such as ACOA and CEIC. Explore opportunities to develop hatchery-dependent runs of salmon for Aboriginal food fisheries.	Under the Fraser River Sustainable Development program, initiated studies on rearing and incubation habitats, evaluation of restored estuarine habitats and fish/forestry interaction. The 1991 lake enrichment projects in British Columbia are estimated to have contributed over a million sockeye annually to the commercial fishery. Continued the production of juvenile Atlantic salmon for release (3.6 million in 1991-92) in Atlantic rivers to enhance wild stocks: most of the enhancement projects involved collaboration with local associations, Native bands or federal and provincial agencies. Completed the final stages of the 20-year project to open access for wild salmon to 200 km of the Exploits River, Nfld., as well as to a large array of tributaries.	Supplement natural Atlantic salmon production through regional enhancement programs, in cooperation with resource management and habitat protection efforts and, where possible, involving the private sector and agencies such as ACOA and CEIC. Explore opportunities to develop hatchery-dependent runs of salmon for Aboriginal food fisheries.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Habitat Assessment			
Provide habitat research and related scientific advice in support of the application of the provisions of the Fisheries Act, the implementation of the Department's Policy for the Management of Fish Habitat and DFO's compliance with the Order-in-Council governing the Environmental Assessment and Review Process (EARP). Continue to carry out research on phycotoxin-producing marine algae, broadening the program on the Pacific coast as well as stimulating development of improved bioassay procedures, reference materials and calibration standards.	Improve scientific knowledge of fish habitat and marine environment: strengthen marine fish habitat research for key species, including the study of impacts of aquaculture operations on the ecosystem and water quality; provide input and review for Environmental Assessments for major developments, particularly the Grande-Baleine (Que.) and Conawapa (Man.) hydroelectric developments. Broaden the studies on toxin-producing marine algae on the Pacific coast.	Prepared or reviewed Initial Environmental Assessments for various hydroelectric projects, fish passage facilities and water use projects, including the Grande-Baleine, Conawapa and Greenwood (Nfld.) hydroelectric developments and the N.B./P.E.I. fixed link. Implemented acid rain monitoring at five sites across eastern Canada as part of the assessment of effectiveness of sulphur dioxide controls now being put in place. Studied the recovery of aquatic ecosystems in an experimentally acidified lake as a model of expected changes in larger ecosystems. In conjunction with other agencies, achieved major progress on Remedial Action Plans at four sites on the Great Lakes — Thunder Bay, Severn Sound, Hamilton Harbour and Bay of Quinte. Conducted a research cruise off eastern Canada as part of the international Joint Global Ocean Flux Study to study the role of the ocean as a carbon sink that modifies the Greenhouse Effect. Initiated a phycotoxins research program in B.C. to focus on phytoplankton sampling and prediction of harmful algal blooms and on toxin production by relevant algae, with particular emphasis on domoic acid (amnesic shellfish poisoning) and the toxin(s) of heterosigma.	Improve scientific knowledge of fish habitat and marine environment: strengthen marine fish habitat research for key species, including the study of impacts of aquaculture operations on the ecosystem and water quality; provide input and review for Environmental Impact Statements for major developments, particularly the Grande-Baleine and Conawapa hydroelectric developments. Continue studies on toxin-producing marine algae on the Pacific coast.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
PHYSICAL AND CHEMICAL SCIENCES			
		Climate	
Participate in national and international ocean climate research programs, commensurate with incremental resources being made available pursuant to approval of the Green Plan, including the World Ocean Circulation Experiment, the Joint Global Ocean Flux Study, climate impacts on fisheries, ocean climate modelling and Arctic ocean climate studies.	Undertake national and international ocean climate research programs, commensurate with incremental resources being made available pursuant to approval of the Green Plan, including the World Ocean Circulation Experiment, ocean climate modelling, Arctic ocean climate studies and joint research with Biological Sciences on climate impacts on fisheries and on the role of oceans in the CO_2 cycle (Greenhouse Effect).	A six-year plan was established to conduct research in climate change under the Green Plan. Funds were allocated to specific projects to support the World Ocean Circulation Experiment, the Joint Global Ocean Flux Study and Arctic objectives. A national ocean climate committee was set up to guide climate program objectives in future years. Research is proceeding on ocean conditions, circulation and CO_2 flux in Canadian waters.	Undertake national and international ocean climate research programs, commensurate with incremental resources being made available pursuant to approval of the Green Plan, including the World Ocean Circulation Experiment, ocean climate modelling, Arctic ocean climate studies and joint research with Biological Sciences on climate impacts on fisheries and on the role of oceans in the CO_2 cycle (Greenhouse Effect).
		Physical Oceanography in Support of Fisheries	
Continue efforts in research and monitoring of the influences of oceanographic conditions on the distribution of northern cod and the state of fish stocks; conduct follow-up work on classification of oceanographic features of Atlantic coastal waters to assist aquaculture; advance the development of environmental indices related to the state of Atlantic fish stocks; provide support during environmental emergencies.	Continue participation in collaborative studies aimed at relating marine environmental conditions to the population dynamics, recruitment and distribution of fish, including new initiatives as part of the Atlantic Fisheries Adjustment Program and research on aquaculture/habitat/ environment interactions. Improve the availability of data for management purposes; coordinate Canada's participation in the Intergovernmental Oceanographic Commission.	Ocean monitoring continued as a part of an ongoing effort to improve understanding of the influences of ocean conditions on long-term renewal of fish stocks. Key programs were conducted off Vancouver Island and on La Perouse Bank. Studies relating environmental conditions and marine ecosystems continued on the Scotian shelf, including a special phytoplankton study in L'Etang Inlet. Assistance was given to the aquaculture industry on site conditions. Good progress was made on an ecological model for active tidal mixing in the Gulf of Maine/Georges Bank.	Continue participation in collaborative studies aimed at relating marine environmental conditions to the population dynamics, recruitment and distribution of fish, including new initiatives as part of the Atlantic Fisheries Adjustment Program and research on aquaculture/habitat/ environment interactions. Improve the availability of data for management purposes; coordinate Canada's participation in the Intergovernmental Oceanographic Commission.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Contaminants			
Undertake assessment, monitoring and research activities relating to the impacts of toxic chemicals on fisheries resources, commensurate with incremental resources being made available pursuant to the approval of the Green Plan, the Great Lakes Action Plan, the St. Lawrence Action Plan, Northern Oil Gas Action Plan (NOGAP), the Atlantic Fisheries Adjustment Program (AFAP) and other major policy/funding decisions.	Undertake assessment, monitoring, research and data management activities relating to the presence of toxic chemicals in aquatic ecosystems and the impacts of toxic chemicals on fisheries resources, commensurate with incremental resources being made available pursuant to the approval of the Green Plan (Toxic Chemicals, Tanker Safety, Arctic Environmental Strategy), the Great Lakes Action Plan, the St. Lawrence Action Plan, NOGAP, AFAP, and other major policy/funding decisions. Continue development of a national system for the management of data on toxic chemicals in fish and aquatic ecosystems. Improve program coordination linkages and the delivery of scientific information and advice concerning the effects of toxic chemicals on fish; in particular, provide advice to the Department of Environment (DOE) on impacts of pesticides on fish and fish habitat.	A new dioxin analysis facility was completed in British Columbia. Several studies on the effects of pulp mill effluents were completed. A study of dioxins in sediments was conducted in the Fraser River Basin. Two field studies were successfully conducted under the Panel on Energy Research and Development (PERD) related to surface currents on the north coast of B.C. Studies related to oil development in the Beaufort Sea were completed. New studies were started at several pulp mills in the Great Lakes Basin to correlate the degree of biological response by fish to effluents. A study of contaminants in Arctic fish led by Indian and Northern Affairs Canada (INAC) continued. Cadmium studies at the Experimental Lakes Area (ELA) near Kenora, Ontario, were undertaken. Specific studies were completed in the Miramichi area near L'Etang Inlet on industrial and aquaculture contaminants.	Undertake assessment, monitoring, research and data management activities relating to the presence of toxic chemicals in aquatic ecosystems and the impacts of toxic chemicals on fisheries resources, commensurate with incremental resources being made available pursuant to the approval of the Green Plan (Toxic Chemicals, Tanker Safety, Arctic Environmental Strategy), the Great Lakes Action Plan, the St. Lawrence Action Plan, NOGAP, AFAP, and other major policy/funding decisions. Continue development of a national system for the management of data on toxic chemicals in fish and aquatic ecosystems. Improve program coordination linkages and the delivery of scientific information and advice concerning the effects of toxic chemicals on fish; in particular, provide advice to DOE on impacts of pesticides on fish and fish habitat.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Industrial Effluents		
Investigate the sources and pathways of chemicals in aquatic ecosystems and the impact of persistent man-made contaminants on the reproduction and abundance of fish.	Continue research on the cycling of dioxins in the environment. With Green Plan funding for toxics, start new projects to assess the problem of contamination of major fisheries by industrial effluents. With DOE, develop requirements for the application of Environmental Effects Monitoring to various industries.	A six-year program of research in toxic chemicals was established to provide support for existing projects in all regions. Environmental effects monitoring requirements for pulp and paper mills came into force in May 1992. Development of requirements for the metal mining sector initiated in 1992-93.	Continue research on the cycling of dioxins in the environment. With Green Plan funding for toxics, start new projects to assess the problem of contamination of major fisheries by industrial effluents. With DOE, develop requirements for the application of Environmental Effects Monitoring to various industries. Draft environmental effects monitoring requirements for the metal mining sector to be completed in 1993-94.
HYDROGRAPHY			
	Navigational Charts and Ocean Mapping		
Ensure that charts and related publications are available at all times for vessels navigating in Canadian and adjacent waters. Continue the program of producing new metric, bilingual charts of areas where existing charts are outdated. Conduct surveys in priority areas on the Atlantic and Pacific coasts, in the St. Lawrence River and Gulf of St. Lawrence, on the Great Lakes and in inland waterways and the Arctic. Continue multidisciplinary offshore surveys on the Canadian continental shelf.	Produce new and revised documents as necessary to ensure that charts and related publications are available at all times for vessels navigating in Canadian and adjacent waters. Continue the program of producing new metric, bilingual charts of areas where existing charts are outdated. Conduct surveys in priority areas on the Atlantic and Pacific coasts, in the St. Lawrence River and Gulf of St. Lawrence, on the Great Lakes and in inland waterways and the Arctic. Continue multidisciplinary offshore surveys on the Canadian continental shelf.	In accordance with work scheduled for 1991-92, produced various charts and conducted field surveys in two dozen specific areas across Canada.	Ensure that charts and related publications are available at all times for vessels navigating in Canadian and adjacent waters. Continue the program of producing new metric, bilingual charts of areas where existing charts are outdated. Conduct surveys in priority areas on the Atlantic and Pacific coasts, in the St. Lawrence River and Gulf of St. Lawrence, on the Great Lakes and in inland waterways and the Arctic. Continue multidisciplinary offshore surveys on the Canadian continental shelf.

Figure 12: Science, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Technology Development and Transfer			
Continue technology development in support of the increased efficiency of the survey and charting program. Emphasize the development of electronic chart technology and application of the Global Positioning System (GPS). Provide leadership in marine geomatics.	Improve safety of navigation by accelerated development of electronic chart technology. Implement a vigorous program of electronic chart testing and development as a follow-up to the Brander Smith inquiry on tanker safety. Assist the domestic geomatics industry to define business opportunities in the worldwide electronic chart market. Provide leadership in marine geomatics.	Pilot projects were established whereby electronic charts will be placed on oil tankers and other commercial and government vessels to assist in the development of electronic chart technology. Established a consortium of Canadian companies to investigate opportunities in marine geomatics. The Global Positioning System (GPS) has been used successfully in the differential mode during demonstrations of the Canadian Ocean Mapping System (COMS) in Conception Bay, Newfoundland.	Improve safety of navigation by accelerated development of electronic chart technology. Implement a vigorous program of electronic chart testing and development as a follow-up to the Brander Smith inquiry on tanker safety. Assist the domestic geomatics industry to define business opportunities in the worldwide electronic chart market. Transfer the automatic tide monitoring system to industry.

B. Fisheries Operations

Objective

To conserve, protect, develop and enhance the fishery resource base and its habitat; to provide for the management, allocation and control of the commercial, Aboriginal and recreational fisheries in marine and inland waters; to maintain and develop benefits from the use of the resource; and to provide services and infrastructure in support thereof.

Resource Summaries

Fisheries Operations represents approximately 46% of the Department's total 1993-94 financial resources and 32% of its human resources.

Figure 13: Activity Resource Summary

(thousands of dollars)	**Main Estimates 1993-94**		Forecast 1992-93		Main Estimates 1992-93	
	$	**FTE**	$	FTE	$	FTE
Fisheries and Habitat Management	**369,923**	**1,620**	358,794	1,670	174,349	1,685
Resource and Industry Development	**66,538**	**326**	74,826	332	83,537	326
	436,461	**1,946**	433,620	2,002	257,886	2,011

Details on the year-over-year changes for the Fisheries Operations Activity may be found in Section III, Figure 39, pages 118 and 119.

Figure 14: 1991-92 Financial Performance

(thousands of dollars)	1991-92		
	Actual	Total Available for Use	Main Estimates
Fisheries and Habitat Management	177,356	187,030	170,163
Resource and Industry Development	81,343	85,396	69,252
	258,699	272,426	239,415

Description

The Fisheries Operations Activity encompasses all federal fisheries and habitat management and fisheries development functions in all provinces and territories in Canada, both within and adjacent to Canada's 200-mile fishing zones. This includes marine waters and river systems and lakes in all areas, except where authority for the management of inland fisheries has been delegated to a provincial or territorial government; shared management of the Canadian portion of trans-boundary rivers; and interception fisheries in international waters.

Program delivery spans six regions and encompasses 1,946 FTEs and $436.5 million, the vast majority of which are expended on regional operations. A description of major fisheries and industry client groups is provided in "Commercial Fisheries," page 16.

The management of the Fisheries Operations Activity is achieved through two sub-activities: Fisheries and Habitat Management, and Resource and Industry Development.

Fisheries and Habitat Management: The Fisheries and Habitat Management sub-activity involves the following:

- **Resource conservation and allocation activities** involve the development of fishery management plans, policies and programs that protect the biomass to ensure self-generation of stocks and the fair distribution of harvestable surpluses among user groups to ensure an orderly and equitable harvest. Management measures include fisheries quotas, gear restrictions, season closures and licensing conditions. Collection and analysis of harvest data and stock assessments permit in-season management and the development of future year fishing plans;

- **Licensing** is the means for regulating participation in and access to the fishery to ensure that the harvest remains within conservation limits and promotes economic viability for individual participants. Activities include issuance of licences for fishermen and vessel registrations; processing of licence transfers and appeals; and the development of licensing policy and guidelines.

- **Surveillance and enforcement** programs ensure compliance with Canadian fisheries and habitat legislation and policies. Enforcement mechanisms include terms and conditions of habitat authorizations, and unlicensed/unauthorized fishing activity by foreign nationals within the 200-mile zone;

- **Fish habitat management** includes operational, regulatory, consultative and advisory activities consistent with achieving the Department's habitat objectives of bringing about a net gain in productive capacity. This involves liaison and coordination with other federal departments, provincial governments, government agencies and the private sector; and

- **Regulations development** provides for the development, amendment and processing of regulations necessary for carrying out fisheries management, including impact evaluations of legislation and regulations and production of annual regulatory plans.

Full-cycle consultations with fishermen, processors, recreational anglers, Aboriginal representatives, as well as provincial fisheries officials, form an integral part of fisheries management and the effective delivery of service in all areas.

Resource and Industry Development: Programs carried out under this sub-activity contribute to the stability and viability of fishing and fishing related industries. Activities are aimed at more cost-efficient exploitation of the fisheries resource; productivity and quality related improvements to fish harvesting and processing practices; new product development; introduction of more selective harvesting technology and value-added processing technology; the control of the parasitic sea lamprey in the Great Lakes; and resource development such as that achieved under the Pacific Salmonid Enhancement Program.

Under the Pacific Salmonid Enhancement Program, the Department operates 19 major hatcheries in addition to 25 Community Economic Development Projects, over 140 volunteer enhancement facilities and more than 50 small, semi-natural enhancement projects. These projects, combined with lake fertilization and habitat improvements, result in a Salmonid Enhancement Program contribution of approximately 5 million fish annually harvested by Canadian fishermen.

Areas of focus for departmental resource and industry development activities involve the following:

Resource Development: Activities include development of new fisheries, exploitation of underutilized species and aquaculture activities in the Atlantic, Pacific and northern regions. These are encouraged through federally funded, Department-administered assistance for exploratory fishing to determine the potential for commercial harvesting activity, and the development or transfer of appropriate harvesting, aquaculture and processing technology. Along with promoting aquaculture activity and improving enterprise viability, agreements are made with the provinces to streamline the licensing process for this sector and coordinate federal-provincial efforts.

In partnership with industry/user groups, provincial governments and other federal departments and agencies, initiatives are undertaken to identify and develop fisheries resources, in particular, those related to recreational fisheries, underutilized species and aquaculture with the potential to generate benefits to local economies.

Resource enhancement activities involve rehabilitation of wild stocks on both coasts through hatchery development, habitat restoration and improvements.

Industry Development: Activities are directed to fisheries diversification, improved economic viability and realization of fisheries opportunities. Work is undertaken with other federal departments, agencies, provinces and industry to identify priority development initiatives for implementation by the Department.

Fishery development agreements are made with the provinces for joint funding in the areas of recreational fisheries, Native fisheries, resource enhancement (underutilized species and aquaculture), product development, productivity and quality improvements, and technology development and transfer.

The sub-activity provides a wide range of development assistance through the Atlantic Fisheries Adjustment Program. The program is aimed at adjusting the Atlantic industry to the current realities of depressed stocks, lower incomes and employment. Development assistance is geared to diversifying the fisheries: underutilized species and aquaculture development, new product development and technology improvements, conversion to fishing gear better suited to the Department's conservation and habitat goals and fishermen's professionalization.

In participation with the Canadian fishing industry and other departments, industry-led programs are elaborated that enhance long-term viability.

Technology Development: Activities include developing and transferring technology that improves industry productivity and performance. The focus is on development of cost-efficient and environmentally sound fishing vessels, selective harvesting techniques, new fish products and new processing technology.

Research and development are undertaken and initiatives are proposed to fishermen to enhance operational performance. These initiatives are geared to achieving optimal vessel and operational designs that maximize fuel efficiency, resource sustainability and protection of the environment. Technical and economic advice is provided for fishermen on the design, construction and operation of selective fishing gear and processing systems.

Technology transfer packages, consisting of video productions with supporting materials, and workshops and presentations are designed to transfer expert systems and other technology to fishermen across Canada.

Performance Information and Resource Justification

The following performance service standards are currently in place:

- public consultations on each fishery in all regions in advance of the fishing season;
- development and distribution of fishing plans before the commencement of each fishing season;
- accessibility of points and hours of service to all sectors of the fishing industry, particularly during the fishing season;
- target observer coverage on selected fisheries including 100% observer coverage on foreign vessels in Canadian waters on a cost-recovery basis;
- timely, fair and open appeal process for licensing matters;

- in the aquaculture area: timely consideration of client proposals; accurate and timely disease diagnosis; responsive inspection services; and provision of export certificates.

- Fisheries Development and Assistance: systematic and timely consideration of client proposals to ensure equitable treatment; and annual or semi-annual information briefings to industry groups on program details and results;

- Salmonid Enhancement Program: public review of community-based proposals and results with stakeholders. All eggs sold are inspected to ensure that they are disease free. Nine separate performance indicators are currently used for assessing program effectiveness; and

- assurance of bait supply to Newfoundland fishermen as per terms of Confederation.

Targeted results for the activities outlined above are highlighted in Figure 15.

Figure 15: Fisheries Operations, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
FISHERIES AND HABITAT MANAGEMENT			
	Aboriginal Fisheries — National		
	Implementation of the Aboriginal Cooperative Fisheries Management Program. Written interim agreements will ensure accountability and later reflect in land claims negotiations where applicable.	Under Aboriginal Fisheries Strategy (AFS), agreements concluded with First Nations involving food fishing, economic development, aquaculture, underutilized species, Native guardians, and Native representation.	Under AFS, negotiate and implement written agreements with First Nations on issues identified in previous column.
	Aboriginal Fisheries — Atlantic		
In cooperation with other government agencies, develop Aboriginal fishing plans. Promote fisheries-based Aboriginal economic development initiatives.	Assist Aboriginal people in development of their food, cultural and societal fishery. Promote fisheries-based Aboriginal economic development initiatives Further refine current programs (e.g., licensing) to promote entry of Aboriginal people into the commercial fishery.	Agreements concluded with 10 bands. 39 Native guardians and 4 Native seasonal fishery officers hired. Two salmon assessment projects undertaken. Native fisheries organizations established in NS and NB to serve communities. Fisheries economic development initiatives undertaken under Cooperation agreements. Licences issued for exploratory scallop fishing projects in Nunavik.	Further refine programs to promote entry of Aboriginal people into commercial fishery (e.g. snow crab licensing). Develop commercial scallop management plan for N. Québec. Increase Native involvement in management of food fisheries. Refine Native Guardian Program to include joint patrols, formal training towards full-time fishery officer status.
Assist in the resolution of Native land claims — Labrador Inuit Association (LIA), Conseil des Atikamekw Montagnais (CAM), and James Bay and Northern Québec Agreement renewal. Work with DIAND to define consultation process for dealing with third parties affected by land claims.	Negotiations on fisheries component of LIA to begin and possibly be completed in 1992. Negotiations on CAM, Innu claims will proceed, as will negotiations with Huron-Wendat on self-government & resource initiatives. Participate in JBNQ renewal agreement.	Negotiations with the LIA on agreement in principle discontinued in May by the Federal Government over funding issue. The Conseil des Atikamekw Montagnais (CAM) Agreement in principle and renewal of the James Bay and Northern Québec (JBNQ) Agreement are still under negotiation.	Pursue negotiation of the CAM Agreement in Principle. Participate as required in renegotiation of the JBNQ Agreement. Negotiate on Makivik Corporation (Northern Québec Inuit) off-shore claim and its overlap with the Nunavut claim and with the Huron-Wendat.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Aboriginal Fisheries — Central and Arctic		
	Participation in negotiations of comprehensive land claims for TFN, Sahtu, Gwitch'in and possibly other Dene Métis regional claims; develop and implement plans for TFN and Gwitch'in agreements; continue with co-management of fisheries resources with legislated and advisory resource boards.	Gwitch'in settlement approved, legislation pending. Negotiations begun on Sahtu claim, nearly completed on TFN claim. W. Arctic joint management committee operating well, including harvest of first bowhead whale in Canadian Arctic in over 40 years. Native co-management also in place for Great Slave Lake, Great Bear Lake, Nunavut, and S.E. Baffin beluga.	Participate in negotiations of comprehensive land claims for North Slave claim. Prepare analysis for Sahtu claim, and implement plans for TFN claim. Begin Gwitch'in implementation. Implement cooperative management initiatives under AFS in the Arctic. Participate in renegotiation of funding for Inuvialuit Final Agreement.
	Aboriginal Fisheries — Pacific		
In line with recent court decisions and the Government's priority on land claims, implement strategies for Aboriginal cooperative management and an equitable Aboriginal food fishery.	Assist in the quantification of levels of fish allocations to Aboriginal fisheries.	AFS implemented to deal with range of Aboriginal issues. See Aborigianl Fisheries, page 99.	See Aboriginal Fisheries, page 99.
	Develop a consultative process for third-party interests. Provide analytical/scientific data support for land claim negotiations (or interim arrangements).	B.C. Native Fisheries Strategy and Action Plan were developed.	Consultation through DIAND with third parties. Complete costing/ implementation negotiations.
	Continue implementation of interim measures and negotiation of an agreement in principle with the Nisga'a Tribal Council.	Tripartite strategy meetings (DFO, DIAND, Province) resulted in framework agreement signed by Nisga'a Tribal Council, Province of B.C. and Federal Government. Began implementation of interim projects.	Implement second year of Nisga'a Interim Fisheries Projects Program. Negotiate agreement-in-principle.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Aboriginal Fisheries — Pacific (cont'd)		
	Implement the Agreement in Principle on Yukon Land Claims and continue negotiation of individual community agreements.	Participated in drafting final Agreement; Fish and Wildlife component almost completed.	Complete costing and implementation negotiations. Begin negotiation for Native fishery survey design for the Yukon River. Once cost sharing arrangements finalized between Canada and B.C., begin negotiations on additional claims. Informal discussion underway with Sechelt, Gitksan and Tsimshean. Provide support to DIAND self-government negotiations with Gitksan-Wetsuwet'en and We Wai Kai.
	Develop policy to harvest salmon in excess of spawning requirements (ESR).	Policy developed to harvest ESR salmon which are not harvested by traditional users.	Conduct review of ESR licensing approach as basis for future decisions.
	Commercial Fisheries — National		
	Contribute to development of revised decision-making process for licensing and resource allocation.	Participated in regional working groups aimed at providing analysis and recommendations to decision makers.	Continue Reform Working Group participation with view to facilitating later implementation.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Commercial Fisheries — Atlantic		
Complete consultations, implement recommendations of Northern Cod Review Panel. Emphasis on needs of inshore fisheries in AFAP and Federal/ Provincial agreements.	Implement approved recommendations of Task Forces on Northern Cod (TFNC) and Scotia Shelf groundfish (TFSSG).	Licensing recommendations of TFNC implemented in Newfoundland. Individual quotas (IQs) implemented in Scotia Fundy, Gulf and Québec Regions.	Develop management measures for reopening of northern cod fishery, and restructured groundfish fishery. Implement approved recommendations of Task Force on Incomes and Adjustment. Harmonize development of intercommunity trade in N. Québec.
	Review vessel replacement and transfer policies.	Review done. Implemented adjustments to offshore and midshore programs.	Implementation completed.
	Develop long-term strategic changes for fisheries management.	Future directions considered in context of DFO Reform, Northern Cod Moratorium.	See DFO Reform, Northern Cod Moratorium, page 95.
	Develop annual Fisheries Management Plans through consultation with industry and provinces.	1992 Fishery Management Plans completed. New management measures introduced for Atlantic salmon, swordfish and tuna. Reviewed 10-year herring plan.	Develop management plans for all fisheries. Promote gear efficiency and selectivity, e.g., Nordmore grate. Develop first management plan for sharks. Finalize 10-year herring plan. Develop industry-funded DMP for the herring seiner fishery.
	Continue consolidating and rationalizing East Coast Licensing Policy, including review of policies (e.g., Fleet Separation).	Amendments made to rectify inconsistencies and anomalies in fleet structure.	Licensing revisions will be consider in context of DFO Reform (see page 95).
	Undertake Direct Sales Program Review (Over-the-Side and Over-the-Wharf sales).	Industry consultations resulted in draft policy now under review. Policy decision expected early 1993.	Implement new policy as per Ministerial direction.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Commercial Fisheries — Central and Arctic		
Continue efforts to complete fisheries agreements with inland provinces.	Continue to support completion of fisheries agreements with inland provinces.	Discussions held, but no progress possible.	Support completion of fisheries agreements with Manitoba and Saskatchewan, and sub-agreements with Alberta, Manitoba, Ontario, Saskatchewan, including aquaculture sub-agreement with Saskatchewan.
Undertake initiatives to conserve/protect Arctic fisheries resource.	Maintain effective management of Arctic, inland and coastal fisheries.	Fishery management in N.W.T. enhanced by increased funding for co-management and air surveillance, and new patrol vessel on Great Slave Lake. Strategies developed for Keewatin Arctic char and Beaufort Sea fisheries.	Complete consultations to develop the Great Bear Lake Fishery Management Plan. See also Aboriginal Fisheries, page 99.
	Commercial Fisheries — Pacific		
Introduce and evaluate long-term strategic fisheries management structures to promote greater industry self-reliance, equitable allocations, and a healthy resource base.	Implement commercial salmon allocation agreements as per 4-year plans for the seine, gill net and troll sectors.	Salmon management plan developed which includes measures for chinook and steelhead conservation.	CFIC will review plan, Spring of 1993. If no changes, Plan will continue to 1994.
	Revise "Pacific Fisheries Policy Directions Statement" based on industry consultations.	"Directions" Document will be reviewed by Pacific Regional Council (PARC) and revised accordingly.	Directions statement will be reviewed in context of DFO Reform.
	Receive report from Commercial Fishing Industry Council (CFIC) on Industry Reform/ Restructuring. Assess recommendations.	Analyzed CFIC recommendations on Industry Reform and Restructuring.	Review CFIC recommendations in context of DFO Reform and Aboriginal Fisheries Strategy, page 95.
		Work teams established to assist with fact finding on Fraser River Salmon Study, under Dr. Peter Pearse. DFO accepted report in fall and started implementing accepted recommendations in context of Aboriginal Fisheries Strategy (AFS).	Continue implementation of accepted recommendations from the Pearse study in the context of AFS.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Commercial Fisheries — Pacific (cont'd)		
	Respond to industry review of Cruickshank Report (industry-funded commission on commercial licensing).	Cruikshank Recommendations reviewed by DFO as part of ongoing licensing review.	Announcement and implementation of licensing policy changes in context of DFO Reform.
	Initiate industry review of by-catch policy in consultation with CFIC and PARC.	Industry-wide review initiated.	Subsequent to industry-wide consultations, develop specific by-catch policy initiatives.
	Complete resource management model for Pacific hake that will set out allocation principles to ensure orderly management in context of the B.C. groundfish fishery.	Support of emerging Pacific hake onshore processing sector resulted in doubling of processed volume to almost 20K tonnes. Improved total catch utilization while maintaining foreign participation in fishery.	Analyze results of 1992 resource management plan. Modify plan as required to maximize orderly development of Pacific hake resource. Consider industry-funded port monitoring program.
	Consult on steelhead conservation programs and start implementation plan. Initiate process for mixed-stock Skeena fishery concerns.	Federal/Provincial linkages strengthened for better in-season management/ conservation of steelhead. Implemented Steelhead interception gillnet selectivity experiments. Skeena Watershed Committee created for more comprehensive management approach.	Conduct program analysis of watershed and conservation measures with province. Evaluate gillnet interception experiments and propose future course. Refine program to maximize conservation benefits.
	Implement stock-rebuilding program for southern coho stocks.	Recommendations presented to fishers and PARC. Consensus reached on need for habitat/ enhancement measures.	Recommendations to be presented to Minister on all aspects of conservation, including user allocation options.
		Implemented industry recommendation to limit number of hook and line rockfish fishermen to safeguard resource fishermen's livelihood.	Review limited entry licensing regimes in hook and line rockfish fishery and refine as appropriate.
	Develop alternative approaches for management of groundfish fishery.	Consultations initiated on alternative management approaches in groundfish management plans.	Implement management plan for groundfish trawl fishery aimed at conservation, reduced wastage of the resource, and increased benefits to fishermen.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Commercial Fisheries — Pacific (cont'd)		
	Conduct stakeholder consultation for clam management plan.	Finalize clam management plan.	
	Licence Appeals		
			Promote fairness and efficiencies in Atlantic Fisheries Licence Appeal Board (AFLAB) and Pacific Region Licence Appeal Board (PRLAB).
	Consultation Process		
Development of comprehensive assessment of all Atlantic Fisheries consultative bodies.	Participate in public consultations on proposed Regional Fisheries Management Agencies.	DFO Atlantic study on consultative process led to introduction of resource management initiatives (ITQs/IQs).	Provide advice/analysis to DFO Reform on resource allocation and licensing.
	Continue full-cycle consultations on Fisheries Management Plans, etc.	Consultations completed and Management Plans announced. Improvements in advisory committee process by consolidating areas and gear sectors.	Complete consultations on 1993 Fisheries Management Plans prior to their announcement. Further improvements in advisory committees and acceptance of greater responsibility by the groundfish industry.
	Individual Transferable Quotas (ITQs)/Dockside Monitoring		
Promote improved design of individual quota management programs and increase the use of this approach, particularly with quota transferability, in suitable fisheries.	Participate in review, implementation of Dockside Monitoring decisions subsequent to report of Government Industry Task Force chaired by DM.	Commercial Catch Monitoring System and Dockside Monitoring Program implemented. For the first time, repayable contributions were negotiated with East Coast fishermen.	Review Enterprise Allocation/Individual Transferable Quota systems to promote consistency. Assist industry in setting up DMPs. Implement licensing changes subsequent to regulatory changes scheduled in 1993.
	Dockside Monitoring Programs (DMPs) will continue to be refined for target species, especially groundfish, and integrated with Individual Transferable Quota (ITQ) programs where applicable.	Facilitated implementation and enforced licence conditions of DMP as per industry consultations on cost sharing and program design.	Implement Dockside Monitoring Working Group to promote national coordination. Expand Program to other species such as herring.
	Complete review of sablefish trial IVQ program. Continue second year of trial halibut IVQ program.	Sablefish and halibut IVQ trial programs continued successfully and evaluations were conducted.	Seek approval for industry-funded IVQ regime in sablefish and halibut fisheries.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Habitat Management — National		
	Protect/improve fish habitat, Environmental Assessment and Review Process (EARP) assessments. Implement policies/program initiatives.	All regions contributed analysis/information to National Committee aimed at developing a National Fish Habitat Management System.	Implement new Canadian Environmental Assessment Act.
	Habitat Management — Atlantic		
In cooperation with the Pacific and Freshwater Fisheries Sector, develop a new habitat management program, including a referral process.	See national target, above.	Prepared draft Atlantic EARP Screening Guidelines. Nfld. — developed approaches for reviewing aquaculture referrals, consulting with forest harvesting industry, and responding to habitat violations. Scotia Fundy — minimized damage at several sites and improved compliance. Gulf — analysis focused on PEI fixed link, Cavendish Farm, and McCain Lower Churchill Falls Electric Power projects. Quebec — assessments of access infrastructures for Grande-Baleine, Eastmain Hydroelectric Project, Ste-Marguerite River Hydroelectric Project; 18 reports produced to assess endangered species/ habitat in St. Lawrence and promote habitat rehabilitation; also developed Emergency Intervention Panel Plan for oil spills.	Complete participation to the public hearings on Grande-Baleine, Eastmain and Ste-Marguerite. Implement Environmental Effect Monitoring for 57 pulp and paper mills in accordance with the new regulations. Significant involvement expected in major projects such as Halifax Harbour clean-up, Metropolitan Authority Landfill/Incinerator, and Mactaquac minimum discharge turbine.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Habitat Management — Pacific		
	Implementation of the Fraser River Green Plan and other Green Plan initiatives.	Clean-up/rehabilitation program for the Fraser River developed and announced as part of Green Plan strategy.	Implement Fraser River rehabilitation program within resources available.
	Completion of EARP review of Kemano Completion Project.	Review halted after Federal Court of Appeal ruled EARP review required.	Restart review if appeal request by Rivers Defense Coalition and Carrier Sekani Tribal Council is granted.
	Expansion of pilot demonstration projects to promote community and provincial involvement.	Participated in estuary management programs for Squamish, Fraser and Cowichan; Yukon Placer management process. Worked with Forest Industry on guidelines for habitat protection. Began implementation of strategies for Kitimat Estuary, Courteny Comox, and Johnstone Strait (Killer Whale Management). EARP Mediation begun for sandspit Marina Project.	Implement management measures evolving from partnership committed noted in column 3. Expand community involvement in line with Aboriginal Fisheries Strategy. Participate in provincial pilot projects to involve all stakeholders in selected area on Vancouver Island, Howe Sound, Koutenay District, Cariboo-Chilcotin.
	Habitat Management — Central and Arctic		
	Participate in EARP panel projects on pulp-mill development (Northern Alberta), hydroelectric development (Conewapa, Manitoba; Jackfish River, Ontario; James Bay, Quebec), and other major industrial developments in cooperation with provincial governments.	Participated in 5 EARP panel projects (Conawapa Hydro and North Central Power Line, Manitoba; Little Jackfish and Moose River hydro, Ontario; Grande-Baleine hydro, Québec; 6 Saskatchewan uranium mines); computerized EARP registration system; advised on NWT industrial applications.	Participate in 1992-93 EARP projects except Conawapa, plus Little Bow River. Review other industrial developments in cooperation with provincial governments to ensure protection of fish habitat. Continue to provide advice on all NWT industrial applications (400+) and activities which might adversely affect fish habitat.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Marine Mammal Management		
Continue work of joint Science/Operations Fisheries Marine Mammal Working Group (MMWG).	Refine policy or directives for whale watching.	MMWG to consider draft policy on whale watching as per quidelines developed in Quebec Region.	Finalize national policy on whale watching.
	Analyze results of whale watching survey.	Inconsistencies in national survey data preclude valid national results.	Produce Quebec regional report.
	Develop options for addressing harbour porpoises (HP) by-catch in Bay of Fundy.	Government-industry Advisory Committee on reducing HP bycatch created; members recommended further research. Seine designed to assist in rescue of mammals trapped in weirs.	Work of Advisory Team will continue.
	Continue efforts for joint enforcement of conservation quotas for Northern Québec beluga subsistence hunt.	Community liaison officers hired to work with Native groups (draft management plans, monitor harvests).	Coordinate Inuit participation in research projects on Ungava Bay and Eastern Hudson Bay Beluga populations. Publish revised comanagement plan. Implement in partnership with Inuit groups.
	Implement Interdepartmental Action Plan to ensure survival of St-Lawrence beluga whales.	Completed first mapping of known beluga habitats used in setting limits of Saguenay River Park. Population census conducted. Stranded corpses analysed for contaminants. Whale watching guidelines published. Funding completed.	No further action unless additional funding is made available.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Marine Mammal Management (cont'd)		
	Revisit policy for beluga live-capture to address public concern.	Minister Advisory Committee on Marine Mammals reviewed policy. Minister accepted recommendation to not consider any more applications for live capture of Belugas for export.	Initiative completed.
	Continue initiatives with Inuit and Inuvialuit of the Arctic for the sound co-management and protection of harvested stocks of Arctic seals and whales.	Established SE Baffin Beluga Committee, and Canada/Greenland Joint Commission on Conservation of Narwhal and Beluga.	Develop co-management plans for Arctic marine mammals with Aboriginal groups (SE Baffin Beluga, beluga and bowhead in Beaufort Sea).
	The Beaufort Sea Beluga Management Plan and Bowhead Management Plan will be implemented.	Conservation education initiatives were undertaken.	Initiative completed.
	Coordination of national/ regional/international issues will continue to be addressed by national Marine Mammal Working Group (MMWG).	Terms of reference and membership established for an MMWG.	Issues addressed above. No further action on formalizing committee structure.
		The 1992 seal management plan was completed and implemented subsequent to industry consultation.	Prepare and implement 1993 seal management plan subsequent to industry consultation.
	Statistics		
	Improved data collection for both accuracy and timing is expected from initiatives such as dockside monitoring program (DMP).	Amendments made to Fisheries Act to strengthen data-collection provisions. DMP reports improved accuracy of harvest information.	No further action required.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	International — Atlantic		
	Carry out review of the use of foreign vessels in Canadian fisheries.	Review completed.	No further action required. Action recommendations of the Foreign Fishing Panel.
		Discussions with NAFO membership resulted in decision to proceed with pilot observer program, production logbooks, elimination of small-mesh gear fisheries, and inclusion of catch reporting in NAFO hail system.	Implement NAFO decisions outlined in column 3.
	Implement management measures for 3Ps following decisions on boundary division with St. Pierre and Miquelon.	Boundary decision handed down June 10, 1992. Implementation discussions initiated with France; unilateral quotas offered.	Pending France's acceptance of Canadian proposals, finalize management measures for 3Ps.
	Implement International Commission for the Conservation of Atlantic Tuna (ICCAT) management measures for tuna and swordfish.	As result of November/91 ICCAT meeting, implemented management measures for bluefin tuna.	Implement ICCAT management measures for tuna and swordfish.
	Participate in joint US/ Japan/Canada ICCAT Bluefin Management Measures Review Committee for review of Certificate of Origin Regime.	Committee met in May; report presented at November/92 ICCAT meeting.	Implement decisions on Certificate of Origin as adopted by ICCAT.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	International — Pacific		
	Evaluation scheduled 1992-93 to examine effects of Free Trade Agreement (FTA) on at-sea export of salmon and roe herring.	Implemented Canada-US Trade Commission Agreement for at-sea export of salmon and roe herring.	Review implementation of this agreement prior to 1993 negotiations with the U.S.
	Continue operational and scientific support for ongoing Yukon River negotiations.	Provided scientific advice/assessment information for negotiations.	Continue operational and scientific support for ongoing Yukon River negotiations.
	Continue operational support/advice in support of ongoing annex negotiations for Pacific Salmon Treaty.	Canadian positions prepared and tabled at annual meeting of Pacific Salmon Commission, Feb/91. Negotiations ongoing.	See Pacific Salmon Treaty, page 86.
	International Pacific Halibut Commission (IPHC) will monitor reduction in U.S. by-catch by Alaska groundfish trawl fleets to enable increased Canadian allocations.	Alaskan groundfish fishery established by-catch limits and an observer program. Canada monitoring expected 10% by-catch decline in 1992.	Under IPHC review approaches for reducing both Canadian and U.S. halibut by-catches.
	Support negotiations with U.S. on sharing of international Pacific hake TAC.	Canadian and U.S. scientists developed a joint hake report for negotiators in hake dispute. No agreement yet reached.	Further negotiations March/93 to review 1992 data and seek agreement on Canada/ U.S. hake sharing.
	International — Central and Arctic		
	Continue with full program of the Great Lakes Fishery Commission (GLFC), including sea lamprey population assessment and control.	Completed ten research studies in support of sea lamprey control by the GLFC. Treatment/ assessments carried out as planned.	Continue with full program of the GLFC, including sea lamprey assessment (200 streams/rivers) and control (13 streams/ rivers); continue modelling/fish habitat relationships.
	With Alaska, co-manage Beaufort Sea beluga, bowhead whale and joint fish stocks; with Greenland co-manage beluga, narwhal and walrus in the Eastern Arctic.	Cooperation continued on joint stocks with Alaska and Greenland.	Continue cooperation with Alaska for co-management of Beaufort Sea beluga and bowhead stocks and with Greenland for beluga, narwhal and walrus in E. Arctic.

Figure 16: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
RESOURCE AND INDUSTRY DEVELOPMENT			
	Industry Services		
	Enhance technological infrastructure for commercial fisheries operations.	Through the "Canadian Fish Harvesting Program for Responsible Fishing," 22 projects were conducted to ensure energy conservation in commercial fisheries operations throughout Canada.	Implement technological fisheries development program for responsible fishing operations.
	Implement initiatives in partnership with industry which will incorporate cost efficiency and sustainability features for future optimized harvesting operations.	A total of 55 (1991-93) gear selectivity projects were carried out on commercial fishing vessels. In addition, research projects on vessel design and harvesting development were conducted.	Implement initiatives in partnership with industry throughout Canada which will incorporate cost efficiency and resource sustainability features.
	Implement technology transfer program to ensure that Canadian fishermen and industry can access information related to the development work undertaken.	Technical information on current projects was transferred to Canadian fishermen/industry via workshops and distribution of reports.	Hold consultations with industry and the Provinces on technology development. Establish Information program outlining fisheries technology, transfer and information to industry.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Underutilized Fisheries — National		
Arrange for priority access by active fishermen to new opportunities for under and unutilized species.	Initiatives to support increased harvesting of underutilized species by Canadians and increased onshore domestic processing of underutilized species. Continue efforts in the promotion/development of underutilized species.	Permits issued for exploratory offshore shark fishery. New surimi processing initiated in B.C. using Pacific hake.	Evaluate viability of sustainable commercial fisheries for N. turbot, silver hake, mackerel, shark, hagfish, dogfish, and pacific hake. Establish national working group to promote more coordinated approach to underutilized species development.
	Major consultations to be held in January 1992 on Atlantic underutilized species.	New eligibility criteria and operating guidelines developed for management of turbot, silver hake and mackerel.	Conduct consultations to implement industry-led approaches/initiatives toward development of underutilized species.
	Contribute to the development of economic diversification options to reduce pressure and income dependency on traditional fisheries.	Regional diversification projects include male capelin, turbot, round-nose grenadier, herring, swordfish, shark in Newfoundland; shrimp, shark, inshore and offshore silver hake, mackerel and dogfish in Scotia Fundy; rock crab, turbot, Icelandic scallops, redfish, squid in the Gulf; and turbot, crab, clams, Gulf stimpson surf clams, dogfish and pelagics in Quebec.	Arrange more consolidated cooperative harvesting/processing marketing program for herring in Atlantic Canada. Support Industry led, market driven initiatives to address market constraints for turbot, silver hake, mackerel, shark, dogfish, clams, rock crab and redfish.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Cooperative Programs		
	Implement fisheries sub-agreements of NIFDA, the PEI, NB and NS Cooperative Agreements. Continue to develop projects to expand resource base, develop conservation oriented harvesting methods and promote fleet rationalization.	Various projects undertaken within Fed./Prov. Cooperation Agreements, AFAP QFFDP. A number of amendments initiated to adapt Agreements to current priorities.	Implementation of fisheries development agreements under Round V of the Cooperation Program, with emphasis on development of sustainable fisheries.
		Concluded 5-year $60 M Nfld fisheries development agreement. 3815 projects initiated, including assistance to more than 3,000 inshore vessel owners to upgrade technology used in their operations.	Negotiate and, depending on outcome, implement a fisheries development agreement for Newfoundland under Round V of the Cooperation Program.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Salmonid Enhancement Program (SEP) — Pacific			
	Complete consultations and develop options for SEP multi-year plan.	Delivery of SEP continued with emphasis on community and semi-natural enhancement approaches. Consultations/options development completed. Prepare draft report.	Following completion of SEP evaluation, 10-year plan for SEP with costed program mix will be developed.
	Maintain/expand/assess fish production for SEP projects, especially Strait of Georgia coho.	Final report of Coho Steering Committee under review.	Participate in coho action plan, once finalized.
	Contribution to prevention of habitat loss by participating in pilot projects in habitat management/education.	Joint federal/provincial/ municipal pilot project under way on Vancouver Island to develop partnerships in habitat management and restoration.	Pilot projects in Comox/ Courtenay area will be launched and assessed.
	Promote joint funding with industry and provincial agencies.	Limited success in obtaining large-scale funding commitments. Smaller ventures under way with B.C. Hydro, Pacific Salmon Foundation, and Habitat Conservation Fund.	Continue promotion of joint projects as opportunities arise.
	Contribute to major evaluation of SEP.	Information collection, database development completed. Analysis of information under way.	Completion of SEP evaluation and review of recommendations in order to propose future course of action. Directed research into cause of chinook survival rate decline at selected hatcheries.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Salmonid Enhancement Program — Atlantic		
		Fourteen of the 35 rivers in the Scotia Fundy region stocked with salmon in 92-93 were for enhancement purposes.	Salmonid Enhancement Program to be included in Canada-NS Coop Agreement on Recreational Fisheries Development, Canada-PEI Cooperation Agreement on Sustainable Development. DFO-Atlantic Canada Opportunities Agency (ACOA) Memorandum of Understanding (MOU) on Education and Public Awareness Program to be delivered by the Atlantic Salmon Federation.
	Aquaculture		
Development of a proposal assessment system for aquaculture projects in cooperation with other government departments.	Undertake initiatives to refocus the aquaculture industry's priorities toward increased productivity and competitiveness.	DFO participated in F/P development strategies under the auspices of a Memorandum of Understanding on Aquaculture with the four Atlantic Provinces.	
		A Federal-Provincial-Industry Forum on Aquaculture Development held Sept/92 to provide direction to future program development.	Implement 47 recommendations from the National Forum.

Figure 15: Fisheries Operations, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Recreational Fisheries		
	Implementation of Cooperative Agreements for recreational fisheries to achieve a reduction of commercial Atlantic salmon fishing and increased salmon enhancement and increased marine recreational fisheries.	Commercial Salmon Licence Retirement plan introduced in Newfoundland through a separate Federal-Provincial Cooperation Agreement. Participation exceeded 80% objective. Licence retirements in NB continues as part of Federal-Provincial Agreement on Recreational Fisheries Development.	Pending joint approval of a Federal Provincial cooperative Agreement on Recreational Fisheries, implement licence buy-back program in Nova Scotia. Once all Co-op Agreements for Recreational Fisheries are signed, DFO will focus on coordination through Atlantic Sportfisheries Enhancement Program (ASEP). Explore options for expanded recreational Atlantic marine fisheries.

For the purposes of this Expenditure Plan, resources devoted to enforcement activities are displayed under Fisheries Operations. During 1993-94, enforcement activities will be consolidated under one sector reporting to the Assistant Deputy Minister of Regulatory and International Affairs. Corresponding changes will be incorporated in the 1994-95 edition of the Department's Expenditure Plan.

Actual results against planned targets for 1991-92, 1992-93 and targets for 1993-94 for Enforcement are illustrated in Figure 16.

Figure 16: Enforcement, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Enforcement		
	Examine Enforcement activities with a view to achieving greater compliance with regulatory requirements.	Recommend allocation of funds for sea surveillance and ensured coordination of sea surveillance activity through the Zonal Vessel Scheduling Committee.	Contribute to the development of innovative, cost-effective, enforcement strategies through effective national/regional working groups and international research.
	Provide for effective control of foreign fishing vessels with the 200-mile zone.	Developed/coordinated systems to collect timely and accurate field data for foreign quota monitoring, offshore surveillance and observer programs. Completion and integration of regional information systems. Canadian Foreign Allocations to advise them of Canadian regulations and reporting requirements.	Effective monitoring and control over foreign fishing vessels operating in Canadian waters. Monitor and report on foreign fishing activity outside 200-mile limit and work with North Atlantic Fisheries Organization (NAFO) to enhance overall NAFO effectiveness. Continue operational support to negotiations associated with international commissions/treaties.
	Strengthen linkage between resource management and enforcement planning to ensure approved management plans are supported by appropriate enforcement measures.	Provided a sectoral review and control point for management issues (i.e. habitat, native and Arctic fisheries) which have enforcement implications.	Continue the "Enforcement Effectiveness Project" designed to establish enforcement planning process and the development of performance criteria databases for the purpose of determining most cost effective enforcement strategy for an individual fishery in a specific area.
	Anticipate flying approximately 3,900 surveillance hours across Canada to ensure effective deterrence of potential violators in the offshore.	Continued to monitor operations relating to the fisheries surveillance helicopter stationed in Yarmouth, Nova Scotia.	Monitor national fixed wing and rotary wing aerial surveillance used to deter domestic and foreign illegal fishing to monitor air surveillance contracts to ensure compliance with terms. To obtain data that will be used in review to determine effectiveness.

Figure 16: Enforcement, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Enforcement (cont'd)		
	Realize extensive increase in observer coverage for target species in Atlantic.	Coverage of the Observer Program resulted in 100% coverage of the Northern Shrimp, foreign and Northern Cod Fisheries, turbot and plaice and partial coverage for tuna, redfish, etc.	Review observer program with a view to improving program outputs and developing cost recovery options. Continue the development and implementation of the "Enforcement" sector that will see the streamlining and standardization enforcement activities both at National headquarters and in Regions. Provide advice to the DFO Reform group as it pertains to Enforcement and the implementation of the Aboriginal Fisheries Strategy.

C. Inspection

Objective

To provide reasonable assurance that fish and fish products for domestic and export trade meet Canadian or foreign country grade, handling, identity, process, quality and safety standards.

Resource Summaries

The Inspection Activity represents approximately 4% of the Department's total 1993-94 financial resources and 9% of the total human resources.

Figure 17: Activity Resource Summary

(thousands of dollars)	**Main Estimates 1993-94**		Forecast 1992-93		Main Estimates 1992-93	
	$	**FTE**	$	FTE	$	FTE
Inspection	**35,188**	**525**	34,894	544	37,994	547
	35,188	**525**	34,894	544	37,994	547

Details on year-over-year changes for the Inspection Activity may be found in Section III, Figure 39, pages 118 and 119.

Figure 18: 1991-92 Financial Performance

(thousands of dollars)	1991-92		
	Actual	Total Available for Use	Main Estimates
Inspection	36,472	38,075	39,207
	36,472	38,075	39,207

Description

The Inspection Activity promotes and supports the value, wholesomeness and marketability of fish products produced or sold in Canada by developing, promoting and ensuring compliance with appropriate standards that contribute to the achievement of acceptable quality, safety and identity of fish and fish products.

Inspection carries out a full range of activities, from the development of appropriate standards, to the promotion of their adoption, through to ensuring compliance with those standards. Inspection ensures that standards are relevant,

necessary and sufficient to achieve quality, safety and proper labelling of fish and fish products.

Standards cover all aspects of the harvesting and processing procedures, including those governing vessels and equipment as well as handling and processing procedures. They promote timely, effective and efficient intervention at critical processing stages.

Inspection is committed to cooperation and collaboration with its clients and partners, in particular industry, the principal client of Inspection, as well as other government departments at the federal, provincial and local levels, other national governments and consumer groups. The major programs administered by the Inspection Sector are as follows:

Molluscan Monitoring and Control Program: An extensive molluscan shellfish program is in place to prevent the marketing of unsafe or unwholesome molluscan shellfish. This program involves surveys and classification of molluscan shellfish growing areas, monitoring of the shellfish for the presence of Paralytic Shellfish Poison and other toxins, and initiation of closures of harvesting areas as required. Commercial shipments are also monitored for the presence of bacteria of public health significance.

Import Inspection Program: Fish and fish products imported into Canada are inspected to prevent the marketing of unsafe, unwholesome or mislabelled products. Increased inspection effort is directed at foreign processors which have demonstrated a history of poor compliance with Canadian standards. On the other hand, inspection effort is reduced through the establishment of Memoranda of Understanding with other countries having reliable inspection systems.

The costs of the import inspection program are partially recovered. Importers must obtain an import licence and are also required to pay an inspection services fee for each shipment of fish imported plus examination fees for products which have a history of non-compliance.

Quality Management Program: The Department of Fisheries and Oceans is continuing with the implementation of the Quality Management Program (QMP). The QMP is an enhanced inspection program which requires all registered fish processing plants to develop and implement an in-plant quality management program. The program provides added assurance that fish products produced in Canada comply with regulatory requirements.

The program relies on the basic concepts of "detection" and "prevention." The program enables the fish processing industry to monitor its own compliance with regulations and to identify and quickly deal with problems in processing operations.

The Inspection Activity verifies that a processor's in-plant QMP is functioning effectively and meets the requirements of the regulations. Processing operations are rated Excellent, Good, Satisfactory or Fail based on the number of deficiencies detected in conducting QMP inspections. QMP ratings indicate the degree of confidence that the Department has in a processing operation and are used to determine the frequency of subsequent QMP inspections.

The benefits from this program to fish processors who consistently maintain Excellent or Good ratings include a streamlined process for the certification of final products for export (thereby facilitating access to markets), the granting of the privilege to display the "Canada Inspected" logo on products, as well as a minimization of government intrusion and intervention in day-to-day operations.

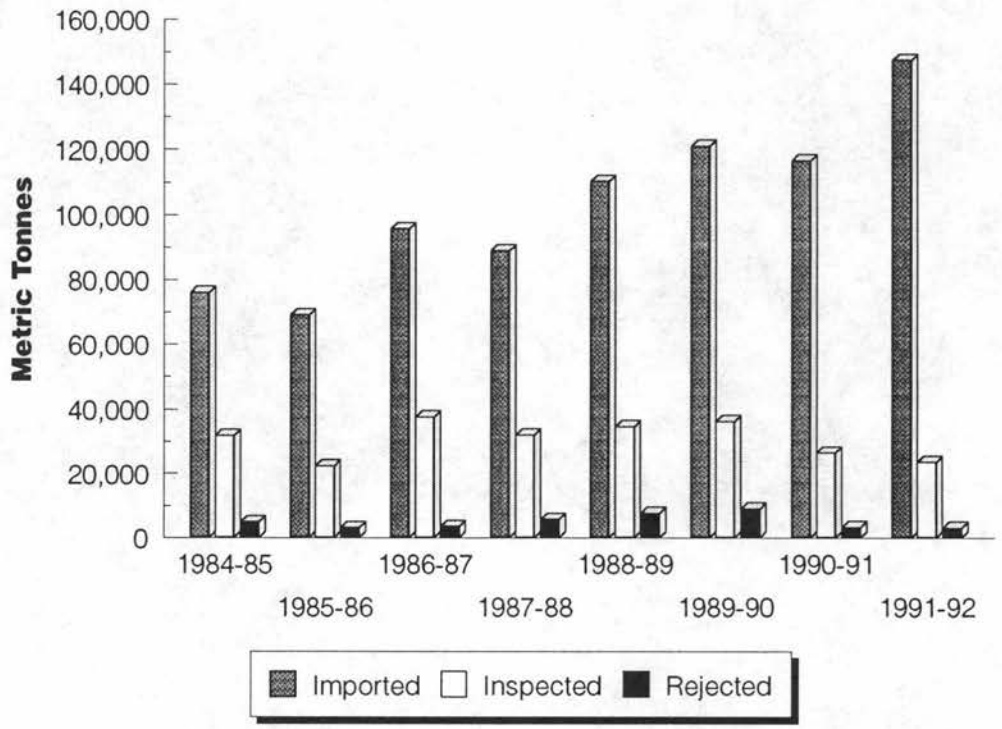
Other Inspection Programs: The Inspection Activity also encompasses the maintenance of data bases on contaminants in fish and fish products, and the inspection of fishing vessels, facilities used in the offloading and holding of fish prior to processing, vehicles used in the transportation of fish, fishermen packer facilities and cold storages.

Also, all consumer and trade complaints involving fish products are investigated to determine the cause of the complaint and the appropriate follow-up action.

Figure 19 shows the trends for the import inspection program and provides a year-over-year comparison of inspected and rejected product in relation to all products imported.

The marked increase in the total weight imported results from the inclusion in 1991-92 of frozen fish landed by foreign vessels destined for further processing in Canadian processing plants.

Figure 19: Import Inspection Program, All Products



Achievements of the Inspection Activity in 1991-92 and 1992-93 to date are shown in Figure 20.

Figure 20: Inspection, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Consumer Complaints		
	Investigate all consumer and trade complaints. Investigate complaints involving health and safety immediately.	Approximately 500 complaints were investigated. Complainants were notified of the results of each investigation. Domestic processors implicated in complaints were notified of the results of investigations.	Continue to investigate all consumer and trade complaints. Develop a national information system for trade and consumer complaints.
	Shellfish Monitoring Program		
	Regularly monitor all shellfish harvesting areas for the presence of marine toxins, and take early closure action to prevent toxic shellfish from reaching the market.	Over 15,000 samples were analysed for the presence of Paralytic Shellfish Poison (PSP) and domoic acid. Harvesting areas were closed when necessary, and there were no reports of illness from commercially harvested shellfish. An audit of the program with Environment Canada was completed for the Nfld. and Quebec Regions (1991-92) and for the Pacific Region (1992-93).	Continue intensive monitoring of all shellfish harvesting areas. Expand monitoring to include non-molluscan species as appropriate. Carry out program audits in two regions.
	Quality Management Program (QMP)		
Implement QMP on a compulsory basis to increase industry responsibility for quality control.	All federally registered plants operate in compliance (100%) with QMP.	All federally registered plants (1,280) have implemented QMP or are in the process of revising their program. Over 2,000 QMP inspections have been conducted, with a compliance rate of 84%. The compliance rate has increased over the course of the year as the industry went through a period of adjustment since QMP became mandatory in February 1992.	Increase the rate of compliance of all federally registered plants. Monitor all operations to ensure that standards of safety and quality of fish and fish products are maintained. Provide enhanced service to industry for requested and mandatory inspections in a more efficient and effective manner. Implement a national, computer-based information system to monitor the effects of QMP implementation.

Figure 20: Inspection, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Mandatory Inspections		
	Continue to provide mandatory inspections on products such as canned salmon, salted fish and whitefish wherever requested by industry.	All lots of fish requiring mandatory inspection were inspected as requested by industry.	It is expected that revision of the Fish Inspection Regulations will eliminate the requirement for mandatory inspections. In the interim, these inspections will be done on an as-requested basis.
	Import Product Inspection and Offshore Inspection		
Develop further Memoranda of Understanding (MOU) based on the potential for increased cost effectiveness of the Import Program.	Inspect imported fish products at a frequency based on consumer risk. Bring the Inspection Import System (INIM) on line. Conduct audits of offshore processing plants as per MOU agreements. Expand MOUs with Thailand to cover more products.	The INIM system, which became fully operational in June 1992, involves 23 import centres and allows better targeting of imports for inspection. Border blitzes were carried out to identify non-licensed importers and non-complying products. Audits of foreign processors were carried out in Thailand and the Philippines.	Continue monitoring of imports and increase enforcement actions, including border blitzes. Develop further MOUs based on the potential for increased cost-effectiveness of the import program.
	Contaminants Monitoring		
	Develop a contaminants database, and maintain it on a regional basis to allow appropriate use of the resource, ensure product safety and facilitate expert certification.	Aquaculture chemical residue testing for domestic product increased to 500 samples per year. Contaminants screening of imports was implemented for various chemicals and drugs.	Target monitoring for contaminants and chemical residues at suspect harvest areas and fish species. Develop the analytical capability for new compounds.
	Other Facilities		
	Inspect fishermen packers, cold storages and lobster or crab holding ponds as needed.	Facilities were inspected as required.	To ensure that fishermen packers comply with standards and that the fish they process is packed under acceptable conditions in compliance with regulatory requirements.

Figure 20: Inspection, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Vessels		
	Inspect vessels as needed.	Vessels were inspected as required.	To ensure that vessels comply with standards so that fish quality is maintained and fish is not exposed to contamination on board.
	Unloading, Handling, Holding and Transport (UHHT)		
	Inspect unloading, handling, holding and transport facilities as needed.	Unloading, handling, holding and transport facilities were inspected as required.	To ensure that facilities comply with standards so that fish is protected from sun, weather and contamination.
	Interorganizational Harmonization		
Continue development and implementation of MOUs.	Develop and sign MOU with Consumer and Corporate Affairs. Review the effectiveness of and make improvements to MOUs. Prepare Codex Alimentarius recommendations for fish and fishery products.	Initiated changes to improve MOUs with Health and Welfare and Agriculture Canada. The Codex Alimentarius recommendations prepared by Canada for fish and fishery products were tabled at Codex meetings and are under review.	Develop and sign MOU with Consumer and Corporate Affairs. Append protocols to existing MOUs. Canada and the United States will continue to seek a Mutual Recognition Agreement for the Canadian Quality Management Program and U.S. Hazard Analysis and Critical Control Point system.

D. International

Objective

To advance Canada's international fisheries interests in conservation and trade.

Resource Summaries

The International Activity represents less than 1% of the Department's total 1993-94 financial resources and total human resources.

Figure 21: Activity Resource Summary

(thousands of dollars)	**Main Estimates 1993-94**		Forecast 1992-93		Main Estimates 1992-93	
	$	**FTE**	$	FTE	$	FTE
International	**6,779**	**21**	6,668	20	4,818	20
	6,779	**21**	6,668	20	4,818	20

Details on the year-over-year changes for the International Activity may be found in Section III, Figure 39, pages 118 and 119.

Figure 22: 1991-92 Financial Performance

(thousands of dollars)	1991-92		
	Actual	Total Available for Use	Main Estimates
International	5,401	5,275	4,957
	5,401	5,275	4,957

Description

This activity encompasses the conduct of international relations to advance Canada's fisheries conservation and trade interests, and maximize allocations to Canadians from internationally managed fish stocks. External Affairs and International Trade Canada (EAITC) and other government departments are involved. It includes the negotiation and administration of international treaties and agreements affecting conservation, allocations and trade, the conduct of bilateral and multilateral fisheries relations with other countries, as well as the formulation and presentation of fisheries conservation, allocation and trade positions.

The International Activity focuses on three main subject areas: Atlantic Fisheries Relations, Pacific Fisheries Relations and Trade Policy. International is accountable for policies, strategies and programs aimed at advancing, developing and protecting Canadian fisheries conservation and trade interests, and maximizing allocations to Canadians from internationally managed fish stocks through international fisheries relations and the settlement of issues related to maritime boundary disputes. The trade objectives include lowering tariffs and reducing non-tariff barriers, expansion of access to foreign markets, and provision of fisheries negotiating positions to EAITC regarding current General Agreement on Tariffs and Trade (GATT) multilateral trade negotiations, and negotiations under the Canada-U.S. Free Trade Agreement (FTA) and the trilateral North American Free Trade Agreement (NAFTA).

The Department's International Sector participates in nine bilateral and multilateral fisheries conservation and science organizations. Payments to these organizations (which amount to approximately 66% of the total budget for international activities) are non-discretionary obligations on behalf of Canada pursuant to various treaties and in support of Canada's foreign policy objectives (see page 89). These payments must be made in the currencies in which they are levied and are thus subject to unforeseeable currency fluctuations. The remaining 34% of the International operating budget is applied primarily to research, consultation and negotiation expenses associated with the conduct of international fisheries relations.

Performance Information and Resource Justification

Work undertaken in this Activity results in the following:

- the advancement, through international negotiations, of Canadian interests in management, protection and conservation, and scientific assessment of Canada's fisheries resources;
- conservation and allocation of internationally managed fish stocks which migrate through international waters, and reduction of loss of Canadian origin salmon to high seas interception fisheries, through implementation of bilateral agreements and participation in multilateral commissions and organizations;
- defence of Canadian sovereignty through negotiation of maritime boundary disputes, assisting enforcement against illegal foreign fishing in Canadian or treaty waters, and resolution of boundary conflict issues;
- enhancement of Canada's international trade in fish and seafood products with our major trading partners, represented by the United States, Japan, the European Community (EC) and others through bilateral and multilateral market access negotiations; and
- protection of Canadian fisheries trade and regulatory interests through participation in Canada-U.S. FTA working groups and dispute settlement panels, GATT Multilateral Trade Negotiations and trilateral negotiations to implement NAFTA.

Figure 23: International, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Northwest Atlantic Fisheries Organization (NAFO)/Foreign Overfishing			
Continue earlier efforts in support of Canadian initiatives, with special attention within NAFO to improvements to surveillance and control of fishing by non-members.	Obtain European Community (EC) compliance with all NAFO decisions and seek improved international control of fishing activity in the NAFO Regulatory Area and reduced fishing by non-member vessels. Advance Canadian objectives on management of high seas fish resources at UNCED and increase public understanding of the impact of overfishing in northwest Atlantic.	EC accepted eight of 11 NAFO decisions for 1991 and 1992 and began to improve control of its vessels fishing in the NAFO Regulatory Area in 1992, including timely fishery closures. Measures were approved at 1992 NAFO Annual Meeting to facilitate inspection and enforcement and will be in effect for 1993 fishing season, including a pilot project for observers and minimum sizes for cod and flatfish. EC delegation accepted all NAFO TACs and quotas for 1993 and ban on fishing 3L cod outside 200 miles for 1993. Joint diplomatic representations made by NAFO members to non-member governments to stop fishing contrary to NAFO decisions in 1991 and 1992. Decisions were taken at UNCED to convene a UN Conference on High Seas Fisheries in 1993. Increased public understanding in Canada and abroad of dangers of overfishing straddling stocks and other marine resources on the high seas.	Further improvements to NAFO system of international control and enforcement. Reduction of fishing by non-member vessels. EC compliance with NAFO decisions, including 3L cod moratorium. Implementation of Canada-EC Fisheries Agreement. Continued monitoring of all fishing activity in NAFO Regulatory Area outside 200-mile limit. Consolidation of international support for the Canadian approach to conservation of living marine resources of the high seas. Decisions at the 1993 UN Conference on High Seas Fisheries consistent with Canada's objectives for sound management of straddling stocks in particular. Wide dissemination of information on the extent of overfishing problems and consequences.

Figure 23: International, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
		Canada/France	
Coordinate the government's response on the fisheries aspects of the Canada-France boundary decision and discussions on future fish quotas for France.	Coordinate fisheries input into Canada's response to the boundary decision. Promote and protect Canadian fisheries interests in discussions with France. Provide technical and policy support to Head of Canadian delegation in discussions with France. Coordinate consultations with provinces and industry.	International Directorate coordinated the Department's contribution to an interdepartmental team which prepared the written and oral pleadings in the boundary arbitration. Boundary decision favourable to Canada was announced by tribunal on June 10, 1992. Fisheries impacts analyzed and announced within hours of boundary decision announcement. The interim fisheries agreement operated smoothly in 1991 and 1992, while the arbitration was underway, until it expired on September 30, 1992. Three rounds of fisheries discussions held with France in July and September 1992 on future arrangements. Canadian decision on fair and equitable quotas for France announced on October 10, 1992.	Maintain Canadian positions with respect to fair and equitable levels of French fishing in Canadian waters. Seek access by Canadians to French fishing zone on terms consistent with Canadian positions on conservation and management of relevant fish stocks. Protect Canadian sovereignty and fisheries interests through surveillance and control in boundary area. Promote scientific cooperation with France in 3Ps in the interest of conservation and management of transboundary stocks.

Figure 23: International, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
International Trade Negotiations			
Engage in bilateral negotiations and use GATT to seek removal of tariff and non-tariff barriers. Assess Canadian interest and participation in negotiations related to a possible trilateral United States/Mexico/ Canada Free Trade Agreement.	Enter into bilateral negotiations and use GATT to seek removal of tariff and non-tariff barriers which will remain after conclusion of the current round of Multilateral Trade Negotiations. Participate in negotiations on a trilateral United States/ Mexico/ Canada Free Trade Agreement. Support strengthening of GATT conservation clause to allow trade measures under international environment agreements. Continue to assist in FTA implementation and harmonization work.	Canada tabled proposals in the GATT Uruguay Round for maximum liberalization of international fisheries trade through global free trade in fish products on a reciprocal basis and participated in fisheries sector negotiations on market access. A North American Free Trade Agreement (NAFTA) was signed in September 1992 with benefits for the fisheries sector. A GATT Group on Environment and Trade was activated to review measures in support of international conservation/ environment agreements.	Conclusion of Multilateral Trade Negotiations and ratification of NAFTA. Implementation of improved fish and seafood market access benefits by Japan, Korea, USA, Mexico, etc.
Canada/United States Pacific Salmon Treaty Negotiations			
Renegotiate expiring chapters to treaty and move forward on equity issue and strategy for dealing with United States Fraser River sockeye catches.	Resolve current problem with the United States on Fraser River sockeye; renegotiate Fraser River chapter; make progress on equity issue and satisfactorily renegotiate other expiring Treaty chapters.	Canada and the United States agreed to a schedule for resolution of the "equity issue" with regard to levels of intercepted fish. Progress was made toward a Yukon salmon interceptions agreement. Canada prevented the U.S. from over-harvesting Fraser sockeye to level it had sought.	Seek successful renegotiation of Fraser River sockeye and pink chapter and chinook, coho and transboundary river chapters; obtain compensation for 1992 US Fraser sockeye overage; conclude negotiations on Yukon salmon interceptions agreement; and seek further limitations on southeast Alaskan intercepting fisheries.
North Pacific Anadromous Stocks Convention			
Continue to work with the United States, Russia and Japan to develop a convention for the conservation of salmon in the North Pacific.	Canadian signing and ratification of the draft convention.	A draft convention to prohibit high seas salmon fishing in the North Pacific was negotiated in September 1991. Canada, the United States, Japan and Russia signed the agreement.	Entry into force of convention.

Figure 23: International, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	United States Catches of Pacific Hake		
	Seek fair-sharing agreement for Canada of this transboundary stock.	Two negotiating rounds held with USA on a framework agreement.	Elaborate, if needed, basis for determining shares as well as dispute settlement mechanism.
	Driftnets		
Work through both bilateral and multilateral channels to curtail and eliminate incidental catches of salmon, sea birds, and marine mammals by foreign driftnet fleets in the North Pacific.	Work through bilateral and multilateral channels to ensure implementation by Japan, Taiwan, the Republic of Korea and others of the United Nations resolution calling for a January 1993 moratorium on large-scale pelagic driftnet fishing.	Scientific monitoring and enforcement agreements were concluded with Japan to curtail operation of its North Pacific high seas squid driftnet fleet, and a major scientific assessment symposium was held in June 1991. Canada was a co-sponsor of a second United Nations resolution calling for a moratorium on driftnet fishing by the end of 1992. In September 1991, Canada signed Protocol II to the Wellington Convention on Driftnets.	Same as 1992/93 expectation. Monitor US legislation to embargo imports of all driftnet-caught fish.
	North Pacific Marine Science Organization		
Finalize convention text and bring it into force.	Bring the agreement into force through signature and ratification by other parties.	Progress in strengthening international understanding of fisheries and oceanographic development in the North Pacific was made through the entry into force of the North Pacific Marine Science Organization Convention.	Elaborate terms of reference for new Organization for assuming scientific research requests from North Pacific Anadromous Fish Commission.
	Canada/United States Enforcement		
Implementation of the Canada/U.S. Enforcement agreement.	Monitor implementation. Report on first year of operation. Continue to seek to avoid conflicts in Dixon Entrance.	The agreement has been implemented and is working effectively. Thirty-five U.S. vessels have been charged with illegal fishing in Canadian waters. Prosecutions are ongoing. The issue has been discussed with U.S. Coast Guard and members of the Canadian Fisheries Industry.	Increased prosecutions and significant fines by the U.S. authorities to be sought.

Figure 23: International, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	United States By-Catches of Pacific Halibut		
Seek improved United States management controls to reduce high levels of halibut by-catches by the Alaskan trawl fleet.	Monitor U.S. commitment to reduce by-catches by 25% by the end of 1993, and assist development of by-catch controls in Canadian waters.	The U.S implemented prohibited species catch limits and closed a number of fisheries in response to high by-catches.	Ensure U.S. meets its commitment on by-catch reductions.
	Salmon Trafficking		
	Continued decrease in laundered salmon trade in both canned and frozen forms; quadrilateral enforcement and intelligence activities on the part of Canada, U.S.A., Japan and Russia.	U.N. passed a resolution calling for a moratorium on driftnet fishing by the end of 1992. Undertakings from Southeast Asian countries to discourage purchases by their processors.	The salmon trafficking problem is expected to be minimal with the U.N. moratorium in place. See Driftnets, above.

Figure 24: International Fisheries Commissions and Organizations, Objectives and Payments*

Organization/Commission	Commission Objective
Northwest Atlantic Fisheries Organization (NAFO)	Conservation, restoration, rational management and sharing of fish stocks in the Northwest Atlantic: international cooperation with respect to the resource (1992-93 forecast expenditures $435,500).
North Atlantic Salmon Conservation Organization (NASCO)	Conservation, restoration, enhancement, rational management and sharing of North Atlantic salmon stocks (1992-93 forecast expenditures $87,600).
Pacific Salmon Commission (PSC)	Conservation, restoration, enhancement, rational management and sharing of Northeast Pacific salmon stocks. Establishment of salmon management and enhancement programs to reduce interceptions, to prevent overfishing and to secure, for each country, benefits equivalent to the production of salmon from its own waters (1992-93 actual expenditures $786,500).
International North Pacific Fisheries Commission (INPFC)	Conservation and rational management of the high seas salmon stocks of the North Pacific Ocean; reduction of foreign interceptions of North American salmon and curtailment of their sale abroad (1992-93 forecast expenditures $160,000).
International Convention for the Conservation of Atlantic Tunas (ICCAT)	Conservation, restoration, rational management and sharing of tuna-like species in the Atlantic Ocean and adjacent seas (1992-93 forecast expenditures $40,000).
International Council for the Exploration of the Sea (ICES)	Encouragement and coordination of studies of the marine environment and living resources of the North Atlantic Ocean and provision of scientific advice, on request, to member governments, groups of member governments or international commissions (1992-93 actual expenditures $157,000).
International Pacific Halibut Commission (IPHC)	Conservation, restoration, rational management and sharing of halibut resources in the Pacific Ocean (1992-93 forecast expenditures $927,000).
Great Lakes Fishery Commission (GLFC)	Study of the Great Lakes fisheries; installation of devices and application of lampricides in the Convention area and related tributaries for lamprey control; and provision of a forum for the development of fisheries management programs (1992-93 forecast expenditures $335,000 (International's Administrative component)).
International Fisheries Commissions Pension Society (IFCPS)	Administration of pension and related benefit policies for employees and dependents of International Fisheries Commissions established and maintained by Canada and the U.S. in line with their prevailing employee benefit plans.
North Pacific Marine Science Organization (PICES)	International cooperation and exchange of information on oceanography and biology of the North Pacific Ocean (1992-93 forecast expenditures $88,000).

* The expenditures reported in this figure represent the Department's share in supporting the listed organizations and commissions.

E. Corporate Policy and Program Support

Objective

To provide executive direction and coordination and corporate administrative services and human resource planning in support of the Program; to direct acquisition and provide the framework for management of capital resources and assets for the Program; to coordinate the policies and programs for the Government of Canada respecting ocean affairs; and to provide assessment, analysis and policy and program planning advice respecting the current and future direction of Canadian fisheries and oceans interests.

Resource Summary

The Corporate Policy and Program Support Activity represents approximately 28% of the Department's total 1993-94 financial resources and 24% of its total human resources.

Figure 25: Activity Resource Summary

(thousands of dollars)	**Main Estimates 1993-94**		Forecast 1992-93		Main Estimates 1992-93	
	$	**FTE**	$	FTE	$	FTE
Corporate Policy and Administration	**64,681**	**515**	64,719	449	55,577	415
Capital Assets Management	**143,821**	**129**	113,433	131	135,315	131
Regional Policy and Administration	**63,949**	**806**	92,281	844	69,955	848
	272,451	**1,450**	270,433	1,424	260,847	1,394

Details on the year-over-year changes to the Corporate Policy and Program Support Activity may be found in Section III, Figure 39, pages 118 and 119.

Figures 26 and 27 (pages 91 and 92) provide further information on financial performance and resource distribution.

Figure 26: 1993-94 Resources by Major Sub-Activity Elements

	($ 000)	FTE
Corporate Policy & Administration		
Executive Group	2,947	41
Policy and Program Planning		
Assistant Deputy Minister	662	7
Strategic Policy and Planning, Communications, Habitat, Natives, Plant Workers and Atlantic Fisheries Adjustment Programs	40,679	222
Fishing Vessel Insurance Plan	2,044	38
Regulations and Enforcement	2,552	14
Corporate Management		
Senior Assistant Deputy Minister	426	7
Information Management and Technical Services	5,107	63
Personnel	3,405	58
Finance	5,001	52
Audit and Evaluation	1,858	13
Sub-total	**64,681**	**515**
Capital Assets Management		
Small Craft Harbours	71,488	89
Asset Management	17,293	22
Vessel Acquisition Strategy Plan Management	39,684	12
Facilities	15,356	6
Sub-total	**143,821**	**129**
Regional Policy and Administration*	**63,949**	**806**
Total	**272,451**	**1,450**

* Regional Policy and Administration: approximately 51% of the resources are devoted to vessel and facility administration. Of the remaining resources, approximately 38% are used in regional administration (finance and planning, personnel, information and administrative services), with the balance of approximately 11% being used for program coordination and economics.

Figure 27: 1991-92 Financial Performance

(thousands of dollars)	1991-92		
	Actual	Total Available for Use	Main Estimates
Corporate Policy and Administration	66,957	100,038	44,687
Capital Assets Management	90,153	99,977	144,985
Regional Policy and Administration	77,039	76,324	67,914
	234,149	276,339	257,586

Description

The Corporate Policy and Program Support Activity consists of three sub-activities: Corporate Policy and Administration, Capital Assets Management and Regional Policy and Administration.

Corporate Policy and Administration: This sub-activity includes the offices of the Minister and the Deputy Minister; the corporate units reporting to the Senior Assistant Deputy Minister (SADM), Corporate Management; and the units reporting to the Assistant Deputy Minister (ADM), Policy and Program Planning.

The functions carried out by the SADM with respect to this sub-activity are of a coordinating and service nature to ensure the Department manages through a well-organized and coherent process and is provided with the information needed for planning, control and decision making. The following corporate functions report to the SADM under the Corporate Policy and Administration sub-activity: Finance; Information Management and Technical Services; Personnel, including Human Resource Planning; and Internal Audit and Evaluation.

The ADM, Policy and Program Planning is responsible for strategic policy and planning, habitat management and sustainable development, industry development and programs, Native affairs and corporate communications. Strategic policy and planning includes policy development and coordination, cabinet affairs, economic policy and analysis, reform of the licensing and allocation system and federal/provincial relations. Habitat management focuses on fish habitat protection, pollution prevention and environmental assessment; sustainable resource development focuses on principles to guide fisheries and habitat managers and clients. Industry development and programs includes commercial development, regulatory coordination, Crown corporations, recreational fisheries and aquaculture. The Department's corporate communications activities include the development of communications strategies and scientific publications.

Capital Assets Management: The life cycle management of the Department's capital assets is under the direction of the SADM, Corporate Management. The entire asset inventory, composed of harbours, vessels, equipment, and buildings and works, has an estimated replacement value of over $4.75 billion. Each asset is an essential tool in the delivery of the Department's three key operational activity areas: fisheries management, inspection and science.

The current asset base comprises 1,307 commercial and 820 recreational harbours for small craft, providing services for approximately 74,000 commercial fishermen and 34,000 fishing vessels, and representing 5% of all recreational berths in Canada; a marine fleet of 19 major vessels over 30 metres in length, 47 minor vessels between 13 and 30 metres in length, and 198 small vessels between 6 and 13 metres in length, as well as 1,500 smaller craft; 780 departmentally managed facilities, including 10 major centres; and an equipment inventory containing over 96,000 items, consisting of vehicles, sophisticated scientific and laboratory equipment, radio communication equipment, a wide range of EDP equipment from laptops to mainframes, sophisticated cartography equipment, office furniture and a wide variety of operational support equipment. In addition, the Department occupies 311 facilities which are provided by Public Works Canada for general purpose office and storage space requirements.

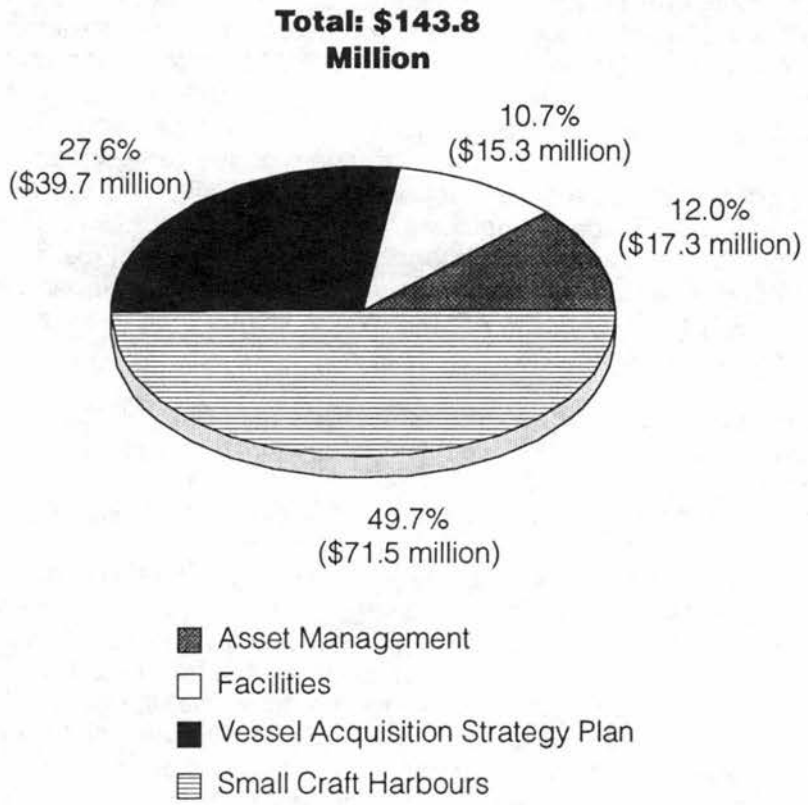
Further information concerning the management of the Department's capital assets is contained in Section III, "Capital Expenditures," page 105.

The Capital Assets Management sub-activity is responsible for the following:

- the administration of some 2,100 fishing and recreational harbours across Canada. The mandate for the Small Craft Harbours (SCH) Program is provided through the *Fishing and Recreational Harbours Act* (1978). The two principal program elements are harbour maintenance and harbour operations. At the present time, the greatest share of the SCH regular program budget is directed to essential maintenance and repair projects as opposed to new harbour development or upgrading projects. This orientation is expected to continue in the future.

- the acquisition, maintenance, management, use and disposal of departmental capital assets to meet program needs cost effectively. This sub-activity also includes costs related to major vessel and real property acquisition, capital repair and construction activities, and the purchasing and contracting for goods and services. Regional resources dedicated to the management of assets are included in the sub-activity dealing with Regional Policy and Administration, as are the costs of shared-use assets such as data processing installations and office buildings supporting more than one activity. The costs related to the acquisition of all other classes of assets and the costs of asset maintenance and operations are reported with the activity supported by the assets.

Figure 28: Capital Assets Management (1993-94 Budget)



Regional Policy and Administration: This sub-activity includes the offices of the Department's six regional Directors General and the provision of administrative and support services such as management, finance and planning, personnel and communication services to the Program at the regional level.

Figure 29: Corporate Policy and Administration, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Northern Cod Adjustment and Recovery Program*			
	Develop and implement a comprehensive income replacement package to address the hardship of individuals and communities affected by the two-year moratorium on the northern cod fishery.	The Northern Cod Adjustment and Recovery Program (NCARP) was announced on July 17, 1992, as a comprehensive two-year package designed to meet the immediate income replacement needs of fishermen and plant workers directly affected by the northern cod moratorium and to lay the foundation for a more viable and efficient fishery to emerge from the moratorium.	From January 1993 until the Spring of 1994, NCARP offers the opportunity to individuals affected by the moratorium to upgrade their skills and fishing practices. Individuals who choose to leave the fishery will be offered training for employment outside the fishery. Older workers will have the opportunity to take early retirement from the fishery. Studies to develop more sustainable harvesting practices are being carried out. Discussions on long term strategy for the processing sector are being pursued with the provincial government. The objective is to emerge from the moratorium with a more economically viable and environmentally sustainable northern cod fishery with a better balance between the number of individuals who depend on the resource and the resource's ability to support them.
DFO Reform			
	Develop and consult on a major package designed to devolve licensing and allocation to separate administrative agencies.	Industry Working Groups were formed on both coasts to help refine the proposal to create two new regional fisheries boards.	Public document outlining proposal to be released generating public discussion. Legislation to establish the new fisheries boards is planned to be introduced in the House of Commons.

* Grants and contributions under NCARP are displayed under Fisheries Operations throughout this Expenditure Plan.

Figure 29: Corporate Policy and Administration, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Atlantic Fisheries Adjustment Program (AFAP)			
Ensure that all elements of AFAP are fully operational in 1991-92 and that all client groups are informed of the program's directives and the support available.	Ensure that the management of AFAP is consistent with program objectives and budgets. Institute Ministerial review of all proposals to ensure that the program responds to evolving circumstances and needs of the people of Atlantic Canada.	The Program was fully operational, and client proposals were considered on a timely basis. Federal/provincial agreements on Plant Workers Adjustment Program (PWAP) were signed with Newfoundland, New Brunswick, and Nova Scotia. A review of AFAP in the light of prevailing circumstances led to refocusing the program to provide more direct support to individuals and enterprises dependent on fisheries.	Continue to ensure that the Management of AFAP is consistent with program objectives and budgets, and responds to the evolving circumstances and needs of the people of Atlantic Canada.
Task Force on Incomes and Adjustment			
	The Task Force on Incomes and Adjustment in the Atlantic Fishery will report their advice on a long-term approach to income and employment problems for fishermen and plant workers.	The Task Force on Incomes and Adjustment in the Atlantic Fishery was established by the Ministers of Fisheries and Oceans and Employment and Immigration. The Task Force is developing a comprehensive long-term strategy on Incomes and Adjustment in the Atlantic Fishery.	The Department, in collaboration with Employment and Immigration Canada, will develop the Government's response to the Task Force advice.

Figure 29: Corporate Policy and Administration, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Habitat/Environment			
Coordinate DFO's participation in the implementation phase of the federal Green Plan, including the implementation of major new program initiatives and the development of the Canadian Environmental Assessment Act (CEAA).	Develop programs to meet Green Plan deliverables for sustainable fisheries and aquatic habitat conservation and protection; continue to coordinate DFO's participation in the implementation of initiatives for climate change, toxic chemicals and Brander Smith; coordinate the implementation of CEAA; undertake or participate in Environmental Assessment Review Process (EARP) project reviews; provide advice to clients.	Coordination of DFO's participation in implementing major Green Plan program initiatives continued and DOE was provided with progress reports on departmental Green Plan initiatives undertaken. Despite resource constraints and a greater-than-expected workload associated with EARP project reviews, operational activities in support of National Habitat Policy were managed so as to ensure that the most important activities such as development of pulp mill effluent regulations, national habitat referral tracking procedures and preparation for the Department's role in the new Canadian Environmental Assessment Act (CEAA), were undertaken. Evaluation of referrals and provision of advice to clients, cooperative habitat management communications efforts and cooperative management programs were also continued.	As a commitment in the Green Plan, a nationally consistent approach in issuing authorizations under the Fisheries Act will be developed and development and delivery of Green Plan initiatives on fish habitat will be initiated. The Policy and Action Plan for Sustainability of Canada's Aquatic Resources will be developed; plans will be prepared for the Department to implement the Canadian Environmental Assessment Act; a national compliance policy and habitat enforcement procedures will be developed; and working relationships to promote and support conservation, restoration and development of fish habitat will be established and maintained with provincial governments, indigenous organizations, other federal agencies, private sector companies and other stakeholders.

Figure 29: Corporate Policy and Administration, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Sustainable Development		
Develop a policy framework and operating principles to guide DFO and clients on ensuring a sustainable fisheries resource.	Preparation of Canada's position on Living Marine Resources for the Earth Summit, to be held in Rio de Janeiro in June 1992. Consultations will also continue on the Sustainable Fisheries and Oceans Policy with a view to the policy being final in the summer of 1992 and the policy implementation plan being completed in January 1993.	DFO participated in the Earth Summit and the Global Forum, meetings held in Rio de Janeiro in June of 1992. Canada's position on living marine resources and the need for sustainable development of ocean resources was presented in each forum. Consultations are ongoing for the development of a sustainable living aquatic resources policy.	Consultations will continue for the purpose of preparing a national Sustainable Living Aquatic Resources Policy; working relationships to promote and support sustainable development will be established and maintained with provincial governments, indigenous organizations, other federal agencies, private sector companies and other stakeholders; and a discussion paper to be used as the basis for the development of a national policy on sustainable living aquatic resources will be finalized.
	Aquaculture		
Coordinate the implementation of the strategy for aquaculture to address the scientific, environmental marketing and inspection requirements of this industry for the 1990s.	Update and publish Aquaculture Development in Canada: A Guide to Federal Government Programs in support of aquaculture. Hold a national planning forum on aquaculture with federal, provincial, and industry representatives to identify actions needed to further industry development and to enhance industry-government coordination and cooperation. Develop and begin implementation of regional Aquaculture Development Strategies, commencing with the Newfoundland, Pacific, and Scotia-Fundy region.	The establishment of an Aquaculture Division in Policy and Program Planning, with a full time Director to coordinate federal government support of the aquaculture industry. Publication of Suppliers to the Aquaculture Industry: A Status Report. The Canadian Aquaculture Planning Forum (Sept. 1992) was attended by 97 delegates from 18 federal departments and agencies, 8 provinces, and industry; it resulted in 47 recommendations for action to foster industry development. Follow-up efforts have commenced.	As the lead federal coordinating agency for aquaculture, the Department will work to effectively service the developmental needs of the sector. This will require ongoing assessment of industry needs, design and development of Departmental policies and programs and an appropriate allocation of resources.

Figure 29: Corporate Policy and Administration, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
		Aboriginal Fisheries	
Develop and implement a national fisheries strategy compatible with Indian and Northern Affairs initiatives on Native economic development, land claim negotiations, fulfilment of treaty obligations and development in the Arctic.	Implement a national strategy on Aboriginal fisheries dealing with Aboriginal food fishing cooperative management and a process to reach working agreements with First Nations on a range of fishing issues. Implement final agreements on the TFN and Gwitch'in land claims.	Developed and implemented the Aboriginal Fisheries Strategy to deal with Aboriginal involvement in the fishery, and negotiated agreements with Native bands and associations in British Columbia, Arctic Canada and the Atlantic provinces; revised the interim policies on management and enforcement of Aboriginal Food Fisheries. Participated in negotiation and implementation of land claims, notably the TFN, CYI, Nisga'a, Gwitch'in and Sahtu claims.	Implement Aboriginal Fisheries Strategy by negotiating more in-depth agreements with Aboriginal peoples dealing with Aboriginal food fishing and cooperative management, leading to interim arrangements on the fishery where land claims are to be put in place. Participate in land claims negotiations in British Columbia, the Northwest Territories and Newfoundland; implement the TFN, Gwitch'in, Sahtu and CYI claims.
		Recreational Fisheries	
Implement Canada's Recreational Fisheries Policy in all regions of Canada through the development and implementation of a National Action Agenda and with the aid of regional coordinators, other governments, industry and citizens' groups.	Negotiate, finalize and implement Atlantic Recreational Fisheries Development Initiatives through Cooperative Agreements with each of the participating provinces. Develop DFO program commitments to implement the National Action Agenda that will include partnerships with non-government groups and initiatives to improve management of preferred recreational species such as Atlantic salmon, chinook salmon and coho salmon.	Prepared a National Action Agenda on sustainable recreational fisheries, based on extensive public consultation, as the foundation of cooperative commitment by all interested parties. Announced agreements with three Atlantic Provinces; implemented licences retirements in Newfoundland.	Finalize and implement program documents for Recreational Fisheries Development in four Atlantic provinces.
Completed the 1990 Survey of Recreational Fishing in Canada.	Preliminary results of the 1990 Survey of Recreational Fishing were published and released at the Recreational Fishing Awards Ceremony.	Published the final report for the 1990 Survey of Recreational Fishing in Canada.	Plan the 1995 Survey of Recreational Fishing.

Figure 29: Corporate Policy and Administration, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
National Fisheries Data Initiatives (NFDI)			
Achieve progress toward a national fisheries data system consistent with DFO Reform and AFAP objectives.		Planning for this initiative is on hold pending reconsideration of Departmental needs and priorities.	
Communications			
Initiatives in support of departmental priorities within the framework of a corporate communications strategy.	Emerging priorities for communications support are reform of the licensing and allocation system; enhanced participation of Aboriginal groups in Canadian fisheries, development of new approaches to income problems associated with fisheries employment; initiatives to limit foreign fishing; and sustainable development programs.	Communications strategies and plans, new releases, speeches, backgrounders, publications were prepared and press conferences organized and an emergency response 1-800 line established in support of these priorities.	The Communications thrusts will be in support of initiatives in response to changing conditions in the fishery and new policy direction such as, DFO Reform, the Aboriginal Fisheries Strategy, Recreational Fisheries, Habitat Management and Sustainable Development, the Northern Cod Adjustment and Recovery Program, and International Fisheries.
Employment Equity			
Undertake internal initiatives to eliminate barriers to women. Create a national strategic overview and action plan, develop a career development training package to assist women and other development equity target groups, a career diversification program, and specific training programs to involve women in non-traditional activities such as Inspection and Fisheries Officers; create an inventory of women at or below the Senior Management level.	Implement strategies and measures aimed at meeting the 1991-1994 Employment Equity targets for recruitment, promotion and retention of all groups.	Updated inventory of women at the Senior Management level. Developed a national Employment Equity strategy. Conducted a survey on employee attitudes to employment equity and incorporated recommended actions in Employment Equity strategy.	Continue to implement measures to meet 1994 Employment Equity targets. Implement a total communication program to enhance awareness of employment equity. Develop and implement an improved employment equity data gathering, monitoring and reporting capability.

Figure 30: Capital Assets, Planned Results and Achievements

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
	Small Craft Harbours		
Continue the implementation of the Small Craft Harbours Plan and complete the Harbour Revitalization Program.	The completion of a minimum of 2,500 repair projects at Class A, B & C fishing and recreational harbours across Canada. Implement appropriate maintenance projects to keep 179 class A harbours, 363 class B harbours and 1,000 class C harbours in fully operational condition.	Program funds have been directed wherever possible to the operation, maintenance, and repair of existing small craft harbours across Canada. By fiscal year end 1992-93, more than 2000 projects will have been undertaken. Program funds have not been sufficient to meet all identified needs. As a result, priority has been given to projects of a health or safety nature at existing facilities.	Program funds will be directed towards the operation, maintenance, and repair of existing harbours across Canada to ensure that commercial fishermen and recreational boaters continue to have safe and effective facilities. Safety and health considerations will be the primary criteria used to establish repair priorities for some 2000 anticipated projects. The Small Craft Harbours program will share the same funding pressures being experienced by the other Government programs. As a result, it is anticipated that the construction of new harbours or projects to expand the capacity of existing harbours will be difficult to accommodate.
Continue the establishment of local harbour authorities to ensure that those benefiting directly from the use of Small Craft Harbours facilities bear most responsibility for their management and day-to-day operations.	Continue to promote co-management through the establishment of 63 additional fishing Harbour Authorities.	A total of 16 new Harbour Authorities managing 27 fishing harbours will have been established during 1992-93. By fiscal year end, therefore, there will be 159 Harbour Authorities managing 231 fishing harbours across Canada.	The establishment of Harbour Authorities will continue to be a priority, with a target of an additional 25 Harbour Authorities to be established in the year.

Figure 30: Capital Assets, Planned Results and Achievements (Cont'd)

1991-92 Target/Expectation	1992-93 Target/Expectation	1991-92, 1992-93 Results Achieved	1993-94 Target/Expectation
Small Craft Harbours (cont'd)			
Complete the study of alternatives for greater public, municipal and provincial participation in recreational small craft harbours.	Provide ongoing assistance and information in support of the constitutional negotiations as they may affect Small Craft Harbours.	The study of alternatives for greater public, municipal and provincial participation in recreational small craft harbours has been completed.	
Capital Assets			
Continue implementation of the Departmental Capital Investment Strategy and address outstanding departmental priorities in critical asset areas related to health and safety, the environment, accessibility and energy conservation.	Target resources to priority asset areas for health and safety, security, sound investment opportunities and maintenance for critical levels of service. Initiate action to balance infrastructure costs with available resources.	Comprehensive reviews of major asset categories have resulted in over 100 facilities being identified for disposal, a reduction in the motor vehicle fleet of 8%, and seven departmental vessels with a replacement value of $42M being retired without replacement. The total replacement value of vessels retired over the last two years but which will not be replaced amounts to $168M.	Continue to rationalize asset costs to match resourcing capability and government service requirements.

Section III
Supplementary Information

A. Profile of Program Resources

1. Financial Requirements by Object

Expenditures of the Department's Program are presented by object in Figure 31.

Figure 31: Details of Financial Requirements by Object

(thousands of dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Actual 1991-92
Personnel			
Salaries and wages	**298,571**	296,251	296,501
Contributions to employee benefit plans (CEBP)	**38,037**	29,185	50,568
Other personnel costs	**5,775**	5,740	8,918
	342,383	331,176	355,987
Goods and Services			
Transportation and communications	**36,731**	38,143	34,738
Information	**5,678**	6,397	6,880
Professional and special services	**80,754**	84,145	90,715
Rentals			
Ship charters	**12,330**	12,804	14,425
Other rentals	**16,000**	16,615	20,019
Purchased repairs and maintenance			
Maintenance of small craft harbours	**30,357**	31,523	30,916
Other purchased repair and upkeep	**19,356**	20,099	18,867
Utilities, materials and supplies			
Fuel	**11,831**	12,286	10,523
Other utilities, materials and supplies	**39,458**	40,974	35,735
Other subsidies and payments			
International commissions — Canada's share	**4,225**	4,387	3,790
Other subsidies and payments	**4,236**	4,398	3,736
	260,956	271,771	270,344
Total operating	**603,339**	602,947	626,331
Capital			
Controlled			
Construction and/or acquisition of lands, buildings and works	**60,164**	42,180	33,248
Construction and/or acquisition of machinery and equipment	**42,708**	28,853	38,050
All other capital expenditures	**3,811**	2,671	6,387
Total capital	**106,683**	73,704	77,685
Transfer payments	**245,770**	278,687	52,847
Total expenditures	**955,792**	955,338	756,863

2. Personnel Requirements

Figure 32: Details of Personnel Requirements

Category/Group	FTE* Estimates 1993-94	FTE Forecast 1992-93	FTE Actual 1991-92	Average Salary Range $	1993-94 Average Salary Provision ($)
Executive					
OIC Appointments[1]	2	2	2	45,600-170,500	117,500
Executive[2]	143	146	131	63,300-128,900	98,035
Scientific and Professional					
Architecture and Town Planning	1	1	1	21,489-78,029	62,983
Biological Sciences	462	472	452	21,217-73,939	52,547
Chemistry	40	41	40	23,000-73,435	46,643
Economics, Sociology, Statistics	64	65	63	20,000-87,241	56,179
Education	2	2	0	19,270-74,268	52,101
Engineering and Land Survey	108	110	98	29,722-80,521	59,167
Law	3	3	1	29,870-128,900	75,618
Library Sciences	13	13	11	26,132-61,951	42,202
Physical Sciences	88	90	79	23,056-79,045	53,926
Scientific Regulation	122	125	122	19,534-68,830	48,491
Scientific Research	335	342	308	37,036-92,942	67,043
Administrative and Foreign Services					
Administrative Services	246	251	233	17,994-75,002	43,100
Computer Systems Administration	158	161	158	24,060-78,759	44,099
Financial Administration	72	74	72	15,516-69,789	51,348
Information Services	48	49	46	17,849-67,814	47,004
Organization and Methods	1	1	2	17,635-72,700	52,877
Personnel Administration	73	74	70	16,882-69,291	50,046
Program Administration	238	243	233	17,994-75,002	50,260
Purchasing and Supply	48	49	43	16,781-72,700	41,570
Commerce	131	134	124	19,263-79,497	62,090
Technical					
Drafting and Illustration	85	87	35	20,448-52,986	37,685
Electronics	81	83	85	21,358-68,973	47,939
Engineering and Scientific Support	651	664	699	18,457-66,859	43,328
General Technical	739	754	721	16,608-73,190	40,500
Photography	1	1	1	22,610-41,199	36,412
Primary Product Inspection	207	211	192	25,356-62,615	36,201
Radio Operations	2	2	2	18,970-66,012	38,401
Ships' Officers	328	335	303	28,058-75,348	40,377
Social Science Support	92	94	91	16,608-75,927	38,754
Administrative Support					
Communication(s)	1	1	1	20,195-41,830	25,998
Data Processing	35	36	29	17,680-48,804	32,390
Clerical and Regulatory	540	551	588	16,999-41,724	27,616
Office Equipment	1	1	4	16,648-33,218	25,439
Secretarial, Stenographic and Typing	243	248	233	16,847-41,991	28,089
Operational					
General Labour and Trades	121	123	140	20,495-51,174	32,565
General Services	89	91	102	17,489-53,544	30,533
Heating, Power and Stationary Plant Operation	19	19	20	24,898-49,943	31,921
Printing Operations	4	4	4	21,464-69,057	42,866
Ships' Crew	438	447	456	29,952-42,984	36,447
Total**	6,075	6,200	5,995		

* See note at top of page 105.
[1] This includes all those at the DM level and all GICs.
[2] This includes all those at the EX-1 to EX-5 range inclusive.
** Total for 1991-92 includes 10 exempt staff.

Note: Full-time equivalent (FTE) is a measure of human resource consumption based on average levels of employment. FTE factors out the length of time that an employee works during each week by calculating the rate of assigned hours of work over scheduled hours of work. FTEs are not subject to Treasury Board control but are disclosed in Part III of the Estimates in support of personnel expenditure requirements specified in the Estimates.

The full-time equivalent columns display the forecast distribution of FTE for the Program by occupational group. The current salary range column shows the salary ranges by occupational group at October 1, 1992. The average salary column reflects the estimated base salary costs including allowance for collective agreements, annual increments, promotions and merit pay. Year-to-year comparison of averages may be affected by changes in the distribution of the components underlying the calculations.

3. Capital Expenditures

The Department's mandate gives it the lead federal responsibility for the management of Canada's fishery and ocean resources. This requires expertise in biology, oceanography and hydrography; conservation, development and economic utilization; and protection and enhancement of the environment. These diverse functions are supported by an asset base, with an estimated current replacement value of over $4.75 billion, making it the third largest asset base in the federal government.

Given the critical requirement for program personnel to have the right tools at their disposal to carry out their functions, the management of capital assets plays an integral part in the overall management structure of the Department, and the results achieved by the program. Through several management initiatives and prudent use of resources, the Department has been able to maximize its asset base in this time of restraint while at the same time maintain critical levels of service and ensure that health, safety and security remain a priority. In general, the initiatives have focused on improving the way we do business and affordability. The Department is also continuing the rationalization of its asset base and now looks at long-term cost-effectiveness and evaluates new proposals as to whether or not they are sound investment opportunities. The Department has also been proactive in sharing assets across sectors and with other government departments. This has allowed the Department greater flexibility in dealing with capital pressures and being able to match scarce resources to government and departmental priorities.

Capital Profiles: The Department's Small Craft Harbours inventory consists of 1,307 fishing and 820 recreational harbours. While the annual budget for the program has been as high as $147 million, since the end of the Harbour Revitalization Program the budget has been in the vicinity of $70 million.

The Department's marine fleet supports departmental ocean science and fisheries management programs. Since the spring of 1991, the fleet has been reduced from 275 to 264 vessels, lowering the replacement value of the fleet by about $168 million. Accordingly, the average annual vessel capital replacement envelope has been reduced by $5 million. For 1993-94, the budget for the Vessel Acquisition Strategy Plan is $39.7 million, including the capital component of $35.3 million. Refer to Section B, "Fisheries and Oceans' Fleet," on page 121, for more details.

The departmental facility inventory (780 sites and $1 billion replacement value excluding 311 facilities provided by Public Works Canada) is in the third year of a facility reinvestment strategy whereby needed repairs are carried out according to government priorities of health, safety, security, the environment, accessibility and facility integrity. As a result, the critical repair situation has been stabilized and environmental and accessibility programs have been developed to correct identified deficiencies. The major area of concern is the need for significant investments related to the replacement/consolidation of several old major special-purpose institutes which are at the end of their useful economic life and, as such, no longer lend themselves to a repair response.

The equipment inventory contains more than 96,000 items, consisting of vehicles, sophisticated scientific and laboratory equipment, radio communication equipment, a wide range of EDP equipment from laptops to mainframes, sophisticated cartography equipment, office furniture and a wide variety of operational support equipment.

The Department currently has a fleet of 1,301 vehicles. Since September 1991, the fleet size has been reduced by approximately six per cent with a further two per cent reduction anticipated by March 31, 1993. The basic concepts underlying our commitment include eliminating vehicles; multi-tasking and re-allocating vehicles across the regions; making more use of more economical modes of transportation; and increasing the use of leases, rentals and privately-owned motor vehicles during seasonal peaks. The vehicle strategy, which the Department is undertaking, will strike an optimum balance between program requirements, asset requirements and resourcing capability. The result is a cost-effective, vitalized and streamlined fleet.

Capital expenditures by Activity are summarized in Figure 33.

Figure 33: Distribution of Capital Expenditures by Activity

(thousands of dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Main Estimates 1992-93	Actual 1991-92
Science	**7,027**	8,776	10,249	13,082
Fisheries Operations	**10,805**	10,751	10,763	17,963
Inspection	**1,215**	1,134	1,134	3,022
International	—	—	—	58
Corporate Policy and Program Support	**87,636**	53,043	77,432	43,560
	106,683	73,704	99,578	77,685

Figure 34: Details of Capital Projects Over $250,000*

Sector/ Province/ Project Description	(thousands of dollars) Previously Estimated Total Cost	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1993	Estimates 1993-94	Future Years' Requirements	Class of Estimate	Treasury Board Authority Level
1. Science							
Nova Scotia							
Main Frame Replacement	—	3,455	1,075	825	1,555	D	DA
ALFRED NEEDLER (main engine)	—	550	550	—	—	A	DA
ALFRED NEEDLER (trawl winch)	—	375	375	—	—	A	DA
Quebec							
FREDERICK G. CREED (reconfiguration)	—	273	273	—	—	A	DA
Ontario							
LOUIS M. LAUZIER (modifications)	500	750	350	400	—	B	DA
Electronic Charts Infrastructure — National Capital Region (NCR)	3,120	1,795	1,765	30	—	A	DA
2. Fisheries Operations							
Newfoundland							
Radio Equipment	1,259	1,259	1,062	62	135	B	DA
LEONARD J. COWLEY (steering gear)	—	300	300	—	—	A	DA
Computer/Data Communications Network	—	300	300	—	—	D	DA
Nova Scotia							
Radio Equipment	1,348	1,348	958	190	200	B	DA
New Brunswick							
Radio Equipment	1,288	1,288	698	190	400	B	DA
Mactaquac Fish Culture Station — Upgrade	—	1,000	115	340	545	D	PPA
Charlo Salmon Enhancement Centre	—	600	25	230	345	D	PPA
Quebec							
Radio Equipment	610	610	430	30	150	B	DA
Ontario							
ARROW POST (replacement)	8,612	6,021	5,811	210	—	A	EPA
Manitoba, Ontario, NWT							
Radio Equipment	430	430	375	40	15	B	DA
British Columbia							
Radio Equipment	1,991	2,130	1,830	250	50	B	DA
ESTEVAN REEF (replacement)	—	2,040	2,000	40	—	A	DA
Babine Fish Counting Fence	—	1,305	1,305	—	—	A	DA
Salmonid Enhancement Program (SEP)							
Chilliwack Clay Slides	385	385	226	159	—	B	DA
Capilano Services	—	340	40	200	100	B	DA
Kingcome	360	360	40	250	70	D	DA

* See note on page 110 for an explanation of the definitions in this figure.

Figure 34: Details of Capital Projects Over $250,000 (cont'd)

Sector/ Province/ Project Description	(thousands of dollars) Previously Estimated Total Cost	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1993	Estimates 1993-94	Future Years' Require-ments	Class of Estimate	Treasury Board Authority Level
3. Corporate Management							
Newfoundland							
Northwest Atlantic Fisheries Centre — Upgrade	3,100	3,100	1,300	1,800	—	A	DA
Ontario							
Router Network	—	500	500	—	—	C	DA
Various							
Communication Interoperability	—	800	500	300	—	A	DA
4. Inspection							
Newfoundland							
Radio Equipment	—	315	283	20	12	B	DA
Small Craft Harbours (SCH)*							
SCH Specific Projects							
Newfoundland							
Bell Island (The Beach) — Wharf reconstruction	350	382	382	—	—	A	DA
Bonavista — Breakwater repairs	—	500	500	—	—	A	DA
Burgeo — Wharf reconstruction	—	260	260	—	—	A	DA
Calvert — Wharf extension	—	600	267	333	—	B	DA
Chance Cove — Wharf reconstruction	—	400	350	50	—	A	DA
Cupids — Wharf extension	425	522	522	—	—	A	DA
Foxtrap — Harbour reconstruction	—	974	454	520	—	A	DA
Griquet — Wharf reconstruction	300	360	360	—	—	A	DA
Job's Cove — Wharf reconstruction	500	560	560	—	—	A	DA
Leading Tickles West — Wharf reconstruction	490	300	300	—	—	A	DA
Ming's Bight — Wharf construction	—	575	200	375	—	C	DA
Ochre Pit Cove — Basin dredging	—	380	230	150	—	A	DA
Portugal Cove — Harbour development	—	2,218	385	1,833	—	C	DA
Rocky Harbour — Wharf reconstruction	—	600	550	50	—	A	DA
Sibleys Cove — Basin dredging	—	250	250	—	—	A	DA
South East Bight — Wharf reconstruction	—	345	250	95	—	B	DA
St. Anthony Bight — Wharf reconstruction	335	348	348	—	—	A	DA

* In addition to the major capital projects listed above, there are approximately 450 capital projects costing less than $250,000 each being undertaken by Small Craft Harbours in 1992-93.

Figure 34: Details of Capital Projects Over $250,000 (cont'd)

Sector/ Province/ Project Description	(thousands of dollars) Previously Estimated Total Cost	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1993	Estimates 1993-94	Future Years' Require-ments	Class of Estimate	Treasury Board Authority Level
St. Bride's							
— Wharf extension	377	462	462	—	—	A	DA
St. Shotts							
— Wharf extension	1,500	1,540	1,540	—	—	A	DA
St. Shotts							
— Armour Units Const.	—	350	350	—	—	B	DA
Nova Scotia							
Baileys Brook (Lismore)							
— Wharf reconstruction	—	850	450	400	—	A	DA
Big Tancook Island							
— Wharf repairs	—	359	359	—	—	A	DA
Cheticamp (La Digue)							
— Service area reconst.	—	250	250	—	—	A	DA
Gunning Cove							
— Wharf reconstruction	—	1,474	562	912	—	A	DA
Ingomar (Black Point)							
— Breakwater construction	300	318	318	—	—	A	DA
Port la Tour							
— Breakwater construction	805	644	644	—	—	A	DA
New Brunswick							
Neguac							
— Wharf reconstruction	—	400	400	—	—	A	DA
North Head							
— Harbour Development	—	1,500	600	900	—	A	DA
Quebec							
Baie Comeau (Havre Polivale)							
— Float construction	—	316	316	—	—	A	DA
Millerand							
— Breakwater construction	2,394	2,363	2,363	—	—	A	DA
Pointe-Basse							
— Wharf reconstruction	—	909	774	135	—	A	DA
Ste-Therese-de-Gaspe (Petit)							
— Wharf reconstruction	—	857	842	15	—	A	DA
Tourelle (St.-Joachim)							
—Harbour Development	—	500	500	—	—	B	DA
Ontario							
Meaford							
— Breakwater extension	—	282	282	—	—	A	DA
Manitoba							
Easterville							
— Wharf reconstruction	—	293	33	260	—	A	DA
British Columbia							
Campbell River (Discovery Harbour)							
— Float construction	—	350	350	—	—	A	DA

Note: The following definitions apply to Figure 34:

- **Government Projects.** A departmental undertaking which is not a regular program activity but involves the design and development of new programs, equipment, structures or systems, and has above-normal risk, is deemed to be a government project when a) its estimated expenditure exceeds the project approval authority granted to the department by the Treasury Board; b) it is particularly high risk, regardless of estimated expenditure.

- **Class A Estimate.** This is the most accurate and comprehensive level of estimate, normally limited to items in production or to immediate or repeat orders. It must be based on full production configuration data or on enforceable schedules or other legally binding instruments. Typically, a Class A Estimate supports a submission for increasing the quantities of deliverables for a project when the project is under contract and when a contract clause provides the basis for the estimate.

- **Class B Estimate.** The scope of this estimate covers the design of all major systems and sub-systems, together with production plans, site and installation investigations, special transportation requirements, labour market constraints and outlines of all other project objectives. While less accurate than Class A, this estimate usually requires significant project definition work, frequently by means of a contract with the private sector, and the participation of appropriate common service organizations.

- **Class C Estimate.** The scope of this estimate covers the life-cycle costs of the preliminary solution to the statement of requirement (SOR), including a preliminary analysis, in consultation with appropriate common service organizations, of sources of supply and production of technological readiness. It must be sufficiently accurate to justify investment decisions.

- **Class D Estimate.** This is a rough estimate based on a comprehensive mission-related SOR, which gives an approximation of final total project costs and projected duration.

- **Preliminary Project Approval (PPA).** Treasury Board's authority to initiate a project in terms of its intended operational requirement, including approval of, and expenditure authorization for, the objectives of the project definition phase. Sponsoring departments are to submit for PPA only when the project's entire life-cycle scope has been examined and costed, normally to the Class C level, and when the cost of the Project Definition (PD) Phase has been estimated to the Class B level.

- **Effective Project Approval (EPA).** Treasury Board's approval of, and expenditure authorization for, the objectives of the project implementation phase. Sponsoring departments are to submit for EPA only when the scope of the project's life-cycle has been defined and where the estimates have been refined to at least Class B level.

- **Departmental Authority (DA).** Effective project authority is delegated to the Department up to and including $3.5 million.

4. Transfer Payments

Grants and contributions make up 26% of the Department's 1993-94 Main Estimates. Figure 35 represents a summary of all grants and contributions.

Figure 35: Details of Grants and Contributions

(dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Actual 1991-92
Grants			
Science			
Grants to support organizations associated with research, development, management, and promotion of fisheries and oceans-related issues	**640,000**	735,000	842,395
Fisheries Operations			
Grants to fishermen, plant workers and trawlermen affected by the two-year moratorium on the northern cod fishery	**204,000,000**	187,000,000	—
Grants to the Government of Yukon Territory to assume the day-to-day management of freshwater fisheries in the Yukon	**—**	250,000	250,000
Grants to the Marine Products Research and Development Centre Foundation (MPRDCF), Shippagan, New Brunswick, for the purpose of establishing an administrative structure and start-up of operations	**—**	—	3,900,000
Corporate Policy and Program Support			
Grants to support organizations associated with research, development, management, and promotion of fisheries and oceans-related issues	**180,000**	200,000	—
Grants to assist self-employed fishermen to gear up for the 1992 fishing season	**—**	50,000	5,834,400
Grants for special assistance to self-employed fishermen prevented from fishing because of abnormal ice conditions	**—**	—	17,708,814
Grants to Canadian herring processors under the Fisheries Prices Support Act	**—**	—	1,432,470
Total Grants	**204,820,000**	188,235,000	29,968,079

Figure 35: Details of Grants and Contributions (cont'd)

(dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Actual 1991-92
Contributions			
Science			
Contributions under the Atlantic Fisheries Adjustment Program for alternative employment opportunities	**90,000**	100,000	—
Contributions to support organizatons associated with research, development, management and promotion of fisheries and oceans-related issues	**—**	—	120,845
	90,000	100,000	120,845
Fisheries Operations			
Contributions to heads of active licensed groundfish enterprises affected by the two-year moratorium on the northern cod fishery to maintain and store their vessels for the duration of the moratorium	**6,750,000**	7,500,000	—
Contributions under the Quebec Federal Fisheries Development Program	**4,072,500**	4,350,000	1,788,681
Contributions under the Atlantic Fisheries Adjustment Program for resource conservation	**2,902,500**	1,990,000	3,040,732
Contributions under the Atlantic Fisheries Adjustment Program for alternative employment opportunities	**1,548,000**	2,499,000	—
Contributions under the Canada/New Brunswick Economic and Regional Development Agreement on fisheries development	**1,341,000**	1,525,000	1,448,206
Contributions under the Canada/Quebec Subsidiary Agreement on the Economic Development of the regions of Quebec to implement a fisheries and aquaculture testing and experimentation program	**1,170,000**	1,840,000	2,706,199
Contributions under the Canada-Newfoundland Cooperation Agreement for Salmonid Enhancement/Conservation	**1,017,000**	50,000	—
Contributions under the Fishery Subsidiary Agreement for development of the Nova Scotia fisheries	**922,500**	1,060,000	1,435,246
Contributions under the Canada-New Brunswick Agreement on Recreational Fisheries Development	**792,000**	1,650,000	—
Contributions under the Canada/Prince Edward Island Economic and Regional Development Agreement on fisheries development	**646,200**	910,000	884,830

Figure 35: Details of Grants and Contributions (cont'd)

(dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Actual 1991-92
Contributions under the Inuvialuit Final Agreement for the protection of wildlife harvesting, land ownership, resource management and economic and social development	**531,000**	518,000	306,300
Contributions under the Newfoundland Inshore Fisheries Development Subsidiary Agreement	**—**	2,895,000	2,740,479
Contributions under the Atlantic Fisheries Adjustment Program for assistance to the sealing industry	**—**	815,000	205,500
Contributions under the Aboriginal Cooperative Fisheries and Habitat Management Program	**—**	—	948,900
Contributions to support organizations associated with research, development, management and promotion of fisheries and oceans-related issues	**—**	—	89,750
	21,692,700	27,602,000	15,594,823
International			
Contributions to support organizations associated with research, development, management and promotion of fisheries and oceans-related issues	**—**	—	5,000
	—	—	5,000
Corporate Policy and Program Support			
Contributions to support increased Native participation in commercial fisheries, cooperative fisheries management arrangements and consultations respecting Aboriginal fisheries agreements	**16,650,000**	21,300,000	—
Contributions under the Plant Workers Adjustment Program	**1,575,000**	11,000,000	3,819,840
Contributions under the Atlantic Fisheries Adjustment Program to the Canadian Seafood Advisory Council	**315,000**	350,000	290,500
Contributions to support organizations associated with research, development, management, and promotion of fisheries and oceans-related issues	**270,000**	300,000	50,000
Contributions under the Atlantic Fisheries Adjustment Program for alternative employment opportunities (Marketing)	**157,500**	175,000	—

Figure 35: Details of Grants and Contributions (cont'd)

(dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Actual 1991-92
Contributions under the Canada/Newfoundland Cooperation Agreement for Salmonid Enhancement/Recreational Fisheries Development (Salmon Licence Retirement)	—	26,900,000	—
Contributions to non-profit organizations to construct or repair harbour facilities at scheduled departmental harbours	—	1,175,000	—
Contributions to harbour authorities for the management of scheduled commercial fishing harbours in accordance with the Fishing and Recreational Harbours Act and Regulations		550,000	
Contributions in support of harbour development, infrastructure, marine works and repair at non-federal harbours	—	—	2,641,579
Contributions under the Aboriginal Cooperative Fisheries and Habitat Management Program	—	—	181,313
Contributions under components of the Atlantic Fisheries Adjustment Program for resource conservation	—	—	175,000
	18,967,500	61,750,000	7,158,232
Statutory Items			
(S) Liabilities under the Fisheries Improvement Loans Act	**200,000**	1,000,000	—
Total contributions	**40,950,200**	90,452,000	22,878,900
Total grants and contributions	**245,770,200**	278,687,000	52,846,979

5. Revenue

Revenues are generated primarily through charges for regulatory and other services provided to the public by the Department. Figure 36 provides details on the sources of revenue generated by the Department which are credited to the Consolidated Revenue Fund and not available for use by the Program.

Figure 36: Revenue by Class

(thousands of dollars)	**Main Estimates 1993-94**	Forecast 1992-93	Main Estimates 1992-93	Actual 1991-92
Non-Tax Revenue Credited to the Consolidated Revenue Fund				
User Fee Revenue				
Fisheries Harvest Management				
Commercial licences	**9,174**	9,266	10,142	10,509
Individual vessel quotas (IVQs)	**—**	764	—	1,144
Foreign licences	**2,445**	2,445	6,209	3,711
Sportfish licences	**4,500**	4,500	4,550	4,298
Fish Inspection Services				
Import inspection licences, fees and charges	**938**	938	882	910
Lab tests and analyses	**21**	21	16	3
Industrial Development Services to the Fishing Industry				
Sale of bait	**750**	750	850	816
Sale of fish and eggs	**300**	300	300	390
Small Craft Harbour Revenue	**3,823**	3,844	3,420	4,382
Hydrographic Products				
Sale of charts and publications	**1,740**	1,730	2,230	1,643
Science Services				
Charges for oceanographic services	**16**	12	12	6
Other User Fee Revenue				
Rental of Land, Buildings and Equipment	**405**	425	470	496
Other Services and Service Fees	**81**	81	79	113
Technology Transfer Licences	**45**	40	40	17
Miscellaneous	**68**	68	68	202
	24,306	25,184	29,268	28,640
Other Revenue				
Return on Investment	**800**	800	2,500	3,410
Fines and Forfeitures	**2,000**	2,000	2,000	2,344
Refund of Previous Years' Expenditures	**1,800**	1,800	1,800	2,094
	4,600	4,600	6,300	7,848
Total Non-Tax Revenue	**28,906**	29,784	35,568	36,488
Tax Revenue Credited to the Consolidated Revenue Fund				
Goods and Services Tax (GST)	**700**	700	750	715
Total Tax Revenue	**700**	700	750	715
Total Revenue	**29,606**	30,484	36,318	37,203

6. Loans, Investments and Advances

The various loans and advances currently outstanding are summarized in Figure 37. The interest collected from loans is credited to the Consolidated Revenue Fund.

Figure 37: Outstanding Loans and Advances

(thousands of dollars) Debtor and Purpose	Balance March 31, 1991	1991-92 New Loans/ (Repayments)	Balance March 31, 1992	1992-93 New Loans/ (Repayments)	1993-94 New Loans/ (Repayments)
Loans to Crown Corporations					
Canadian Saltfish Corporation					
Capital Asset Loan	900.0	(100.0)	800.0	(800.0)	—
Working Capital Loan	30,500.0	1,500.0	32,000.0	(500.0)	—
Freshwater Fish Marketing Corporation					
Capital Asset Loan	—	—	—	8,650.0	3,300.0
Working Capital Loan	12,500.0	(3,900.0)	8,600.0	(3,600.0)	(1,800.0)
Other Loans, Advances, Loan Guarantees					
Loans to Haddock Fishermen*	1,353.0	(4.6)	1,348.4	(0.2)	—
Advances to Canadian Producers of Frozen Groundfish*	188.4	—	188.4	(60.0)	—
Working Capital Loans to Ice-affected Fish Plants	67.0	—	67.0	(50.0)	—
Loans to Groundfish Processors*	18.7	—	18.7	(18.7)	—
Loan Guarantees under the Fisheries Improvements Loan Act	n/a	n/a	n/a	200.0**	200.0**

* Referred to the Department of Justice for remedial action.

** Potential requirements.

7. Net Cost of Program

The 1993-94 Main Estimates include only those expenditures to be charged to the Department's voted and statutory authorities. Other cost items, as well as revenue, must be considered when describing the Program on a full-cost basis.

Figure 38: Estimated Net Cost of Program for 1993-94

(thousands of dollars)	**1993-94**	1992-93
Operating expenditures	**603,339**	648,406
Capital expenditures	**106,683**	99,578
Grants and contributions	**245,770**	42,732
Main Estimates	**955,792**	790,716
Services received without charge		
Accommodation from Public Works Canada	**22,238**	17,885
Employer's share of employee benefits covering insurance premiums and costs, from Treasury Board Secretariat	**12,101**	11,588
Employer's share of compensation costs, from Labour Canada	**1,045**	909
Cheque issue services from Supply and Services	**706**	632
Legal services provided by the Department of Justice	**488**	460*
Accommodation from Transport Canada**	**2**	25
	36,580	31,499
Total program cost	**992,372**	822,215
Less Revenues credited directly to the Consolidated Revenue Fund (see Figure 36, page 115)	**29,606**	36,318
Estimated net program cost	**962,766**	785,897

* Not reported in previous Expenditure Plans.

** This service is provided as a result of the Department's air surveillance activities.

8. Financial Information by Activity, Explanation of Change

The change from the 1992-93 Main Estimates to the 1992-93 Forecast is an increase of $164.6 million (see below) while the change from the 1992-93 Forecast to the 1993-94 Main Estimates is an increase of $0.5 million (see page 119).

Figure 39: Financial Requirements by Activity, Explanation of Change

(millions of dollars)	Science	Fisheries Operations	Inspection	International	Corporate Policy and Program Support	Total
1992-93 Main Estimates	**229.2**	**257.9**	**38.0**	**4.8**	**260.8**	**790.7**
Increases (Decreases)						
Northern Cod Adjustment and Recovery Program		194.5				194.5
Canada/Nfld. Cooperation Agreement					17.5	17.5
Aboriginal Fisheries Strategy					11.0	11.0
Atlantic Salmon Licences Retirement Program					9.6	9.6
Reduction in Contributions to Employee Benefit Plans (Pension Legislation)	(7.0)	(5.8)	(1.5)	(0.1)	(3.8)	(18.2)
Rephasing of Major Capital Expenditures					(13.0)	(13.0)
November 1992 Reduction in Operating Costs of 2%	(2.6)	(3.1)	(0.6)		(6.6)	(12.9)
Response to February 1992 Federal Budget	(3.6)	(1.9)	(0.4)		(2.7)	(8.6)
Green Plan Reprofiling	(2.9)	(1.3)			(1.0)	(5.2)
Quebec Federal Fisheries Development Program		(4.7)				(4.7)
Plant Workers Adjustment Program					(4.0)	(4.0)
Various MInor Adjustments	(3.4)	(2.0)	(0.6)	2.0	2.6	(1.4)
Total Increases/(Decreases)	(19.5)	175.7	(3.1)	1.9	9.6	164.6
Total 1992-93 Forecast	**209.7**	**433.6**	**34.9**	**6.7**	**270.4**	**955.3**

Figure 39: Financial Requirements by Activity, Explanation of Change (cont'd)

(millions of dollars)	Science	Fisheries Operations	Inspection	International	Corporate Policy and Program Support	Total
Total 1992-93 Forecast	**209.7**	**433.6**	**34.9**	**6.7**	**270.4**	**955.3**
Increases (Decreases)						
Rephasing of Major Capital Expenditures					26.0	26.0
Northern Cod Adjustment and Recovery Program		17.0				17.0
Impact of the Pension Legislation Change	3.1	2.8	0.7	0.1	1.6	8.3
Inflation Adjustment	2.2	1.7	0.5		1.2	5.6
Green Plan Adjustments	(1.4)	2.7			(0.4)	0.9
Atlantic Salmon Licences Retirement Program					(18.9)	(18.9)
December 1992 Economic Statement Incremental Reductions	(3.1)	(4.6)	(0.5)		(2.0)	(10.2)
Canada/Nfld. Cooperation Agreement					(10.0)	(10.0)
Plant Workers Adjustment Program					(9.6)	(9.6)
Nfld. Inshore Fisheries Development Agreement		(8.5)				(8.5)
Various Minor Adjustments	(5.6)	(8.2)	(0.4)		14.1	(0.1)
Total Increases/(Decreases)	(4.8)	2.9	0.3	0.1	2.0	0.5
Total 1993-94 Main Estimates	**204.9**	**436.5**	**35.2**	**6.8**	**272.4**	**955.8**

Figure 40: Financial Performance by Activity, Explanation of Change

(millions of dollars)	Science	Fisheries Operations	Inspection	International	Corporate Policy and Program Support	Total
1991-92 Main Estimates	**219.4**	**239.4**	**39.2**	**5.0**	**257.6**	**760.6**
Increases (Decreases)						
Atlantic Fisheries Adjustment Program:						
• Grants to Self-Employed Fishermen — Ice Compensation Program					18.0	18.0
• Plant Workers Adjustment Program					15.6	15.6
• Grant Payments to Assist Self-employed Fishermen to Gear up for the 1992 Fishing Season					7.0	7.0
• Alternative Employment Opportunities	0.7	3.8			0.3	4.8
• Marine Products Research and Development Centre — Shippagan, New Brunswick		3.9				3.9
• Contribution to Newfoundland and Labrador Shrimp Company					1.8	1.8
• Grants to Canadian Herring Processors		(2.5)			2.5	0.0
Green Plan Initiatives	10.0	11.7			(4.9)	16.8
Quebec Federal Fisheries Development Program		7.9				7.9
Aboriginal Cooperative Fisheries and Habitat Management		7.1				7.1
Map and Chart Printing	1.2					1.2
Individual Vessel Quotas — Pacific Halibut		0.8				0.8
Inuvialuit Final Agreement and Wildlife Protection		0.7				0.7
Response to January 27, 1992 Freeze on Spending and New Hiring	(6.7)	(13.4)	(1.6)	0.1	(14.5)	(36.1)
Response to February 26, 1991, Federal Budget	(6.8)	(9.1)	(1.4)	(0.1)	(5.8)	(23.2)
Refocus of Atlantic Fisheries Adjustment Program					(20.0)	(20.0)
Re-engineering of Capital Initiatives					(8.0)	(8.0)
Various Minor Adjustments	4.3	8.4	0.3	0.4	(15.4)	(2.0)
Total Increases/(Decreases)	2.7	19.3	(2.7)	0.4	(23.4)	(3.7)
1991-92 Actual Expenditures	**222.1**	**258.7**	**36.5**	**5.4**	**234.2**	**756.9**

B. Fisheries and Oceans' Fleet

The Department operates an extensive marine fleet made up of its own vessels and chartered vessels. The vessels are used for biological sciences, fisheries management, physical and chemical sciences, hydrographic surveys, and also the provision of ship support to the programs of other departments, agencies and institutions. Included is the provision of a search and rescue capability. The total estimated operating cost of the marine fleet in 1992-93 was $64 million and 785 full-time equivalents, with an additional $12.5 million in vessel charters.

There are 264 vessels in the departmental fleet with a total replacement value of $1.0 billion. Figure 41 shows particulars of the major ships in the fleet.

Figure 41: Major Department Vessels

Name	Primary Purpose	Year Built	Life Expectancy	Vessel Length (metres)	Home Port
LEONARD J. COWLEY	Fisheries patrol	1985	25	72	St. John's, Nfld.
CAPE ROGER	Fisheries patrol	1977	25	62	St. John's, Nfld.
WILFRED TEMPLEMAN	Fisheries research	1982	25	51	St. John's, Nfld.
CHEBUCTO	Fisheries patrol	1966	35	55	Dartmouth, N.S.
CYGNUS	Fisheries patrol	1982	25	62	Dartmouth, N.S.
HUDSON	Hydrography/Fisheries patrol	1963	40	91	Dartmouth, N.S.
MATTHEW	Hydrography/Oceanography	1990	25	51	Dartmouth, N.S.
A. NEEDLER	Fisheries research	1982	25	50	Dartmouth, N.S.
PARIZEAU	Hydrography/Oceanography	1967	35	65	Dartmouth, N.S.
E. E. PRINCE	Fisheries research	1966	30	40	Dartmouth, N.S.
F. C. G. SMITH	Hydrography	1986	25	30	Dartmouth, N.S.
PIERRE FORTIN	Fisheries patrol	1975	25	30	Quebec, Que.
LOUIS M. LAUZIER	Hydrography/Oceanography	1977	20	37	Burlington, Ont.
LIMNOS	Limnology/Hydrography	1968	30	45	Burlington, Ont.
W. E. RICKER	Fisheries research	1978	25	55	Nanaimo, B.C.
JAMES SINCLAIR	Fisheries patrol	1981	20	37	Sidney, B.C.
TANU	Fisheries patrol	1968	35	52	Sidney, B.C.
JOHN P. TULLY	Hydrography/Oceanography	1985	25	69	Sidney, B.C.
VECTOR*	Oceanography	1967	25	40	Sidney, B.C.

* Placed in reserve status in June 1992.

C. Selected Program Reports

1. The Northern Cod Adjustment and Recovery Program (NCARP)

Some 25,000 fishermen and plant workers and almost 400 communities depend to some degree on the northern cod fishery for their livelihood. While northern cod is important to communities throughout Atlantic Canada and on the lower north shore of Quebec, it is the mainstay of the Newfoundland and Labrador fishery, accounting for 40 per cent of the landed value of all fish harvested in that province.

New scientific advice in 1992 revealed a sudden and sharp decline in the northern cod stock. More disturbing, however, the spawning stock dropped suddenly and unexpectedly to historic and dangerously low levels. The principal causes appear to include climatic and ecological changes, competition for food and fishing pressures.

Income Replacement: With the announcement of the Northern Cod Adjustment and Recovery Program (NCARP) on July 17, 1992, the Government of Canada undertook to assist the most seriously affected, approximately 18,000 fishermen and plant workers. The $402-million income replacement program under NCARP shares many similarities with the Unemployment Insurance program, but has been tailored to the specific circumstances of the northern cod moratorium and is being delivered by the Department of Fisheries and Oceans.

Eligible individuals receive bi-weekly income replacement payments based on their weekly average unemployment insurance benefits over the past three calendar years, subject to a minimum of $225 per week and a maximum of $406 per week.

The income replacement element of NCARP is designed to encourage individuals eligible for unemployment insurance benefits to continue to draw those unemployment insurance benefits to which they are entitled. If their unemployment insurance benefits are less than they would receive from income replacement benefits under NCARP, these individuals receive a supplement to cover the difference.

The income replacement element also contains incentives for individuals to adjust to the reality of a declining resource and to keep working if they have the opportunity to do so. In order to maintain their benefits levels for the duration of the moratorium to May 15, 1994, individuals must elect to participate in various self-improvement options (i.e. training, retraining, skills upgrading) or other approved program activities. Failure to do so results in benefits being reduced to the minimum level of $225 per week.

As with unemployment insurance, the income replacement element of NCARP is subject to benefit reduction for income arising from employment. Benefit reductions are based on quarterly reports provided by recipients. Income arising from employment in excess of 25 per cent of the recipient's income replacement benefits in any calendar quarter, are recovered on a dollar for dollar basis through a reduction of income replacement benefits. In the case of fishing income, benefits are reduced at a rate of 50 cents for every dollar earned over and above 25 per cent of benefit levels.

Individuals who refuse to accept employment within the fishing industry or who voluntarily quit a job in the fishing industry without just cause, will be disqualified from future income replacement benefits.

Adjustment Elements of NCARP: The assistance package also addresses the need to restructure the northern cod fishery by presenting individuals with opportunities to retrain for work outside the fishery and, for those who choose to stay, opportunities to upgrade their skills.

Training courses for work outside the fishery are delivered by Employment and Immigration Canada. Training programs can be up to three years duration and include literacy and numeracy training, if required.

For those who wish to remain in the fishery, support is being provided for training as part of an overall program of professionalization and certification in the fishery, developed in conjunction with key industry stakeholders. Satisfying training certification standards will be a prerequisite for holding an inshore commercial groundfish licence in the post-moratorium period.

During the moratorium, individuals will also have the opportunity to participate in approved fisheries-related activities such as small-scale test fisheries. Test fisheries will be carried out to investigate alternative harvesting practices for northern cod to help ensure a sustainable fishery for the future, including the use of otter trawls, the design of gillnets and the design of cod traps.

Another important element of the adjustment package is the provision of an early retirement program for older fishermen and plant workers affected by the northern cod moratorium, along the lines of the existing Plant Workers Adjustment Program (PWAP). Costs will be shared with the Province of Newfoundland. There will also be a voluntary licence retirement program for fishermen who choose to leave the fishery.

A $15 million vessel support program is available to assist vessel owners to maintain and store their vessel and gear during the northern cod moratorium.

Discussions to develop a long-term strategy for the restructuring of the processing sector are being pursued with the Province of Newfoundland, which has jurisdictional responsibility for the licensing of processing plants.

NCARP has been designed and will be delivered in close cooperation with all stakeholders: the provincial government, processors and fishermen and plant workers representatives.

2. Reforming Licensing and Allocation

It is proposed that two new boards be established, one for the Atlantic and one for the Pacific coasts. These independent, quasi-judicial boards made up of individuals with knowledge about and experience related to the fishery would hear industry views, make decisions on allocations and licensing and apply administrative sanctions.

The Minister of Fisheries and Oceans would remain responsible for conservation and would set the overall levels of harvest for the marine commercial fisheries. The Minister would also retain responsibility for recreational fisheries, and continue obligations to Aboriginal and international resource users.

Within the marine commercial fisheries, the Minister would still set the broad policy framework. But the Minister would permanently give up the power to decide individual cases. The Boards, operating under Ministerial policy and conservation directions, and within the limits of the overall harvest levels, would decide exactly who gets the fish, and how much.

How The System Would Work: The system would work as follows:

- The framework would be set by law; the mandate and operating rules of the Boards would not change with each new Minister;
- The Minister would guide by setting policy but would have no direct influence over specific decisions;
- The Boards would decide, within the policy framework set by the Minister, who would get the licences and allocations;
- The Department would carry out the Board's decisions through the day-to-day management of the fishery and routine licensing requirements;
- The Boards would hear appeals on licence decisions taken by the Department or Board staff. There would be no subsequent appeal to the Minister; and
- The Boards would penalize commercial fisheries violators brought before it by departmental enforcement personnel.

Consultation: The consultation process began with the release of the document titled "A Proposal for Reforming Licensing and Allocation Systems" in November of 1991. During this same period, the Department formed two Working Groups, one on each coast, of knowledgeable industry people to provide advice as the details of the proposal were developed. A second public document has been prepared which is the culmination of many months of discussions with these advisory Working Groups, provincial governments and other knowledgeable people on both coasts. In the next phase this document will be used as part of a broader consultation exercise with industry and the provinces. Legislation is under preparation. The Department will define further the working relationship between itself and the Boards through 1993 and 1994.

3. Aboriginal Fisheries

Following the Supreme Court's ruling on the *Sparrow* case, which involved the right of Native people to fish for food, societal and ceremonial purposes, and the success of the 1991 cooperative management program, the Department has implemented the new procedures and programs described below.

Aboriginal Fisheries Strategy: On June 29, 1992 the Minister announced the Aboriginal Fisheries Strategy, a seven-year, $140-million national program to integrate Native people into the management of the fishery, while ensuring the stability and profitability of the sector. Under this program, over 100 agreements have been signed and over $18 million was transferred to Aboriginal groups to support fisheries management activities and negotiations on agreements.

The Department will continue to negotiate agreements over the next six years, including interim agreements to be in place until land claims can be resolved. Agreements under the Aboriginal Fisheries Strategy will contain multi-year plans for the management of the Aboriginal fishery, programs for fisheries management, habitat restoration, fisheries research and fisheries enhancement and a process to govern dealings between Fisheries and Oceans and the First Nations. Agreements will also define allocations to the Aboriginal fishery, the time and place of fishing to the extent necessary to ensure conservation of stocks, disposition of catch and responsibilities for management of the fishery within the fishing plan, as well as specific economic development initiatives. The Aboriginal Fisheries Strategy provides $7 million to compensate fishermen who voluntarily retire commercial licences where reallocation between sectors is required to fulfill agreements in the commercial Pacific salmon fishery.

Interim Policies on the Aboriginal Food Fishery and Enforcement within the Aboriginal Food Fishery: The Department is revising policies to guide the administration and enforcement of Aboriginal food fishing in areas where it has direct responsibility for regulating the fishery. Before finalizing these policies, Native peoples and other stakeholders will be consulted.

4. Quebec Federal Fisheries Development Program (QFFDP)

Background: The federal government announced the creation of this five-year, $53-million program in August, 1990. The Quebec Federal Fisheries Development (QFFDP), a response to the growing pressures on the fishing industry caused by the declining resource base, is aimed at ensuring the long-term viability of the industry in Quebec. The Program comprises five components, plus administration and coordination:

- Fishery Product Marketing ($5M). Designed to partially or totally organize Quebec's fishery product suppliers into an independent organization controlled by the private sector in order to provide the industry with capability to adjust quickly to market changes;

- Rationalization — Secondary Sector ($5M). To promote measures aimed at increasing and diversifying the productivity of the secondary sector. Assistance will complement existing federal programs such as the Department's Testing and Experimentation Program for Fisheries and Aquaculture and programs of the Department of Industry, Science and Technology;

- Restructuring and Diversification — Primary Sector ($18M). To improve the financial structure and productivity of the harvesting sector, such as

fishing fleet restructuring; encouragement of joint fishery/aquaculture operations; improvements in mobile gear selectivity; and new training programs;

- Adjustment in the Labour Market ($8M). After consultations with interested parties, it was decided not to proceed with this component. Consultations are continuing and alternative proposals are under development; and

- Research and Infrastructure

  — Research ($10.5M). To provide the Quebec fishing industry with the necessary scientific support to ensure its future development by promoting research in the fishery and in aquaculture. Specific emphasis will be placed on improving biological knowledge of non-traditional species available to the industry and stock assessments, and transferring technology on new sea-farming techniques.

  — Infrastructure ($2.5M). To promote the industry with the requisite harbour infrastructure and related services to complement changes to the industry resulting from rationalization and restructuring efforts supported by other components of the Program.

An additional component provides for program implementation, including administration, transportation, accommodation, and communications.

Accomplishments: The Program is fully operational with the exception of the Labour Adjustment component. Numerous projects are being funded in all components though the total program uptake has been lower than anticipated despite industry's strong support for the Program. To date, 96 projects totalling more than $24.5 million have been approved under this Program. Further declines in the resource base and the financial state of the processing sector have affected the industry's ability to participate in some program efforts. Ongoing consultations with the industry will address this question.

5. Fishery Development Agreements and Programs (Cooperation Agreements)

Atlantic Fisheries Development Agreements were initiated in 1984 under the Economic Regional Development Agreements (ERDA). The intent was to enhance the viability and stability of the fishing industry, thereby contributing to the economic development of these provinces. The agreements in effect are as follows:

- In 1988, the federal government and the Province of Newfoundland signed a five-year Newfoundland Inshore Fisheries Development Agreement;

- In 1988 and 1989, the federal government entered into five-year Cooperation Agreements on Fisheries Development with Prince Edward Island and New Brunswick under the ERDA umbrella;

- In June 1989, the federal government initiated, as part of the Canada-Quebec Subsidiary Agreement, the Fisheries and Aquaculture Testing and Experimentation Program;

- In 1990, the federal government entered into a four-year Cooperation Agreement with the Province of Nova Scotia;

- In August 1990, the federal government commenced a five-year program — the Quebec Federal Fisheries Development Program — for the purpose of revitalizing the Quebec fisheries. The federal government committed $53 million to this program;

- In 1992, Canada and Newfoundland signed two cooperation agreements under the ERDA: a two-year $39.1-million agreement on Commercial Salmon Licences Retirement and a five-year, $21.4-million agreement on salmonid conservation and enhancement. Both agreements are cost shared on a 70% federal/30% provincial basis;

- In 1992, Canada and Nova Scotia signed a two-year Recreational Fisheries Planning Agreement;

- In 1992, Canada entered into a four-year Cooperation Agreement on Recreational Fisheries Development with the Province of New Brunswick; and

- In 1992, Canada signed a Cooperation Agreement on Sustainable Development between Prince Edward Island and the Atlantic Canada Opportunities Agency. The Department will be responsible for the Watershed Improvement and Recreational Fisheries Development component of the agreement (federal share $1.76M; provincial share $1.01M).

The duration and size of financial commitments for the federal-provincial agreements are displayed in Figure 42.

Figure 42: Federal/Provincial Fisheries Development Agreements

Province	Date Signed	Termination Date	Federal/Provincial Share ($M)	Total ($M)
Newfoundland	November 1988	March 31, 1993	42.0/18.0	60.0
Newfoundland	March 1992	March 31, 1994	27.4/11.7	39.1
Newfoundland	October 1992	March 31, 1997	15.0/6.4	21.4
Prince Edward Island	October 1988	March 31, 1994	7.5/3.1	10.6
Prince Edward Island	October 1992	March 31, 1996	1.76/1.01	2.8
New Brunswick	November 1989	March 31, 1994	11.7/7.9	19.6
New Brunswick*	August 1992	March 31, 1996	15.0/0	15.0
Nova Scotia	July 1990	March 31, 1994	4.8/3.2	8.0
Nova Scotia	July 1992	March 31, 1993	0.5/0.1	0.6
Quebec*	June 1989	March 31, 1994	13.6/0	13.6
Quebec*	August 1990	March 31, 1995	53.0/0	53.0

* Federally delivered program.

Implementation: Responsibility for implementing the federal-provincial agreements rests with joint management committees responsible for the administration and management of the agreements, communications activities, and coordinating the agreements with other federal and provincial programs.

Objective: The objective of the Newfoundland Inshore Fisheries Development Agreement is to modernize the inshore fishery in order that the benefits from the fisheries resource are maximized.

The objectives of the current New Brunswick and Prince Edward Island Cooperation Agreements are to enhance and diversify the resource base; enhance fish quality; develop new seafood products; improve efficiency of the harvesting/fish processing sectors; and improve industry competitiveness.

The objectives of the Nova Scotia Cooperation Agreement are to move toward a self-sustaining entrepreneurial environment in the fishing industry; enhance the fisheries resource base, seafood production and markets; and create more lasting employment opportunities and increased fisheries income.

The objective of the Fisheries and Aquaculture Testing and Experimentation Program in Quebec is to stimulate, through contributions to business, technological innovation, new product development and new harvesting and processing methods.

The objective of the $53-million Quebec Federal Fisheries Development Program is to promote the long-term viability of the Quebec fishing industry and provide assistance to persons employed in the fisheries and in fisheries-dependent communities.

The objective of the Canada-Newfoundland Cooperation Agreement on Commercial Salmon Licensing Retirement is to reduce pressure on the salmon stocks throughout Atlantic Canada through licence buy-back.

The objective of the Canada-Newfoundland Cooperation Agreement on Salmonid Conservation and Enhancement is to restore, develop and enhance salmonid stocks in Newfoundland and to encourage public participation in the enhancement process.

The objective of the Canada-New Brunswick Cooperation Agreement on Recreational Fisheries Development is to enhance fish populations and their habitats and to restore recreational fisheries stocks.

The objectives of the Canada-Nova Scotia Cooperation Agreement on Recreational Fisheries Planning are to conduct industry consultations to determine the needs of the Recreational Fishing Community; determine the potential for further fisheries development; and identify opportunities for non-traditional sport fisheries.

The objective of the Canada-Prince Edward Island Cooperation Agreement on Sustainable Development (Watershed Improvement, Recreational Fisheries Component) is to enhance fish habitat and recreational fisheries and to create economic development opportunities.

Accomplishments: The five-year Newfoundland Inshore Fisheries Development Agreement will be completed on March 31, 1993. The most important results are in the area of harvesting, processing and resource development. In harvesting, focus has been on skills development, infrastructure improvements and fleet efficiency and rationalization. Important progress was made this year in developing harvesting of turbot, an underutilized species, for inshore gillnet vessels. Catches in 1992 were double those of the previous year. Marine Service Centres have been constructed or upgraded and unloading facilities installed in a number of locations. At two centres, fishermen can now fibreglass their own vessels, thereby realizing significant cost savings and prolonging the life of their vessels. Significant improvements have been made in the inshore fleet's operational efficiency through the vessel upgrading program. In the processing sector, new initiatives have been launched to improve processing, productivity and efficiency.

The Canada-New Brunswick Cooperation Agreement has completed three years of activities. Projects in the areas of underutilized species, harvesting, product development and marketing were completed. The program upgrading the province's bloater plants (smoked herring) has been completed. A lobster promotion campaign was completed with good results, including the establishment of new markets in the U.S. and increased sales in Japan. The oyster seed production program has led to enhanced viability of oyster operations by providing technical assistance which enabled producers to significantly reduce the grow-out period for oysters. Funding for the development of Aboriginal fisheries was continued with the objective of increasing economic returns from the recreational fisheries.

Under the Canada/Prince Edward Island Cooperation Agreement, which expires in 1993-94, aquaculture has been given the highest priority. During the first three years of the Agreement, about 70 percent of the project funding was directed to this sector. Oyster shellbed enhancement projects have resulted in a marked increase in oyster production. Funds were also expended on mussel, clam and scallop aquaculture. As well, funds were provided to the Atlantic Veterinary College for the development of diagnostic and support services for the aquaculture industry.

Implementation of the Canada-Nova Scotia Cooperation Agreement has resulted in the funding of a number of projects in the areas of resource base enhancement, technology upgrading and innovation, and Aboriginal fisheries development. The underutilized species, silver hake, which has been a focus of attention, is very close to being at the commercialization stage. Progress is also being made in developing an inshore fishery for this species. Funding is also being provided for a joint government/industry/university program with Dalhousie University. This will enable a multi-year investigation into ocean productivity and the life cycles of cod and scallops, two of the province's key fisheries resources.

The Technical University of Nova Scotia, with assistance from the Cooperation Agreement, has developed numerous products from underutilized species such as silver hake.

The Quebec Fisheries and Aquaculture Testing and Experimentation Program has, since 1989, approved over 100 projects of a total value of $9 million. Half of the projects are related to new product development for both traditional and underutilized species. About 30 percent are related to research and development in aquaculture. Most of these projects involve mussels, scallops or salmon aquaculture and are designed to increase industry profitability. About 10 percent of projects provide assistance for introducing new technologies in the processing sector.

More information about the projects for the $53-million Quebec Federal Fisheries Development Program may be found in the previous selected program report of the same name.

The Newfoundland Commercial Salmon Licence Retirement Program has resulted in a participation rate of over 90% with approximately 2,700 licences submitted for retirement. The objective to reduce potential fishing effort by 80% was surpassed.

6. Dockside Monitoring

Traditionally, fish have been harvested on a competitive basis. Fisheries and Oceans sets a total allowable catch (TAC) limit for a given species and lets license holders compete for a share of this TAC under varying conditions of licence. This race to catch a restricted quantity of fish resulted in excessive capacity as vessel owners tried to secure a competitive advantage and in lower landed values; it also contributed to a tendency to overfish, misreport catches and fish under unsafe conditions.

In order to address this issue, and in consultation with industry groups, the solution of dividing the TAC into individual quotas for licence holders was identified as a means to improve fisheries management. Harvesting and processing could be conducted in an orderly fashion which would yield greater economic returns to participants, and promote fishing under safer conditions.

One of the implications of introducing individual quotas is that monitoring such quotas over a longer period would be more costly to manage than one overall quota fished as quickly as possible. As direct beneficiaries, fishers would agree to pay the increased cost of this monitoring activity.

After extensive consultations with the Atlantic fishing industry through a Task Force appointed in October, 1991, the Department decided to implement a Dockside Monitoring Program in connection with individual quotas. Fleet sectors would take responsibility for the design and funding of dockside monitoring.

To facilitate the implementation of industry-managed monitoring programs, the Department agreed to enforce compliance with the program if 60% of the fleet sector supported the program. The Dockside monitors would be certified by the Department but be under contract to the responsible fleet sector. Thus, the collection of dockside monitoring charges would be a business matter between the company and the fleet sector.

In order to ensure such an "arm's length" arrangement, the *Atlantic Fishery Regulations, 1985* were amended to include a definition for "dockside observers" and to enable the Department to require dockside monitoring as a condition of licence on the Atlantic coast. Approximately 11 fleet sectors or associations are participating in a Dockside Monitoring Program on the Atlantic coast.

On the Pacific coast, there are three trial Individual Vessel Quota (IVQ) programs continuing in the 1993 fishing season. The 48 licence holders in the sablefish fishery fund dockside monitoring of individual quotas through a third party contractual arrangement.

Similarly, the 55 licence holders in the geoduck fishery fund dockside monitoring through a third party contractual agreement. Each licence holder pays an equal share of the annual quota monitoring costs to a research society. They also provide the Department with proof of their participation in the landing verification system.

In the larger halibut fishery consisting of 435 vessels, the Department is seeking to amend the regulations to allow an increase in licence fee to fund dockside observers and increase management and enforcement for the halibut fishery in 1993. Licence fees collected would be in the order of three quarters of a million dollars.

7. Test Fishing

For a number of years, the Department has used "test fishing" as a management tool in the salmon and roe herring fisheries on the west coast. Test fishing is done to collect information on the abundance of the stocks and, in the case of herring, to determine the optimum condition of the fish (specifically, the roe). This information assists fishery managers in establishing the opening times for the commercial fisheries in order to maximize the economic returns to the fishing industry.

In 1993-94, the Department will enter into arrangements with licensed fishermen to conduct specific test fisheries. These activities are authorized pursuant to Section 4 of the *Fisheries Act* which permits the taking of fish for scientific purposes. At the same time, fishermen are provided with commercial fishing licences under Section 7 of the *Fisheries Act* authorizing them to retain a specified quantity of fish.

If the actual catches exceed the authorized amount, the excess is sold, with the proceeds being deposited into the Consolidated Revenue Fund.

Test fishermen are selected through a public process in response to "Requests for Expressions of Interest." Fish taken in test fisheries are reported for fishery management purposes and are accounted for under Total Allowable Catch limits, where applicable.

In 1992, there were 23 arrangements for test fishing of roe herring. The quantity of herring taken under these arrangements totalled 2,019 tons, at a market value of $2.3 million. Proceeds from the sale of excess test fish totalled $545 thousand, which amount was deposited by the Department to the Consolidated Revenue Fund (CRF).

For the 1991 salmon season (the latest season for which complete data is available) there were 36 test fishing arrangements. These arrangements accounted for catches totalling approximately 606 tons of salmon, valued at $1.1 million. The average of test salmon catches had a commercial value of $207 thousand, and this amount was also credited to the CRF.

These test fishing operations are of significant benefit to the fishing industry and are accommodated within the overall quantities of fish which may be taken in the commercial fisheries.

D. Index of Selected Program Reports from Previous Expenditure Plans

1990-91 Expenditure Plan

1. Cooperation Agreements
2. Geoduck Management
3. Salmonid Enhancement
4. Canada-European Community Fisheries Relations
5. Air Surveillance
6. Sampling Program for Dioxins and Furans
7. Long Range Transport of Airborne Pollutants (LRTAP)

1991-92 Expenditure Plan

1. Atlantic Fisheries Adjustment Program
2. Green Plan
3. Cooperation Agreements
4. Free Trade Agreement Salmon and Herring
5. Individual Vessel Quotas (IVQ)/Sablefish Management
6. Enhancement of the National Inspection Program
7. Quality Management Program
8. Canada-European Community Fisheries Relations
9. Air Surveillance
10. Operational Indicators

1992-93 Expenditure Plan

1. Atlantic Fisheries Adjustment Program
2. 1991 Atlantic Catch Failure Program
3. Fishery Development Agreements and Programs (Cooperation Agreements)
4. Aboriginal Fisheries
5. Canada-European Community Fisheries Relations
6. Reforming Licensing and Allocation

E. Relationship of Program Objective to Legislation

Legislative Base	Program Objective
Government Organization Act Section 5 Fisheries Act	To undertake policies and programs in support of Canada's economic, ecological and scientific interests in the oceans and inland waters, and to provide for the conservation, development and sustained economic utilization of Canada's fisheries resources in marine and inland waters for those who derive their livelihood or benefit from these resources; and to coordinate the policies and programs of the Government of Canada respecting oceans.
Government Organization Act (1979) — Section 5 Fisheries and Oceans Research Advisory Council Act Canada Shipping Act requires use of DFO/CHS charts	To ensure that scientific information of the highest international standard is available to the Government of Canada for use in developing policies, regulations, and legislation regarding the oceans and aquatic life, and to other government departments, private industry and the public for use in carrying out aquatic activities.
Fisheries Act Fisheries Protection Act Fisheries Development Act	To conserve, protect, develop and enhance the Coastal fishery resource base and its habitat, and to provide for the management, allocation and control of the commercial, native and recreational fisheries in marine and inland waters to maintain and develop benefits from the use of the resource, and to provide services and infrastructure in support thereof.
Fisheries Act Fish Inspection Act	To promote and support the value, wholesomeness and marketability of fish products produced or sold in Canada by developing, promoting, and ensuring compliance with appropriate standards that contribute to the achievement and enhancement of the quality, safety and identity of fish and fish products.
International Conventions and Treaties	To advance Canada's international fisheries interests in conservation and trade.
Government Organization Act Fishing and Recreational Harbours Act Fisheries Improvement Loans Act Appropriations Acts re: Fishing Vessel Insurance Plan Fisheries Prices Support Act Coastal Fisheries Protection Act North Pacific Fisheries Convention Act Northern Pacific Halibut Fishery Convention Act Freshwater Fish Marketing Act Great Lakes Fisheries Conservation Act Pacific Fur Seals Convention Act Saltfish Act Territorial Sea and Fishing Zones Act	To provide executive direction and coordination, corporate administrative services and human resource planning in support of the Program, and to direct the acquisition and to provide the framework for the management of capital resources and assets for the Program, and to coordinate the policies and programs of the Government of Canada respecting ocean affairs, and to provide assessment, analysis and policy and program planning and advice respecting the current and future direction of Canadian fisheries and oceans interests, and to develop and promulgate the Department's national regulations and the direction of the Department's enforcement activities.

Glossary

Aquaculture	The cultivation of aquatic life (plants, shellfish and finfish).
Anadromous fish	Fish which spawn in freshwater and migrate to saltwater to feed and mature.
Biodegradable	Material that, when lost or discarded, has a relatively high decomposition rate.
Biomass	Total weight of a fisheries stock.
Bycatch	The unintentional catch of one species when the target is another.
Catch monitoring	Activities required to record the quantities of fish being caught and landed by the fishery.
Catch rate	Volume of fish caught per amount of fishing effort expended.
Diadromous fish	Fish that migrate between salt and fresh waters.
Discarding	The intentional dumping of unwanted fish at sea.
Domoic acid	A toxic chemical substance produced by some marine algal.
Dragger	Fishing vessel less than 30.5 metres (100 feet) in length that catches fish with a trawl.
Effort controls	Regulatory measures used to limit the use of fishing effort.
Enterprise Allocation (EA)	Quota allocated to an enterprise (company).
Exploitation	The harvesting of fish.
Fishing capacity	The ability of a fishing vessel or fleet to catch fish.
Fishing effort	Fishing activity measured in units of time (hours, days).
Fixed gear	Fishing equipment which catches fish passively, i.e., longlines, traps and gillnets.
Fleet sector	A group of fishing vessels with common characteristics.
Flounder	Collective term used to describe the flatfish species of groundfish, i.e., plaice, sole, winter flounder, yellowtail, etc.
Full- and part-time fishermen	Full-time fishermen are individuals who normally fish all or most of the season available to them in their localities. Those who fish for shorter periods are referred to as part-time fishermen.

GATT	General Agreement on Tariffs and Trade. A multi-lateral treaty, the basic aim of which is to liberalize world trade and place it on a more secure basis. At present, 98 governments subscribe to the Agreement.
Geomatics	The art, science and technologies involved in managing geographically referenced information, including its acquisition, storage, analysis and dissemination.
Gillnet	A long rectangular net, usually anchored near the ocean bottom, which catches fish by entanglement or snaring at the gills. If the net becomes separated from its surface buoy it can continue to "fish" indefinitely without being retrieved. This is called "ghost-fishing."
Ghost-fishing	See Gillnet.
Groundfish	Collective term used to describe species that feed near the ocean bottom. The principal species include cod, haddock, redfish, pollock and flounder.
Heterosigma	A microscopic marine algal species.
Highgrading	The discarding of lower valued fish in preference for higher valued fish.
Individual Quota (IQ)	Quantity of fish allocated on an annual basis to either a vessel or person.
Individual Transferable Quota (ITQ)	Individual quota which can be transferred to others in the fishery.
Inshore	Fleet sector consisting mostly of independently owned vessels under 30.5 metres (100 feet) in length, supplying small independently owned processing plants.
Juvenile	Fish too young to spawn.
Longline	A line of baited hooks, anchored to the ocean bottom and retrieved at intervals by a vessel called a longliner.
Marine	A salt water environment (as opposed to fresh water).
Mobile gear	Fishing equipment towed behind a vessel in active pursuit of fish (see trawl).
NAFO Divisions	Fishing zones off Canada's east coast established by NAFO and identified by alpha-numeric codes.
Northern cod	Popular term for the cod population found from the northern half of the Grand Banks to the Hamilton Inlet Bank off Labrador (NAFO Divisions 2J, 3KL).

Northwest Atlantic Fisheries Organization (NAFO)	An international organization responsible for providing management advice on fisheries of interest to Canada and member states.
Offshore	Fleet sector consisting of vessels greater than 30.5 metres (100 feet) feet in length and usually owned by vertically integrated companies with large processing plants.
Overfishing	Harvesting activity by fishing fleets which catches quantities of fish in excess of the TAC.
Pelagics	Collective term used to describe species that range throughout the water column and feed predominately in the mid and upper sections. Travelling mostly in large schools, Atlantic pelagic species include herring, mackerel, capelin and tuna.
Phototoxins	Toxic substances produced by certain microscopic algae.
Phycotoxins	Toxic substances produced by certain planktonic microscopic algae.
Population	Synonymous with stock.
Quotas	Quantities of fish allocated to various fleets, the sum of which equals the TAC.
Recruitment	The entry into the stock of young fish which have grown to a harvestable size.
Stock assessment	The scientific activity conducted to determine the size and potential yield of a fish stock.
Stock	A group of fish of the same species which live and reproduce within a defined geographical area and generally do not mix with those in other areas.
Surimi	Fish product obtained by mincing or shredding fish flesh into a homogeneous consistency and usually combining it with phosphite and sugar. Surimi is used to make such products as imitation crab legs, scallops and shrimps.
Survey	Fishing for research purposes to determine characteristics of fish populations.
Sustainable fisheries	Stewardship of the fisheries resource and the fish habitat resource base to provide for the social and economic needs of the present in a way that future generations may meet their own needs.
Tonne (t)	Metric ton. One thousand kilograms (2204 lb.). The standard unit of volume in fisheries statistics. It is abbreviated as t.

Total Allowable Catch (TAC)	For each distinct stock of fish, an annual determination of a total maximum permitted catch level.
Trawl	A bag-like fishing net which captures fish by being towed behind the vessel along the ocean bottom.
Trip limit	Amount of fish permitted to be caught during one trip.
Underutilized species	Species of known or unknown quantities which have the potential to be more fully exploited on a commercial and marketable basis by Canadian fishing enterprises.

Index

200-mile zone, *10, 12, 18, 40, 49, 73, 84*
8th Conference of the parties to Convention on International Trade in Endangered Species (CITES), *40*

A

Aboriginal Cooperative Fisheries Management Program, *53, 113, 114, 120*
Aboriginal fisheries, *10, 26, 27, 37, 48, 50, 54, 124, 133*
Aboriginal Fisheries Strategy, *10, 26, 27, 57, 61, 74, 99, 100, 118, 125*
See also Native fishery
Aboriginal rights, *10*
Acid rain, *43*
Activity Resource Summary, *90*
Adjusting to current realities, *28*
Air surveillance, *30, 57, 73, 133*
Alaska pollock, *19*
Alaskan groundfish, *65*
Alaskan trawl fleet, *88*
Amnesic shellfish poisoning, *43*
Aquaculture industry, *20, 21, 28, 33, 35, 36, 39, 41, 44, 50, 51, 52, 57, 70, 92*
Aquaculture status report, *98*
Aquaculture Strategy, *41*
Aquatic ecosystems, *33, 34, 35, 45, 46*
Arctic char, *37, 57*
Arctic Environmental Strategy, *45*
Arctic marine mammals, *63*
Arctic Ocean climate studies, *44*
Arctic seals, *63*
Atlantic and Pacific marine commercial fisheries, *10*
Atlantic Canada Opportunities Agency, *27, 42, 127*
Atlantic catch failure, *27, 133*
Atlantic Fisheries Adjustment Program (AFAP), *26, 27, 28, 39, 44, 45, 51, 68, 96, 112, 113, 114, 120, 133*
Atlantic Fisheries Licence Appeal Board, *59*
Atlantic Fisheries Licensing Policy, *9, 24*
Atlantic Fisheries Resource Conservation Council, *38*
Atlantic fishery, profile, *17*
Atlantic Fishery Regulations, 131
Atlantic Groundfish Advisory Committee (AGAC), *25*
Atlantic Groundfish industry, *9, 16, 18*

Atlantic Recreational Fisheries Development Initiatives, *99*
Atlantic salmon, *71*
Atlantic Salmon Federation, *70*
Atlantic Salmon Licence Retirement Program, *118, 119, 130*
Atlantic Sportsfishing Enhancement Program, *71*

B

Bait supply assurance, *52*
Barriers to women in the workplace, *100*
Beaufort Sea fisheries, *57, 65*
Beaufort Sea oil development, *45*
Bedford Institute of Oceanography, *15, 22*
Beluga, *63*
    Northern Quebec, *62*
Biological sciences, *33, 34, 38*
Bluefin Management Measures Review Committee, *64*
Bowhead whale, *54*
Brander Smith inquiry, *47, 97*
British Columbia Hydro, *69*
British Columbia Native Fisheries Strategy and Action Plan, *54*
By-catch policy, *58, 62*

C

Canada-China treaty, *40*
Canada Employment and Immigration Commission, *42*
Canada-European Community Fisheries Relations, *10, 133*
Canada-France Maritime Boundary Arbitration, *40*
Canada-France relations, *85*
Canada-Greenland Joint Commission on Conservation of Narwhal and Beluga, *63*
Canada-Japan treaty, *40*
Canada-New Brunswick Agreement on Recreational Fisheries, *112, 127*
Canada-New Brunswick Cooperation Agreement, *129*
Canada-New Brunswick ERDA, *112*
Canada-Newfoundland Cooperation Agreement for Salmonid Enhancement, *112, 114, 118, 119*
Canada-Nova Scotia Co-op Agreement, *70, 127, 130*
Canada-Nova Scotia Subsidiary Agreement, *112, 127*
Canada Oceans Act, *37*
Canada-Prince Edward Island Cooperation Agreement, *70, 127, 129*
Canada-Prince Edward Island ERDA, *112, 127*
Canada-Quebec Subsidiary Agreement, *112, 127*

Canada-United States Enforcement Agreement, *87*
Canada-United States Free Trade Agreement, *65, 83*
Canada-United States Pacific Salmon Treaty, *20, 26, 28, 65, 86*
Canada-United States Trade Commission Agreement, *65*
Canada-United States treaties, *40*
Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC), *25*
Canadian Fish Harvesting Program for Responsible Fishing, *66*
Canadian Foreign Allocations, *73*
Canadian Environmental Assessment Act (CEAA), *60, 97*
Canadian Hydrographic Service (CHS), *34, 35*
Canadian Ocean Mapping System (COMS), *47*
Canadian Saltfish Corporation, *8, 116*
Canadian Seafood Advisory Council, *113*
Capelin fishery, *18*
Capital assets, *102*
    Management, *92, 93, 94*
Capital expenditures, *105, 106, 107, 108, 109*
    Definitions, estimates class, approvals, *110*
Census, *37*
Certificate of Origin Regime, *64*
Certification program, *24, 28*
Charts and mapping, *46, 120*
Chinook and steelhead conservation, *57*
Chinook survival rate, *69*
Clearwater Fine Foods, *17*
Climate, *12, 15, 30, 33, 44*
Co-op Recreational Fisheries Agreements, *71*
Coastal engineering, *30*
Codex Alimentarius, *81*
Cold storage, *80*
Commercial fisheries, *10, 42, 53, 55, 56, 57, 58, 59, 66, 124*
    Employment in Fisheries by Province, *16*
Commercial Fishing Industry Council (CFIC), *57*
Commercial salmon licence cancellation program, *27*
Commercial Salmon Licence Retirement Plan, *71*
Communications, *100*
Compensation costs, from Labour Canada, *117*
Confederation, *52*
Conservation, *38, 82, 97*
Consolidated Revenue Fund, *11, 132*

Constitution Act, *13*
Consultation process, *59*
Consumer complaints, *79*
Consumers, *15, 19*
Contaminants, *33, 35, 45, 46, 80, 81*
Contaminants Monitoring, *80*
Contaminants on vessels, *81*
Cooperation agreements, *21, 53, 68, 71, 126, 133*
Corporate Policy and Adminstration, *92*
Crossbreeding of cultured stocks, *41*
Crown corporations, *92*
Cruickshank Report, *58*
Cumberland Sound: see Resolute Passage

D

Decentralization, *15*
Dioxins and furans, *45, 46, 133*
Direct Sales Program Review, *56*
Dixon Entrance, *87*
Dockside monitoring, *27, 59, 63, 130, 131*
Dollar, exchange rate, *20*
Driftnets, *40, 87, 88*

E

East Coast Licensing Policy, *56*
Economic and Regional Development Agreements, *126*
Economic diversification, *28*
Electronic chart technology, *47*
Electronic data processing (EDP) equipment, *15*
Emergency Intervention Panel Plan, *60*
Employee benefit plans, *5, 7, 103, 117, 118*
Employment and Immigration Department, *24, 27*
Employment equity, *100*
Energy, Mines and Resources Department, *35*
Energy Research and Development Program, *31*
Enforcement, *10, 14, 15, 27, 49, 72, 73, 74, 97, 125*
Enforcement Effectiveness Project, *73*
Environment Department, *45*
Environmental Assessment and Review Process (EARP), *60, 61, 97*
Environmental impact statements, *43*

European Community, *10, 84*
Experimental Lakes Area cadmium studies, *45*
Exploits River, Nfld., *42*
Exports, *12, 17, 19*
External Affairs and International Trade Canada (EAITC), *82*

F

Federal Court Awards, *7*
Federal Court of Appeal, *61*
Federal-provincial fisheries cooperation agreements, *28, 56, 57, 71*
    List, objectives, *128, 129*
Federal-provincial relations, *13*
Financial Requirements by Activity, *11, 118, 119*
Financial Requirements by Authority, *5*
Fish Health Protection Regulations, *41*
Fish Inspection Regulations, *80*
Fish population forecasts, *38*
Fish stocks, *18, 27, 44*
Fisheries and Oceans Department
    Activity structure, *14*
    Assets, *15, 92, 93, 94*
    Clients, *12*
    Economic and regional impact, *16*
    Facility inventory, *106*
    Fleet, *15, 93, 105, 121*
    Mandate, *12, 13*
    Program delivery organization, *13*
    Program effectiveness, *29*
    Program objectives, *13*
    Regions, *13*
    Resource profile, *14*
Fisheries Act, *63, 131, 134*
Fisheries Assessment Research Vessel, *118, 119*
Fisheries Boards legislation, *95*
Fisheries Development and Assistance, *52*
Fisheries Habitat Management, *48, 49, 53, 60*
Fisheries Improvement Loans Act, *5, 7, 116*
Fisheries management, *31, 33, 34, 56*
Fisheries patrol helicopter review, *30*
Fisheries Prices Support Act, *111*

Fisheries Resource Conservation Council, *9, 24, 25, 26, 38*
Fishery development agreements, *51*
Fishery Products International, *17*
Fishing and Recreational Harbours Act, *114*
Fishing Vessel Insurance Plan, *8, 15, 91*
Fishing vessels, *5, 7, 9, 51, 76*
Fleet rationalization, *68*
Fleet separation, *56*
Foreign fishing/overfishing, *10, 40, 83, 84*
Foreign Fishing Panel, *10, 64*
Foreign fishing vessels, *51, 64, 73*
Fraser River Green Plan, *61*
Fraser River salmon, United States harvest, *28*
Fraser River sockeye, *86*
Fraser River Sustainable Development Program, *42*
Freshwater Fish Marketing Act, *8*
Freshwater Fish Marketing Corporation, *8, 18, 116*
Freshwater Institute, *22*

G

Gear conversion/efficiency, *28, 51, 56, 112*
General Agreement on Tariffs and Trade (GATT), *83, 86*
Geoduck fishery, *19, 131, 133*
Georges Bank, *44*
Gillnet fishery, *58*
Global Forum meetings, *98*
Global Positioning System (GPS), *47*
Globalization of markets, *20*
Government Organization Act, *134*
Grande Baleine and Conawapa hydroelectric developments, *43*
Grants to fishermen, *111*
Great Bear Lake fishery, *57*
Great Lakes Action Plan, *45*
Great Lakes Fishery Commission (GLFC), *65*
Green Plan, *31, 44, 45, 46, 61, 97, 118, 119, 120, 133*
Greenhouse effect, *43, 44*
Grey seals, *39*
Gross National Product, *12*
Groundfish fishery, *58*
Groundfish licences, inactive, *24*

Groundfish Management Plan, *18*
Gulf of Maine, *44*
Gulf of St. Lawrence fishery, *38*

H

Habitat assessment, *43*
Habitat Conservation Fund, *69*
Habitat management and protection, *10, 15, 21, 30, 33, 34, 100*
Habitat Management and Sustainable Development, *10, 11*
Haddock fishermen, loans, *116*
Halibut, *19, 131*
    Greenland, *38, 40*
Halibut IVQ program, *59*
Halifax Harbour cleanup, *60*
Harbour Authorities, *101*
Harbour Revitalization Program, *101, 105*
Harvesting sector, *12, 17*
Helicopter surveillance, *30, 73*
Herring processors, grants, *120*
Herring seiner fishery, *56*
Hibernia oil field, *22*
High-seas interception, *83*
High-seas driftnet fishery, *40, 87*
Human Resources (FTE), *11*
    See also Personnel requirements
Hydroelectric power projects, *43, 60, 61*
Hydrographers, *15*
Hydrographic and Inspection Services, *32*
Hydrography, *33, 34, 35, 46, 115*

I

Ice-affected fish plants, loans, *116*
Ice-affected fishermen, grants, *120*
Import Inspection Program, *76, 77*
Import license, *76*
Import Product Inspection and Offshore Inspection, *80*
Indian Affairs and Northern Development Department, *29, 54, 99*
    Contaminant study, *45*
    Self-government, *55*
Individual quotas, *19, 28, 56, 59*

Individual Transferrable Quotas, *24, 59*
Individual Vessel Quotas, *115, 120, 131, 133*
See also Sablefish
Industrial effluents, *46*
Industry development, *50*
Industry outlook, *20*
Industry Reform/Restructuring report, *57*
Industry Working Groups, *95*
Inflation, *119*
Inland fisheries, *18*
Inspection and inspection services, *6, 11, 15, 16, 21, 26, 28, 52, 75, 78, 92, 106, 115, 133*
Institute of Ocean Sciences, *22*
Interdepartmental Committee on Oceans (ICO), *33*
Intergovernmental Oceanographic Commission, *44*
International activity, *83*
International agreements/treaties, *40, 82, 83*
International Commission for the Conservation of Atlantic Tuna (ICCAT), *64*
International Convention on Bio-diversity, *40*
International fisheries, *40*
International Fisheries Commissions and Organizations, *5, 7*
Objectives and payments, *89*
International Pacific Halibut Commission (IPHC), *65*
Interorganizational Harmonization, *81*
Inuvialuit Final Agreement and Wildlife Protection, *26, 29, 37, 54, 113, 120*

J

Joint Global Ocean Flux Study, *43, 44*
Juvenile Atlantic salmon, *42*

K

Kemano Completion Project, *61*
Killer Whale Management, *61*

L

La Perouse Bank, *44*
Labour market adjustment, *126*
Labrador Shrimp Company, *120*
Law of the Sea, *37*
Legislative base for program objectives, *13, 134*
Licence appeals, *59*

Licences and licensing, *9, 49, 51, 53, 59*
Licensing and allocation system, *92*
Licence retirement, *71, 99*
Living Marine Resources for the Earth Summit, *98*
Lobster fishery, *19*
Long range transport of airborne pollutants, *133*
Lower Churchill Falls Electric power projects, *60*

M

Mandatory inspection, *80*
Mapping and charting, *33, 34, 35*
Marine engineering, *33*
Marine geomatics, *47*
Marine Mammal Working Group (MMWG), *62, 63*
Marine mammals, *34, 37, 38, 62, 63*
Marine plants, *34, 38*
Marine Products Research and Development Centre Foundation, *111, 120*
Marine services, *30*
Marine shipping, *21*
Market demand, *19*
Maurice Lamontagne Institute, *15, 22*
Memorandum of Understanding on Education and Public Awareness, *70*
Mexico markets, *20*
Molluscan shellfish, *76*
Multilateral Trade Negotiations, *83, 86*

N

Nass River, B.C., *37*
National Fish Habitat Management System, *60*
National Fisheries Data Initiatives, *100*
National Habitat Policy, *97*
National Project Information System, *31*
National/regional working groups, *73*
National Sea Products, *17*
Native and Arctic fisheries, *73*
Native fishery
    Food fishery, *42, 54, 99*
    Survey for Yukon River, *55*
    See also Aboriginal fisheries
Native Guardian Program, *53*

Native land claims, *53, 99*
Comprehensive land claims, *54*
Yukon Land claims, *55*
Navigational charts see Charts and mapping
Newfoundland Fisheries Development Agreements, *68, 71, 126*
Inshore Agreement, *113, 119, 129*
Nisga'a Tribal Council, *54*
Nishga'a land claims, *37*
Non-profit fishing, *114*
North American Free Trade Agreement, *20, 41, 83, 86*
North Pacific Anadromous Stocks Convention, *86, 87*
North Pacific Marine Science Organization, *40, 87*
Northern Cod Adjustment and Recovery Program (NCARP), *9, 23, 24, 28, 95, 100, 118, 119, 122, 123*
Northern Cod moratorium, *9, 16, 18, 20, 23, 27, 56, 84, 95, 112, 122, 123*
Northern Cod Review panel, *56*
Northern cod stocks, *27, 39, 122*
Northern Oil and Gas Action Plan (NOGAP), *45*
Northwest Atlantic Fisheries Organization (NAFO), *10, 64, 73, 84*
Northwest Territories Fisheries Management, *57*

O

Observer Program, *74*
Ocean manufacturing and services industries, *12*
Ocean sciences, *35*
Oceans Development, *37*
Oceans sector
Industry output value, *21*
Manufacturing and service sub-sector, *22*
Offshore oil and gas, *22*
Offshore development/petroleum development, *12, 15, 16, 30, 35*
Order-in-Council governing EARP, *43*
Outstanding loans and advances, *116*
Over-the-side sales, *56*
Over-the-wharf sales, *56*
Overtime management, *32*

P

Pacific and Freshwater Fisheries Sector, *60*
Pacific Fisheries Policy Directions, *57*
Pacific fishery, profile, *17*

Pacific groundfish, *19*
Pacific hake, *19, 40, 58, 65, 67, 87*
Pacific halibut by-catches, *88*
Pacific herring roe, *20*
Pacific licensing, resource allocation, regulations, *29*
Pacific Region Licence Appeal Board, *59*
Pacific salmon, *19, 20, 26, 28, 38, 50, 65, 69, 86*
Pacific Salmonid Enhancement Program, *50*
Pacific Salmon Foundation, *69*
Pacific shellfish, *19*
Paralytic Shellfish Poison, *76*
Parasitic sea lamprey, *50, 65*
Pearse report on Fraser River salmon, *57*
Pelagic fisheries, 18, 38
Performance Information and Resource Justification, *35, 51, 52, 83*
Performance measurement, *32*
Personnel requirements, *104*
    Full-time equivalent (FTE), *105*
Pesticides, *45*
Phycotoxins, *43*
Physical and Chemical Sciences, *31*
Phytoplankton study in L'Etang Inlet, *44*
Plant Workers' Adjustment Program, *28, 96, 113, 118, 119, 120, 123*
Policy and Action Plan for Sustainability of Canada's Aquatic Resources, *97*
Policy for the Management of Fish Habitat, *43*
Pollution control, *30*
Previously reported initiatives, update, *26*
Prince Edward Island fixed link, *43, 60*
Processing plant workers, *133*
Processing plants, licences, *123*
Processing sector, *12, 17, 96*
Production, value, *17, 18*
Program objective, relationship to Legislation, *134*
PS 2000, *36*
Pulp and paper mills, *45, 60, 61, 97*

Q

Quadrilateral enforcement, *88*
Quality Management Program (QMP), *27, 76, 77, 79, 81, 133*
Quebec Federal Fisheries Development Program, *39, 68, 112, 118, 120, 125, 126, 127, 130*

Quebec Fisheries Adjustment Program (FPQFD), *39*
Quebec Fisheries and Aquaculture Testing and Experimentation Program, *130*
Quota management, *59*
Quota monitoring, *73*
Quotas, *10, 59, 73*

R

Real property management, *31*
Recreational fisheries industry, *22, 23, 26, 27, 48, 50, 71, 92, 99, 100*
Recreational fisheries survey, *99*
Reform Working Group, *55, 74*
Reforming Licensing and Allocation, *10, 123, 124, 133*
Regional Fisheries Management Agencies, *59*
Regulations and development, *16, 50*
Remedial Action Plan on the Great Lakes, *43*
Research and development, *51, 112*
Resolute Passage and Cumberland Sound, *37*
Resource and Industry Development, *48, 50*
Resource conservation and allocation activities, *49*
Revenues, *115*
Rivers Defence Coalition, *61*
Robotics, *22*
Roe herring, *65, 132*

S

Sablefish trial IVQ program, *59*
Salmon and herring free trade agreement, *133*
Salmon exports, *65*
Salmon stocks, *37, 38*
Salmon trafficking, *88*
Salmonid aquaculture, *41*
Salmonid imports, *41*
Salmonoid enhancement programs, *15, 27, 42, 50, 52, 69, 70, 108, 133*
Saltfish Act, *8, 134*
Scallop fisheries, *53*
Science and technology, *22, 51*
Scientists, retirement, *31*
Scotia Shelf groundfish, *27, 39*
Scotian Shelf, *44*
Scotian shellfish, *39*

Seal management plan, *63*
Sealworm, *39*
Service standards development, *32*
Services received without charge, *117*
Shark fishery, *67*
Shellfish industry, *19, 39, 79*
Shellfish Monitoring Program, *30, 79*
Ship charters, *103*
Shipping, *30*
Shrimp industry, *19, 38*
Skeena Watershed Committee, *58*
Skills development programs, *9, 28*
Small Craft Harbours, *15, 16, 91, 93, 101, 102, 103, 105, 115*
Snow crab, *18, 19, 27, 39, 53*
Sockeye salmon, *42*
Sovereignty, *83*
Sparrow case, Supreme Court ruling, *124*
Spawning requirements, excess (ESR), *55*
Spending authorities, *5*
St. Lawrence Action Plan, *45*
St. Pierre and Miquelon, *64*
Steelhead conservation, *58*
Strait of Georgia coho, *69*
Supply and services sector, *21*
Surveillance, *27, 49, 73, 84, 85*
    See also Air surveillance
Surveillance and enforcement, *49*
Survey methodologies, *38*
Sustainable development, *9, 10, 98, 100*
Sustainable Living Aquatic Resources Policy, *98*

T

Tanker safety, *45, 47, 49*
Task Force on Incomes and Adjustment, *26, 27, 56, 96*
Task Forces on Northern Cod (TFNC), *56*
Task Forces on Scotia Shelf groundfish (TFSSG), *56*
Technology
    Development, *51*
    Development and transfer, *47*
    See also Science and technology

Test fishing, *131*
Tidal mixing, *44*
Total Allowable Catch (TAC), *10, 18, 20, 25, 84, 130, 132*
Toxins/toxic substances, *15, 34, 43, 45, 46, 76, 97*
Toxin-producing marine algae, *43*
Transfer payments, *111*
Transboundry stocks, *40, 49, 85, 87*
Treasury Board, *11, 100*

U

Underutilized species, *28, 39, 50, 51, 67*
Unemployment insurance program, *122*
United Nations Conference on Environment and Development (UNCED), *40, 84*
United States markets, *19, 20*
Unloading, Handling, Holding and Transport (UHHT), *81*
User fees, *115*

V

Vessel Acquisition Strategy Plan, *91*
Vessel inspection, *77*
Vessel replacement and transfer policies, *56*
Vessel support program, *123*

W

Walrus, *65*
West coast herring, *19, 29*
Whale watching, *62*
World Ocean Circulation Experiment, *44*

Y

Yukon Salmon Interceptions Agreement, 86

Z

Zonal Vessel Scheduling Committee, 73