

# DFO FACTBOOK



Fisheries  
and Oceans

Pêches  
et Océans

Canada

# DFO FACTBOOK

***D**FO Factbook contains information on the Department of Fisheries and Oceans' organization, responsibilities, activities, resources, clients, history and other relevant aspects.*

***T**he Factbook provides an overview rather than a detailed examination of the department. Designed primarily as an orientation guide for new employees, it also serves as a convenient reference source for readers outside the department.*



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# Who We Are and What We Do

*The Department of Fisheries and Oceans (DFO) is responsible for a wide range of activities that support Canada's economic, ecological and scientific endeavours in the oceans and inland waters. Providing for the conservation, development and sustained economic utilization of our nation's fisheries resources in Canadian waters and beyond, rests with DFO. Also a part of DFO's mission is the coordination of the Government of Canada's policies and programs respecting oceans.*

## OUR MANDATE

*While other federal departments contribute to the management of Canada's aquatic activities, this is the primary focus of Fisheries and Oceans.*

The duties, powers and functions of the Minister of Fisheries and Oceans include:

- (a) all matters over which the Parliament of Canada has jurisdiction, not assigned by law to any other department, board or agency of the Government of Canada, relating to:
  - marine and inland fisheries;
  - fishing and recreational harbours; hydrography and marine sciences; and
  - policy and program coordination of the Government of Canada respecting oceans; as well as
- (b) other matters over which the Parliament of Canada has jurisdiction relating to oceans, that are assigned to the Minister by law.

## OUR PRIORITIES / INITIATIVES

The Department's mission is to assist its varied clientele in achieving their aspirations and goals in a framework established by Government and Ministerial policy. To realize success in this mission, the Department will be delivering or embarking on a series of initiatives, some of which are in response to changing conditions in the fishery and some of which are the realization of new policy direction.

## **DFO Reform**

This initiative is to reform the administration of fishery licensing and allocation by the creation of Boards on Canada's east and west coasts. The Boards will take over the licensing and allocation functions now performed by DFO.

Consultations with key industry stakeholders and provincial representatives will continue to ensure industry and provincial cooperation and assistance in developing a workable system. Start-up is envisioned for 1994.

Close collaboration between the new east and west coast fisheries Boards and the Department will be necessary as the Department transfers expertise at the outset and works with the Boards in developing acceptable and enforceable fishing plans. The Department will enforce the fishing plans, and will act as a local link to the Boards through fishery offices located in fishing communities.

The Boards will be responsible for licensing and allocations and will administer administrative sanctions, developed with the industry, for fisheries violations, including a ticketing system.

This reform initiative will have a strong, positive effect on the Department, freeing resources and energies to focus on its revitalized mission.

## **Aboriginal Fisheries Strategy**

The Department's Aboriginal Fisheries Strategy is a new model of negotiation, cooperation, participation and development. Agreements are being negotiated with Aboriginal groups to increase self-management of Aboriginal fishing, to define allocations and to test new policies such as sale of fish taken in Aboriginal fisheries. Agreements also include cooperative management programs to enhance fish stocks and improve fish habitat. Aboriginal groups are actively encouraged to work with third parties to ensure a smooth transition to greater Aboriginal involvement in the traditional commercial fishery. DFO is also consulting with these groups and developing a pilot program to compensate for fishing opportunities transferred to Natives.

## **Habitat Management and Sustainable Development**

The Department will move forward with its program on Sustainable Fisheries, the development of federal-provincial agreements to improve delivery of the habitat management program and enhancements to the Fish Habitat Management Program. The Department will also implement the new Canadian Environmental Assessment Act. Environmental assessments are often costly and time-consuming and officials will continue to be innovative and effective in undertaking EARP responsibilities.



## Recreational Fisheries

The recreational fishery offers economic opportunities in areas where few other alternatives exist. More than five million Canadians and one million out-of-country visitors generate some seven billion dollars in economic activity in the sport fishery annually.

The federal and provincial governments are working out a series of agreements to develop sustainable economic opportunities in recreational fisheries.

Conservation and rehabilitation of Atlantic salmon is a major priority with programs directed at education and awareness, commercial licence retirement in Newfoundland and the Maritimes, stock assessment and enhancement, habitat improvement, tourism promotion and infrastructure development.

The Department will work with representatives of the sport fishery and create avenues for consultation through advisory committees.

## Northern Cod

The northern cod fishery was the largest single employer in the commercial fishing industry, with some 20,000 plant workers and fishermen directly dependent on it for their livelihood.

The catastrophic collapse of the northern cod stock has resulted in a two-year fishery moratorium announced in July 1992 and the Northern Cod Adjustment and Recovery Program (NCARP). This program has two aims: in the short term, to meet the immediate income and adjustment needs of fishermen and plant workers during the moratorium, and in the long term, to emerge from the moratorium with an economically viable and environmentally sustainable northern cod fishery. To achieve these objectives requires a comprehensive program to restructure the industry and provide adjustment support to the people working in it.

The program measures currently being designed by the federal and provincial governments are aimed at achieving a better balance between the available resource and those who depend on it by decreasing the number of people, boats, plants and licences now in the fishery, and at reducing the likelihood that, once the moratorium is lifted, these numbers will rise again. In addition, the current crisis offers the opportunity to act on long standing needs for upgrading and updating of fishermen's skills and fishing practices through the introduction of professionalization programs and sustainable harvesting gear and techniques. DFO is seizing the possibilities offered by this serious decline in the stock to rebuild both the fishery and the livelihood of the people dependent upon it.

## International Fisheries

DFO will continue to pursue the goal of sustainable fisheries in international waters. Initiatives related to curtailing foreign overfishing on the east coast include working within the Northwest Atlantic Fisheries Organization, raising international awareness of the problems of high seas overfishing and the steps that need to be taken by the international community and establishing new rules to govern high seas fishing through the U.N. Conference to be held on this subject.

Other priorities include managing fisheries relations with France in light of the recent boundary decision, ensuring the Pacific Salmon Treaty negotiations protect Canadian rights and generally protecting Canadian fisheries interests in international conservation and trade activity.

## Income Security Adjustment

A task force has been established to address the needs for income security and adjustment in the fisheries sector, particularly on the Atlantic coast. This group will report to the Minister of Fisheries and Oceans and the Minister of Employment and Immigration. It will address the long-term needs of people engaged in the fisheries and will identify possible initiatives to deal with incomes and with industry adjustment.

## OUR WORK AND RESPONSIBILITIES

In carrying out Fisheries and Oceans' mandate, DFO personnel are engaged in diverse and challenging tasks and activities, working from coast to coast, including the Arctic, in various capacities.

The activities of the Department are varied and multi-dimensional. Employees work from offices, field camps, ships and helicopters. Their talents range from native and community liaison officers, to enforcement officers, fish inspectors, patrol and research vessel officers and crew, scientists with a wide range of disciplines, and policy analysts and advisors.

To ensure that Canadians obtain the maximum economic and social benefit from their fisheries resources, DFO must maintain effective control of domestic and foreign fishing within Canada's 200-nautical-mile fishing limit. Preventing over-exploitation and depletion of fish stocks requires constant surveillance from land, sea and air and readiness to enforce rules when necessary. Surveillance and enforcement are important, not only to the offshore and coastal fishery, but to the inland fishery as well, where fishery officers must watch for threats to habitat, violations of net or area regulations and survey salmon streams and spawning grounds.

Quality and safety of domestic and imported fish and seafood products are the concerns of DFO fish inspectors, who work in laboratories and in the field to



ensure that stringent national standards are met. Their work covers all links in the production chain including vessels, landings, facilities for unloading, handling and transportation, processing plants and finished products.

In essence, the work of DFO employees involved in scientific programs is to develop and communicate a better understanding of Canada's marine and freshwater environments. The scope of fisheries and aquatic research ranges from studies of primary production to physical oceanography and limnology (studies in freshwater) to hydrographic surveying and charting. DFO science programs also address pressing environmental issues of consequence to Canada's aquatic resources including acid rain and the behaviour and effects of marine contaminations.

These examples are the tip of the iceberg. Departmental responsibilities span many other areas, including the administration of commercial fishing and recreational small craft harbours, fisheries development and fish marketing and initiatives in support of international fisheries negotiations. Information on these activities is summarized elsewhere in this publication.

For more detailed information, employees should consult DFO's Annual Report and Part III of the Main Estimates.

## OUR ORGANIZATION

The DFO organization is headed by a Deputy Minister, a Senior Deputy Minister of Corporate Management, an Assistant Deputy Minister of Policy and Program Planning, an Assistant Deputy Minister of Fisheries Operations (formerly the Atlantic Fisheries and the Pacific and Freshwater Fisheries), an Assistant Deputy Minister of Science, and an Assistant Deputy Minister of Regulatory and International Affairs.

DFO's groups are organized in three program areas. This is to ensure that all three are directed as national programs with clear and effective linkages to government priorities.

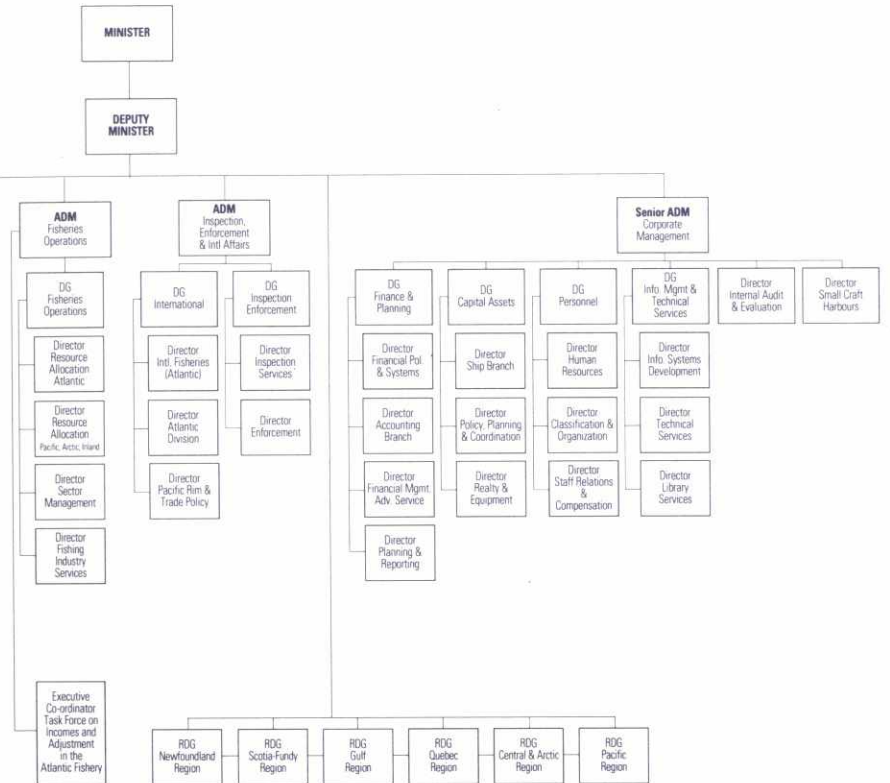
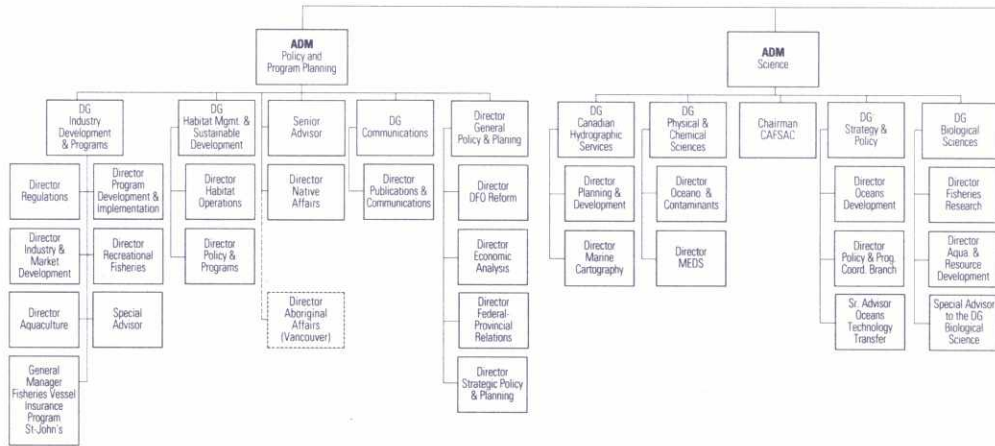
They are:

- Fisheries Operations (formerly the Atlantic Fisheries and the Pacific and Freshwater Fisheries)
- Regulatory and International Affairs
- Science

In addition other activities include:

- Policy and Program Planning, directed by an ADM, responsible for Strategic Policy and Planning. The functions reporting to the ADM Policy and Program Planning are: Habitat Management and Sustainable Development; Strategic Policy and Planning including DFO Reform; Native Affairs; Industry Development and Programs; and the departmental Communications Services.

# DEPARTMENT OF FISHERIES AND OCEANS



- The Corporate Management sector, directed by the Senior Assistant Deputy Minister, is responsible for Corporate Financial Services, Personnel Services, Information and Technical Services, Internal Audit and Evaluation, Capital Assets and Small Craft Harbours.

## Fisheries Operations

**Mandate:** *To conserve, protect, develop and enhance fishery resources and their habitat; to provide for the management, allocation and control of the commercial, Native and recreational fisheries in marine and inland waters; and to maximize benefits from the use of marine resources and to provide relevant services.*

The Fisheries Operation Sector was formed in 1991 and is responsible for all management and development of federal fisheries and habitat in Canada. This responsibility encompasses the provinces and territories and waters within and adjacent to Canada's 200-mile fisheries zone. Specifically, this includes the river systems and lakes in all provinces and territories except those in which authority for the management of inland fisheries has been delegated to the provincial or territorial governments. In Quebec, the provincial government has administrative responsibility for freshwater fisheries and anadromous species (fish that migrate up-river from the sea to breed) such as salmon, and catadromous species (those that migrate from freshwater to the sea to breed) such as eels. In the prairie provinces and in Ontario, the provincial governments assume responsibility for day-to-day management of the inland fisheries.

The federal authority also includes:

- management of Canadian parts of trans-boundary rivers;
- shared management of interception fisheries in international waters.

### **Resource and Industry Development**

DFO's work in this area is aimed at creating supplies of fish for harvesting in cases where natural stock rebuilding has not been effective. The Department also provides assistance to fishing and fishing-related activities in the private sector and administers special economic development programs. Other work is aimed at increasing and diversifying the benefits from the fishery resource through planning and analyzing of new fisheries and aquacultural operations and supports to experimental fisheries.

Resource and Industry Development activities in the Atlantic Fisheries include planning support for special development programs such as ERDA (Economic and Regional Development Agreement), operation of the Newfoundland Bait Service (a commitment under the Terms of Union with that province) and support for experimental fisheries and aquaculture.

In Pacific and Freshwater Fisheries, DFO's activities include programs to rebuild Pacific salmon and fish stocks in the Great Lakes.

The Fisheries Operations sector is responsible for the management and development of Canada's Arctic fisheries; a mission that involves fish habitat management and resource development requirements peculiar to the Arctic. Work in this region centres on the protection and conservation of northern fishery resources, which provides food for Canada's native population and as the basis for valuable commercial and recreational fisheries. DFO is also responsible for aspects of the management of Arctic marine resources and for their sustainable exploitation, particularly by Arctic peoples.

## Regulatory and International Affairs

### **Inspection Services**

**Mandate:** *To ensure that fish and shellfish products for the domestic and export trade meet Canadian and/or foreign country standards covering grade, handling, identity, processing, quality and safety.*

These services include the development, formulation and implementation of national policies, regulations and programs to ensure that Canada produces fish and fish products that measure up to national safety standards, and that imported fish and shellfish products meet minimum standards of identity, quality and safety.

These functions are fulfilled through the operation of DFO's National Fish Inspection Program. The program is conducted under the authority of the following statutes and regulations: the *Fish Inspection Act and Regulations* and the *Sanitary Control of Shellfish Fisheries Regulations*. DFO also enforces parts of the *Food and Drug Regulations* and the *Consumer Packaging and Labelling Regulations* that apply to fish and shellfish products.

### **Regulations and Enforcement**

**Mandate:** *To ensure compliance with the legislation and policies and programs that relate to the conservation of Canada's fisheries resources and to ensure their best use by present and future generations.*

These services include the development and implementation of national and regional compliance policies and programs in support of legislation and management initiatives, to encourage compliance by user groups and the public. Compliance is promoted by information and education activities and enforcement programs are delivered through air, sea and land surveillance programs. There is interaction and coordination with other federal and provincial agencies, eg. as the Royal Canadian Mounted Police, intensive training programs, the most visible interaction is demonstrated by the activities of 750 Fishery Officers. Fishery Officers enforce compliance in all of Canada's tidal waters and in the inland waters of Canada with the exception of Ontario, Quebec and the Prairie Provinces. In those areas, responsibility for ensuring compliance with federal legislation has been delegated to provincial conservation officers.

## **International Fisheries**

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

This DFO activity, conducted in cooperation with External Affairs and other federal government departments, includes negotiation and administration of international fisheries treaties and agreements. International Fisheries also participates in the formulation and representation of Canada's position regarding fisheries trade policy, settlement of boundary disputes and market-access questions. Staff of the directorate also participate in nine international scientific and conservation fisheries commissions.

## **Science**

**Mandate** *To ensure that the highest standard of scientific information 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.*

Science, at DFO, involves these sub-activities:

### **Biological Sciences**

This area includes stock assessment and related research on all major fisheries species (fish, invertebrates, marine mammals and marine plants) and their habitat. This work provides the scientific data and information needed to manage the fishery resources and their habitats. Biological science activities also include aquaculture and ecological research. This is carried out to complement the production of wild stocks, to prevent the spread of fish diseases and to transfer new technology to the aquaculture industry.

### **Physical and Chemical Sciences**

Activities under this heading encompass the study of the ocean's physical and chemical properties, processes and phenomena as they relate to:

- living marine resources;
- safety and efficiency of marine operations;
- climate and the effect of the oceans on climate;
- behaviour of organic and inorganic materials and their impact on fish and ecosystems; and
- monitoring and study of contaminants and their occurrence in fish and fish habitat.

DFO scientists provide data to clients in government and industry, including regulatory agencies. They also develop and transfer marine technology to the ocean industry.

## **Hydrography**

The mission of the Canadian Hydrographic Service is to promote and facilitate safe use of Canada's navigable waters. Its work includes bathymetric, tide and current surveys and the preparation and distribution of navigational charts, tide and current tables, sailing directions and related publications. These activities are essential to commercial mariners, fishermen, recreational boaters and the Canadian Navy.

Technological development is an important aspect of all DFO Science activities. This is particularly true of aquaculture and resource development, ocean sciences and hydrography. DFO routinely transfers proven technology it develops to the Canadian oceans industry.

## **Corporate Management**

*Mandate: To provide executive direction and coordination and corporate administrative services and human resource planning in support of DFO's program objectives. This includes directing acquisitions and providing the framework for management of the department's capital resources and assets.*

Corporate Management's function is to ensure that the Department is served by a well organized and coherent management process and is provided with the information needed for planning, control and decision-making. The organization also provides administrative, personnel, information and technical services, internal audit, evaluation, and financial support to all DFO sectors.

## **Capital Assets Management**

This sub-activity involves the management of DFO's capital assets, which comprise Small Craft Harbours and all other departmental assets, such as special-purpose buildings and other facilities, vessels and a wide range of equipment. These assets are indispensable to the delivery of Fisheries and Oceans' management, inspection and science programs.

## **Regional Policy and Administration**

This part of the organization includes the offices of six Regional Directors General and the regional executive. It provides functions such as economic and commercial analysis, administration of small craft harbours, and administrative and support services, in the Department's six regions.

## **Policy and Program Planning**

*Mandate: To provide assessment, analysis and policy and program planning advice respecting the current and future direction of Canadian fisheries and oceans interests.*

This Sector is responsible for functions that relate to strategic planning and policy development of the Department. This development may reflect new initiatives of different approaches to existing policies and programs and is

designed to reflect the changing environment within which the DFO operates. The DFO reform initiative, the proposed reform of the administration of current licensing and allocation in the commercial fishery, is a responsibility of Policy and Program Planning. The following corporate functions are also the responsibility of Policy and Program Planning: Strategic Policy and Planning, Habitat Management and Sustainable Development, Industry Development and Programs, Aboriginal fisheries, and corporate Communications. Strategic Policy and Planning includes policy development and coordination, economic analysis; federal/provincial relations; recreational fisheries programs and policies; and administration of the Fishing Vessel Insurance Program and the *Fisheries Improvement Loans Act*; and the provision of policy analysis and advice for the Fisheries Prices Support Board, the Canadian Saltfish Corporation and the Freshwater Fish Marketing Corporation.

## OUR REGIONS

Most of DFO's employees work in a network of regional offices, research establishments and laboratories throughout Canada. About eleven per cent work in the National Capital Region.

DFO's effectiveness in fulfilling its mission depends first and foremost on the strength of our regional operations units and the ability of these front-line units to meet specific resource and geographic needs across Canada.

Following are thumbnail sketches of each of DFO's six regions.

### Newfoundland

The Newfoundland Region comprises the province of Newfoundland and Labrador and adjoining marine waters.

For more than four centuries, the socio-economic history of the province – as a colony, as an independent region and as a member of the Canadian Confederation – has been dominated by the fishery. Perhaps in no other part of Canada is there such a deep sense, in virtually the entire population, of the vital importance of this historic industry.

The commercial fishery is overwhelmingly a groundfish fishery with cod the dominant species.

Newfoundland also has a small but growing high-tech oceans science and technology industry.

### Scotia-Fundy

The Scotia-Fundy Region covers a land area of 72,124 square kilometres, with 3,452 kilometres of coastline. The Region manages fish resources for the commercial, native and recreational fisheries, and provides fisheries science, fish inspection and harbour support for the Scotia Shelf, Bay of Fundy

and Georges Bank. It also maintains habitat management in inland rivers, streams, and lakes within the regions boundaries in Nova Scotia and New Brunswick. The Region is also responsible for hydrographic surveying and charting, and physical, chemical, and biological process studies throughout the Atlantic and Eastern Arctic zones.

The Region has a year-round, highly diversified fishery. In 1990, the Scotia-Fundy commercial fishery included 14,620 fishermen, 5,829 fishing vessels, 300 active fishing harbours, and 388 federally registered fish processing plants employing 11,829 workers. The rural distribution of much of the fishery makes an important contribution to the economies of small communities.

In 1990 the Scotia-Fundy commercial fishery landed 522,400 tonnes of fish, valued at \$436.5 million. Processing this catch approximately doubles this value. Provincial export income for fisheries products in 1990 was \$743.2 million for Nova Scotia and \$215.1 million for New Brunswick. Added to this is the growing value from the recreational fishery.

The oceans science and technology industry is strongly represented in Scotia-Fundy and relays on DFO scientific support and science programs.

## Gulf

DFO established the Gulf Region in 1981. This was done in recognition of the fact that the Gulf of St. Lawrence constitutes a single ecological and socio-economic complex that requires its own management regime.

The region, geographically one of DFO's largest, comprises the Gulf coasts of New Brunswick, Nova Scotia, and Prince Edward Island.

The region's fishery is the traditional source of livelihood for 1,000 or more small towns, villages and other settlements on the shores of the Gulf of St. Lawrence.

## Quebec

The Quebec Region covers more than 6,000 kilometres of coastline. In 1990, the Region served a fisheries sector which included 5,426 fishermen, 2,457 vessels and 109 fish processing plants. The Region manages more than 380 small craft harbours. It furnishes hydrographic services for navigation and responds to the research needs of industry in matters related to exploitation of ocean resources. A total of 74,330 tonnes of fish valued at \$74.1 million were landed in 1990.

DFO's newest marine science research centre, the Maurice-Lamontagne Institute is located in the Region at Mont-Joli, and is active in the areas of fisheries, oceanographic and hydrographic research. An ultra-modern and highly sophisticated fish inspection centre, the René-Poirier Laboratory, is located near Montréal, the second largest point of entry and export of fish in Canada.

Since 1984, DFO has assumed the entire responsibility for managing the marine fishery in Quebec, except for anadromous and catadromous species which are managed by the province. This federal/provincial arrangement is new for Quebec and has brought about an unprecedented restructuring of the Quebec Region's marine fisheries.

## Central and Arctic

DFO's Central and Arctic Region represents 64 per cent of the area of Canada, encompassing four provinces and the Northwest Territories. The region contains about 67 per cent of our country's freshwater and seven of the 14 largest lakes in the world.

DFO's science activities in this region are internationally recognized. They support activity in four areas of the federal fisheries mandate:

- conservation, management and protection of the Arctic fishery resources;
- development and rehabilitation of the fishery resources throughout the region;
- protection of freshwater fish habitat; and
- support of cleanup and preservation initiatives in the Great Lakes.

Recreational fishing is particularly important in this region, which accounts for 60 per cent of Canada's recreational anglers. Indeed this is a region in which recreational fishery landings exceed the commercial catch.

About 50 per cent of the commercial catch is marketed through a crown corporation the Freshwater Fish Marketing Corporation.

## Pacific

The Pacific Region oversees west coast marine resources and the inland fisheries of the Yukon Territory. Because the region is entrusted with managing and protecting Pacific salmon, it is involved with 105 river systems in B.C. as well as two transboundary northern rivers: the Stikine and Taku.

Salmon is the best known and most valuable west coast fishery, the management of which presents Pacific Region with an immense challenge. Among the key priorities for this Region are the conservation of the salmon resource, and management of the native fishery.

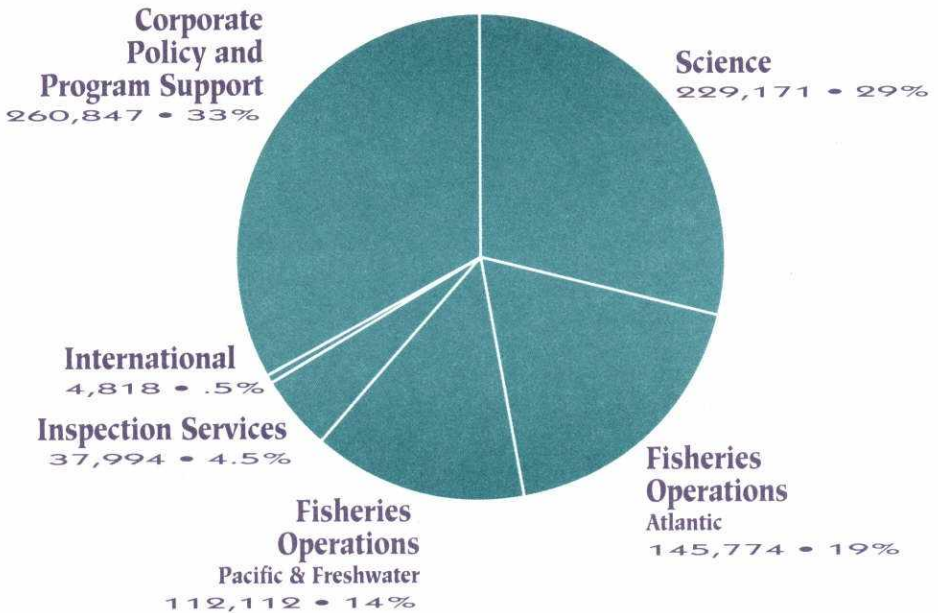
This DFO region is home to a large segment of Canada's oceans science and technology industry.

# Our Resources

## DEPLOYMENT OF RESOURCES

*By Activity \**  
1992-93

*Funding (\$000)*  
Total: 790,716

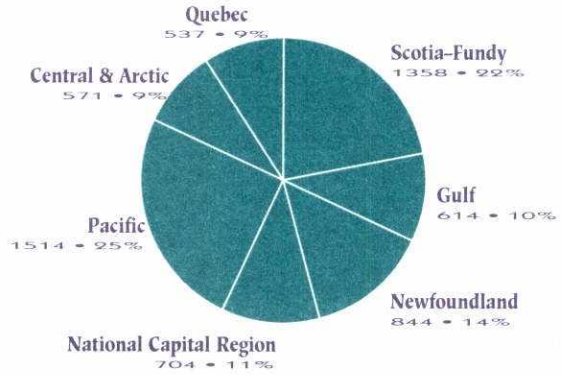


\* Extracted from DFO 1992-93 Estimates, (Part III, Expenditure Plan)

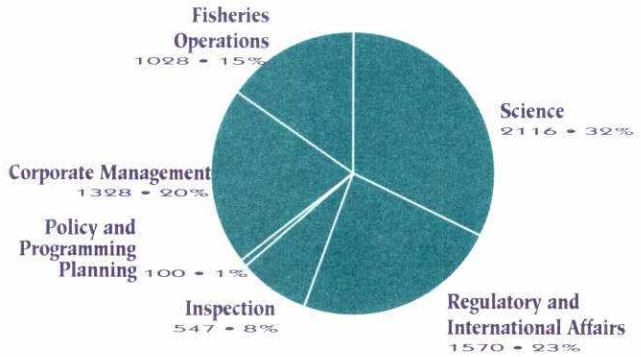
# POPULATION DISTRIBUTION

Total Population: 6142

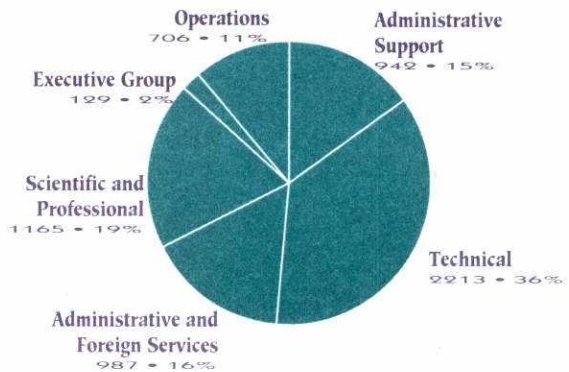
## By Region



## By Sector



## By Category



## CAPITAL ASSETS

The value of Fisheries and Oceans' capital assets is estimated at \$4.4 billion. The inventory includes ships and specialized equipment, boats, vehicles, widely dispersed onshore support facilities, buildings, laboratories, small craft harbours, enhancement works, laboratory equipment and inventories comprising a vast array of small equipment items.

## BUILDINGS AND WORKS

DFO's work goes forward at nearly 800 DFO-operated special-purpose facilities with an estimated replacement value of \$1 billion. These installations range from the large scientific institutes listed below to smaller laboratories, hatcheries, field camps, and other minor works such as water gauge stations and repeater sites. In addition, DFO occupies approximately 300 field offices and storage facilities provided by Public Works Canada to permit decentralized delivery of service to clients.

## Research Institutes (by DFO Region)

### *Pacific*

Pacific Biological Station, Hammond Bay Road,  
Nanaimo, B.C. V9R 5K6 - (604) 756-7000;

Institute of Ocean Sciences, 9860 West Saanish Road, Box 6000, Sidney,  
B.C. V8L 4B2 - (604) 356-6517;

West Vancouver Laboratory, 4160 Marine Drive,  
West Vancouver, B.C. V7V 1N6 - (604) 666-4813.

### *Central and Arctic*

Freshwater Institute, 501 University Crescent,  
Winnipeg, Man. R3T 2N6 - (204) 983-5000;

Bayfield Institute, 867 Lakeshore Rd., Box 5050,  
Burlington, Ont. L7A 1A6 - (416) 336-4871.

### *Quebec*

Maurice Lamontagne Institute, 850 Route de la Mer, Box 1000,  
Mont-Joli, Que. G5H 3Z4 - (418) 775-6553.

### *Gulf*

Gulf Fisheries Centre, Box 5030,  
Moncton, N.B. E1C 9B6 - (506) 851-6227.

## ***Newfoundland***

Northwest Atlantic Fisheries Centre, Box 5667,  
St. John's, Nfld. A1C 5X1 - (709) 772-2020.

## ***Scotia-Fundy***

Bedford Institute of Oceanography, Box 1006,  
Dartmouth, N.S. B2Y 4A2 - (902) 426-2373;

St. Andrews Biological Station,  
St. Andrews, N.B. E0G 2X0 - (506) 529-8854;

Halifax Fisheries Research Laboratory, 1721 Lower Water St., Box 550,  
Halifax, N.S. B3J 2S7 - (902) 426-7444;

Regional Fish Inspection Laboratory, 1707 Lower Water St., Box 550,  
Halifax, N.S. B3J 2S7 - (902) 426-2373

## **Centres of Disciplinary Expertise (CODES)**

In 1986, DFO established Centres of Disciplinary Expertise (CODES) in existing facilities to focus departmental studies in areas critical to fisheries and aquatic research. The CODE network now comprises:

### ***Newfoundland***

*Atlantic Resource Assessment and Survey Methodology Centre,*  
Northwest Atlantic Fisheries Centre, St. John's, Nfld.

### ***Scotia-Fundy***

*Centre for Biological Oceanography,*  
Bedford Institute of Oceanography (BIO), Dartmouth, N.S.

*Centre for Marine Contaminants and Toxicology,* BIO.

### ***Quebec***

*Centre of Scientific Expertise for Parasitology,*  
Maurice Lamontagne Institute, Mont-Joli, Que.

### ***Central and Arctic***

*Centre for Freshwater Fisheries Contaminations and Toxicology,*  
Freshwater Institute, Winnipeg, Man., and Bayfield Institute, Burlington, Ont.

### ***Pacific***

*Centre for Genetics and Biotechnology for Aquaculture,*  
West Vancouver Laboratory, West Vancouver, B.C.

*Centre for Ocean Climatic Chemistry,*  
Institute of Ocean Sciences, Sidney, B.C.

## Enhancement Facilities

There are approximately 170 departmental enhancement facilities across Canada, ranging from fish hatcheries and culture stations to fishways and fish ladders. The purpose of these is to promote enhanced yields to the fisheries. They also conduct research in areas related to commercial aquaculture production.

## HARBOURS AND VESSELS

### Harbours

DFO's Small Craft Harbours (SCH) Directorate manages and administers over 1,400 commercial fishing and 800 recreational small craft harbour facilities throughout Canada.

Newfoundland	405
Scotia-Fundy	394
Gulf	351
Quebec	381
Central & Arctic	496
Pacific	228
<b>TOTAL</b>	<b>2,255</b>

Each year, DFO undertakes hundreds of maintenance and other programs to ensure the safety of the people and vessels using these harbours and to ensure continuity of service.

There has been a move in recent years to increase public participation in the management of harbours through community-based Harbour Authorities.

### Vessels

Fisheries and Oceans operates an extensive fleet made up of department-owned and chartered vessels. These vessels are used for biological, physical and chemical scientific research fisheries management, hydrographic surveys, surveillance and enforcement and in support of programs of other departments, agencies and institutions.

## Major DFO Vessels

Region	Name	Primary Purpose	Year Built	Life Expectancy	Vessel Length	Home Port
Nfld	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.
Scotia-Fundy	Chebucto	Fisheries Patrol	1966	35	55	Dartmouth, N.S.
	Cygnus	Fisheries Patrol	1982	25	62	Dartmouth, N.S.
	Alfred Needler	Fisheries Research	1982	25	50	Dartmouth, N.S.
	E.E.Prince	Fisheries Research	1966	25	40	Dartmouth, N.S.
	Parizeau	Oceanography Hydrography	1967	35	65	Dartmouth, N.S.
	Hudson	Oceanography Hydrography	1963	40	91	Dartmouth, N.S.
	F.C.G. Smith	Hydrography	1986	25	35	Dartmouth, N.S.
	Matthew	Hydrography Oceanography	1990	25	51	Dartmouth, N.S.
Quebec	Pierre Fortin	Fisheries Patrol	1975	25	32	Quebec City, Que.
Central & Arctic	Limnos	Limnology Hydrography	1968	25	45	Burlington, Ont.
	Louis M. Lauzier	Limnology	1976	25	37	Burlington, Ont.
Pacific	James Sinclair	Fisheries Patrol	1981	20	37	Sidney, B.C.
	Tanu	Fisheries Patrol	1968	35	52	Sidney, B.C.
	Vector	Oceanography Hydrography	1967	25	40	Sidney, B.C.
	John P. Tully	Hydrography Oceanography	1985	25	69	Sidney, B.C.
	W.E. Ricker	Fisheries Research	1978	25	55	Nanaimo, B.C.

## TOOLS OF SCIENCE

State-of-the-art scientific equipment and software is used by DFO in its day-to-day science operations. Major tools used by the Department and developed with its assistance include:

**Optical Zooplankton counter:** a device which counts and sizes the minute aquatic life-forms known as zooplankton.

**The Through-Ice Bathymetry System (TIBS)** is a helicopter-borne electromagnetic ranging instrument designed primarily to measure water depth through ice.

**COWLIS (Coastal and Ocean Water Level Information System)** is an automated information system capable of providing water levels and tides in near real-time.

**The Spatial Information Management System (SIMS)** is a software package for high-volume database management.

**CARIS (Computer-Aided Resource Information System)** is a Geographic Information System (GIS) designed for the creation and retrieval of hydrographic data and the digital production of nautical charts.

**ISAH (Integrated System for Automated Hydrography)** is a data logger which records water-depth data while at the same time acquiring data received from various positioning systems. ISAH is used as a precise navigation aid.

**The Differential GPS (Global Positioning System)** is designed to enhance the precision and reliability of shipborne and airborne positioning systems used in hydrographic operations.

**HIPS (Hydrographic Information Processing Software)** is a high-density, high speed data processing system.



# Our Clients

## OUR RAISON D'ÊTRE: OUR CLIENTS

We strive to manage and protect Canada's aquatic resources and to facilitate their development and use for the maximum benefit of the people of Canada – their owners and users.

The Department of Fisheries and Oceans is committed to achieving the sustainable development of Canada's living marine resources. This commitment is supported by sector specific policies, (e.g., the Fish Habitat Management Policy), strategy statements (e.g., the federal Oceans Strategy), and management strategies (e.g., setting fisheries allowable catches to ensure the conservation and rebuilding of fish stocks). Fisheries stakeholders are a part of planning and decision making across Canada, not only in fisheries management but also in fish habitat management. For example, the recently signed Fraser Basin Management Program will provide a unique opportunity for the three levels of government to provide the basis for multisectoral planning, integrated resource management, and the rehabilitation and restoration of the environment. All this will be achieved through a management board that will ensure that a broadly based advisory and decision-making process is implemented with the intention of achieving comprehensive sustainable development in the near future.

In the Oceans Strategy – a policy statement adopted in 1987 – the federal government commits itself to realizing for Canadians the full potential of these resources, in terms of economic and scientific benefits, and in terms of sovereignty. DFO's Science Sector is responsible for implementing this government-wide policy.

The following statistics show the scope and significance of the Department's ocean and freshwater responsibilities.

- Canada, with the world's largest coast line (244,000 kilometres) borders the Atlantic, Pacific and Arctic oceans.
- Canada has over 785,000 square kilometres of fresh water, 16 per cent of the world's total, and about 9 per cent of the total flow of all the world's rivers.
- Canada possesses some of the richest fishing grounds in the world, and the largest untapped reserves of offshore oil and natural gas.
- Canada's oceans and ocean resources are directly responsible for more than \$6 billion of the country's national income and for more than 165,000 jobs.
- One quarter of Canada's Gross National Product is based on foreign trade. More than half of this trade is transported by water.

DFO's responsibilities in this area include:

- ensuring that all fisheries in the ocean and inland waters are managed and protected in the best interests of the people of Canada;
- working to secure pollution-free marine and freshwater environments for the benefit and enjoyment of Canadians;
- ensuring the wholesomeness of fish and shellfish products and their suitability for public consumption;
- putting the interests of Canadians first in all international dealings and negotiations that relate to fisheries, while cultivating stable relationships and maintaining fair positions;
- ensuring that small craft commercial fishing and recreational harbours are in a good state of repair and that their management promotes maximum safety and benefit for users;
- disseminating data and information, including scientific, economic and general interest material on all aspects of Canada's fisheries and oceans;
- providing the up-to-date and accurate charts, tide tables, and sailing directions needed to permit safe navigation of Canadian waters; and
- meeting the needs of all those who depend on historic and real-time, site-specific data on waves, currents, ice movements and wind and weather conditions, material which is vital to, among others, those responsible for the design and safe operation of the petroleum industry's offshore exploration platforms and oil rigs.

In addition, through contracting-out and procurement, DFO plays an important part in the development of many small and medium-sized Canadian companies in the ocean technology sector. This activity stimulates the development and transfer of technology as well as the provision of data and services to the industry.

DFO's fisheries management and development functions benefit all users of Canada's fishery resources. This very large client group includes all commercial, recreational, and native fishermen, fish-plant owners and workers, people in related supply industries, and consumers of fish products.

While other federal government Departments such as Environment, Energy, Mines and Resources, Transport and Defence have their own specific ocean responsibilities, DFO is responsible for all matters in this sector that are not assigned by law to any other departments. DFO is also responsible for coordinating the oceans-related policies and programs of the federal government. The Oceans Strategy mentioned above is the main instrument of that coordination.

As the federal Department entrusted with primary responsibility for Canada's oceans, DFO is committed to the quest for the knowledge that this country needs to use and navigate Canada's ocean areas, to exploit their resources, and to protect them environmentally.

Among the key challenges facing DFO are reconciling pressures from competing uses of the oceans resources and the vital need to observe the principles of sustainable development in this sector.

## THE FISHERIES AND OCEANS SECTORS IN PROFILE

### Fisheries

Canada, with one of the world's largest commercial fishing industries, is the world's leading exporter of fish and fish products.

The Canadian fishing industry employs more than 130,000 people directly or indirectly.

While commercial fishing accounts for less than 1 per cent of Canada's GDP, it is an extremely important contributor to the economies of the coastal provinces. More than one quarter of the people of the Atlantic region, for example, live in 1,300 fishing communities, half of which depend completely on the fishing industry for their existence.

#### **Coastal Landings**

*Landed values by selected species  
(value in \$ 000)*

Atlantic Coast (1990)		Pacific Coast (1990)	
Species	Value	Species	Value
Cod	243,871	Salmon	263,401
Lobster	227,797	Herring	73,169
Scallop	86,962	Halibut	21,065
Herring	37,616	Redfish	18,433
Flatfishes	36,272	Clams	16,000
Mackerel	6,210	Shrimps	9,643
Other	314,358	Other	76,481
<b>TOTAL</b>	<b>953,086</b>	<b>TOTAL</b>	<b>478,192</b>

#### **Inland Fisheries Landings (1989)**

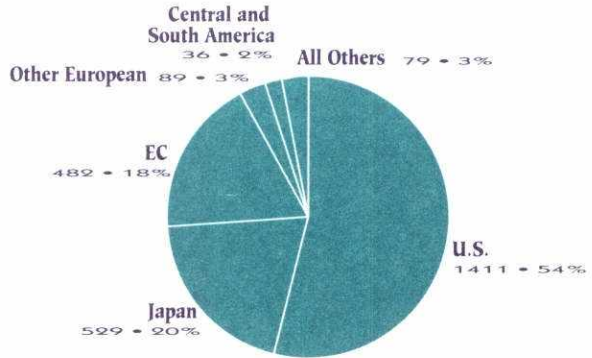
*(Ontario, Manitoba, Saskatchewan, Alberta and N.W.T.)*

Species	Value
Pickereel	19,834
Yellow Perch	27,194
Whitefish	13,217
Northern Pike	3,170
Smelt	2,770
Lake Trout	1,402
Other	15,103
<b>TOTAL</b>	<b>82,690</b>

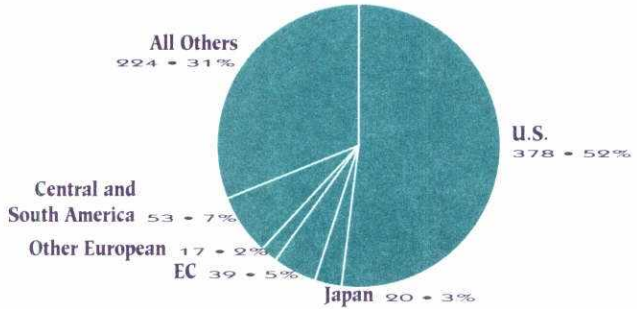
*All figures preliminary*

## TRADE (value in \$ million)

### Exports



### Imports



## Aquaculture

Aquaculture, the cultivation of aquatic life, is a rapidly expanding industry in Canada and one whose total economic value is expected to double by the year 2000.

In 1990, Canada's commercial aquaculture industry produced 10,528 tonnes of molluscs and 25,933 tonnes of fish, with a value of approximately \$196 million. Total production increased by 20% over 1989 levels. This represents 6% of the total value of commercial fisheries production. Total revenues generated by suppliers to the aquaculture industry in 1990 have been estimated at \$266 million, including exports.

The main species cultured continue to be salmon, trout, oysters and mussels. In the salmon sector, Atlantic salmon is beginning to overtake Pacific (chinook and coho) salmon as the principal species on both coasts. Arctic charr culture is attaining commercial status in the finfish sector. In the shellfish sector,

culture of the Manila clam (west coast) and scallops (east coast) is attaining commercial status.

It is estimated that the production of aquaculture accounts for approximately 1,885 direct jobs while the suppliers to the aquaculture industry account for another 1,770 jobs, for a total employment contribution of 3,655 jobs. With economic linkages, it is estimated that aquaculture accounts for approximately 5,200 jobs in Canada.

## Recreational Fisheries

Every five years, in collaboration with provincial and territorial sport fishing agencies, DFO conducts the Survey of Sport Fishing in Canada. The preliminary results of the 1990 survey, shown below, confirm the importance and value of the recreational fishery.

- 5.2 million Canadians and over one million tourist anglers fished in Canada's marine and inland waters.
- Adult anglers fished on a total of 67 million days.
- An estimated 296 million fish were caught by anglers and over 149 million were retained.
- Anglers spent \$4.7 billion on goods and services directly related to sport fishing.

## Native Food Fisheries

Many aboriginal communities depend heavily on fish as a source of food. Access to fish and involvement in fish management are key components of native land claims, which are currently being negotiated in the Yukon and Northwest Territories, Labrador, Quebec and British Columbia. The Department of Fisheries and Oceans has also undertaken an Aboriginal Fisheries Strategy to integrate native people into the management of the resource and provide economic benefits related to the fishery.

There are approximately 20,000 Indians in Atlantic Canada, and fish play an important part of their way of life. As part of managing the native fishery, DFO and bands are cooperating in projects, such as enhancement and habitat restoration programs. The native food fishery is particularly important in British Columbia, where there are approximately 88,000 status and an estimated 20,000 non-status Indians. The B.C. native food catch is made up for the most part of salmon, and about one million are harvested each year. This represents two to five per cent of the total annual salmon catch. In addition, native people play an active part in the commercial fishing industry in British Columbia.

In the Canadian Arctic, the native peoples are the primary users of the fishery resource and as such have a vital interest in the management and development of Arctic resources. The aboriginal people living in the Yukon

and Northwest Territories are participants in the land claims process, which addresses participation in the management of, and access to, natural resources.

## Oceans

### *Oceans Manufacturing and Services Sector*

Canada is one of very few nations of the world with internationally competitive capabilities in the multi-disciplinary fields of oceanography and hydrography. There are 440 oceans manufacturing and services firms in Canada: one third in western Canada, one third in central Canada and one third in eastern Canada. B.C. has the largest number of companies (15). In terms of earnings, Ontario and Alberta generated two thirds of total Canadian revenues, followed by B.C. In Atlantic Canada, Nova Scotia had the highest earnings. The majority of companies in Canada's oceans manufacturing and services sector are small and privately owned and among them they provide direct employment to about 6,000 people.

The manufacturing sub-sector of the oceans industry produces software, hardware and other items for oceanographic, hydrographic, diving and other operational marine uses and for marine remote-sensing, submersible and seabed systems.

The services sub-sector covers a large range of activities based in engineering, sciences, consulting and surveying, including aerial surveys of ocean and other marine areas. Many of these companies also develop or adapt advanced technologies for innovative applications.

### *Oceans Sector*

Sales and firms (1989)

Sub-sector	Approx. No. of Firms (1989)	Sales, 1989 (\$ millions)
Oceans manufacturing (including 75 electronics firms)	150	385
Oceans Services and Consultants (including engineering, surveying and diving)	290	378
<b>TOTAL</b>	<b>440</b>	<b>763</b>

### *An international industry*

The sector is highly entrepreneurial and outward-looking and Canadian products and skills are in use in more than 80 countries. The industry believes that its largest future market opportunities lie in meeting the needs of developing coastal states which, in recent times, have acquired jurisdiction over 200-mile Exclusive Economic Zones.

The Canadian oceans manufacturing and services industry has developed in response to the commercial demand created by the establishment of national institutes in marine, fisheries, environmental and resource sciences and engineering, government contract and R&D spending. Additional stimulus has come from maritime defence requirements and from offshore oil and gas exploration activities over the past quarter of a century.

With the downturn in offshore oil and gas activity of recent years, governments in general and the federal government in particular have become these companies' most important customers. In addition to purchasing products from the industry for its programs, the federal government's funding of private sector R&D has been a significant factor in the financial health of the industry. It has also been the source of many innovative products and techniques which have been applied in Canada and also sold abroad.

Because of the Department's impressive record in contracting-out and in stimulating technology development, the industry continues to look to the Department for support and leadership and is a direct beneficiary for many of its science services.

### ***Offshore Oil and Gas***

Canada's offshore areas contain substantial reserves of oil and natural gas. The East Coast offshore region alone has 30 per cent of Canada's oil potential and 17 per cent of its gas potential.

The oil and gas industry has invested heavily in exploration and development work offshore of Canada. Between 1982 to 1988, expenditures for offshore drilling totalled more than \$8 billion. Since 1988, drilling activity has declined, but there are plans for future exploration and development. The projected development of the Hibernia oil field off Newfoundland will be the single largest, most technically advanced petroleum project in Canadian history.

Offshore exploration in Canada faces unique challenges such as great distances from supply bases, exposure to open ocean weather, drifting pack ice, icebergs and the multiple-year ice of the Arctic Ocean. New technologies, improved environmental information and specialized scientific services will be required to meet these challenges.

### ***Offshore Mining***

Historically, the private sector has not shown a widespread interest in exploring and developing offshore mineral resources. This has been due to generally unfavourable and uncertain industry conditions.

Gold, silicate sand, and sand and gravel deposits in Canada's oceans have the greatest likelihood of being developed in the foreseeable future. In the long term, there may be some potential for ocean mining in the seabed beyond Canada's 200-mile zone.

## ***Marine Shipping***

In 1989, there were 303 Canadian marine carriers. Among them they operated 2,000 vessels, employed 15,306 crew members and generated gross revenues of \$2.2 billion.

Canada has concentrated on development of its lake and seaway fleet because of its importance to the domestic economy and the need for efficient, economical transportation of the country's resource materials. More recently, lake vessels have been built that have ocean-going capability.

## ***Shipbuilding and Repair***

The Canadian shipbuilding industry comprises 14 large shipyards each employing approximately 100 workers. Also in operation are 50 or so smaller yards and repair shops. The large yards account for 90 per cent of employment and 90 per cent of total Canadian shipbuilding and repairs.

The governments of Newfoundland, Nova Scotia, P.E.I. and Quebec own or have an interest in a number of Canadian shipyards.

# Our History

## MILESTONES

**1867**

After Confederation, fisheries responsibility was assumed for several years by the Fisheries Branch of the Crown Lands Branch of the united Canadas (Ontario and Quebec). In the other provinces, no similar organization existed. With the *Constitution Act* of 1867, “seacoast and inland fisheries” were designated as one of the exclusive responsibilities of the new Dominion Government.

The Honourable Peter Mitchell, a Father of Confederation, and former Premier of New Brunswick, became Canada’s first fisheries minister.

**1868**

The *Fisheries Act* creating the Department of Marine and Fisheries was given royal assent on May 22.

**1881**

The Fisheries Branch of the Department of Marine and Fisheries employed nearly 700 officers, overseeing a \$16 million industry that exported 40 per cent of its production.

Under the direction of Dr. Boulton of the Royal Navy, the Great Lakes Survey was founded, the predecessor of the Canadian Hydrographic Service.

**1898**

The importance of scientific research in the management of fisheries matters was officially recognized with the setting up of a floating marine biological station at St. Andrews, N.B., with Fisheries Commissioner Dr. Edward E. Prince as Director of the Board of Management, which later to become the Biological Board of Canada, the forerunner of the Fisheries Research Board of Canada.

**1901**

The first issue of what is now the world renowned *Canadian Journal of Fisheries and Aquatic Sciences* was published under the title *Contributions to Canadian Biology*.

**1904**

In this year, the fisheries protection fleet had eight armed patrol vessels all exceeding 100 feet.

The Canadian Hydrographic Service (CHS) was founded.

## 1908

Parliament set up the *Standing Committee on Marine and Fisheries*.

## 1914

The first *Fish Inspection Act* was promulgated.

## 1920

The Department introduced stronger fish inspection measures with a new *Fish Inspection Act* which made inspection compulsory for all pickled fish.

## 1928

The Supreme Court ruled that jurisdiction over fish processing plant licences was *ultra vires* (beyond the power or authority) of the federal parliament. This, and preceding decisions, formed a definition of federal-provincial fisheries jurisdictional powers, which still largely prevails.

## 1937

In pre-war and early wartime years, the departmental headquarters in Ottawa comprised five major divisions and a regional fisheries division, Promotion and Inspection; Fish Culture; Publicity and Statistics (including a Director of Publicity, a Publicity Agent and two demonstrators and lecturers); Purchasing; and Administration.

## 1939

Fisheries operations were hampered by wartime activities but heavy food demands resulted in record market values for fishery products.

## 1947

The Department began a vigorous reorganization and re-orientation. With the start of the post-war era, departmental work and services became defined by function rather than region. Branches included Conservation and Protection; Inspection and Consumer; Marketing and Economic; Industrial Development; Information; a revitalized Fish Culture branch; and various support services.

The *Fisheries Prices Support Act* came into force, giving the Fisheries Prices Support Board the usual statutory powers of a government corporation. The Board was given responsibility for conducting investigations and, when appropriate, recommending action under the Act to support prices of fishery products where declines had occurred.

In the 1940's Canada signed an International Shellfish Agreement with the U.S.A.

## 1949

In response to the internationally perceived problem of reduced Atlantic fish stocks, the *International Convention for the Northwest Atlantic Fisheries*

(ICNAF) was signed by Canada and nine other members. The convention came into force in 1950.

### 1953

The federal inspection branch began enforcing compulsory minimum standards nationwide. Inspection became systematic, supported by staff and labs dispersed across the country.

### 1962

The Department of Oceanography at Dalhousie University was founded. The Bedford Institute of Oceanography was opened as an Institute of the Department of Mines and Technical Surveys.

### 1963

CSS Hudson was commissioned as Canada's first research vessel designed specifically for Oceanographic research and hydrographic surveying.

### 1964

The first federal-provincial ministerial conference on fisheries was held in Ottawa. According to the Department of Fisheries' annual report of that year, a spirit of cooperation existed between all ten provinces and the federal government.

### 1969

As a result of a Royal Commission investigation of the freshwater fisheries in Canada, the Freshwater Fish Marketing Corporation was set up to market freshwater fish from northern Ontario, the prairie provinces and the Northwest Territories.

### 1970

The *Canadian Saltfish Corporation* was established by the *Saltfish Act* for the purpose of "improving the earnings of primary producers of cured saltfish". The corporation operated under enabling legislation in the province of Newfoundland and the Lower North Shore of the province of Quebec.

### 1973

To achieve better control and coordination of research and development in the aquatic resource field, the Department assumed direct responsibility for all scientific research programs and facilities previously under the direction of the *Fisheries Research Board of Canada* (FRB). The 75-year-old FRB, a largely independent departmental research arm up to this time, became an advisory body until disbanding six years later.

Responsibility for commercial and recreational small craft harbours in Canada, formerly held by Public Works and Transport, was transferred to the Department.

## 1977

In company with some 100 of the world's coastal states, Canada extended its fishing waters from 12 to 200 nautical miles, adding 632,000 nautical square miles of ocean to the area over which it exercised responsibility for fisheries management. Following the extension of jurisdiction, the ICNAF Convention was replaced by the *Northwest Atlantic Fisheries Organization* (NAFO) which manages stocks located outside the 200-mile zone on the Flemish Cap and shares management responsibility with Canada for stocks that straddle the boundary of the Nose and Tail of the Grand Banks.

## 1979

The Department of Fisheries and Oceans (DFO) was created under the *Government Organization Act*, 1979. The new department was made up of elements which had functioned as the Fisheries and Marine Service in the previously titled Department of Fisheries and the Environment.

## 1985

With the signing of the *Pacific Salmon Treaty*, Canada and the U.S. agreed to work together to build and manage the Pacific salmon stocks. The *Pacific Salmon Commission* was subsequently set up under the treaty.

## 1986

Major changes in DFO's organization were made. DFO increased the coherence and visibility of its scientific effort with the consolidation of the Fisheries Research and Ocean Science and Surveys programs under a newly created ADM position. The position of Director General, Inspection was created to strengthen the inspection system.

The Foreign Fisheries Relations Policy was announced. It establishes fisheries conservation as Canada's priority in fisheries relations with other countries.

## 1987

The Maurice Lamontagne Institute officially opened at Mont-Joli, Quebec. This was the first departmental research institute to integrate, within a single complex, Fisheries and Oceans' activities of DFO's three science programs, and the first in which French was the working language.

DFO is actively involved in the St. Lawrence Action Plan to help preserve the biological diversity of the St. Lawrence.

## 1988

May 22 marked the 120th anniversary of the *Fisheries Act*, which since its introduction during the first session of Canada's parliament has been amended some 40 times.



## 1989

Agreements were signed to refer the Canada-France boundary dispute to international arbitration and to establish quotas for French vessels in Canadian waters during the period of arbitration.

## 1990

The Atlantic Fisheries Adjustment Program was announced. It has two main goals. One to ensure the existence of a viable fishery over the long term for Atlantic Canadians. The other is to help individuals and communities in the fishery to adjust to the decline of fish stocks and the closure of major fish plants.

The Canada-United States Fisheries Agreement was signed.

The Supreme Court of Canada, in the Sparrow decision, confirmed that where native people can establish an aboriginal right to fish for food, social and ceremonial purposes, this right takes priority over other users and is subject to conservation of the resource.

## 1991

DFO integrated the former Pacific and Freshwater Fisheries and Atlantic Fisheries Sectors into one Fisheries Operations Sector.

The *Fisheries Act* was amended to allow for increased penalties for violations, stronger fisheries management and enforcement and better protection of fish habitat.

The Minister of Fisheries and Oceans announced a public-consultation program as a first step in the reform of the administration of licensing and allocation policies.

The *North Pacific Anadromous Stocks Convention* and the *North Pacific Marine Science Organization Convention* were signed by Canada and other North Pacific nations.

## DFO MINISTERS — 1867 to present

1867-1873	Peter Mitchell	1945-1947	Hedley Francis Gregory Bridges
1873-1878	Sir Albert James Smith	1947	Ernest Bertrand (acting)
1878-1882	James Colledge Pope	1947-1948	Milton Fowler Gregg
1882-1885	Archibald Woodbury McLelan	1948	James Angus MacKinnon
1885-1888	Sir George Eulas Foster	1948-1952	Robert Wellington Mayhew
1888-1894	Sir Charles Hibbert Tupper	1952-1957	James Sinclair
1894-1896	John Costigan	1957-1963	John Angus Maclean
1896-1901	Sir Louis Henry Davies	1963-1968	Hédard Robichaud
1902	James Sutherland	1968-1974	Jack Davis
1902-1905	Joseph Raymond Fournier Préfontaine	1974-1975	Jeanne Sauvé (Minister of the Environment)
1906	Sir Wilfrid Laurier (acting)	1974-1975	Roméo LeBlanc (Minister of State, Fisheries)
1906-1911	Louis-Philippe Brodeur	1975-1976	Roméo LeBlanc (acting)
1911	Rodolphe Lemieux	1976	Jean Marchand (Minister of the Environment)
1911-1917	Sir John Douglas Hazen	1976	Roméo LeBlanc (acting)
1917-1921	Charles Colquhoun Ballantyne	1976-1979	Roméo LeBlanc
1921-1924	Ernest Lapointe	1979-1980	James Aloysius McGrath
1924-1926	Pierre Joseph Arthur Cardin	1980-1982	Roméo LeBlanc
1926	William Anderson Black (acting)	1982-1984	Pierre De Bané
1926	Esiouff-Léon Patenaude (acting)	1984	Herb Breau
1926-1930	Pierre Joseph Arthur Cardin	1984-1985	John Allen Fraser
1930	Cyrus MacMillan	1985	Eric H. Nielsen (acting)
1930-1932	Edgar Nelson Rhodes	1985-1990	Thomas Edward Siddon
1932-1934	Alfred Duranleau (acting)	1990-1991	Bernard Valcourt
1934-1935	Grote Stirling (acting)	1991	John Crosbie
1935	William Gordon Ernst		
1935-1942	Joseph-Enoil Michaud		
1942-1945	Ernest Bertrand (acting)		

## DFO DEPUTY MINISTERS — 1867 to Present

1868-1884	William Smith	1939-1940	John J. Cowie (acting)
1884-1892	Col. John Tilton	1940-1946	Donovan Bartley Finn
1892-1896	William Smith	1947-1954	Stewart Bates
1896	John Hardie (acting)	1954-1963	George R. Clark
1896-1909	Lt. Col. François Frédéric Gourdeau	1963-1971	Alfred W.H. Needler
1909-1910	George Joseph Desbarats	1971-1974	Robert F. Shaw
1911-1914	Alexander Johnston	1974-1979	J. Blair Seaborn
1914-1920	George Joseph Desbarats	1979-1982	Donald D. Tansley
1920-1928	Alexander Johnston	1982-1986	Arthur W. May
1928-1938	William Ambrose Found	1986-1990	Peter Meyboom
		1990-	Bruce Rawson

## DEPARTMENT'S NAME CHANGES — 1867 to present

1867-1884	Marine and Fisheries – Fisheries Branch	1969-1971	Department of Fisheries and Forestry
1884-1892	Department of Fisheries	1971-1976	Department of Environment – Fisheries and Marine Service
1892-1914	Marine and Fisheries – Fisheries Branch	1976-1979	Department of Fisheries and the Environment
1914-1920	Naval Services – Fisheries Branch		Fisheries and Marine Service
1920-1930	Marine and Fisheries – Fisheries Branch	1979-	Department of Fisheries and Oceans
1930-1969	Department of Fisheries		

## DID YOU KNOW?

From Confederation to World War I, apart from the Royal Navy, the Fisheries Patrol Service, created by Minister of Marine and Fisheries Peter Mitchell, served as Canada's only major defence of marine sovereignty.

DFO's research vessel *Hudson* made history in 1970 when it became the first ship to circumnavigate the Americas.

Initiatives of the Department built a new foundation for fisheries management in the 1970s. DFO achievements in that decade included the doubling of offshore research, the introduction of licence limitation, quotas, annual fisheries management plans and the introduction of enterprise allocations. The organization of fishermen was encouraged and the groundwork laid for what is now a strong consultative system.

Canada's extension of its fisheries jurisdiction in 1977, and resource management action that followed, produced impressive results. Most notably, the total allowable catch (TAC) for northern cod rose from 160,000 tonnes in 1977 to 256,000 in 1986.

Under the Pacific Salmon Enhancement Program (SEP), DFO operates 16 major hatcheries. The program also includes 28 Community Economic Development Projects, over 100 volunteer enhancement facilities, and more than 50 small, semi-natural enhancement projects. Combined with lake fertilization and habitat improvement measures, these projects result in a SEP contribution of approximately five million fish to the total harvested by Canadian fishermen.

DFO's scientific activities result in substantial economic and technological spinoffs to the private sector. By contracting-out the research and development of new technologies, Fisheries and Oceans has stimulated significant development of expertise and income in the private sector. Departmental science expenditures and activities create thousands of jobs in many sectors of the Canadian economy. In fact, estimates show that for every one DFO science PY allocated to the Department, five spinoff jobs are created in the private sector.

Scientists at DFO's West Vancouver Laboratory were the first in the world to successfully use a recombinant hormone – *mammalian somatropin* – to accelerate fish growth. (Recombination is the crossing-over and independent sorting of new gene combinations.) This research and related studies are conducted to give Canadian fish farmers a competitive edge in world markets.

Each year the Canadian Hydrographic Service surveys about 20,000 km<sup>2</sup> of Canada's navigable waters. Data from these surveys is used to update and improve the 1,100 nautical charts currently made available by CHS to the marine community. About half a million charts are sold each year. Vessels over 100 gross tons are required by the *Canada Shipping Act* to use CHS charts in Canadian waters.

Fishery officers must act not only as enforcers of fishing regulations but as guardians of fish habitat, conservation educators, public relations officers, arbitrators of disputes and as liaison people linking DFO and a multitude of user groups across Canada.

In collaboration with other agencies, notably the federal Defence and Transport departments, DFO has important responsibilities for Search and Rescue (SAR) operations. Certain DFO vessels are earmarked as being available for SAR. Under this "multi-tasking" arrangement the vessels combine their regular patrol, research and survey tasks with search and rescue duties, responding to distress calls. Several have received commendations for their work in SAR missions.



# For Your Information

## DFO-ADMINISTERED ACTS

- Atlantic Fisheries Restructuring Act, c. A-14
- Coastal Fisheries Protection Act, c. C-33
- Fish Inspection Act, c. F-12
- Freshwater Fish Marketing Act, c. F-13
- Fisheries Act, c. F-14
- Department of Fisheries and Oceans Act, c. F-15
- Fisheries and Oceans Research Advisory Council Act, c. F-16
- Great Lakes Fisheries Convention Act, c. F-17
- North Pacific Fisheries Convention Act, c. F-18
- Northern Pacific Halibut Fisheries Convention Act, c. F-19
- Fisheries Development Act, c. F-21
- Fisheries Improvement Loans Act, c. F-22
- Fisheries Prices Support Act, c. F-23
- Fishing and Recreational Harbours Act, c. F-24
- Saltfish Act, c. S-4

## DFO-ADMINISTERED REGULATIONS

- Aboriginal Fisheries Agreement Regulations
- Alberta Fishery Regulations
- Atlantic Fishery Regulations, 1985
- British Columbia Sport Fishing Regulations
- Coastal Fisheries Protection Regulations
- Fish Chilling Assistance Regulations
- Fishery (General) Regulations
- Fish Health Protection Regulations
- Fish Inspection Regulations
- Fisheries Improvement Loans Regulations
- Fishery Products Storage Regulations
- Fishing and Recreational Harbours Regulations
- Fishing Vessel Assistance Regulations
- Fishing Vessel Insurance Regulations
- Fish Toxicant Regulations
- Foreign Vessel Fishing Regulations
- International Pacific Halibut Convention Regulations
- Kenney Dam and Skins Lake Spillway Orders and Regulations
- Management of Contaminated Fisheries Regulations
- Manitoba Fishery Regulations, 1987
- Marine Mammal Regulations
- Maritime Provinces Fishery Regulations
- Newfoundland Fishery Regulations

North Pacific Fisheries Convention Regulations  
Northwest Territories Fishery Regulations  
Ontario Fishery Regulations, 1989  
Pacific Fishery Management Area Regulations  
Pacific Fishery Regulations, 1993  
Quebec Fishery Regulations, 1990  
Saskatchewan Fishery Regulations  
United States Waters Fisheries Regulations  
Yukon Territory Fishery Regulations

## **ADVISORY BODIES**

National Marine Council (NMC)  
Seafood Inspection Policy Advisory Committee (SIPAC)  
Atlantic Regional Council (ARC)  
Pacific Regional Council (PARC)  
Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC)  
Arctic Fisheries Scientific Advisory Committee (APSAC)  
Pacific Stock Assessment Review Committee (PSARC)  
Pacific Coast Fisheries Advisory Association (PCFAA)  
Hunting, Fishing and Trapping Coordinating Committee (HFTCC)

## **INTERNATIONAL FISHERIES COMMISSIONS AND ORGANIZATIONS**

Northwest Atlantic Fisheries Organization (NAFO)  
North Atlantic Salmon Conservation Organization (NASCO)  
North Pacific Marine Science Organization (PICES)  
International North Pacific Fisheries Commission (INPFC)  
North Pacific Anadromous Fish Commission  
International Convention for the Conservation of Atlantic Tuna (ICCAT)  
International Council for the Exploration of the Sea (ICES)  
International Pacific Halibut Commission (IPHC)  
Great Lakes Fishery Commission (GLFC)  
International Fisheries Commissions Pension Society (IFCPS)  
Canada-Greenland Joint Commission on Beluga and Narwhal

## **INTERNATIONAL HYDROGRAPHIC, OCEANOGRAPHIC AND FISHERIES COMMISSIONS AND ORGANIZATIONS**

Intergovernmental Oceanographic Commission (IOC)  
International Hydrographic Organization (IHO)  
Scientific Council on Ocean Research (SCOR)  
United Nations Office of Ocean Affairs and Law of the Sea (UNOALS)  
International Council for Exploration of the Seas (ICES)

## OTHER INTERNATIONAL ORGANIZATIONS

- Food and Agriculture Organization of the United Nations (FAO)
- International Joint Commission (IJC)
- Organization for Economic Cooperation and Development (OECD)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- International Union for the Conservation of Nature and Natural Resources (IUCN)

## CANADIAN ORGANIZATIONS INVOLVED IN FISHERIES AND/OR OCEAN-RELATED RESEARCH

- Arctic Institute of North America
- Canadian Council for Fisheries Research (CCFFR)
- Centre for Cold Ocean Resources Engineering (C-CORE)
- International Development Research Centre (IDRC)

## WHAT DOES IT STAND FOR?

**U**p to your neck in alphabet soup? Here are some acronyms you may encounter in your day-to-day work.

- |         |  |
|---------|--|
| AAC     | Aquaculture Association of Canada  |
| ACFM    | Atlantic Council of Fisheries Ministers                                      |
| AFAP    | Atlantic Fisheries Adjustment Program  |
| AFSAC   | Arctic Fisheries Scientific Advisory Committee                               |
| AFTP    | Atlantic Fisheries Technology Program  |
| AGAC    | Atlantic Groundfish Advisory Committee                                       |
| AMCS    | Arctic Marine Conservation Strategy  |
| ARC     | Arctic Regional Council  |
| BIO     | Bedford Institute of Oceanography  |
| CAFE    | Canadian Association of Fish Exporters                                       |
| CAFSAC  | Canadian Atlantic Fisheries Scientific Advisory Committee                    |
| CAPC    | Canadian Aquaculture Producers Council                                       |
| CCFFR   | Canadian Council for Fisheries Research                                      |
| C-CORE  | Centre for Cold Ocean Resources Engineering                                  |
| CFIC    | Commercial Fishing Industry Council  |
| CFV     | Commercial Fishing Vessel  |
| CHS     | Canadian Hydrographic Service  |
| CODE    | Centre of Disciplinary Expertise   |
| CODS    | Canadian Ocean Data System   |
| CSC     | Canadian Saltfish Corporation  |
| DEC     | Departmental Executive Committee   |
| DMC     | Departmental Management Committee  |
| DOLPHIN | Deep Ocean Logging Platform with Hydrographic Instrumentation and Navigation |

EA	Enterprise Allocation
EARP	Environmental Assessment Review Panel
EFF	Eastern Fishermen's Federation
ELA	Experimental Lakes Area
ERDA	Economic and Regional Development Agreement
FAO	Food and Agriculture Organization of the United Nations
FCBC	Fisheries Council of British Columbia
FCC	Fisheries Council of Canada
FFMC	Freshwater Fish Marketing Corporation
FMS	Financial Management System
FOCP	Fishery Officer Career Program
FPAFC	Federal Provincial Atlantic Fisheries Conference
FPFC	Federal/Provincial Freshwater Fisheries Conference
FPSB	Fisheries Prices Support Board
FVIP	Fishing Vessel Insurance Program
GARP	Global Atmospheric Research Program
GATT	General Agreement on Tariffs and Trade
GEBCO	General Bathymetric Chart of the Oceans
GFC	Gulf Fisheries Centre
GLFC	Great Lakes Fisheries Commission
GMP	Good Manufacturing Practice
ICCAT	International Convention for the Conservation of Atlantic Tunas
ICES	International Council for Exploration of the Sea
ICO	Interdepartmental Committee on Oceans
ICSAR	Interdepartmental Committee on Search and Rescue
IFCPS	International Fisheries Commissions Pension Society
IHO	International Hydrographic Organization
IJC	International Joint Commission
INPFC	International North Pacific Fisheries Commission
IOC	International Oceanographic Commission
IOS	Institute of Ocean Sciences
IPHC	International Pacific Halibut Commission
JBNQA	James Bay and Northern Quebec Agreement
LOA	Length Overall
MC	Memorandum to Cabinet
MEC	Minister's Executive Committee
MEDS	Marine Environment Data Services
MFU	Maritime Fishermen's Union
MIL	Mandatory Inspection List
MLI	Maurice Lamontagne Institute
MLR	Mid-life Refit
MOU	Memorandum of Understanding
MYMSP	Multi-Year Marine Science Plan

MYOP	Multi-Year Operational Plan
NAFC	Northwest Atlantic Fisheries Centre
NAFO	Northwest Atlantic Fisheries Organization
NASCO	North Atlantic Salmon Conservation Organization
NAFTA	North American Free Trade Agreement
NFFAWU	Newfoundland Fishermen, Food and Allied Workers Union
NMC	National Marine Council
OECD	Organization for Economic Cooperation and Development
OSY	Optimum Sustainable Yield
PARC	Pacific Regional Council
PBS	Pacific Biological Station
PSARC	Pacific Stock Assessment Review Committee
PSC	Pacific Salmon Commission
QMP	Quality Management Program
ROV	Remotely Operated Vehicle
SAR	Search and Rescue
SCH	Small Craft Harbour
SCOR	Scientific Council on Ocean Research
SEP	Salmonid Enhancement Program
SIPAC	Seafood Inspection Policy Advisory Committee
SLAP	St. Lawrence Action Plan
TAC	Total Allowable Catch
UNCED	United Nations Conference on the Environment and Development
UNOALS	United Nations Office of Ocean Affairs and Law of the Sea

## DFO's POLICIES

### Aquaculture Policy

The *National Policy Goals for Canadian Aquaculture*, released during a 1986 meeting of the Federal/Provincial/Territorial Freshwater Fisheries Committee of Ministers in Winnipeg, lays out national goals and principles for the development of commercial aquaculture in Canada.

*Cultivating the Future: An Aquaculture Strategy for the 90's*, released in 1990 and which sets out DFO's strategic approach to the shaping of the future of the aquaculture industry.

### Foreign Relations Policy

The *Foreign Fisheries Relation Policy* supports the achievement of Canadian fisheries resources conservation objectives.

## Enforcement and Surveillance Policy

The *Enforcement Policy*, announced in 1986, bolsters fisheries surveillance and enforcement within Canada's 200-mile zone.

## Fish Habitat Policy

The objective of the *Policy for the Management of Fish Habitat*, tabled in the House of Commons in 1986, is to achieve a net gain of fish habitat in Canada.

## Ocean Strategy

The Government of Canada is committed to achieving four goals through its oceans strategy:

- prosperous, dynamic ocean industries which offer secure, steady employment and economic development benefits, particularly for Canada's coastal regions;
- world-class expertise and capability in oceans-related science, technology, and engineering, which together form the basis for future economic development of the oceans;
- oceans resources and an ocean environment soundly managed and protected for future generations of Canadians; and
- assertion and protection of Canada's sovereignty and sovereign rights over its ocean resources.

## Recreational Fisheries Policy

Canada's *Policy for Recreational Fisheries* was released in 1988. It sets forth the guiding principles, objectives and approaches for government/private sector cooperation required to conserve and improve the Canadian recreational fisheries.

# For More Information

## CORPORATE COMMUNICATIONS

DFO's Communications provides a wide range of informational materials and services related to Fisheries and Ocean's programs and activities. These include:

- Research and assessment of public environments; communications planning; advice and management of communications activities including news releases and speeches.
- Production and distribution of publications, from pamphlets and booklets to scientific reports and media backgrounders.
- Audio-visual and display productions.
- Corporate Employee communications material, such as the *DFO Factbook* and *PISCES*.
- 1-800 - 668-5222 and for TDD users 1-800 - 668-5228. A national toll-free Public Information Line is serving the general public across the country.
- Regional newsletters are also produced including:
  - Pacific: *Sounder* and *Pacific Tidings*
  - Central and Arctic: *On Stream*
  - Fisheries information distributed as supplement to various newspapers.

## ACCESS TO INFORMATION AND PRIVACY

The Access to Information and Privacy Secretariat implements related legislation within Fisheries and Oceans which includes:

- Process all formal and informal requests for information under the *Access to Information Act* and the *Privacy Act*.
- Protect personal information in conformity with the *Privacy Act*.
- Provide advice to the public, public servants and special interest groups on all aspects of both laws and their related policies.
- Review information collection activities for statutory compliance and produce text for inclusion in Treasury Board's *InfoSource*.
- Cooperate with regional ATIP Contacts to facilitate advice and guidance regionally and to ensure requests are processed in accordance with laws.

## LIBRARY SERVICES

A wide range of library services is at the disposal of DFO employees.

- Topical and relevant books and journals organized for easy access. Particular effort is devoted to preserving all DFO publications and contract reports.
- Reference services, which include the provision of information, computerized literature searches on hundreds of data bases, and general assistance with any information needs.
- Regular listings of new accessions of books and journals.
- Current awareness services, including the facility for the selective dissemination of information (SDI) automated alerting service.
- Loans and inter-library loans of books, periodicals, reports, conference proceedings, departmental publications.
- The ordering of books and periodicals for office collections upon request (payable by requester's collator).

## PERSONNEL SERVICES

DFO's Personnel staff in regional offices and in the National Capital Region, manage a number of personnel functions of interest to all DFO employees. They deal with conditions of hiring and employment, the status and position in the Public Service and the Department, and provide information on pay and associated deductions and benefits (superannuation, health plans, etc.). Personnel staff also administer union-management relations.

Main functions include :

- Classification,
- Staffing,
- Pay and Benefits,
- Staff Relations, and
- Compensation.

Other functions important to employees include:

- Training and Development,
- Employment Equity,
- Official Languages,
- Employee Awards, and
- Employee Assistance Program (EAP).

The Personnel Directorate offers information, advice and support to DFO employees in regard to these and other related areas.

For more information, please contact your personnel office.

## Addresses and Telephone Numbers

### *Public Information Line*

**1-800 - 668-5222**

**TDD: 1-800 - 668-5228**

#### **Pacific Region**

Fisheries and Oceans  
555 West Hastings Street  
Vancouver, British Columbia  
V6B 5G3

Telephone: (604) 666-0384

Facsimile: (604) 666-3450

#### **Central and Arctic Region**

Fisheries and Oceans  
501 University Crescent  
Winnipeg, Manitoba  
R3T 2N6

Telephone: (204) 983-5000

Facsimile: (204) 984-2401

#### **Quebec Region**

Fisheries and Oceans  
P.O. Box 15,500  
Quebec, Quebec  
G1K 7Y7

Telephone: (418) 648-2519

Facsimile: (418) 648-4470

#### **Scotia-Fundy Region**

Fisheries and Oceans  
P.O. Box 550  
Halifax, Nova Scotia  
B3J 2S7

Telephone: (902) 426-2373

Facsimile: (902) 426-2256

**Newfoundland Region**

Fisheries and Oceans  
P.O. Box 5667  
St. John's, Newfoundland  
A1C 5X1

Telephone: (709) 772-4421  
Facsimile: (709) 772-2156

**Gulf Region**

Fisheries and Oceans  
P.O. Box 5030  
Moncton, New Brunswick  
E1C 9B6

Telephone: (506) 851-6227  
Facsimile: (506) 851-7732