Fisheries and Oceans | Pêches et Océans

CONFIDENTIAL

Departmental Issues and Reference Book

Volume II

Reference

VOLUME II - REFERENCE

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INTRODUCTION

The purpose of this volume is to provide general background information on the overall framework within which the Department operates.

POLICY

A copy of the Department's Strategic Overview is included under Tab 2. This overview describes in broad terms the major policy directions presently being pursued by the Department. It was signed by the Honourable Pierre de Bané on June 25, 1984. The Overview is revised on an annual basis and will therefore require further thought and attention as we move into the next phase.

LEGISLATION AND AUTHORITY

This section outlines in very general terms the legislation which governs our activities. More detailed material, including copies of the relevant Acts and Regulations will be provided at a later date.

ORGANIZATION

In Volume I under Tab 3, Item II, there is a brief description of the recent actions which have been taken related to reorganization of the Department. Given that some of the changes have taken place very recently, the material contained in this section may, in minor respects, not be completely up to date. It does, however, provide a good, general overview of the Department's present structure.

PROGRAMS

Deparmental programs have been formally defined within our Operational Planning Framework. The Framework describes seven major Planning Elements:

- Atlantic Fishery Management
- Pacific and Yukon Fishery Management
- Northwest Territories & Inland Fishery Management
- Services to the Fishing Industry
- Marketing and International Fisheries
- Ocean Science and Surveys
- Corporate Administration

The Department's internal planning and budgetary process occurs within this framework. Each Element is described in detail under Tab 5.

BIOGRAPHIES

Biographies have been included in this volume of senior departmental officials and a list of key personalities from provincial governments and major client groups has been compiled.

DICTIONARY

The world of fisheries and oceans has a language all its own. When someone says "The TAC for 2J3KL was discussed at AGAC on the basis of advice from CAFSAC", this dictionary should prove useful in deciphering the meaning of statements like this.

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June 25, 1984

STRATEGIC OVERVIEW
1985/86 to 1988/89

DEPARTMENT OF FISHERIES AND OCEANS

STRATEGIC OVERVIEW

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DEPARTMENT OF FISHERIES AND OCEANS

STRATEGIC OVERVIEW

INTRODUCTION

This Overview sets out my strategic plan for the Department of Fisheries and Oceans for the next five years. This plan recognizes that we are entering a new phase in our approach to the management of Canada's fisheries and the direction of ocean sciences. This new phase represents a departure from the department's emphasis since the extension of fisheries jurisdiction in 1977, when the major thrusts were on rebuilding depleted fish stocks, introducing controls on fishing effort and gathering better biological, hydrographic and oceanographic data. Now the department must focus more directly on fishing and ocean industry viability and competitiveness. The strategy for the mid to long term will have four interrelated themes: Fish as Food, Marketing and International Initiatives, Managing Common Property, and Science and the Transfer of Technology. These strategic themes are summarized as follows:

- to implement various measures to upgrade the quality of Canadian fisheries products and thereby increase resource returns (Fish as Food);
- to establish the institutional arrangements to improve the trade environment needed to implement more coherent market strategies, to provide greater market stability and to improve access to export markets (Marketing and International Initiatives);
- to implement regulatory reforms to end the "race to the fish", thus reducing harvesting costs and reorganizing over-subscribed fisheries (Managing Common Property);
- to redirect the department's research efforts to assist the private sector in developing world-class fisheries and oceans industries and to continue to provide up-to-date navigational information to the maritime community (Science and the Transfer of Technology).

These strategic initiatives will take place in the context of a dramatically changing fishing industry. These changes have been brought about by the implementation of the recommendations of the Task Force on Atlantic Fisheries, by the restructuring of the major Atlantic offshore processing companies, and by the implementation of a new policy for the Pacific fisheries. It must be emphasized, however, that

the refinancing of the major Atlantic offshore processors and the implementation of a Pacific salmon fleet buy-back program can only be considered as essential first steps - or prerequisites - to the orderly implementation of the fundamental reforms still necessary to put the fishing industry on a competitive and viable footing.

The transition of full-scale production in the offshore energy sector will bring about new demands for ocean information and technology, requiring the integration of ocean science efforts to both meet these demands and to provide the information base necessary to protect the marine environment to preserve a healthy fisheries resource base.

In developing new policies and programs under these strategies, the department will be guided by the Government's major policy thrusts, particularly the following:

- to strengthen the ability of the private sector to serve as the principal engine of growth by enhancing productivity and promoting competitiveness, especially in the face of current international, economic and trade relations;

- to enhance the capacity of industries, firms, communities and individuals to adjust to changing economic conditions;

- to provide meaningful jobs by working in cooperation with the private sector; and

- to deliver federal programs directly to beneficiaries rather than indirectly through the provinces.

1.0 THE ENVIRONMENT/OUTLOOK

1.1 MARKETS

1.1.1 Supply Outlook

- As a result of conservation action taken after extension of fisheries jurisdiction in 1977, most groundfish stocks are now at stable, optimal levels or are fast approaching those levels.

- A major exception is northern cod, where the Total Allowable Catch (TAC) is expected to increase from 266,000 t. in 1984 to 350-375,000 t. in 1988. On the other hand, both Atlantic and Pacific salmon and Atlantic herring stocks are depressed and drastic conservation measures will be required to rebuild them to historic levels. For salmonids, in particular, strong habitat protection and restoration measures are also needed.

. Opportunities exist to increase significantly the supply of selected species through aquaculture or use of intensive rearing technologies. However, technological support and infrastructure development will be the key to the orderly growth of this component of the sector.

1.1.2 Demand Outlook

. For the high proportion of Canadian fish products which fall into the mid-quality and mid-price range (such as groundfish blocks) market conditions will be unsettled.

. For higher quality products, such as fresh and frozen groundfish fillets and frozen salmon, the market outlook is more promising but not buoyant.

. Consumer demand for fish products in Canada and the United States is not well developed; per capita consumption is only 7.2 kg. per year; competition with alternative protein foods, such as white and red meats, remains intense.

. Exchange rate fluctuations will continue to be a de-stabilizing factor and a major determinant of our competitive position in markets such as southern, central and northern Europe and Japan, as well as in our traditional U.S. markets.

. Resource fluctuations in competing countries is another de-stabilizing element (e.g. the recent increase in Alaska salmon production and the re-emergence of North Sea herring have depressed prices for Canadian salmon and herring products).

. Market access problems continue to restrict Canadian exports of some fish products into certain European as well as Japanese markets.

. New artificial fish products such as mock crab and mock scallop are causing market dislocation as consumer demand is diverted away from natural fish products because of the perceived price advantages. Additional new products are expected to be developed, not only by Japanese competitors but by U.S. and other processors as well. Demand for natural products will rebuild over time but at reduced levels as consumers recognize the quality differences between natural and artificial products and as adjustments occur in the prices of natural products. Meanwhile, artificial fish products will create new opportunities for low valued Canadian groundfish which will be used as raw material in the preparation of these artificial products.

1.1.3 Competitive Outlook

- While there is limited scope for price increases, costs of raw material, labour, packaging and energy costs will increase at a rate higher than prices, thereby reducing gross margins and the industry's competitiveness in export markets.

- The Canadian industry faces strong competition in export markets, especially in the USA and Europe. For groundfish products Scandinavian competitors have effective marketing strategies, well organized marketing institutions, and maintain a superior quality image. The Norwegian and Icelandic industries enjoy preferential access into EEC markets. The Norwegian industry is heavily subsidized, while the competitive position of the Icelandic industry is maintained largely through that country's exchange rate policy. On the Pacific coast, Canadian salmon producers compete with Alaskan producers, with Canadian fish prices and labour rates significantly higher than those in Alaska.

- The competitiveness of the Canadian industry is also adversely affected by its slowness to adopt technological innovation. The Canadian industry has, on average, not been able to match its competitors in productivity improvements. The implementation of energy-saving measures and the use of "high-tech" equipment to improve the on-board and in-plant handling of fish through support of Canadian technological developments could result in significant productivity gains.

1.2 FISHERMEN AND PROCESSORS

- While recently adopted government fisheries policies embrace the formal objectives of "economic viability" and "maximum employment", no operationally precise definitions of these objectives have been developed, particularly with regard to what constitutes "reasonable incomes" arising from fisheries employment. This critical issue is made more complex by the lack of alternative employment in most fishing communities.

- For about half of the fishermen's households on both coasts, a second income-earner employed in either fishery or non-fishery occupations is necessary for a household to keep above the official poverty line.

- The Unemployment Insurance Program for fishermen is a key supplement to ensure some stability in the household income of fishermen.

- Most fisheries are over-subscribed. As a result, average landings are less than required to generate a reasonable annual income, an adequate return on capital and to provide for capital accumulation to replace worn-out vessels.

- With very few exceptions, fishing vessel owners on both coasts have incurred large debt burdens and are currently experiencing severe financial difficulties.

- The processing sector is in poor financial condition on both coasts. This results from weak corporate management, inefficiencies in marketing, a shortage of equity, outdated technology, and a "supply-driven" approach aimed at maximizing throughput.

- Major changes have taken place in the ownership of the Atlantic processing sector with the emergence of three publicly-backed companies: one Newfoundland-based, one Nova Scotia-based, and the other in Quebec. These changes, brought about by the financial restructuring of several companies, should lead to greater stability in the offshore groundfish sector. However, it is still an open question as to whether or not real changes will emerge in the performance of this sector in terms of productivity, quality, labour relations and marketing. As well, these companies are only just adequately capitalized and any market or resource shocks could bring about a recurrence of the financial crises of the past two years.

- In an effort to contain costs and improve productivity, management of the restructured companies can be expected to favour the closure of unprofitable plants. Because of the economic consequences for single sector communities where these plants are located, and the lack of alternative employment opportunities, governments will be faced with difficult decisions as to whether to allow such plants to close or to assume the additional costs involved in keeping them open.

- Processing companies and fishermen on both coasts are experiencing shortened lines of credit and this could lead to distress sales, with adverse impacts on market prices.

- Some important small and medium-sized processors on the Atlantic coast are now in serious financial difficulty and will require an infusion of capital, or some other form of financial assistance, if they are to stay afloat.

1.2.1 Fisheries and Community Development

- Many hundreds of communities are directly dependent on fishing and associated processing activities for their continued existence. The rationalization of fishing and processing capacity required to bring about higher production in the fishing industry is made more difficult by the lack of alternative employment opportunities in other industries.

- Low and unstable incomes have adverse effects on the remote coastal communities dependent on the fishery. The weak community economic base makes it difficult to attract investment in other employment-generating activities. Often the tax base is too small to support modern infrastructure requirements such as roads, hospitals and, in some isolated cases, water supply.

- Land claim settlements and the clarification of aboriginal hunting and fishing rights will likely result in far greater allocations to Indians in many fisheries across Canada.

- The sport fishery attracts a following of about two million Canadians and is a major contributor to the tourist industry. Expenditures made by both Canadian and foreign sport fishermen generate thousands of jobs and significant economic benefits, from boat building to the provision of guiding services, in all parts of the country. In many areas, the sport fishery competes with the commercial and Native fisheries for the available catch from important fish stocks.

- There is a growing feeling on the part of many fishermen that they should have a greater role in the management of their fisheries.

1.3 INTERNATIONAL AND INTERGOVERNMENTAL FACTORS

- Boundary issues with the USA and France remain unresolved, bringing about the need for precision surveying and for constant vigilance in maintaining Canada's legal position and protecting the national interest in living and non-living marine resources.

- The Gulf of Maine/Georges Bank boundary dispute is before the International Court of Justice and, once the boundary has been adjudicated, new cooperative arrangements will have to be negotiated with the United States in respect of fisheries and non-renewable resources.

- The effects of acid rain on Atlantic salmon and freshwater sport fish in Canada will continue to be an issue with the United States.

- Internal differences within the United States between Alaska and the Pacific northwest states are seriously impeding the satisfactory conclusion of a Canada/USA Pacific salmon agreement.

- The European anti-sealing protest movement has had an adverse effect on the livelihoods of thousands of sealers and could potentially harm the earnings of other fishermen as well.

- Access by the metropolitan French vessels to the fisheries resources in the Gulf of St. Lawrence will be phased out by May 15, 1986. While this will free some important fish allocations for use by Canadian fishermen, relations with France will be strained as that country exerts pressure to keep her vessels in Canadian waters.

- Relations with most other countries remain essentially stable although constant attention is required to ensure that fish purchases and foreign catch allocations remain in favourable balance. Close attention is also required to ensure the effectiveness of conservation measures affecting fish stocks that "straddle" the 200 mile zone.

- Conflicts with provincial governments in the field of fisheries are inevitable as the provinces pursue their own economic development objectives which might be at variance with the broader goals of the federal government.

- Dealings with Newfoundland and Nova Scotia on allocations and on the management of the restructured companies will place an added strain on federal/provincial relations, particularly with regard to issues related to plant closures and allocations to companies based on these provinces.

- The Province of Quebec has adopted measures aimed at frustrating the resumption of federal fisheries jurisdiction in Quebec. Bill 49, passed December 23, gives the Province powers over the inspection and quality standards of fish products entering or leaving Quebec. A second initiative, Bill 48, is potentially more worrisome; it would give the Province jurisdiction over the sea bed in its "public domain", which could conceivably include a major portion of the Gulf of St. Lawrence. Any fisherman setting fixed gear on this sea bed could require a permit from the Province. If this Bill is adopted, and is proven constitutionally valid, five provinces could claim jurisdiction of the sea bed in the Gulf and fishermen might require as many as six permits to

carry out their operations. These developments could cause one of the more severe strains on the unity of the federation.

- The opposition of the Nova Scotia, P.E.I. and Quebec governments to collective bargaining precludes effective organization of fishermen and contributes to conflict and irrational behaviour in the port market.

- The Fisheries Act is directed primarily to the "preservation and conservation" of natural fisheries resources, but does not address fully the major problems of restoration and enhancement. Several provinces are seeking to assert the primacy of provincial legislation on the subject of aquaculture. Full consultation with industry will be essential in developing policies in this area.

1.4 SCIENCE CONSIDERATIONS

- The recently concluded Law of the Sea Conference brings with it significant gains and obligations for Canada in respect of marine resources, the management of those resources and marine scientific affairs. The Law of the Sea will be a major driving force on the international maritime scene in the years ahead. Since Canada was a leading proponent in the Conference, its posture and reactions will be scrutinized carefully by developed and developing nations alike. In this situation other countries will look to Canada to use its scientific and technological capabilities to achieve an adequate level of management of its marine environment and resources.

- The search for offshore oil and gas will continue with the focus for hydrocarbon production over the next decade lying off the east coast and the near Arctic. This will require a response from the government's ocean-oriented scientific and technical sector and will challenge the embryonic ocean industry sector to meet the resulting demands for service.

- Fisheries is both science intensive and science dependent. Future trends will include an increased use of multidisciplinary scientific approaches, a greater emphasis on ecosystems impacts of resource husbandry, and an increased attention being paid to impacts of environmental variation on production systems. Production will likely become more integrated into marketing and technology more Canadian in origin and responsive to rising energy and labour costs.

- A wide range of functions in fisheries science is likely to continue. Resources, fish habitat and the environment must be effectively mapped and monitored. Research will continue

to focus on the future opportunities to intensify food production systems.

. In ocean science, continuing research will be needed to gain a better understanding of the fundamental relationship between the biological, chemical and physical processes of the oceans and the productivity of the food chain. New technologies for ocean mapping and sea-bottom sampling will also need to be developed to support Canada's position in boundary disputes.

. The application of fisheries and ocean sciences will involve a wide spectrum of science services, technology transfer and development activities. Increased and improved scientific information systems will be needed to accelerate the transfer of technology to Canadian users. Technology transfer will be a useful adjunct to international marketing negotiations and is an obligation under the Law of the Sea with respect to the Third World. Canada has a policy of encouraging the application of domestic research and development capabilities to the solution of problems of the developing world. Food production poses the most acute of these problems. The department will be expected to respond to an increasing number of opportunities in this area.

2.0 POLICY ANALYSIS AND ISSUES

A review of the marketing issues, the problems facing fishermen and processors, the international and intergovernmental factors and the science considerations reveals that the government must enter a new phase in the management of Canada's fisheries and in the direction of our ocean sciences in order to achieve the potential for viability and competitiveness of the fisheries and ocean industry sector. The policy challenges to meet these goals are described below under my four strategic themes.

2.1 FISH AS FOOD

Fish has been seen traditionally as an income source and as a mainstay of a way of life, not as a product in a shopping basket or on a restaurant menu. Not enough attention has been paid to fish as food and what this implies in moving "backward" from the market to how the fishery as a production system should function.

The recent trends in all consumer industries have been towards a recognition of the importance of quality. The same is true in the food processing sector, with consumers insisting on freshness and quality. The fishing industry has been slow to recognize this imperative of the marketplace, and the equally important need to serve markets with timely deliveries and sales servicing. As a result, the poor quality image of fish is compounded since the product, even in frozen form, has a relatively short shelf-life and fast turn-over is necessary.

Improving quality is, of course, not an end in itself but a means of generating higher and more stable returns and hence higher earnings for all participants in the industry.

Attaining higher resource returns through improved quality, however, involves additional expenditures for fishermen and processors in the short term so as to reap increased revenues over the longer term. For a fisherman, acting independently, the initial outlays may not pay off as he may receive as much for inferior quality landed fish as he would for his first quality landings due to the buying practices of processors, who are interested more in volume than in maximizing margins. For the processor, acting independently, additional costs to improve the quality of his products may not yield a return as he may not have sufficient market clout to command higher prices.

The policy issue then is to what extent and by what measures the government should modify how the fishery system operates to assure that the benefits from improved quality can be generated in the marketplace and passed back to processors and fishermen acting in a concerted fashion to obtain higher resource returns.

2.2 MARKETING AND INTERNATIONAL INITIATIVES

With the fish stocks rebuilding, there is a potential to increase exports from current levels of $1.6 billion to $3.0 billion by 1990. The challenge is how to realize this potential in export growth. This will require meeting well-disciplined competition from other fish exporting countries, overcoming trade barriers, developing new markets and increasing consumer demand in existing markets.

Historically, the industry has never been very adventuresome in its marketing efforts (including product development, distribution, packaging innovation or new market penetration). For example, Atlantic coast processors have resisted developing an industry-wide marketing strategy, often relying on established markets in the U.S. for medium quality groundfish products. Minimal efforts by the industry towards promotion are also a cause for low market returns that stem from under-developed consumer demand.

While private sector needs to expand its marketing capability, this will require a long-term effort and pay-offs cannot be expected immediately. The development of marketing capability requires careful planning, the hiring and training of expert staff with knowledge of target market conditions, the setting up of sales offices and the cultivating of buyer contacts. Product specifications, packaging and transportation must also be tailored to meet target market needs. Long-term corporate

financial commitment is essential for such an effort so as to be able to withstand initial losses.

Four essential issues emerge in considering the marketing backup that government can provide the fishing industry to develop an expanded marketing capability. These are:

- the absence of an effective industry-wide marketing strategy and the design of a regular forum for processors to meet, to share information and to agree on broad strategies;

- whether new funding mechanisms might be appropriate for the Fisheries Prices Support Board to underwrite the risks of extreme fluctuations in world markets;

- whether and how the government should underwrite high-risk market development; and

- whether and how the government should provide specialized market trading services, particularly with respect to state-to-state transactions or as a service to private sector processors upon request.

International considerations have posed strategic challenges to the fishing industry and the government for the past 15 years and will continue to do so into the 1990's. There has, however, been a significant change in focus: the preoccupation of the 1970's was on declining fish stocks as a result of foreign fishing. Since the extension of jurisdiction in 1977, emphasis has shifted from resource considerations to market access issues. These have been, and will continue to be, dealt with through the negotiation of purchase commitments or more favourable terms of market access in exchange for the privilege of fishing surplus and non-surplus stocks at Canadian rates.

While the emphasis internationally will be on market access considerations, this does not mean that international resource issues have been entirely settled. After the World Court decision, expected this summer, delimiting the maritime boundary in the Gulf of Maine/Georges Bank area, new arrangements will need to be negotiated with the United States over the joint management of fish stocks in the boundary area and possible reciprocal fishing privileges. Besides the Gulf of Maine/Georges Bank area, four other maritime boundaries will remain unresolved (off Dixon Entrance, off the Strait of Juan de Fuca, and in the Beaufort Sea with the USA and in the area around the Islands of St. Pierre and Miquelon with France). With the exception of the Beaufort Sea, reciprocal fishing and enforcement arrangements will have to be negotiated in these unresolved boundary areas, as well as in Davis Strait. New initiatives will also be required within the Northwest Atlantic Fisheries Organization (NAFO) to protect Canadian interests in fish stocks straddling the 200 mile limit.

A major international resource issue remains on the Pacific coast with respect to the interception, by the fishermen of Canada or the United States, of salmon bound for rivers of origin in the other country. On the Atlantic coast, the level of commercial interception of salmon has become an issue of pressing importance in regard to conservation and rebuilding of seriously depleted stocks.

2.3 MANAGING COMMON PROPERTY

Fisheries management is an ongoing process of protecting the habitat, assessing fish stocks, determining the impact of alternative harvesting strategies, enforcing fisheries regulations and allocating resources amongst competing users. In particular, this allocation function involves choices between catches today or foregoing these catches for the fish to grow and reproduce for tomorrow. It also involves choices between allocations to major user groups - the commercial fishery, sport fishery or Natives - and within the commercial fishery between inshore fisheries and the offshore companies.

Canada's commercial fisheries are characterized by low earnings and instability. Fisheries resources, being "common property" (for those licensed to participate in a given fishery) result in individual fishermen seeking to gain advantage over their competitors by building bigger and faster fishing vessels and incurring greater operating costs in order to win the "race to the fish". However, since total catches are fixed, usually by overall quota, the net result is that total costs increase while earnings decrease. The ultimate limit of the system is the capability of the resource to renew itself. In some cases excessive investment in vessels and gear brings about a situation where the killing power of the fleet is so great that it is difficult to manage the fishery effectively. As a result, the resource base itself can be reduced to levels well below what is sustainable.

The side effects of the race to the fish can be seen in the problems of fishermen in obtaining the necessary financing to replace their vessels, and the consequent intervention by provincial and federal governments to provide subsidies, loans and loan guarantees to assist fishermen (thereby contributing to the over-capacity problem). In some cases a dependency of fishermen on processors for their working and investment capital needs has also developed.

Our management regime has succeeded in rebuilding many Atlantic stocks to, or near to, reported historical levels, with corresponding increases in catch rates and individual catches. Exceptions remain - Atlantic herring, Pacific and Atlantic salmon for example. As well, many fisheries are over-subscribed, meaning that the average individual catches remain low. Fewer fishermen, higher average catches and lower prices might very

well lead to profitability for both fishermen and processors alike. However, the lack of alternative employment opportunities often militate against reducing fleet sizes.

The essential issue in managing common property is how to change the way the fishery operates away from the costly process of fishermen competing with one another for the largest share of the catch, instead redirecting their competitive behaviour towards becoming more profitable.

2.4 SCIENCE AND THE TRANSFER OF TECHNOLOGY

Both the fishing industry and the expanding offshore energy industry require the provision, in real-time, of operational ocean information on the sea-state, currents, waves and iceberg distribution and movement, for safe operation of vessels and drilling rigs. Neither the private sector nor the government can provide a full range of such information with their current technological capability, nor can available new technology such as satellite-based remote sensing be implemented because of budgetary limitations. A major expansion both in sophisticated equipment and numbers of ocean platforms will be required for Canada to retain its position in international activities as an advanced and technologically-competent maritime nation.

Although the Law of the Sea Convention has been signed and Canada has signified its intention to ratify, the full significance of the Convention in terms of the obligations placed on Canada have yet to be assessed. The expanded exploitation of resources provided for under the Convention has to be supported by research designed to conserve the living resources and measures taken for their long-term protection. Technological gains in these fields are to be shared with developing nations.

Our coastal and continental shelf areas support by far the highest proportion of our living marine resources and are at the same time subject to the greatest stresses arising from coastal development and industrial pollution. The deeper oceans supply the nutrients to our coastal regions and influence the weather and climate on the planet. Thus, within the present context, a full understanding of major ocean processes is essential to the management of our resources.

Achieving this understanding will require the continuation of long-term studies of large scale ocean processes. The time scale of such a research effort is 10-25 years. Our research effort in this field will be greatly extended through participation as a partner in internationally coordinated studies and programs designed to share the scientific and financial burdens associated with the study of these global problems.

Canadian ratification of the Law of the Sea Convention will impose political and scientific obligations which will have long-term implications for the marine-related programs of several

government departments. While the required policy and program initiatives in marine sciences should be addressed by the individual departments, there is a need to coordinate these initiatives to ensure that they are not simply reactive but provide both bold and forward-looking policies and programs and a focus for the national effort in marine sciences.

Aquaculture, a technology based upon the culture and intensive husbandry of aquatic plants and animals, is a significant departure from traditional fisheries in that production yields are largely governed by the state of technology, levels of investment inputs and skills of the operator, rather than the productivity of the environment and natural processes.

3.0 PROPOSED ACTION

In light of the above analysis of the policy challenges in promoting a viable and competitive fisheries and ocean industry sector, the action priorities under each strategic theme are set out below.

3.1 FISH AS FOOD

My department will place top priority on developing a higher awareness of market requirements throughout the fishery production system: a thorough appreciation of the importance of improved and more consistent fish product quality is a must if resource returns are to be improved. The key factors involved in bringing about the behavioural change necessary to improve quality are leadership, technology and attitudes.

The restructuring of the major Atlantic offshore companies presents the government with the opportunity of having an input into the selection of senior management of these companies. These appointments will be of vital importance to the fishing industry over the next five to ten years. The Board Chairmen and Chief Executive Officers of the restructured companies will set the tone for how those companies and the rest of the industry meet the challenges of making the industry competitive. Government nominees on the Boards of Directors of the restructured companies will be in a position to assure the recruitment of dynamic and imaginative leadership for these companies.

Technological change is also required to bring about improved and consistent quality. The Canadian industry must be made more outward-looking to learn from the experience of other fishing and food processing industries in the application of new technology. To a large extent this is a role of corporate management but government assistance, through fostering pilot projects, overseas missions and information exchange, will be required.

The attitudes of all those whose livelihoods depend on the fishing industry will also require change: indeed they are

already changing. There is now general acceptance that the limits of expansion have been reached and that more fish is not always the solution to the economic problems facing the fishing industry. There is a growing realization that the key to viability is reducing costs and increasing productivity. It is my intention to accelerate these attitudinal changes by putting into place an effective communications strategy that will constantly reinforce the need for competitiveness and productivity improvements.

Part of this overall communications initiative will be the preparation of a multi-faceted quality awareness campaign using a wide variety of techniques and forums to convey the message to fishermen, plant workers and managers, and those involved in the distribution and sale of fish products, of the benefits to be gained from improving fish quality "from the sea to the table".

I also intend to implement dockside and final product grading systems for groundfish, herring, crab and Pacific salmon. DFO-sponsored demonstration projects have already shown processors and fishermen the benefits of such grading systems. I will also be submitting proposals to assist in the provision of the necessary quality-related infrastructure, particularly with respect to ice making and ice storage. Upgrading human resource skills at all levels of the fisheries production system is also essential to achieve quality improvement objectives. To this end, training packages will be developed in cooperation with CEIC and the provinces.

As a result of these initiatives, I am confident that within five years the fishing industry will be able to compete on a cost-effective footing in supplying high quality food products in domestic and export markets.

3.2 MARKETING AND INTERNATIONAL INITIATIVES

While it is important to improve the quality of Canadian fisheries products, this in itself will not improve the economic performance of the fishery: these products still must be marketed. For too long the Canadian industry has behaved as though its function was merely to process the catch: the products would somehow sell themselves. Little attention has been paid to new product development, packaging innovation and market cultivation. I intend to use my office as a major instrument in changing that attitude and giving the industry greater exposure to market realities.

Since assuming office I have visited Cuba, Portugal, Spain, Japan, Norway and the Soviet Union. The main focus of these missions has been on marketing and they have been successful in putting the Canadian industry on the world stage. I will continue with these kinds of missions in order to raise the profile of the Canadian industry in foreign markets and to impress upon the Canadian industry itself the importance of

marketing. I will also be seeking to put into place, or where necessary strengthen, institutional mechanisms that will allow the private sector to achieve its full potential with the appropriate degree of government backing. The new or strengthened institutional measures required are:

- creating an effective forum for processors to meet, exchange information and agree on broad marketing strategies;

- establishing, in the short term, new funding mechanisms for the Fisheries Prices Support Board and, in the longer term, developing a comprehensive stabilization program under an amended Fisheries Prices Support Act to underwrite the risks of extreme fluctuations in world markets beyond the control of the Canadian government or industry;

- promoting the penetration of non-traditional markets by underwriting the high risks involved;

- developing the required legislation to establish a fish export marketing organization similar to relevant marketing structures in the agricultural sector to provide specialized trading services, particularly in respect to state-to-state transactions or as a service to private sector processors upon request.

In existing markets, particularly in North America, imaginative, well researched and continuing promotion campaigns will be undertaken to increase consumer awareness and position Canadian fisheries products as a more important component of the consumer's shopping basket of protein goods. Costs of such generic promotion campaigns must be shared with industry, with concurrent individual brand promotion encouraged. In the medium term, the objective will be to have the industry take over full planning, evaluation, coordination and financial responsibilities for such programs.

The allocations of surplus and non-surplus stocks of fish to other countries in return for trade considerations will also be a principal strategic instrument in developing more favourable access to export markets for Canadian fisheries products. Such a policy, however, must be pursued very carefully so as not to expose the Canadian industry to "blackmail": undue dependency on a particular market, access to which has been achieved through allocations, would expose Canada to greater and greater demands for allocations. The challenge of marketing $3 billion by 1990 remains, and every available mechanism must be used to pry open new markets and expand existing ones.

Canada will have to take vigorous action under the GATT to protect the industry from increased trade protectionism. It is unlikely, however, that the GATT can be used to actually reduce tariff and non-tariff barriers.

Food aid will also provide an important future outlet for Canadian fisheries products. Cabinet recently decided to increase significantly the fisheries component of the food aid basket. The provision of fish for food aid grew from less than $1 million in the latter 1970's to almost $2 million in 1983-84. Further increases up to $50 million are attainable in the medium term.

Resolution of maritime boundary issues will be a priority for international relations. Delicate and controversial negotiations must be undertaken in the near future. Longstanding negotiations with respect to the Pacific coast must be resolved if both Canada and the United States are to derive full potential from their salmon resources.

3.3 MANAGING COMMON PROPERTY

The benefits of improved quality and expanded marketing capability will be dissipated unless effective measures are taken to address the problems arising from the common property "race to the fish".

The common property problem can only be addressed by converting "everyone's property" into "somebody's property" through the introduction of a system of quota licences (boat or individual quotas or enterprise allocations). Fishermen would then compete with one another, within the limits of their assigned quota, to be as profitable as possible.

The department has made significant progress over the last two or three years in the implementation of such systems and, in so doing, has set the stage for putting them in place in virtually all fisheries over the next five years.

Enterprise allocations have been implemented in 1984 for the entire Canadian Atlantic offshore groundfish fleet on a five year basis. This allocation plan includes the assignment to individual companies of every major Atlantic groundfish stock to a total of 428,000 tonnes (potentially valued at $140 million under 1983 prices). A similar trial project has been instituted on an experimental basis for the entire Newfoundland west coast dragger fleet.

During 1984, consultations will continue with the vessel owners of the Gulf and Scotia Fundy shrimp and the groundfish fleet in the 65-100 ft category on implementing individual or enterprise allocations for these fleet sectors for 1985.

Similarly, as part of the new Pacific fisheries policy, boat quotas will be implemented in the salmon fisheries and other Pacific fisheries as well, beginning in 1985.

The difficulties of implementing quota licence systems, however, cannot be minimized. First of all, fishermen must be convinced

that such a system is to their benefit and that they will be better off changing from their ways of being hunters and gamblers to becoming harvesters. Old habits will die hard and such attitudinal changes cannot be effected overnight. There are also a number of key policy issues which must be addressed, such as the basis for initial quota allocations and how quotas can be made transferable while at the same time avoiding undesirable trends such as the undue concentration of quota in the hands of any one person or quota speculation.

There are also a number of strategic choices with respect to implementing quota licence systems, particularly with regard to whether they should be put into place quickly and adjusted as experience dictates, or whether they should be applied gradually. The circumstances in each fishery will dictate the approach to be followed.

In implementing individual quota systems, my department will be examining carefully the experience of other sectors in managing property rights regimes (e.g. quotas in the dairy industry and land tenure systems in the forest industry).

In addition to the commercial fishery, competition for important fisheries resources now comes from Indian fisheries and the sport fisheries. The negotiation of Indian land and sea claims and the clarification of aboriginal rights can be expected to provide

Indians with a greater share of these resources and a greater say in their management. Fisheries policy will have to be developed to provide the flexibility necessary to accommodate greater Indian participation.

Canada's sport fisheries provide leisure time activity for nearly 25% of all Canadians. As a significant contributor to Canada's manufacturing and tourism industries they also create needed employment, often in rural and remote areas. It is my intention to elevate the profile of the sport fisheries and develop them to their full economic and social potential. This will require a number of specific developments to assure an appropriate share of the natural and enhanced resource, provide better physical access (piers and reefs, boating infrastructure), improve enforcement, undertake socio-economic research, improve biological knowledge of some recreational species and investigate and implement an appropriate mechanism for revenue generation. In addition I will work towards establishing a Sport Fisheries Canada Foundation to undertake development programs with the private sector and other management agencies.

3.4 SCIENCE AND THE TRANSFER OF TECHNOLOGY

To bring focus to the national effort in marine science in the years ahead my department, with the largest ocean science capability in Canada, will assume a higher profile in the

application of science and technology to marine opportunities and problems. This higher profile will involve strengthening the role of the recently-formed Interdepartmental Committee on Oceans and the development of improved consultation mechanisms with the university and private sectors.

The cornerstone of my efforts to more clearly focus DFO's science objectives and programs will be the development of an ocean science and technology strategy that will concentrate on:

- research into ocean processes in coastal and Arctic waters;
- research at the margin of the continental shelves and in the deep ocean in support of defence and fisheries management requirements;
- fostering private sector ocean technology development;
- multidisciplined research involving genetic diversity, environmental change, species dynamics and eco-systems in general;
- development of technology for application to habitat management and fish stock monitoring and assessment.

4.0 CONCLUSION

Canadian fisheries resources offer great potential for further exploitation and development. We have been through a very difficult period. We will continue to face some of these difficulties but fundamental initiatives have been taken to provide a basis for a more viable and internationally competitive industry. On the basis of these initiatives we can move forward to achieve this by:

- upgrading the quality of Canadian fisheries products;
- establishing institutional mechanisms to improve the marketing of these products;
- replacing the "race to the fish" with regimes based on allocations to individual fishermen or enterprises;
- reorienting our research efforts in order to develop world class fisheries and oceans industries.

Pierre De Bané
Minister of Fisheries and Oceans

LEGISLATION AND AUTHORITIES

FISHERIES:

The Canadian Constitution confers to the Federal Parliament, jurisdiction over "Seacoast and Inland Fisheries". The word "Fisheries" has been judicially interpreted as extending to control over methods, gear, seasons, quotas, but not to the right to fish nor to the fate of fish after it has been taken.

FISH IN THE WATER:

In tidal waters, fish is a common resource and consequently, no one has an exclusive right to the fish. In non-tidal waters, however, the right to fish belongs to the owner of the land over which fish happens to be found. Since in most cases such land is owned by the Crown in Right of a Province, Provinces control access to fish in non-tidal waters.

FISH ONCE TAKEN:

Once caught, fish becomes a property and falls generally under "Property and Civil Rights", a provincial jurisdiction under the Constitution. Unless Ottawa can demonstrate that its legislation with respect to caught fish is either necessarily incidental to the exercise of its responsibilities for fisheries or that such legislation falls under some other head of the Constitution, it risks being declared ultra vires by the courts.

Thus, fish inspection is a provincial responsibility, but can also be a federal one for fish exported out of one province or out of the country. Similarly fish processing is mainly a provincial responsibility although the Federal government has some jurisdiction in the matter.

PRACTICAL ARRANGEMENTS:

This rather complex and mixed jurisdiction over fish has, ever since Confederation, led to practical arrangements between Ottawa and the provinces. In most areas of the country, the responsibility for the administration of non-tidal water fisheries has been delegated by Ottawa to the provincial governments while responsibility over fish inspection and fish processing is often delegated, at least in part, by the Province to the federal government.

THE DEPARTMENT OF FISHERIES AND OCEANS:

The Department of Fisheries and Oceans was created in 1979 by the Government Organization Act, 1979, S.C., ch. 13, 1978-79, 27-28 ELIZ.II. In this legislation, the Minister of Fisheries and Oceans was given duties, powers and functions over the following matters:

(a) all matters over which the Parliament of Canada has jurisdiction, not by any law assigned to any other department, board or agency of the Government of Canada relating to

(i) sea coast and inland fisheries,
(ii) fishing and recreational harbours,
(iii) hydrography and marine sciences, and
(iv) the coordination of the policies and programs of the Government of Canada respecting oceans; and

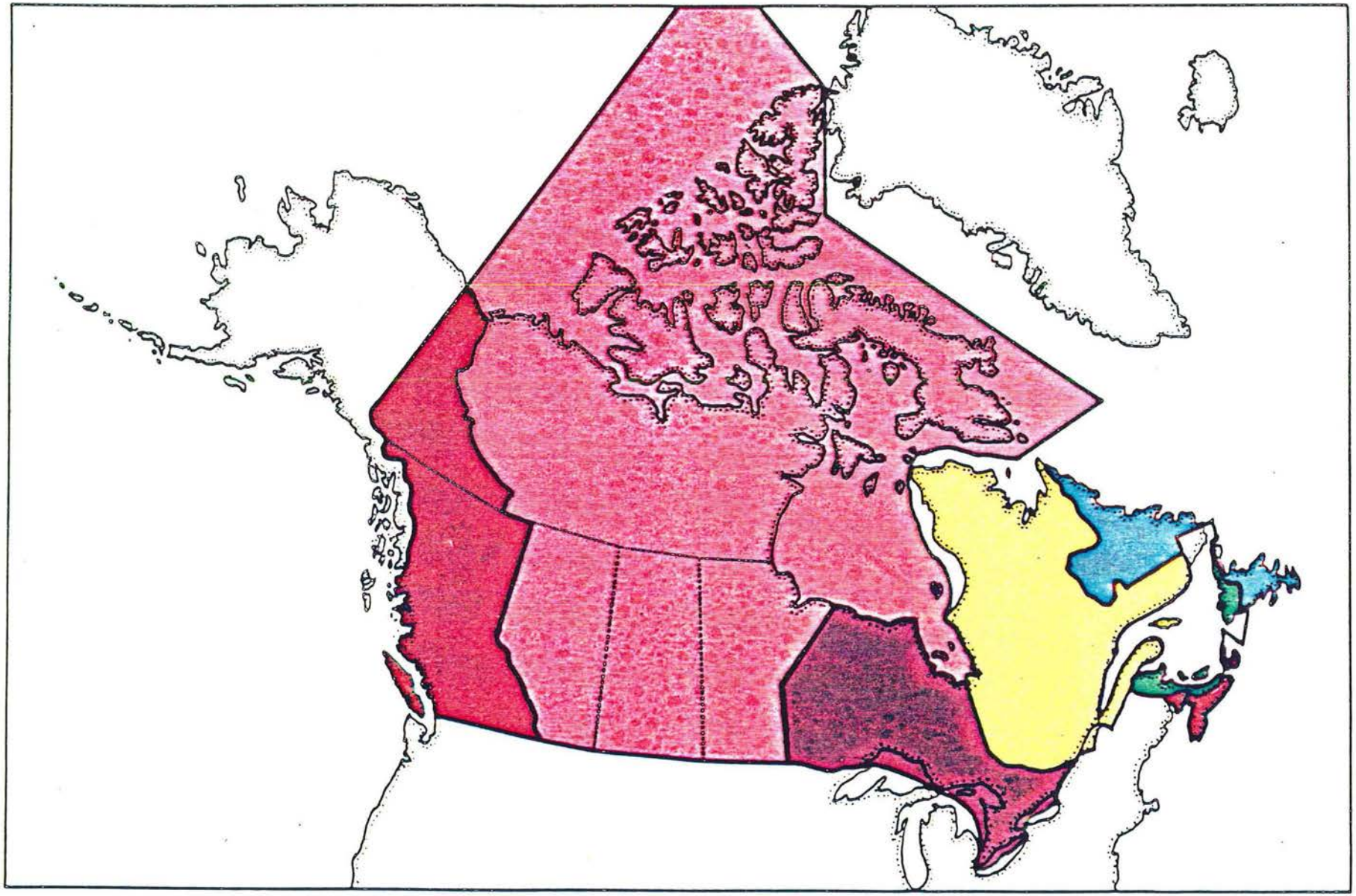
(b) such other matters over which the Parliament of Canada has jurisdiction relating to oceans as are by law assigned to the Minister.

LEGISLATION ADMINISTERED BY THE DEPARTMENT:

At present, the Department of Fisheries and Oceans administers the following legislation:

1) Fisheries Act, R.S., c. F-14
2) Coastal Fisheries Protection Act, R.S., c. C-21
3) Fish Inspection Act, R.S., c. F-14
4) Fishing and Recreational Harbours Act, S.C., 1977-78, c. 30
5) Atlantic Fisheries Restructuring Act, S.C., 1983-84.
6) Fisheries Development Act, R.S., c. F-21
7) Fisheries Improvement Loans Act, R.S., c. F-22
8) Fisheries Prices Support Act, R.S., c. F-23
9) Freshwater Fish Marketing Act, R.S., c. F-13
10) Fisheries and Oceans Research Advisory Council Act, R.S., c. F-24
11) Great Lakes Fisheries Convention Act, R.S. c. F-15
12) North Pacific Fisheries Convention Act, R.S. c. F-16
13) Northern Pacific Halibut Fisheries Convention Act, R.S. c. F-17
14) Nortwest Atlantic Fisheries Convention Act, R.S., c. F-18
15) Pacific Fur Seals Convention Act, R.S. c. F-33
16) Pacific Salmon Fisheries Convention Act, R.S., c. F-19
17) Saltfish Act, R.S., c. 37 (1st Supp.)

DEPARTMENT OF FISHERIES AND OCEANS REGIONS
RÉGIONS DU MINISTÈRE DES PÊCHES ET DES OCÉANS

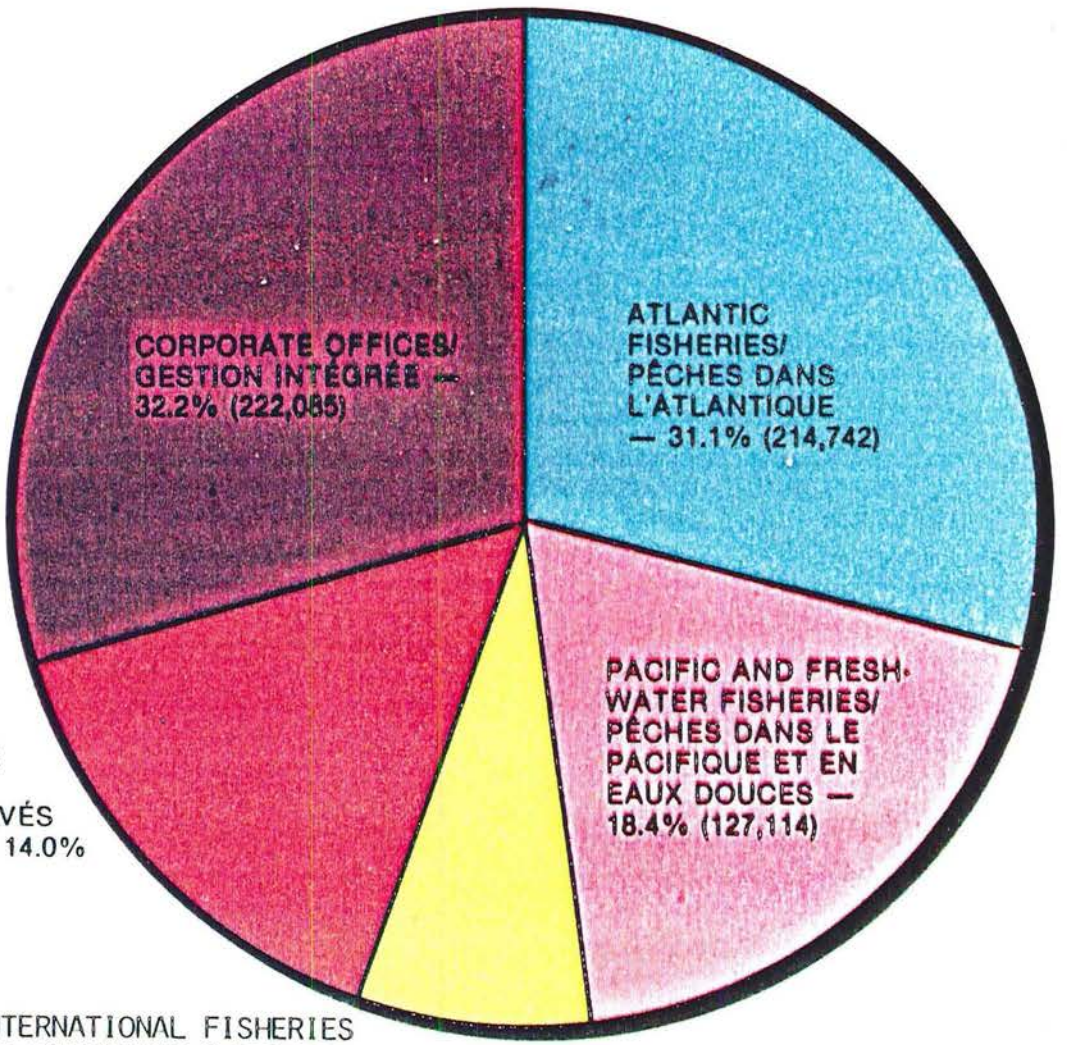


Total Program by Organisation/
Total du programme par organization/

Financial Resource Allocation/
Allocation des ressources financières

($000's)

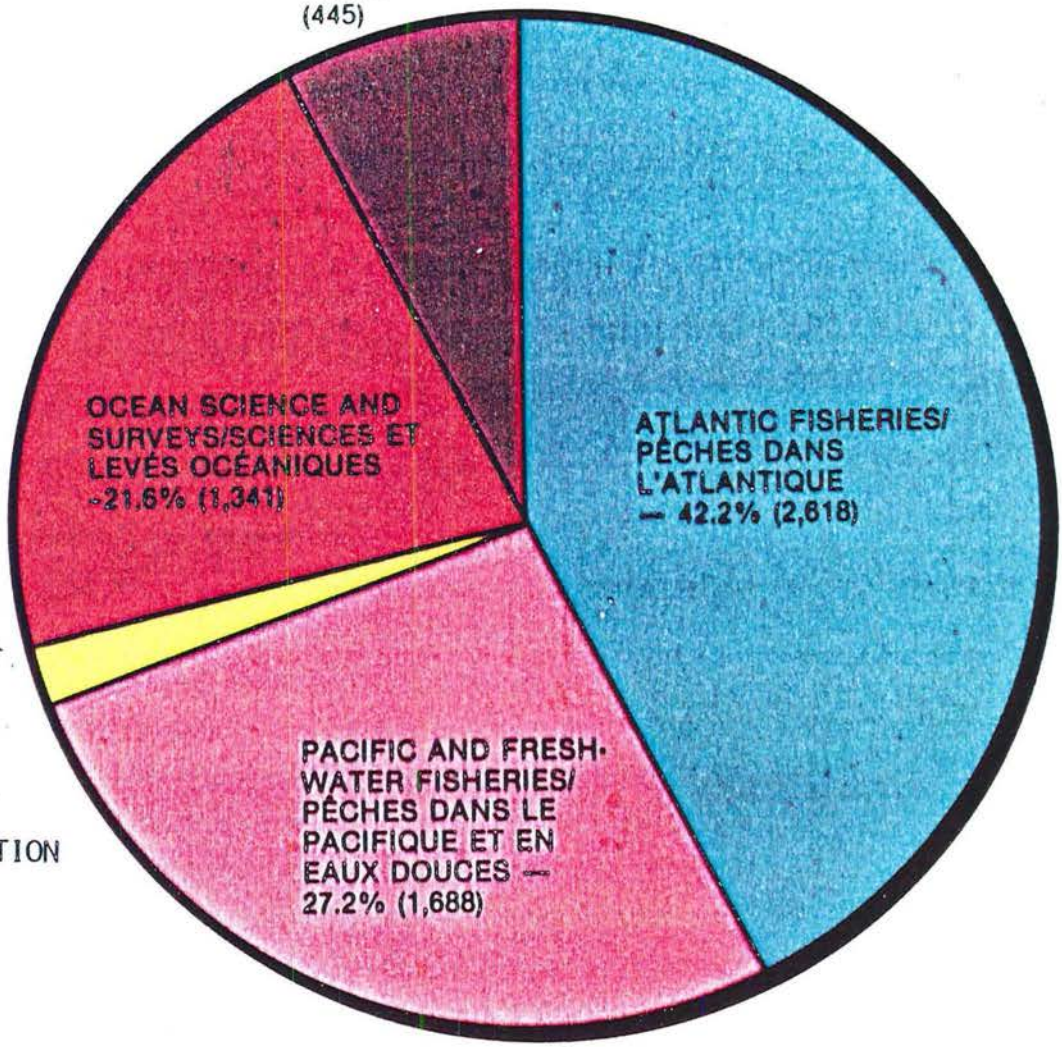
1984-85 — 690,112



Total Program by Organization/
Total du programme par organisation

Person-Year Resource Allocation/
Allocation des années-personnes

1984-85 — 6,202



PACIFIC AND FRESHWATER FISHERIES

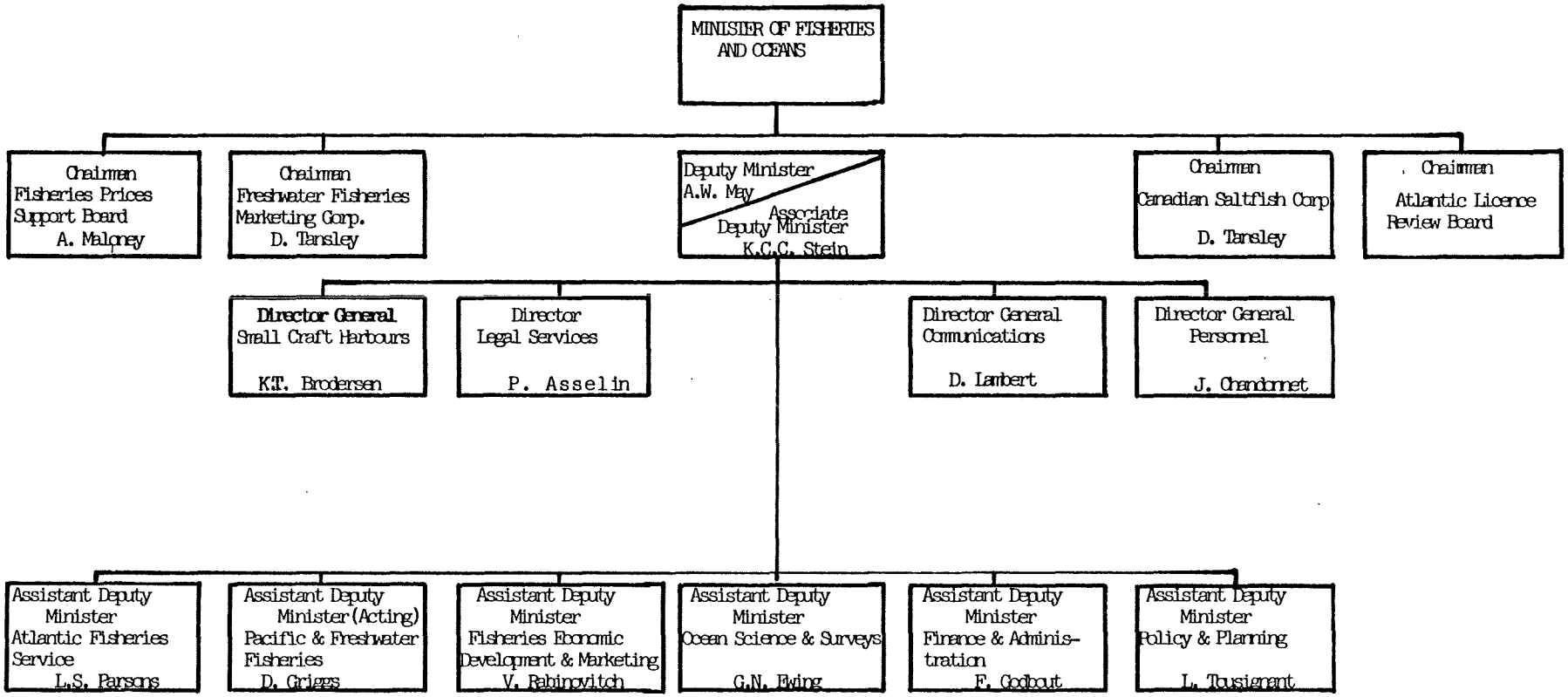
Headed by the Assistant Deputy Minister, this sector is responsible for the planning, direction and co-ordination of field operations relating to the marine and anadromous fisheries in British Columbia, and all fisheries in the Yukon and Northwest Territories. This sector is also responsible for the development and implementation of commercial and recreational fisheries policies and programs in those areas. Work in those areas includes resource allocations, the implementation of development programs and the fulfilling of foreign arrangements. In Ontario, Manitoba, Saskatchewan and Alberta, the Federal government supports a strong research program and carries out inspection of fish and fish products and enforces Federal Fisheries regulations. The provinces themselves have responsibility for all other aspects of fisheries management, although the Federal government is responsible for the development and implementation of commercial fisheries policy for the short and medium term in these areas. The sector also has national responsibility for fish habitat (including enhancement activities), for co-ordinating a native affairs program in areas where aboriginal peoples are involved in the fishing industry, and for research.

FISHERIES OPERATIONS DIRECTORATE

Headed by the Director-General, this directorate is responsible for providing advice and support to the Assistant Deputy Minister on issues related to fisheries management in the various regions of western Canada. This involves co-ordinating and working with the regions for the surveillance of the 200-mile exclusive fisheries zones, research and stock assessments, conservation programs, fish and fishery products upgrading and assistance to fishermen and processors in the development of improved and new methods of harvesting and processing.

PROGRAM PLANNING AND CO-ORDINATION BRANCH

Headed by the Director of Program Planning and Co-ordination, this Branch is responsible for providing advice and support to the Assistant Deputy Minister (P&FF) on planning co-ordination and management improvement. It co-ordinates the Strategic Overview and multi-year operational planning and internal long-term operational planning and work planning of the Pacific and Freshwater Fisheries Service. It also focuses on action plans for management improvement pursuant to IMPAC, co-ordination of P&FF Cabinet and Treasury Board submissions and various special projects.


MINISTER OF FISHERIES AND OCEANS
Chairman Fisheries Prices Support Board A. Maloney
Chairman Freshwater Fisheries Marketing Corp. D. Tansley
Deputy Minister A.W. May
Associate Deputy Minister K.C.C. Stein
Chairman Canadian Saltfish Corp D. Tansley
Chairman Atlantic Licence Review Board
Director General Small Craft Harbours K.T. Brodersen
Director Legal Services P. Asselin
Director General Communications D. Lambert
Director General Personnel J. Chandonnet
Assistant Deputy Minister Atlantic Fisheries Service L.S. Parsons
Assistant Deputy Minister (Acting) Pacific & Freshwater Fisheries D. Griggs
Assistant Deputy Minister Fisheries Economic Development & Marketing V. Rabinovitch
Assistant Deputy Minister Ocean Science & Surveys G.N. Ewing
Assistant Deputy Minister Finance & Administration F. Codbout
Assistant Deputy Minister Policy & Planning L. Tousignant

FISH HABITAT MANAGEMENT BRANCH

This Branch provides planning and program support to the ADMs of Pacific and Freshwater Fisheries and Atlantic Fisheries and advice to the Departmental Senior Management in Ottawa and regions on all fish habitat related policies, programs and issues. It also provides DFO requirements and represents DFO interests to other Government agencies in Ottawa, the private sector and at international meetings and bilateral discussions with the U.S. on fish habitat issues.

ARCTIC AND NATIVE AFFAIRS BRANCH

This Branch is responsible for national programs that include involvement in an active role in negotiating comprehensive land claims across the country. Another responsibility is in the area of policy development in the Indian Food Fishery and the involvement by Indians in the commercial fishery. The Arctic function of the Branch is conducted through policy development and co-ordination of activity in the Arctic fishery.

PACIFIC AND FRESHWATER REGIONAL OFFICES

The Pacific and Freshwater Fisheries Service is divided into three regional offices, each headed by a Director-General who reports to the Assistant Deputy Minister.

Pacific Region - Vancouver

This regional office under the direction of the Regional Director General, Wayne Shinners, deals with both the on-going management concerns and the final stages of program development and evaluation for the marine and anadromous fisheries in British Columbia and the Yukon. It is responsible for liaising directly with industry and the public in all matters relating to the resource. It deals with inland and offshore resources management and conservation in the areas of commercial, recreational and Indian food fisheries. It provides inspection services, enforces fisheries regulations and administers the fishermen's insurance program. It also oversees the licensing system and research on fish and other aquatic fauna, and methods of harvesting and processing them. It is also responsible for the design, construction and operation of facilities within the Salmonid Enhancement Program. Federally funded small-craft harbours in the region are managed through the regional office. Scientific and technical information necessary for on-going fisheries management and for future planning is gathered within the region, particularly as it relates to fish habitat

management. Technical support is provided to fishermen in the areas of catching, handling, onboard freezing, stowing and marketing of fish.

Pacific Regional Headquarters is located in Vancouver. The principal Research facility is the Pacific Biological Station in Nanaimo, with a satellite lab in West Vancouver. Field Services Area offices are located in New Westminster, Nanaimo and Prince Rupert with 41 outlying offices. The Salmonid Enhancement Program (SEP) controls 22 major facilities and 170 other projects throughout British Columbia. Inspection labs are located in Vancouver, Victoria, Prince Rupert and New Westminster. Also, there are 28 surveillance and 2 research vessels, 3 marine bases and 215 Small Craft Harbours facilities.

Western Region (The Freshwater Institute) - Winnipeg

The Freshwater Institute, which is the Western regional office of Fisheries and Oceans, shares responsibility for fisheries management with the provincial governments of Manitoba, Saskatchewan and Alberta. This Region is managed by a Regional Director General, Dr. Herb Lawler. While the regional office undertakes the inspection and certification of fish processing and handling facilities, most other aspects of fisheries management are the responsibility of the provinces. Management programs related to both marine and freshwater species in the Northwest Territories, however, are under federal control. The regional office sponsors services which promote the transfer of technology for practical applications in the fields of engineering, design, process and product development, as well as providing engineering support to industry. The Region administers the Fishing Vessel Insurance Plan throughout the region and also undertakes the collection of fisheries statistics and the economic analysis of regional operations as a basis for policy recommendations. The region is also responsible for the direct administration of the federally funded Small Craft Harbours program. Management of fisheries in the Northwest Territories includes surveillance of the fisheries and enforcement of fisheries regulations, as well as the implementation of resource allocations, conservation programs, and the carrying out of extensive research. The region participates as the representative of the Department of Fisheries and Oceans on various inter-agency committees and task forces concerned with protecting and developing fisheries resources in northern Canada. The Freshwater Institute has a strong research program which is carried out within the region and in co-operation with other regions.

Western Regional Headquarters and the principal Research center is located at the Freshwater Institute in Winnipeg. The Arctic Operations Area office is in Yellowknife with 6 outlying offices. Southern Operations Area offices are located in Winnipeg, Prince Albert and Edmonton, with 9 outlying offices. Throughout the Region are 14 other camps and stations, 1 experimental fish hatchery in Gunton, Manitoba, and 85 Small Craft Harbours facilities.

Ontario Region - Burlington

Responsibility for the administration of the fisheries sector in Ontario is shared with the provincial government. Ontario is responsible for the conservation and regulation of the sport and commercial fisheries, while the federal department undertakes a number of programs to complement the provincial management effort and improve returns to the fishing sector. These programs include the inspection and certification of imported and domestic fish products and fish processing and handling facilities; the provision of engineering support to the fishing industry and sponsorship of product and process development studies to maximize benefits from the resource. A program of Fishing Vessel Insurance is administered as well as a Vessel Assistance Program. Additionally, the Region carries out a program of research directed primarily at providing an understanding of the effects of pollution and habitat degradation on the fishing resources of the Great Lakes. A program to control the sea lamprey in the Great Lakes is administered to allow rehabilitation of desirable fish stocks in the Lakes. Finally, the Region is responsible for the construction and management of the federal program of Small Craft Harbours in Ontario, and provides marketing services to the commercial fishing industry.

Ontario Regional Headquarters is managed by Pat Chamut, the Director General, and is located in Burlington, as is the major Research center of the Great Lakes Fisheries Research Branch (GLFRB) which has 2 satellite labs. The Sea Lamprey Control Center is located in Sault Ste. Marie while Fishing and Industry Services is located in Toronto with 6 outlying offices. Within the Region, Small Craft Harbours operates approximately 400 facilities.

GOVERNMENT/INDUSTRY ORGANIZATIONS

Minister's Advisory Council

Appointed by the Minister to provide advice on key issues affecting the Pacific fishery. Members include representatives from the commercial, Native and sports sectors of the

industry. The current Chairman is Jack Nichol, President of the United Fishermen and Allied Workers' Union (U.F.A.W.U.).

Salmonid Enhancement Advisory Board

Formed in 1978 by the Minister of Fisheries and Oceans in consultation with the Province of British Columbia, this Board was established to provide advice and recommendations to the Minister on the management and direction of the Salmonid Enhancement Program. The Board membership comprises federal and provincial representatives in addition to private sector appointees from the commercial and recreational fishing interests, native Indians, the forest industry and the public-at-large. The Chairman is Dr. A.W. May, Deputy Minister, DFO.

Licence Appeal Board

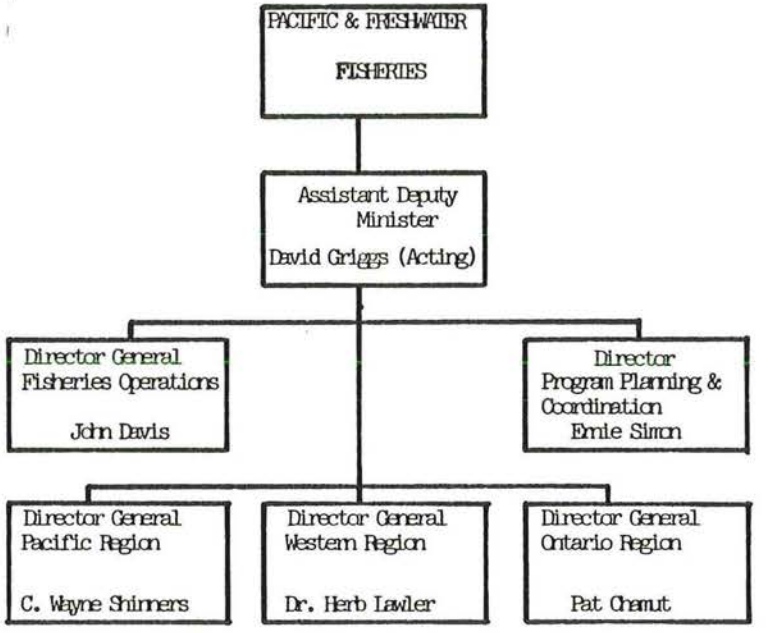
Instituted in 1979 to hear fishermen's appeals on fishing licence matters from the Pacific Region that cannot be dealt with within the strict interpretation of the regulations where there are extenuating circumstances. The Board's recommendations are made directly to the Minister. The most recent Chairman was Phil Murray from Vancouver. Mr. Murray's term has expired although a request for an extension has been submitted to the Minister.

Groundfish Advisory Committee

The purpose of this Committee is to advise on planning and policy development for the groundfish industry, particularly with respect to licensing and fisheries management in the Pacific Region. Members include commercial fishermen and processors. The Chairman is the Chief, Offshore Division, Pacific Region.

Sportfish Advisory Board

This group advises the Minister on tidal and non-tidal sport fishery matters and to assist in disseminating information to the general public on matters pertaining to these fisheries in the Pacific Region. The Chairman of the Board is currently Ralph Shaw.

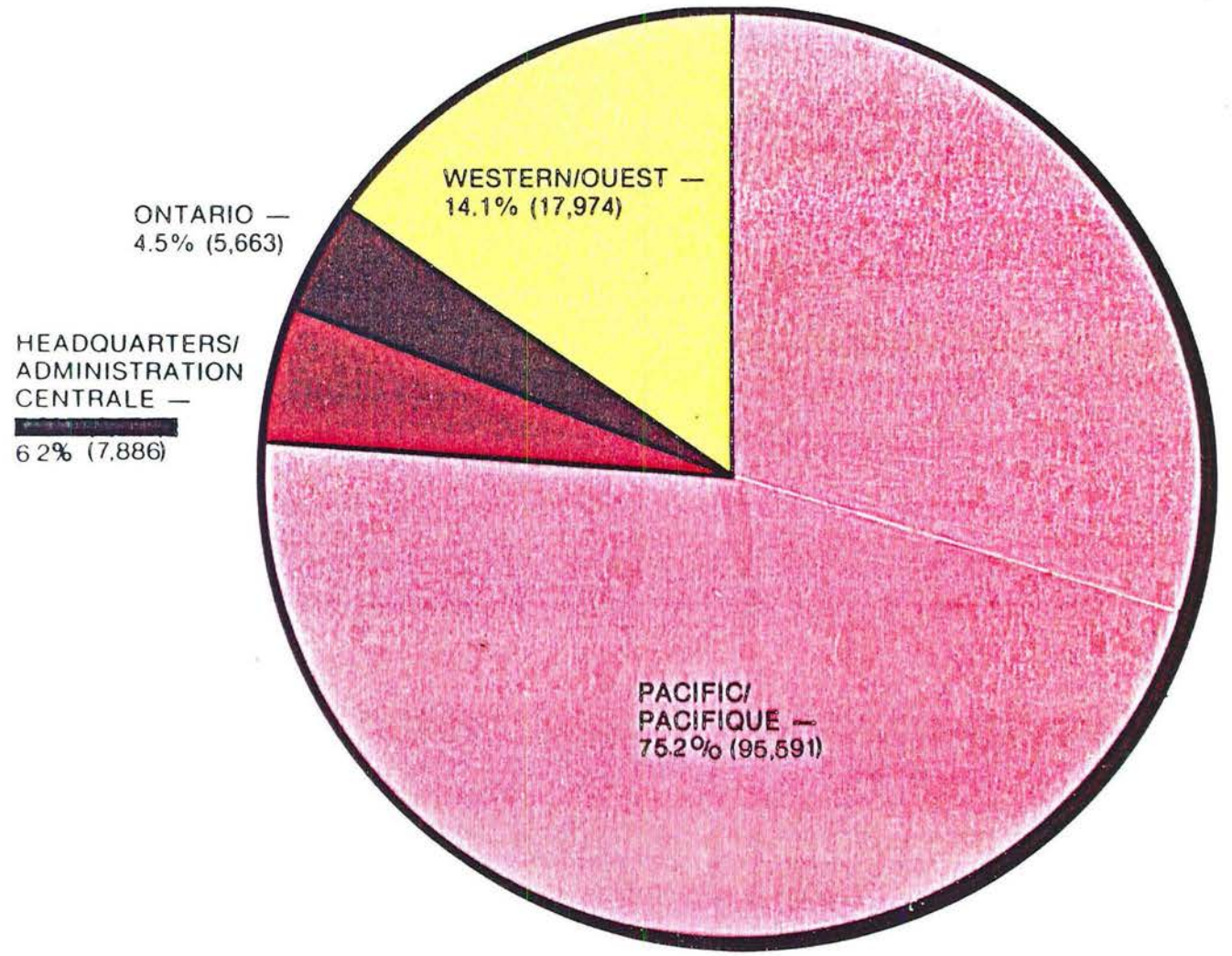

PACIFIC & FRESHWATER
FISHERIES
Assistant Deputy Minister
David Griggs (Acting)
Director General
Fisheries Operations
John Davis
Director
Program Planning &
Coordination
Ernie Simon
Director General
Pacific Region
C. Wayne Shinners
Director General
Western Region
Dr. Herb Lawler
Director General
Ontario Region
Pat Chamut

Pacific and Freshwater Fisheries/
Pêches dans le pacifique et en eaux douces
Organization by region/
Organisation par région

Financial Resource Allocation/
Allocation des ressources financières

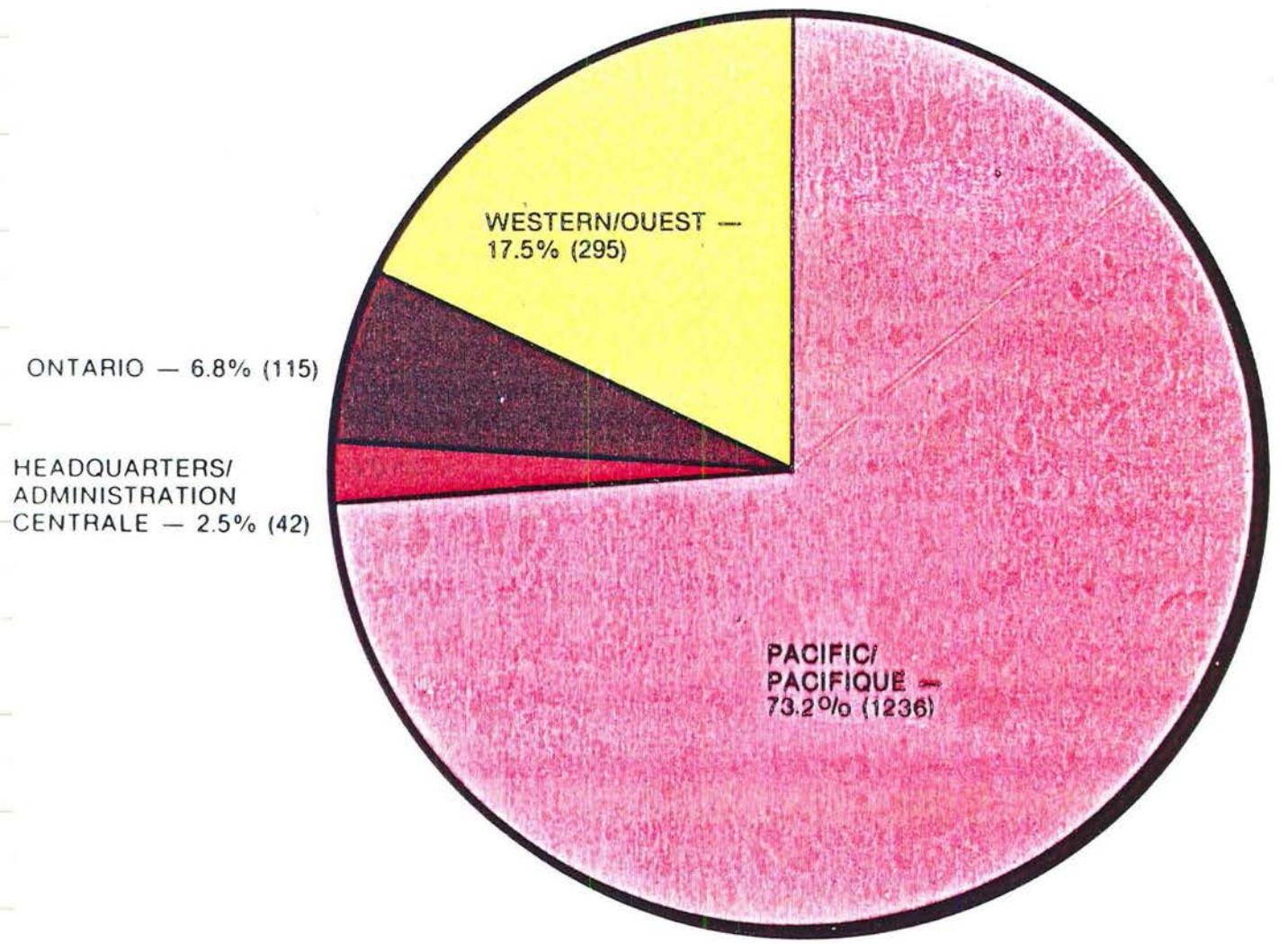
($000's)

1984-85 — 127,114

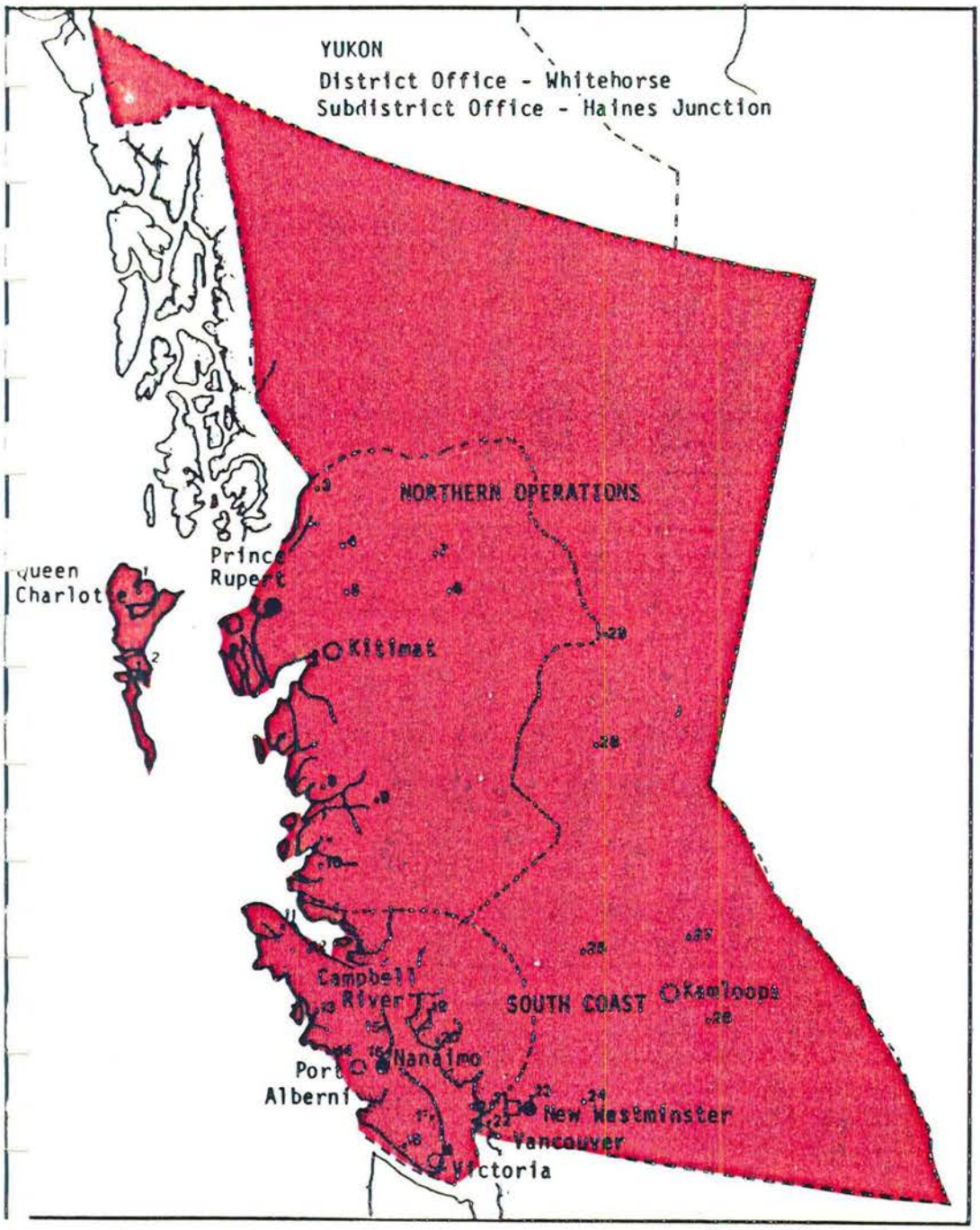


Pacific and Freshwater Fisheries/
Pêches dans le pacifique et en eaux douces
Organization by region/
Organisation par région

Person-Year Resource Allocation/
Allocation des années-personnes
1984-85 — 1,688



PACIFIC REGION FIELD SERVICES OFFICES



SUBDISTRICT OFFICES

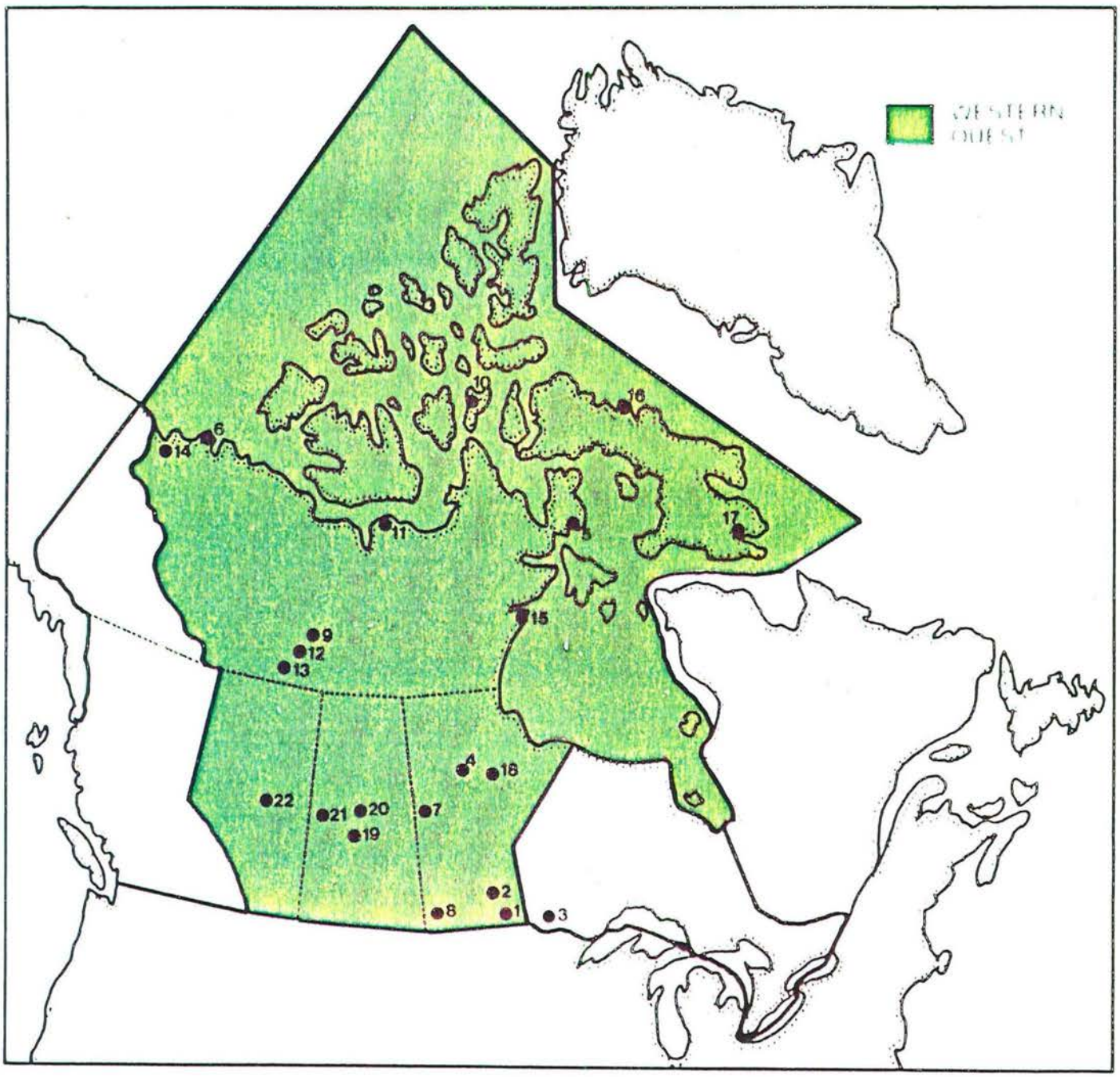
1	Masset
2	Sandspit
3	Stewart
4	Nass Camp
5	Terrace
6	Smithers
7	Hazelton
8	Bella Bella
9	Bella Coola
10	Dawsons Landing
11	Port Hardy
12	Alert Bay
13	Tahsis
14	Tofino
15	Comox
16	Qualicum Beach
17	Duncan
18	Sooke
19	Powell River
20	Madeira Park
21	Squamish
22	Steveston
23	Mission
24	Chilliwack
25	Lillooet
26	Salmon Arm
27	Clearwater
28	Quesnel
29	Prince George

● DIVISIONAL AND DISTRICT OFFICES

○ DISTRICT OFFICES ONLY

□ PACIFIC REGION HEADQUARTERS

DFO OFFICES IN WESTERN REGION



MAJOR RESEARCH AND ASSESSMENT FIELD STATIONS

1. Winnipeg - Freshwater Institute
   Manitoba District Office
   Freshwater Fish Marketing Corporation
2. Rockwood Experimental Hatchery
3. Experimental Lakes Area
4. Southern Indian Lake Field Station
5. Saqvaqjuac Field Station
6. Tuktoyaktuk Field Station

MINOR RESEARCH AND ASSESSMENT FIELD STATIONS

7. Heming Lake Field Station
8. Erickson Field Station
9. Chitty Lake Field Station
10. Resolute Field Station
11. Nauyauk Lake Field Station

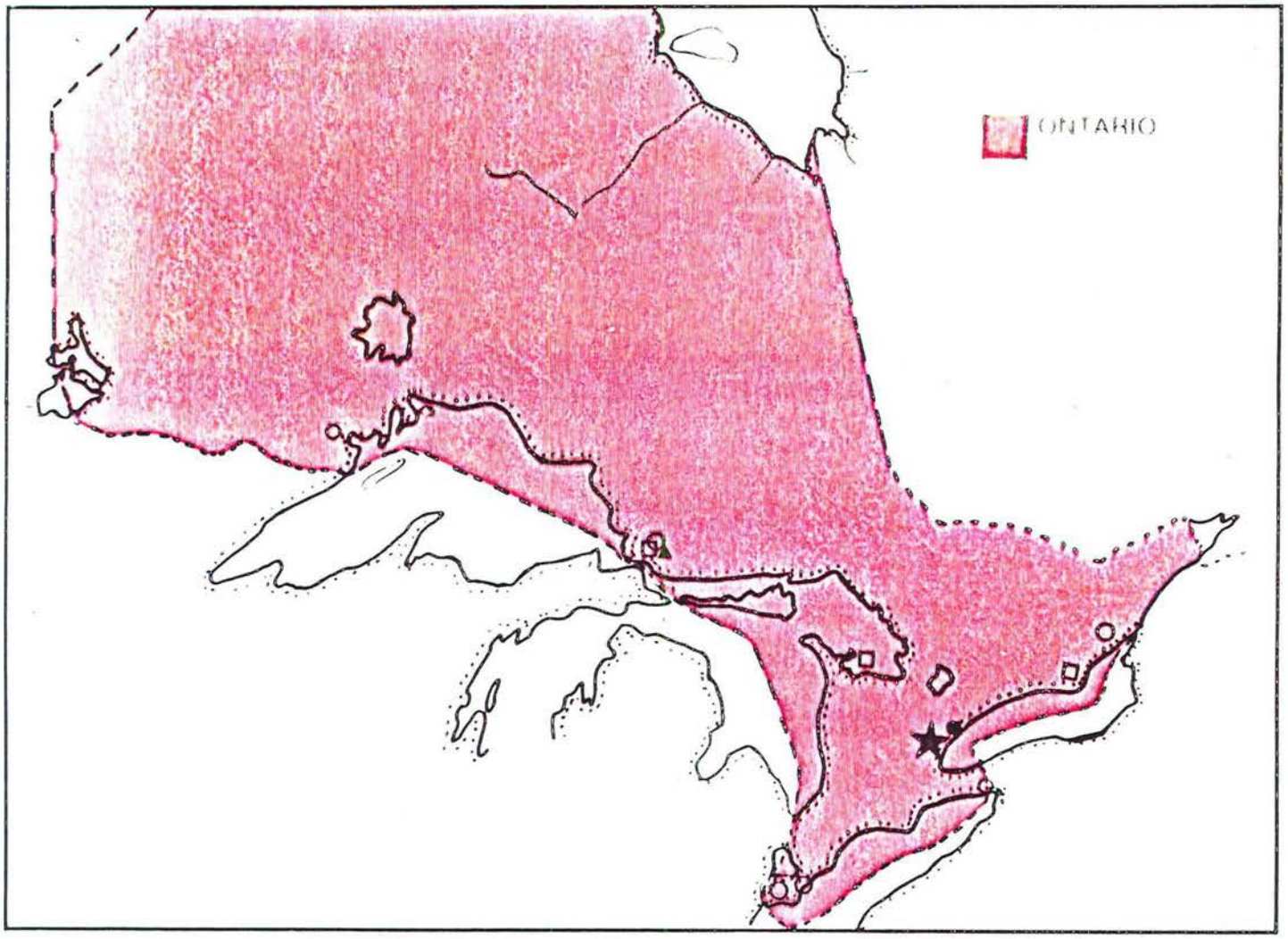
ARCTIC OFFICES

12. Yellowknife - Northwest Territories H.Q.
13. Hay River - Central Arctic Sub-District
14. Inuvik - Western Arctic District
15. Rankin Inlet - Keewatin Sub-District
16. Pond Inlet - North Baffin Sub-District
17. Frobisher Bay - Eastern Arctic District

INSPECTION CENTRES

18. Thompson, Manitoba
19. Prince Alberta, Saskatchewan
20. La Ronge, Saskatchewan
21. Meadow Lake, Saskatchewan
22. Edmonton, Alberta

FISHERIES SERVICE LOCATIONS ONTARIO



★ REGIONAL HEADQUARTERS - Burlington, Ontario

GREAT LAKES FISHERIES RESEARCH BRANCH HEADQUARTERS - C.I.W., Burlington

□ FIELD OFFICES - Picton, Sault Ste. Marie, Owen Sound

▲ SEA LAMPREY CONTROL HEADQUARTERS - Sault Ste. Marie

● FISHING & INDUSTRY SERVICES HEADQUARTERS - Toronto

○ FIELD OFFICES - Thunder Bay, Sault Ste. Marie, Windsor, Wheatley, Fort Erie, Kingston

ATLANTIC FISHERIES SERVICE

Mandate

Headed by L.S. Parsons, Assistant Deputy Minister (Atlantic Fisheries), this sector is responsible for the planning, direction and co-ordination of field operations relating to fisheries management in Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island and Quebec. The sector is also responsible for the development and implementation of commercial and recreational fisheries policies and programs in those areas. The work involves resource allocations, the implementation of development programs, the fulfillment of foreign arrangements and the conservation, protection and enhancement of fishery resources and fish habitat on the Atlantic coast. The section has national responsibility for fisheries research, and for the inspection of fish and fish products in order to ensure high standards of quality and safety. The Service also assists fishermen, as well as the fish processing and distribution industries, to promote more effective harvesting and production, and also by means of financial and technical support.

ATLANTIC OPERATIONS DIRECTORATE

Headed by W.A. Rowat, Director-General (Atlantic Operations), this directorate is responsible for providing advice and support to the Assistant Deputy Minister (Atlantic Fisheries) on issues related to fisheries management in the various regions of the Atlantic coast. This involves coordinating policies and programs on a national basis and working with the regions towards the surveillance and management of the 200-mile exclusive fisheries zone. Specifically, these programs include the design and administration of a licensing system and resource allocation, and the coordination of conservation programs. The directorate also works towards quality improvement, and the provision of assistance to fishermen and processors in the development of new methods of harvesting and processing.

ATLANTIC REGIONAL OFFICES

There are four regional offices on the East Coast, each headed by a Director-General who reports to the Assistant Deputy Minister (Atlantic Fisheries). Day-to-day responsibility for fisheries management and operations rests with the regional offices. This includes implementing decisions dealing with management and conservation, enforcement of Fisheries Regulations, including the operation of a major ocean patrol fleet, industrial development and fish inspection, marketing and promotion. Biological and technical

research on fish and other aquatic fauna is carried out, and statistics related to fisheries opoerations are collected on an on-going basis. Administration of the Fishing Vessel Insurance and Vessel Construction Subsidy programs is handled within the regions, as is the management of federally funded small craft harbours program. The regional offices also undertake the inspection of fish processing and handling facilities for fish entering the inter-provincial or export trade, and for imported fish products.

Although the federal government has exclusive jurisdiction over both coastal and inland fisheries, some provinces have accepted, to varying degrees, the administrative responsibility for their fisheries. However, the federal regional office undertakes the inspection of fish and fish products, and the setting of long term policies.

Scotia-Fundy Region -- Halifax (R.A. Crouter, Director-General) This regional office is responsible for the direct day-to-day management of both marine and freshwater fisheries as outlined above, in Nova Scotia and parts of New Brunswick.

Newfoundland Region -- St. John's (E.B. Dunne, Director-General) This regional office is responsible for the direct day-to-day management of both marine and freshwater fisheries, as outlined above, for the majority of the majority of the province of Newfoundland and all of Labrador. The region also administers a Bait Program through which it supplies bait to Newfoundland fishermen from 16 key bait depots, and 25 small holding units.

Gulf Region -- Moncton (J.-E. Haché, Director-General) This regional office is responsible for the direct day-to-day management of both marine and freshwater fisheries, as outlined above, for some areas bordering on the Gulf of St. Lawrence, including all of Prince Edward Island and parts of New Brunswick, Nova Scotia and Newfoundland.

Quebec Region -- Quebec (D. Martin, Director-General) This recently formed regional office is responsible for the direct day-to-day management of both marine and freshwater fisheries, as outlined above, for all of Quebec. As of April 1, 1984, the federal government reassumed administration of the marine fisheries in Quebec.

FISHERIES RESEARCH ESTABLISHMENTS

Fisheries Research Directorate -- Ottawa Headed by Dr. B.S. Muir, Director-General, Fisheries Research, this Directorate has national responsibility for providing advice

and support to the Assistant Deputy Ministers of Atlantic Fisheries and of Pacific and Freshwater Fisheries, on issues relating to fisheries research programs, and on the scientific aspects of resource management policy and programs. It includes divisions concerned with the study of the resource itself, as well as fish health research, and nutritional and biological studies in the realm of aquaculture and resource development. The Director-General of Fisheries Research also has functional responsibility for coordination of and advice on habitat research via the Director of the Habitat Management Branch who reports to the Director-General of Pacific Operations.

Newfoundland -- St. John's The Fisheries Research Branch operates out of laboratories in the Northwest Atlantic Fisheries Centre. It is organized onto four Divisions: Groundfish; Pelagic Fish; Shellfish and Marine Mammals; Freshwater and Anadromous Fish and Experimental Ecology. The work concentrates heavily on stock assessments and related research on stocks from the Grand Banks to Davis Strait, including seals, inshore species and anadromous fish. Work is also directed to enhancement of Atlantic salmon production and to habitat.

Scotia-Fundy -- Halifax The Fisheries Research Branch has its headquarters and laboratories in downtown Halifax (Water Street). It operates the St. Andrews Biological Station (New Brunswick) and also has a group (part of the Marine Fish Division) at the Bedford Institute of Oceanography. It is organized into four Divisions: Invertebrates & Marine Plants; Marine Fish; Fisheries and Environmental Sciences; Freshwater & Anadromous Fish. In addition to major efforts on stock assessment and related research (in the Scotian Shelf, Bay of Fundy and inshore waters of Nova Scotia and sourthern New Brunswick), this Branch operates six (6) fish hatcheries in Nova Scotia and New Brunswick, and has broad expertise in the area of aquaculture, fish disease and environmental toxicology.

Gulf -- Moncton The Fisheries Research Branch has its headquarters at the regional HQ (Notre Dame d'Acadie in Moncton, N.B.) and additional laboratories at the University of Moncton. It is organized into three (3) divisions: Marine Resource Research; Freshwater and Anadromous Fish; Habitat Evaluation. This Branch has responsibility for stock assessments and related research in the southern Gulf of St. Lawrence and the west coast of Newfoundland, and, by agreement with the Quebec region, assesses stocks of selected offshore species in the Gulf of St. Lawrence. It also operates four (4) hatcheries and does research on habitat issues.

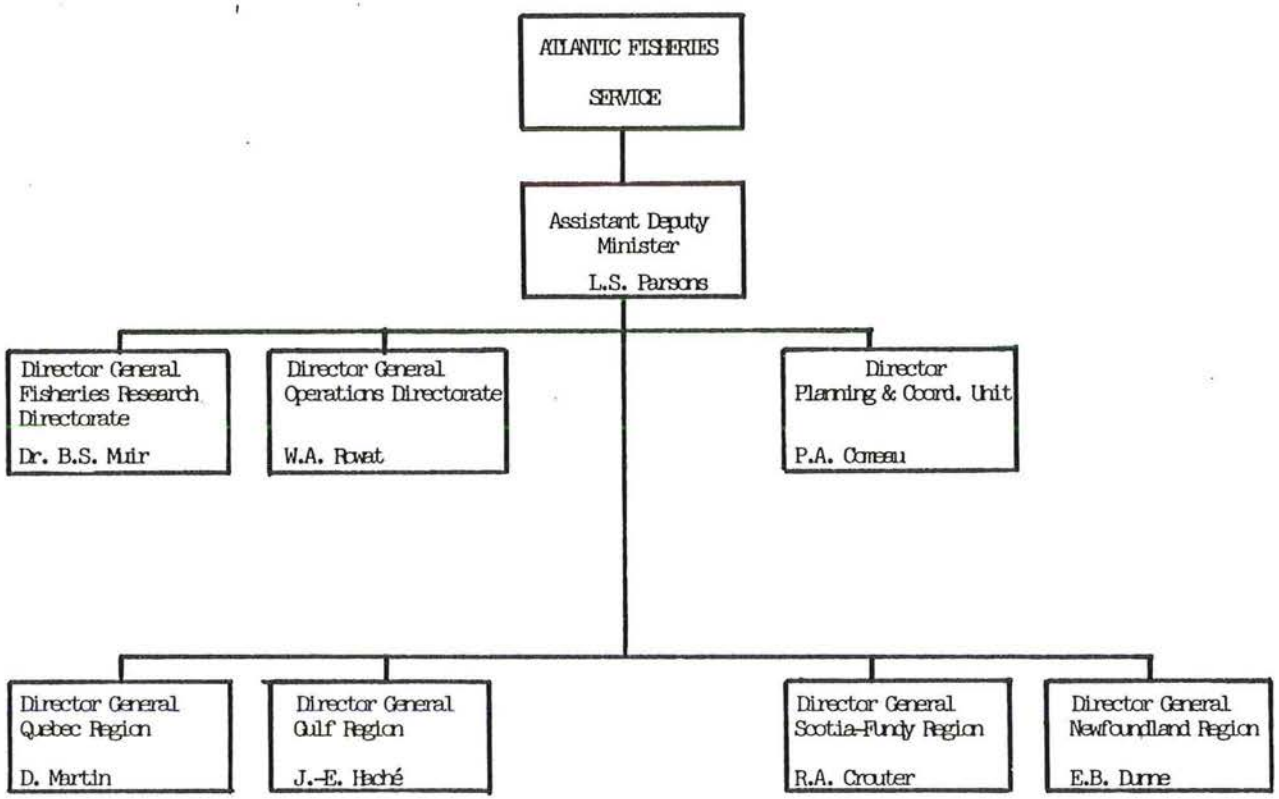
Quebec -- Québec The Fisheries Research Branch has its headquarters at the regional HQ in Quebec City, has a small group at the University of Quebec in Rimouski, and operates the Arctic Biological Station in Ste. Anne de Bellevue. It has responsibility for fisheries research in northern Québec, coastal waters of Québec, and, by agreement with the Gulf Region, does stock assessments and related research on selected stocks in the Gulf of St. Lawrence. The Arctic Biological Station does research on marine mammals in the Gulf of St. Lawrence and Northern Québec, research on arctic ecosystems out of Frobisher Bay, and, in collaboration with the Western Region, research on other marine mammals and arctic ecosystems west of Hudson Bay.

GOVERNMENT - INDUSTRY ORGANIZATION

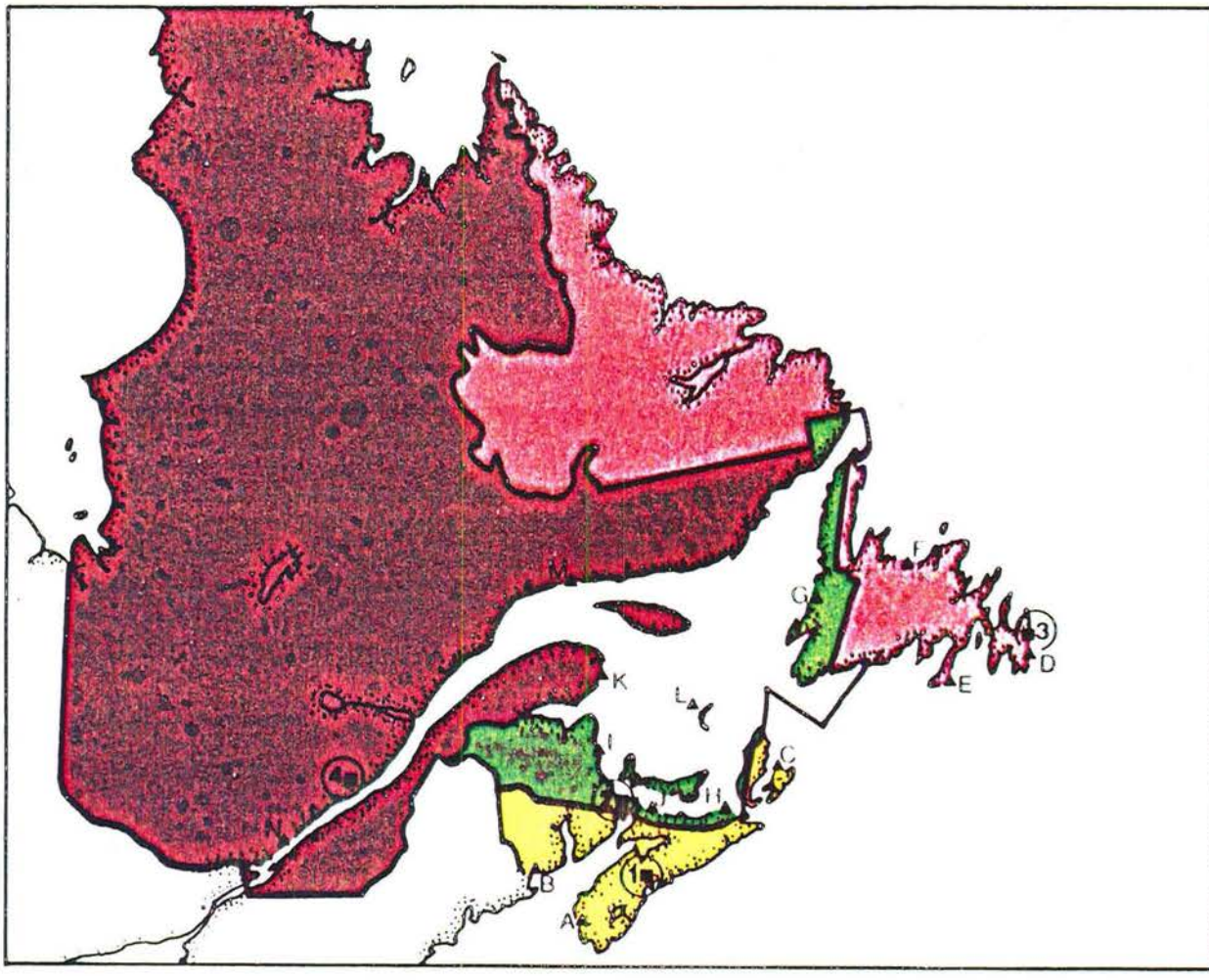
Formal mechanisms exist at several levels for consultation and management.

Consultation with provinces occurs within the FPAFC - Federal Provincial Atlantic Fisheries Committee. This committee is chaired by Dr. May, DM, and includes the Deputy Ministers from each of the five Atlantic provinces. At the government-industry level there are many federally chaired advisory committees, usually species oriented with a broad representation of provinces, fishermen, processors and DFO officials. They provide advice to the department on management of particular fisheries.

Several examples include AGAC-Atlantic Groundfish Advisory Committee, OSAC-Offshore Scallop Advisory Committee and NSAC-Northern Shrimp Advisory Committee. There are also numerous local advisory committees, at the Area or District level. Most committees meet several times a year, more frequently if necessary, and the expenses of some participants (fishermen) are paid for by the Department.


ATLANTIC FISHERIES SERVICE
Assistant Deputy Minister
L.S. Parsons
Director General
Fisheries Research
Directorate
Dr. B.S. Muir
Director General
Operations Directorate
W.A. Rowat
Director
Planning & Coord. Unit
P.A. Comeau
Director General
Quebec Region
D. Martin
Director General
Gulf Region
J.-E. Haché
Director General
Scotia-Fundy Region
R.A. Crouter
Director General
Newfoundland Region
E.B. Dunne

ATLANTIC FISHERIES SERVICE REGIONS
RÉGIONS DU SERVICE DES PÊCHES DANS L'ATLANTIQUE



SCOTIA-FUNDY
SCOTIA-FUNDY

GULF
GOLFE

NEWFOUNDLAND
TERRE-NEUVE

QUEBEC
QUÉBEC

■REGIONAL HEADQUARTERS
BUREAUX RÉGIONAUX

1. HALIFAX - SCOTIA FUNDY
2. MONCTON - GULF/GOLFE
3. ST. JOHN'S - NEWFOUNDLAND/TERRE NEUVE
4. QUEBEC/QUÉBEC

▲ AREA OFFICES
BUREAUX de DISTRICTS

SCOTIA FUNDY
A) YARMOUTH, N.S.
B) ST.-ANDREWS, N.B.
C) SYDNEY, N.S.

NEWFOUNDLAND/
TERRE-NEUVE
D) ST.-JOHN'S
E) GRAND BANK
F) GRAND FALLS

GULF/GOLFE
G) CORNER BROOK, NFLD
H) ANTIGONISH, N.S.
I) TRACADIE, N.B.
J) CHARLOTTETOWN, P.E.I.

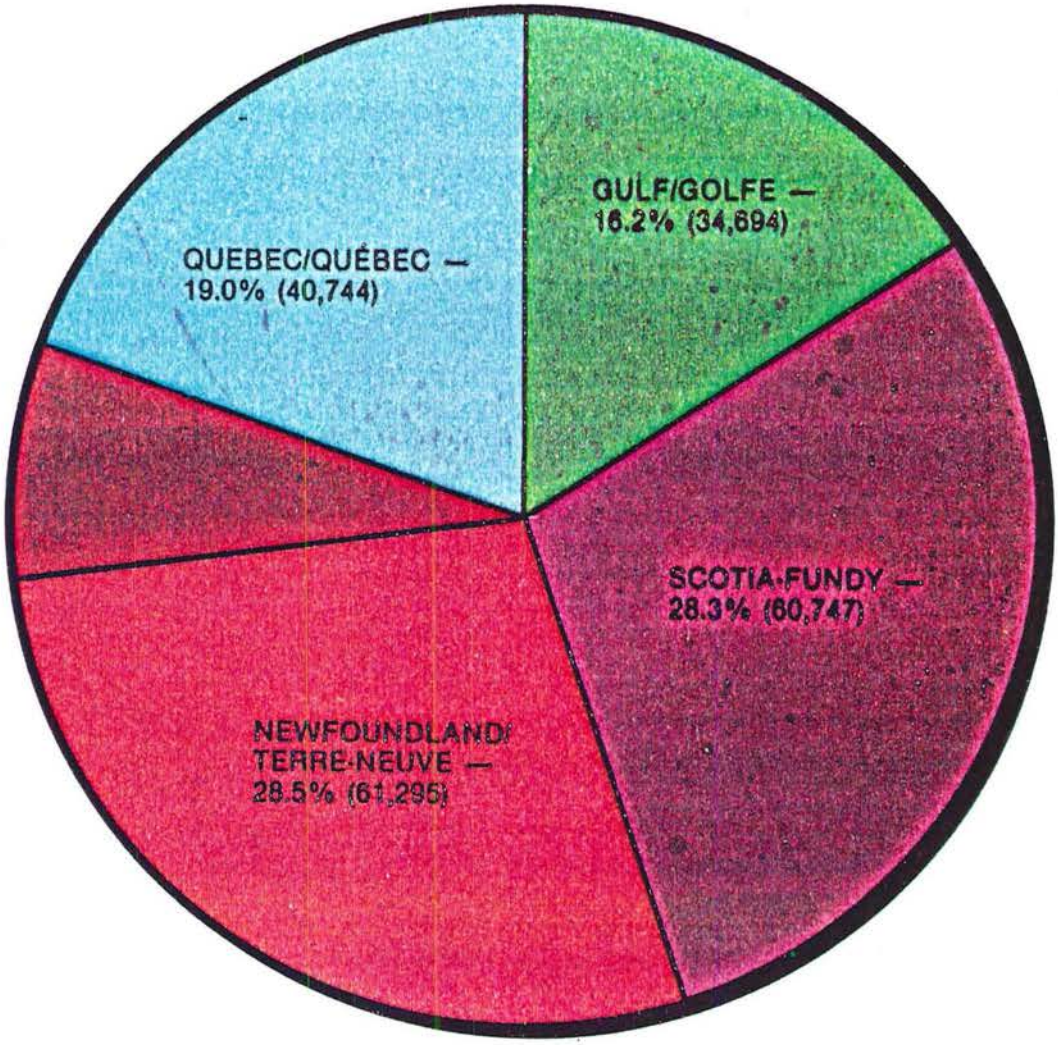
QUEBEC
K) GASPE
L) ÎLES-DE-LA-MADELEINE
M) SEPT-ÎLES
N) LONGUEUIL

Atlantic Fisheries/
Pêches dans l'atlantique
Organization by region/
Organisation par région

Financial Resource Allocation/
Allocation des ressources
financières

($000's)

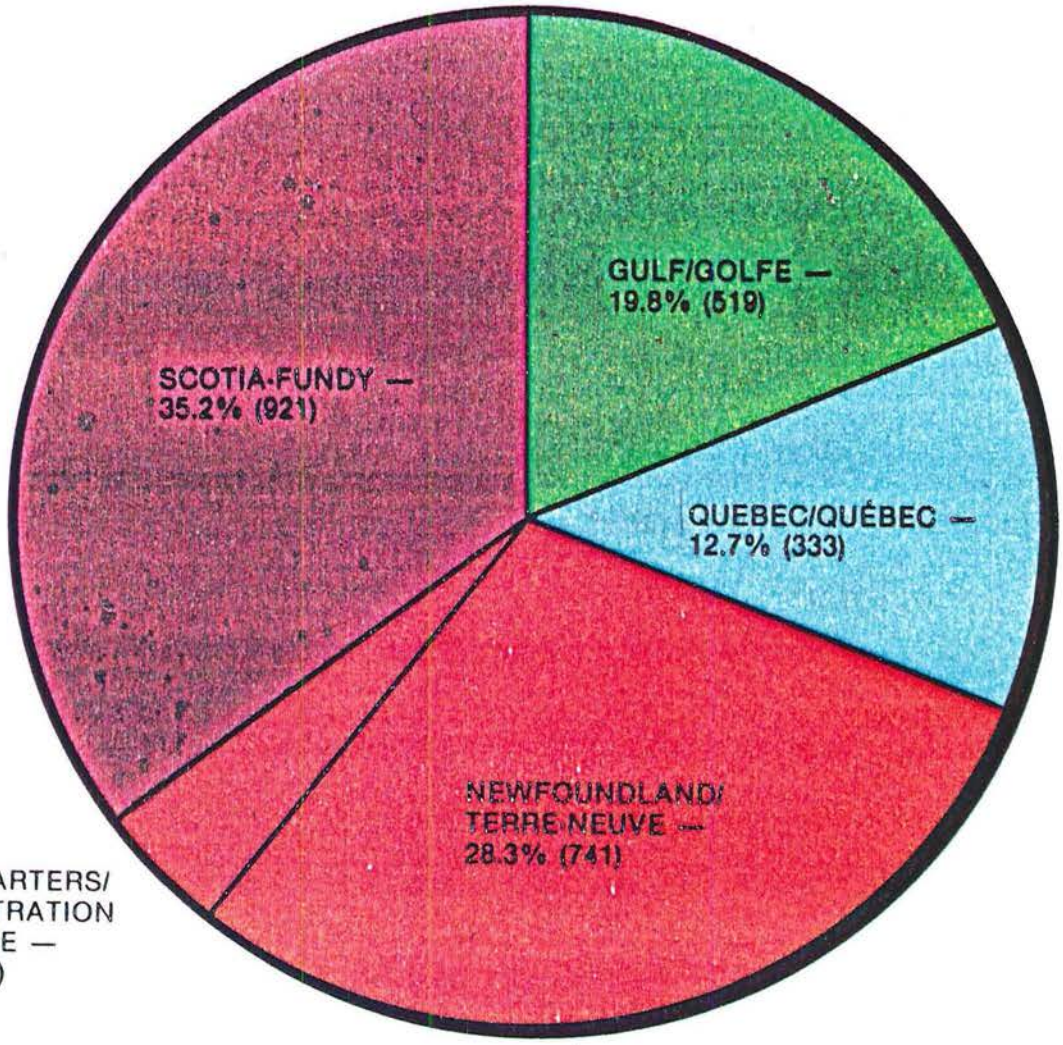
1984-85 — 214,742



Atlantic Fisheries/
Pêches dans l'atlantique
Organization by region/
Organisation par région

Person-Year Resource Allocation/
Allocation des années-personnes

1984-85 — 2,618



HEADQUARTERS/
ADMINISTRATION
CENTRALE —
4.0% (104)

OCEAN SCIENCE AND SURVEYS (OSS)

MANDATE

Under the Government Organization Act (1979), the duties, powers and functions of the Minister of Fisheries and Oceans include, inter alia, responsibilities for

- hydrography and marine science, and for
- the coordination of the policies and programs of the Government of Canada respecting oceans.

OBJECTIVE

These responsibilities form the mandate for DFO's Planning Element "6. Ocean Science and Surveys"; and they are reflected in its objective as follows:

> To promote and facilitate the safe use of Canada's navigable waters and to provide information and advice contributing to the environmentally-acceptable utilization of marine renewable and non-renewable resources, and to ensure the effective coordination of the policies and programs of the Government of Canada with respect to ocean science and technology.

RESPONSIBILITIES

As a consequence, DFO's Ocean Science and Surveys component (OSS) has responsibility for hydrographic surveys and oceanographic research in Canadian waters and in waters of interest to Canada; and it provides hydrographic and oceanographic information, advice and assistance to both government and private sector clients for:

- timely, accurate and safe marine navigation and transportation;
- protection, management and utilization of fisheries;
- industrial development, including safe and environmentally sound utilization of non-renewable resources;
- preservation of marine environmental quality;
- sovereignty and defence;
- enhancement of the ability to understand and predict the oceans's influence on other activities, e.g. ocean and continental climate.

ORGANIZATION

These responsibilities are exercised in accordance with government legislation and policies and are conducted through three work activities: hydrography, oceanography and administration. The major portion of OSS's work is conducted at four regional establishments:

OSS Atlantic - Bedford Institute of Oceanography (BIO), Dartmouth, Nova Scotia
OSS Quebec - Champlain Centre for Marine Science and Surveys, (CCMSS), Quebec City, P.Q.
OSS Central - Bayfield Laboratory for Marine Science and Surveys (BLMSS), Burlington, Ontario
OSS Pacific - Institute of Ocean Sciences, (IOS), Patricia Bay, Sidney, B.C.

OSS headquarters, comprising the ADM's Office, the Office of the Executive Secretary, Canadian Committee on Oceanography (CCO), and OSS's Policy and Program Coordination Branch (PPCB), are an integral part of DFO's Ottawa headquarters establishment. There are also two OSS line directorates in the National Capital Region: the Marine Sciences and Information Directorate (MSID) and the Canadian Hydrographic Service (CHS, national component).

It is to be noted that the hydrographic work activity had its origins in the Navigation and Shipping and Defence references in the original British North America Act, 1867, and that the Canadian Hydrographic Service has been a distinguishable entity since 1883. It also merits note that the Department of Fisheries and Oceans is one of three at the Federal level authorized to own and operate vessels, and that each of OSS's decentralized regions (at Dartmouth, N.S., Quebec City, P.Q., Burlington, Ontario and Sidney, B.C.) manages its own component part of the DFO vessel fleet.

The pursuit of ocean science and of hydrography have one, primary objective: to meet the need for this information by OSS clients throughout government, across Canada and around the world.

Anyone who navigates upon the sea, who seeks to exploit its maritime or seabed resources, or who is concerned with its tides, currents, coastline or bottom topography, has a requirement for nautical charts and/or other publications produced and issued by OSS. Users of Canada's navigable inland waters have a similar need for OSS navigational reference documents.

Scholars publish in, refer to, and act as scientific referees for research journals and monographs produced by OSS's Marine Sciences and Information Directorate (MSID). OSS scientists and technical experts are called upon, as expert witnesses or as advisors, by various international assemblies, such as that developing the Canadian position on the new International Law of the Sea, and recently the International Court of Justice at the Hague. OSS staff similarly serve in both professional and executive capacities in various Canadian and international scientific organizations; and they provide advisory services and serve in joint ventures with professional counterparts in other departments.

The principal common denominators in OSS's various client relationships are as follows:

- these relationships are all of a service nature, with OSS in most cases being the provider of the services. (Some relationships are symbiotic as e.g. with universities);

- OSS services all have a scientific or technical basis. Their importance derives from gains in knowledge, application to the resolution or avoidance of problems, and transfers of technology to industry;

- OSS's clientele has a strongly international dimension. The global hydrographic and oceanographic fraternities serve as a valuable conduit through which Canada gains in ocean knowledge from other countries;

- there is very little commonality between OSS's clients and DFO Fisheries Management clients except for the fishing industries use of OSS tide tables and navigational charts.

The following lists identify some of OSS's major clients:

(a) Federal Agencies

- Transport Canada (MOT), e.g. Environmental Advisory Committee on Arctic Shipping; Search and Rescue; Ports Canada, etc.;

- Indian and Northern Affairs (DIAND), e.g. Environmental Review Committee, Arctic Waters Advisory Committee, Northern Oil and Gas Action Program (NOGAP), etc.;

- External Affairs (DEA), e.g. Interdepartmental Committee on Law of the Sea, Panel on Arctic Waters, etc.;

- Energy, Mines and Resources (DEMR), e.g. Guiding Committee on Offshore Surveys, National Advisory Committee on Surveys and Mapping, Office of Energy R&D etc.;

- National Research Council (NRC), e.g. Marine Standards Committee, Scientific Committee on Oceanic Research, Ice R&D, etc.;

- Science and Technology (MOSST), e.g. Inter-departmetnal Committee on Space, Science ADM's Committee;

- Environment Canada (DOE), e.g. Environment Assessment Review process; Ship support to National Water Research Institute (NWRI), hydrographic support for Parks Canada, and joint program activities with the Atmospheric Environment Service, etc.;

- Fisheries and Oceans (DFO), e.g. Fisheries and Oceans Research Advisory Committee (FORAC); Canadian Committee on Oceanography (CCO), etc; and the

- Natural Sciences and Engineering Research Council (NSERC).

(b) Provincial Governments

- All Provinces, Canadian Council on Surveying and Mapping (CCSM)
- Nova Scotia, e.g. Departments of Development, Environment;
- Quebec, e.g. Department of Energy and Resources; Hydro Quebec;
- Ontario, e.g. Office of the Surveyor General and Provincial Conservation Authorities, Ministry of Natural Resources;
- British Columbia, e.g. Ministry of Universities, Science and Communications.

(c) Universities

- Dalhousie University, Halifax, N.S. e.g. joint and parallel research program relationships; Bedford Institute scientists serve on faculty, etc.;
- Laval University, Quebec City; McGill University, Montreal;
- McMaster University, Hamilton, e.g. concerning ice radar development; University of Toronto;
- University of Victoria, Victoria, B.C. and University of British Columbia, Vancouver, e.g.
- Universities outside Canada, e.g. Washington State University, University of New York - Joint research projects, etc.

(d) Industry

Various companies operating in the following sectors:

- Hydrocarbon Industry, e.g. cooperative survey programs, charting of transportation corridors, etc.;
- Shipping Industry, e.g. customers for Great Lakes/St. Lawrence Seaway and other navigational charts; OSS vessel chartering, etc.;

- Survey and Mapping Industry, undertakes surveys and charting under contract to Canadian Hydrographic Service;

- Fishing Industry, e.g. Great Lakes and sea coast fisheries use hydrographic charts and nautical publications;

- Recreational Industry, especially pleasure boaters rely on OSS publications in all navigable Canadian waters;

- Manufacturing Industry (High Technology Component). OSS is one of governments largest users of sophisticated scientific hardware. It's inventions are also a source of important technology transfers;

- Manufacturing Industry (Shipbuilding). OSS requirements for ships provide contract work.

(e) International

- International Hydrographic Organization (IHO)*

- USA/Canada Hydrographic Commission

- Five Nations Conference on Military Mapping and Charting

- International Cartographic Organization (ICO)

- International Joint Commission (IJC) International Great Lakes Technical Network Board

- International Oceanographic Commission (IOC), UNESCO*

- International Council for the Exploration of the Seas (ICES)*

- International Union of Geodesy and Geophysics (IUGG)

- International Maritime Organization (IMO)

- Scientific Committee for Oceanic Research (SCOR)

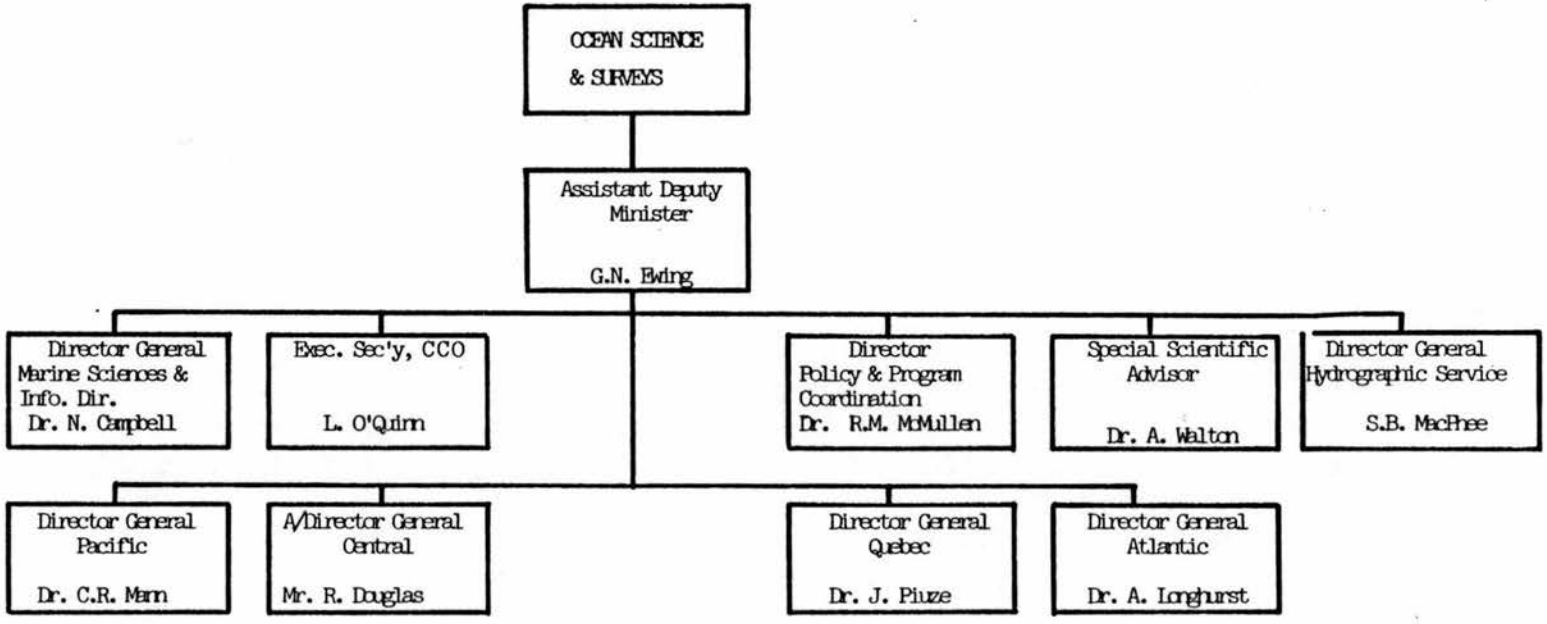
- United Nations Environmental Program (UNEP)

- World Meteorological Organization (WMO)

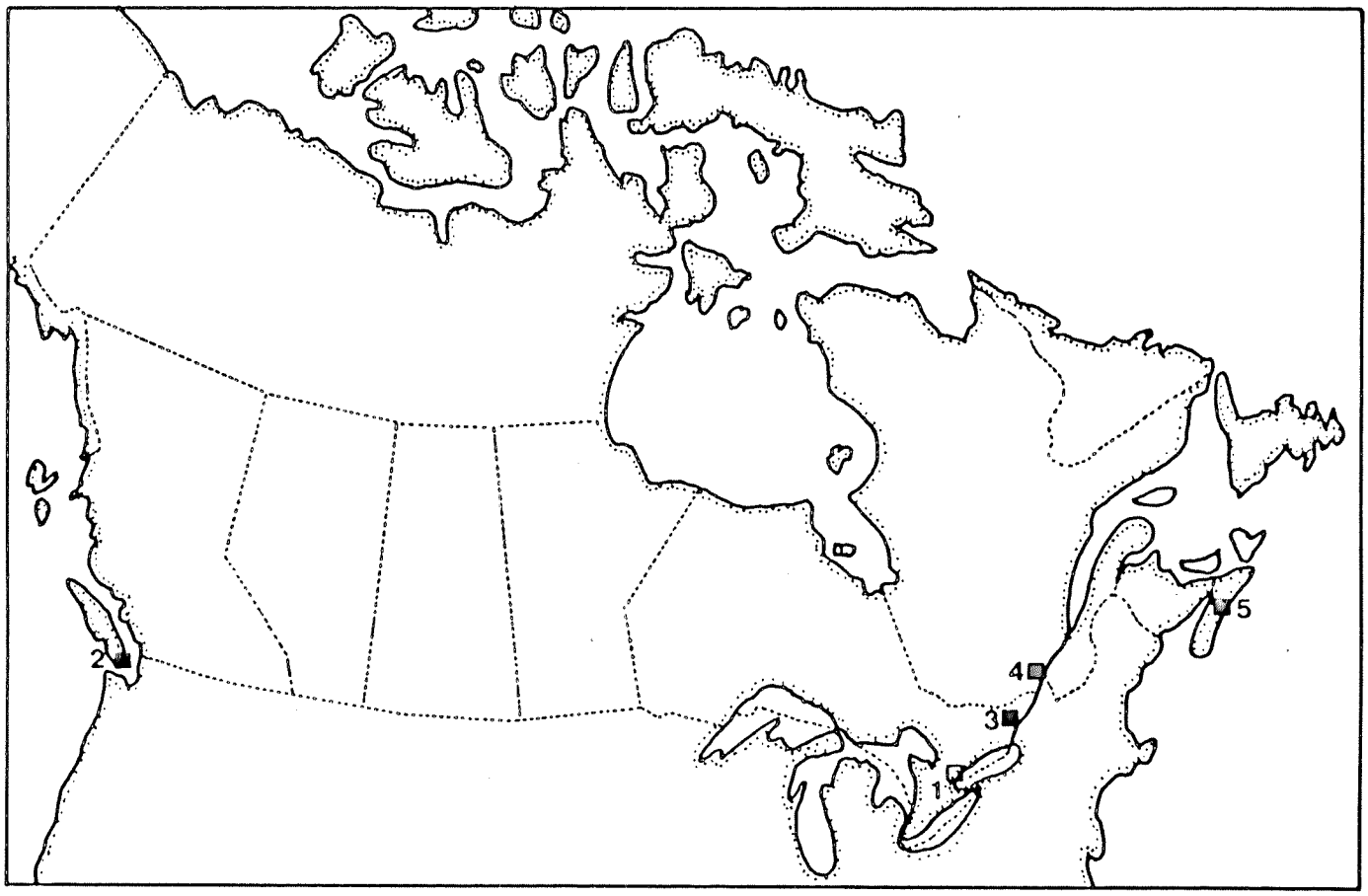
- Union Radio Scientific International (URSI)

- North Atlantic Fisheries Organization (NAFO)

OSS's mandate for an ongoing involvement with client bodies identified with an asterisk (*) has its basis in legislation. A number of bilateral arrangements with individual countries (not listed, but including France, West Germany, Belgium etc.) are based on Science and Technology Agreements arranged by the Department or External Affairs. Other international relationships which have evolved and remain in place over time have done so because of the scientific, technical and/or related benefits accruing to Canada or derived from Canada by virtue of OSS participation.


OCEAN SCIENCE & SURVEYS
Assistant Deputy Minister
G.N. Ewing
Director General Marine Sciences & Info. Dir.
Dr. N. Campbell
Exec. Sec'y, CCO
L. O'Quinn
Director Policy & Program Coordination
Dr. R.M. McMullen
Special Scientific Advisor
Dr. A. Walton
Director General Hydrographic Service
S.B. MacPhee
Director General Pacific
Dr. C.R. Mann
A/Director General Central
Mr. R. Douglas
Director General Quebec
Dr. J. Piuze
Director General Atlantic
Dr. A. Longhurst

OCEAN SCIENCE AND SURVEYS REGIONS
RÉGIONS DES SCIENCES ET LEVÉS OCÉANIQUES



1. BAYFIELD LABORATORY FOR MARINE SCIENCE AND SURVEYS
   LABORATOIRE BAYFIELD DES SCIENCES ET LEVÉS MARINS
   Burlington, Ontario

2. INSTITUTE OF OCEAN SCIENCES
   INSTITUT DES SCIENCES DE LA MER
   Sidney B.C./Sidney C.-B.

3. OSS HEADQUARTERS
   CANADIAN HYDROGRAPHIC CENTRE
   MARINE SCIENCES AND INFORMATION DIRECTORATE
   SLO-ADMINISTRATION CENTRALE
   SERVICE HYDROGRAPHIQUE DU CANADA
   DIRECTION GÉNÉRALE DE L'INFORMATION ET DES SCIENCES DE LA MER
   Ottawa, Ontario

4. CHAMPLAIN CENTRE FOR MARINE SCIENCES AND SURVEYS
   CENTRE CHAMPLAIN DES SCIENCES DE LA MER
   Quebec, Quebec/Québec, Québec

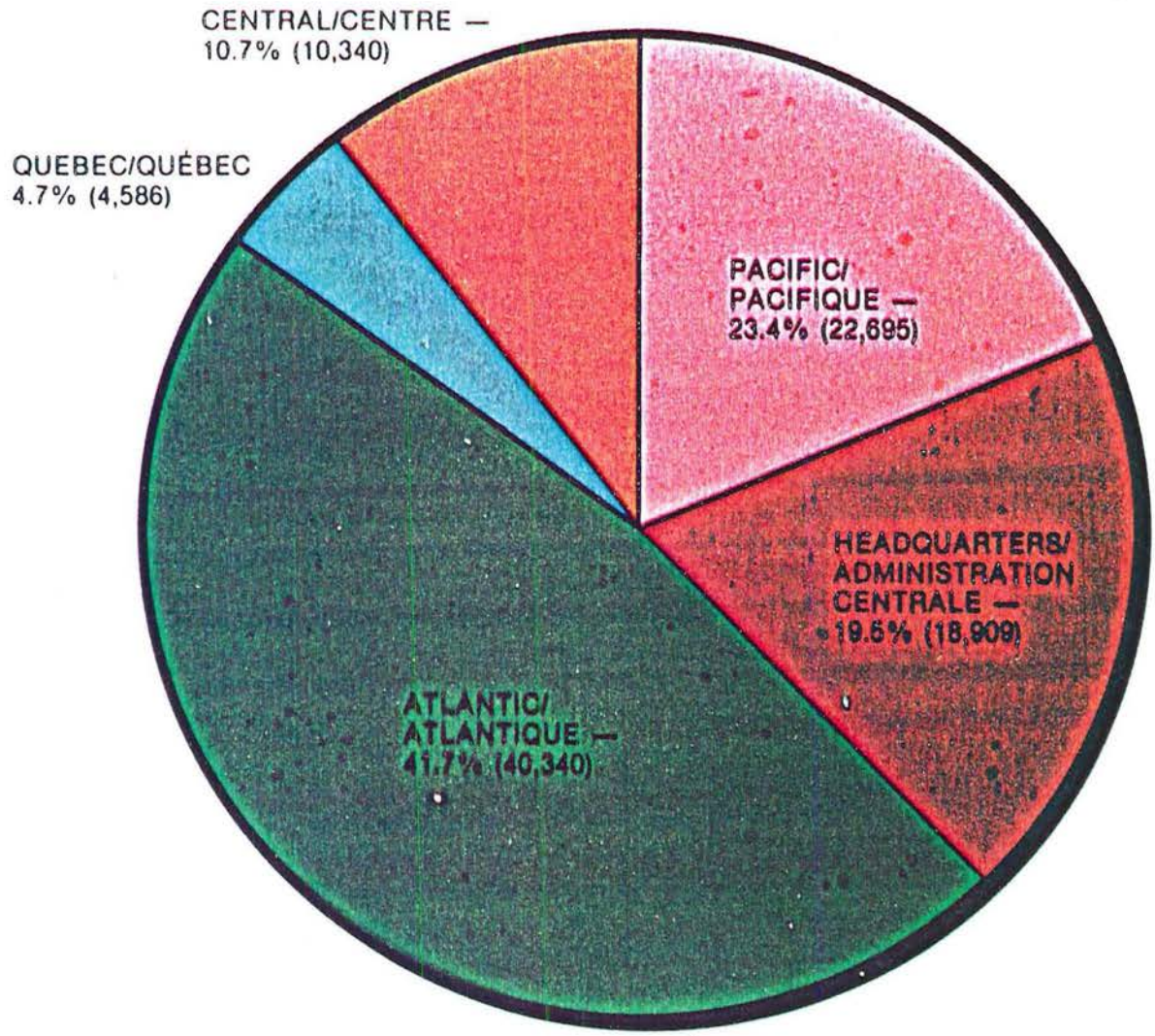
5. BEDFORD INSTITUTE OF OCEANOGRAPHY
   INSTITUT OCÉANOGRAPHIQUE DE BEDFORD
   Dartmouth, N.S./Dartmouth N.-É.

Ocean Science and Surveys/ Sciences et levés océaniques Organization by region/ Organisation par région

Financial Resource Allocation/ Allocation des ressources financières

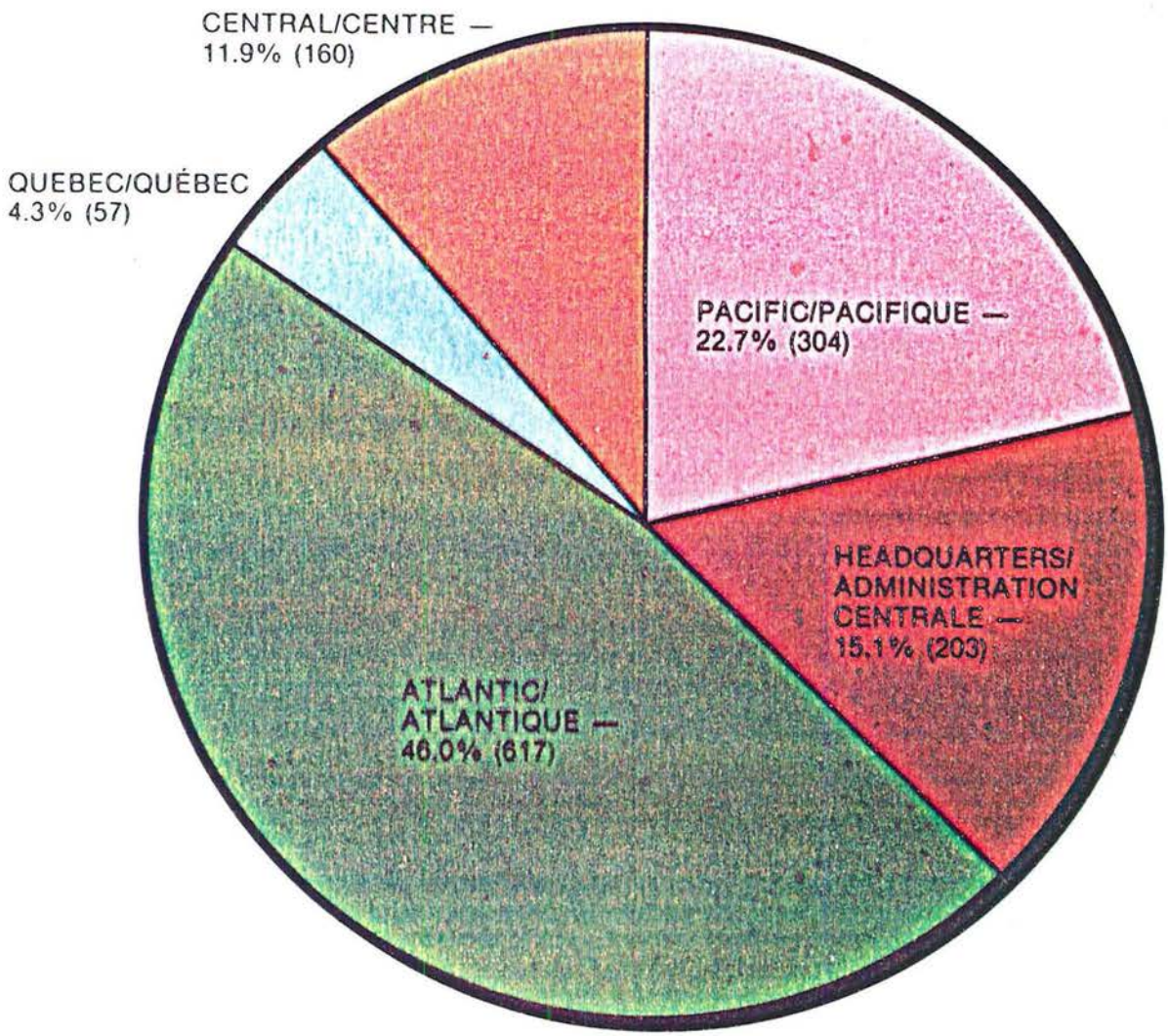
($000's)

1984-85 — 96,870



Ocean Science and Surveys/ Sciences et levés océaniques Organization by region/ Organisation par région 1984-85 — 1,341

Person-Year Resource Allocation/
Allocation des années-personnes



POLICY AND PROGRAM PLANNING

The Assistant Deputy Minister, Louis Tousignant, is responsible for the development of a strategic policy framework that will provide the Minister and the department with a firm basis for assessing the current conditions and future directions of Canadian fisheries and ocean science; recommending and reviewing, on the basis of such assessment, alternative policy initiatives and programs that will assist in the development of viable and forward-looking industries and of programs to foster the overall economic and social development of those regions and communities where the fishery plays an important role; the development of a commercial analysis capability to provide advice on the impact of federal decisions on the viability of particular commercial operations: the provision of overall policy advice to the Minister, Deputy Minister and Associate Deputy Minister, and briefings to them on all major departmental proposals going to Cabinet as well as on those originating from other departments which have implications for DFO; the provision of advice on constitutional and institutional matters relating to the conduct and policy of the department in the field of federal-provincial relations as called for by the Secretary to the Cabinet for Federal-Provincial Relations and the resumption of Federal fisheries jurisdiction in Quebec; the representation of the federal government and department in negotiation of fisheries and ocean science matters, and the formulation and implementation of program evaluation policies, strategies and plans.

STRATEGIC POLICY AND PLANNING DIRECTORATE

The Director General will be responsible for defining the Department's Strategic priorities, and ensuring they are consistent with the overall priorities of the Government; providing overall direction in the development of strategic policy across all concerns addressed by the Department with respect to both fisheries and oceans programs; and for providing briefings to the Minister or Deputy Minister/ Associate Deputy Minister on all m ajor departmental proposals going to Cabinet as well as on those originating from other departments which have implications for DFO.

ECONOMIC AND COMMERCIAL ANALYSIS DIRECTORATE

The Director General will be responsible for developing and recommending, both within the department, and for sponsorship by the Minister or Deputy Minister/ Associate Deputy Minister at various Cabinet and central agency committees, strategies and priorities to maximize the economic and commercial success of the fisheries based on a market-driven approach to the management of the industry; assessing the effectiveness of existing or proposed policies and programs to promote economic, commercial and regional development related to the fisheries and ocean science sectors; conducting economic analyses, including short and medium term forecasts, for the fisheries and oceans science sectors, and general analysis of domestic and international economic developments which will impact on these sectors, and which will be critical to the federal government's ability to make sound decisions affecting the industry; analyzing commercial enterprises to determine the viability of

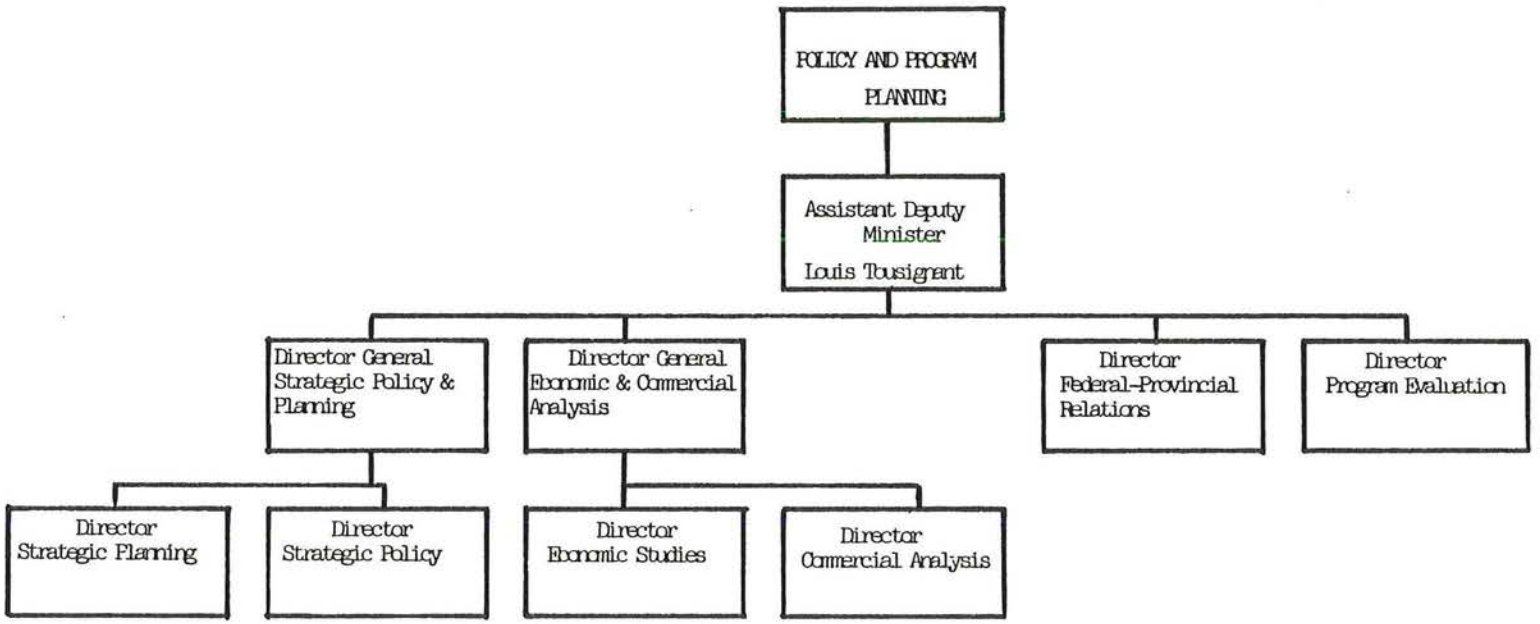
existing operations, the appropriateness of individual components to the restructured industry, and to provide analysis, advice, and recommendations on the impact of, or need for, government intervention; advising the Minister, Deputy Minister/Associate Deputy Minister and other departmental officials on economic and commercial issues in his assigned areas; generating national fisheries statistics to assist in the economic and commercial analysis functions, and coordinating regional fisheries statistics programs in this system; representing the department, as principal economic/commercial advisor, to counterparts in central agencies, other departments, whose programs impact on DFO, industry, economic groups, and other client and interest groups; developing computer models to facilitate quantitative economic analysis and forecasting, and overseeing the publication of economic and commercial studies of of benefit to the department, the federal government, the public, industries and other clients.

FEDERAL-PROVINCIAL RELATIONS

The Director will liaise and consult with provincial and territorial governments to ensure they are aware of federal policy developments of concern to them, advise the ADM, Policy and Program Planning and other senior departmental officials on federal/provincial/territorial implications arising from proposals on fisheries management and ocean science related matters; interface with other federal departments at the central agencies to provide Fisheries and Oceans' input and ensure the department's interests are protected in the development of programs and policies directly, or indirectly, related to its mandate; and devise Fisheries and Oceans' approaches to provincial and territorial governments on policy issues.

PROGRAM EVALUATION

The Director will be responsible for all aspects of the design, development and implementation of a systematic, objective and independent program evaluation program covering all departmental policies and programs; the formulation of program evaluation policies, strategies and plans; the conduct of in-depth, independent and objective evaluations and analyses of the relevance, impact and effectiveness of all departmental policies and programs; the formulation of recommendations to the Deputy Minister/Associate Deputy Minister and other senior executives for the discontinuation, modification or confirmation of policies and programs; and for the conduct of special reviews and studies as required by the Deputy Minister/Associate Deputy Minister to satisfy their accountability for the policies and programs administered by the department.


POLICY AND PROGRAM PLANNING
Assistant Deputy Minister
Louis Tousignant
Director General Strategic Policy & Planning
Director General Economic & Commercial Analysis
Director Federal-Provincial Relations
Director Program Evaluation
Director Strategic Planning
Director Strategic Policy
Director Economic Studies
Director Commercial Analysis

MARKETING AND INTERNATIONAL FISHERIES
(including Inspection and Crown Corporations Liaison)

The Assistant Deputy Minister, Marketing and International Fisheries is responsible for: - the development of fisheries marketing and internatinal relations or trade policies, and for broad programs related to the marketing capability and general wellbeing of Canada's fishing industry;

- the development of policies and programs for the increased sale and consumption of Canadian fish products;
- the overall direction of international fisheries' policies to support Canada's fisheries interests;
- the identification of new business and community development opportunities and the initiation of pilot projects and related initiatives to exploit such opportunities;
- the representation of Canadian and departmental interests in both bilateral and multilateral international negotiations;- the development, implementation and maintenance of all policies, programs and strategies related to access by neighbouring states to resources in areas of disputed or shared jurisdiction;
- defending departmental positions related to bilateral fisheries matters and;
- increasing the overall presence of Canadian fisheries expertise in developing countries through a variety of international assistance programs and fish content in the food aid program.

The ultimate objective of this service is to help ensure that the marketing of Canadian fish and fish products is carried out in the most effective way possible; that industry financial returns are maximized; that international fisheries policies achieve stabilization of harvesting and optimum access to foreign markets; and, that effective liaison and coordination is maintained with fisheries sector Crown Corporations.

Marketing and International Fisheries is comprised of four major areas of responsibility: marketing, international fisheries, inspection, and liaison with Crown Corporations.

MARKETING DIRECTORATE

The Directorate is responsible for planning, developing and implementing marketing policies, strategies and programs to improve the efficiency and effectiveness of marketing Canadian fish and fishery products consistent with the resource potential, harvesting and processing capabilities and worldwide marketing opportunities.

The final **"end"** of all activities in fisheries is the sale and marketing of fish and fishery products; marketing considerations need to be taken into account in all functional areas of fisheries management in order to ensure a viable industry.

Marketing inefficiencies and weaknesses (which arise in all parts of the fisheries production system) need to be corrected to successfully market the vast quantities of fish coming on stream and to realize the fullest potential of Canada's fisheries.

Marketing services included in an integrated "sea to the table" approach are:

Promotions: Develops strategies for promotion and advertising on the basis of extensive consumer research. Promotional programs are designed to improve the image of Canadian fish and seafood products and increase fish consumption and market returns to the industry.

Policy and Extension Services: Develops and implements pilot projects to assist the industry in improving market performance, product competitiveness, and returns to the fishing industry. Activities include: market-related product costing and production planning systems for use by industry in improving plant profitability; pilot marketing projects in support of new business development product costing and profitability studies; and the development and review of marketing policies.

Marketing Planning and Intelligence: Provides extensive market intelligence and analyses, research studies, market outlooks and forecasts and business-oriented advice to industry and government. The function also provides technical advice and assistance to the Fisheries Prices Support Board, the Freshwater Fish Marketing Corporation and the Canadian Saltfish Corporation.

INTERNATIONAL DIRECTORATE

The Directorate is responsible for directing and overseeing the implementation of:

(a) bilateral fisheries treaties with 12 governments;
(b) bilateral relations with countries with which we do not have the usual treaties, e.g. USA, Mexico, Iceland and numerous others;
(c) Canadian obligations as a member of international organizations - International Pacific Salmon Fisheries Commission (IPSFC), Northwest Atlantic Fisheries Organization (NAFO), International Commission of the Conservation of Atlantic Tunas (ICCAT), International North Pacific Fisheries Commission (INPFC), International Pacific Halibut Commission (IPHC), Great Lakes Fisheries Commission (GLFC), North Pacific Fur Seal Commission (NPFSC), International Commission for the Exploration of International Commission for the Exploration of the Seas (ICES), and North Atlantic Salmon Conservation Organization (NASCO).

(d) certain associated statutory obligations, such as the Fraser River Sockeye Salmon Convention Act, the North Pacific Halibut Fisheries Convention Act, the Pacific Fur Seals Convention Act, the Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean, and the Northwest Atlantic Fisheries Convention;
(e) the Coastal Fisheries Protection Act, and the Territorial Seas and Fishing Zones Act;
(f) general international policies such as those set out in the Atlantic Fisheries Task Force Report.

In performing these functions the Directorate plans all international fisheries policies, coordinates with other parts of the Department and other governmental agencies, negotiates agreements with other countries; provides functional direction for the work by other parts of the Department; and provides sector department direction for work done by other Departments and government agencies to implement international obligations.

The Directorate has the central role in managing the fisheries relationship with the United States and its fishery management agencies; coordinating the Department's input to trade policy in the field of fisheries; and managing Canadian positions including conducting negotiations to deal with and resolve disputes arising from five contested maritime boundaries.

The Directorate provides the focal point in the Department for directing the fisheries related aspects of the foreign policy and trade policy functions of the Department of External Affairs, and for direction and coordination with CIDA and other Government Departments concerned with international relations. To perform this function the Directorate must be aggressive, innovative and technically expert to ensure Canadian fisheries interests are properly reflected and represented within the complex of competing sectors and interests.

The Directorate also provides the focus for Departmental involvement in the programs of multilateral organizations such as the Food and Agricultural Organization of the United Nations (FAO), the Organization for Economic Cooperation and Development (OECD), and the World Food Program.

The Directorate is organized into 3 Divisions, each having the following responsibilities:

Pacific Rim Division: to protect and advance Canadian fisheries interests with foreign governments and to assist in the administration of treaties and agreements affecting fishing activity or trade in the Pacific Basin, Indian Ocean and Africa. Also responsible for promoting fish products in Canada's food aid basket, and with the Canadian input to a number of multilateral international fisheries commissions.

Atlantic Division: to develop, recommend and implement strategies aimed at achieving Canada's fisheries objectives through the management of fisheries relations with respect to the USA & East Bloc countries. Also responsible for departmental participation concerning developments in Law of the Sea, NAFO, NASCO and boundary disputes, and managing the relationship affecting the waters between Canada and Greenland.

Western Europe Division: to protect and advance Canadian fisheries interests with foreign governments and to assist in the administration of treaties and agreements affecting fishing activity or trade in Western Europe, and Scandinavia.

FISH INSPECTION BRANCH

Fish Inspection is responsible for the introduction of new regulatory measures designed to reduce at-sea and on-shore wasteage, upgrade the quality of landed and processed fish and improve processing yields.

Objectives of the Fish Inspection Branch are:

1. To ensure that fish products available for domestic and export markets do not present a health hazard, are of acceptable and consistent quality, and are not fraudulently marketed; and

2. To improve the quality of fish products and facilitate their access to domestic and export markets in order to maximize the economic return to the industry.

Fish Inspection encompasses two major programs - the Fish Inspection Program and the Quality Inprovement Program, both of which are delivered by all fisheries management regions of the department. All activity in this area is continuing and regulatory in nature.

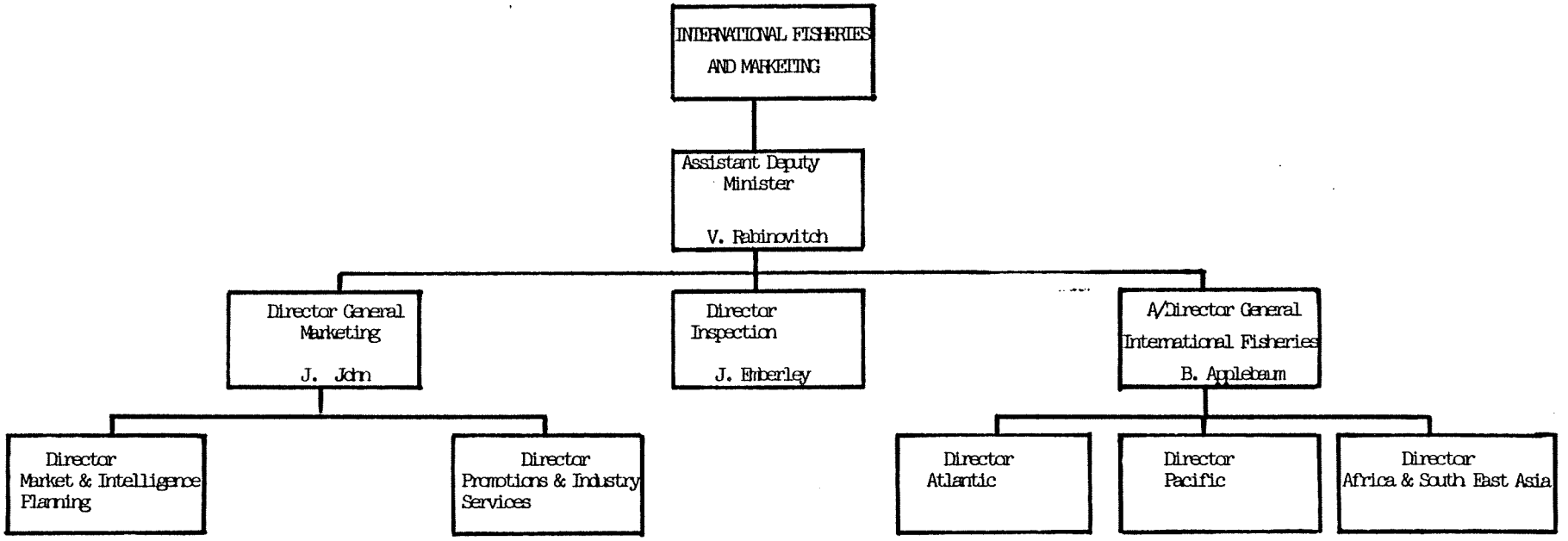
The Fish Inspection Program: conducted under the authority of the Fish Inspection Act, is a comprehensive program for inspection of fishing vessels, fish products and fish processing establishments. It concentrates on sanitary requirements for vessels and plants, quality standards for domestically produced and imported fishery products and grade standards for some traditional products. Fish health regulations are enforced. As well, many foreign countries require imported products to be certified as meeting specific health, quality, identity, composition and labelling specificiations.

The Quality Inprovement Program: resulted from extensive consultations with fishermen's organizations, provincial governments and processors to establish guidelines for quality upgrading initiatives. It encompasses vessel certification; quality protection on board vessels; dockside grading of landings; facilities for unloading, handling and transportation to plants; in-plant quality control and final product grade standards.

CROWN CORPORATIONS LIAISON

This is a newly organized area. With respect to Freshwater Fisheries Marketing Corporation, Canadian Saltfish Corporation and the Fisheries Prices Support Board, the main responsibility is to provide services to these corporations through advice and interpretation of the requirements of their special Acts and the Financial Administration Act. Some of the services are: the provision of assessment notes; drafting of Cabinet Documents and Treasury Board submissions; attending Board of Directors meetings; providing the general public with information on mandate, area of jurisdiction, Board of Directors; and reviewing the financial and corporate plans of each corporation. Independent advice and assessment is provided to the Minister on all these matters.

With respect to the FPSB, departmental staff provide all administrative, financial and executive support services necessary for Board meetings, and for the implementation of Board program (such as price support, deficency payment, stabilization and food aid purchase programs).


INTERNATIONAL FISHERIES AND MARKETING
Assistant Deputy Minister
V. Rabinovitch
Director General Marketing
J. John
Director Inspection
J. Emberley
A/Director General International Fisheries
B. Applebaum
Director Market & Intelligence Planning
Director Promotions & Industry Services
Director Atlantic
Director Pacific
Director Africa & South East Asia

FINANCE AND ADMINISTRATION

The Assistant Deputy Minister, Finance and Administration, has corporate responsibility for departmental systems of financial administration, planning co-ordination, administration, informatics, and Internal Audit. The ADM, F&A is also responsible for the provision of management support services for the National Capital Region.

The ADM, F&A has national program responsibility for vessel acquisition and fleet management as well as for the Department's major construction and energy conservation programs.

The functions of the seven directorates reporting to the ADM are described below:

1. **Corporate Finance**

   Provides financial advice and services to the departmental executive, program managers, and regional finance officers and assists in improving the Department's relations with central agencies. Corporate Finance consists of three Branches:

   Financial Policy and Systems Development

   The Financial Policy and Systems Development Branch has a mandate to design and promulgate financial policies and systems which ensure a high level and quality of financial services and controls are provided to the Department. The Branch also has the mandate to develop appropriate training material for the benefit of both financial staff and operational managers.

   Financial Planning and Analysis and Advisory Support

   Financial Planning and Analysis Branch has corporate responsibility for financial planning and control. Through the analysis of program proposals and monitoring of expenditure patterns, the Branch supports senior Service and Departmental Management by providing advice on resource allocation and utilization. The independence of the Branch from the various Services permits an effective challenge to program proposals and results in recommendations for alternative courses of action designed to assist senior managers in managing their resources efficiently and effectively.

Accounting Operations

The Accounting Branch has corporate responsibility for controlling and reporting on the expenditures, revenues, assets and liabilities of the Department and the provision of functional advice and guidance regarding the accounting control and reporting functions. In addition, the Branch is responsible for the direct provision of financial services to managers within the National Capital Region (NCR).

2. **Management Practices and Planning Coordination**

Following critical reports from the Comptroller General (IMPAC Survey, 1981) and Auditor General (1981 Audit), citing the absence of a focal point for departmental program planning, the Deputy Minister established this Branch in 1982. Its role and responsibilities:

- to develop and implement a departmental planning process;
- to serve as a secretariat to senior management in the monitoring and control of planning activities; and,
- to develop and implement a Management Improvement Plan responding to the OCG and Auditor General criticisms.

In 1983, the Branch was transferred to the ADM, Finance and Administration.

Both the planning and management improvement activities are managed through headquarters and regional staff coordinators. The Branch is the focus for liaison with central agencies on issues relating to the Policy and Expenditure Management System.

3. **Information Technology and Systems**

Provides corporate leadership in the development and implementation of National Informatics Systems. This involves developing plans, policies, standards and procedures to provide National functional direction to the Department's EDP, Telecommunications and Advanced Office Systems (Informatics) activities; developing National Systems and operating a National Data Centre; participating in the selection of senior Informatics staff and approval of Informatics goods and services. The major objective of the Directorate is to ensure that the Department is provided with well-designed, efficient

and cost-effective integrated Informatics systems to meet its defined and future Operational, Research, Administrative and Management Information needs."

NOTE: Proposed Mandate.

4. **Administration and Assets Management**

The Administration Directorate has the dual responsibility of establishing DFO's national administrative and asset management policies and controls as well as for all operational requirements at H.Q. for support services related to general administration, such as:

Materiel Management, Records Management, Library Services and Administrative Operations, e.g. (Security, Realty and Accommodation, Emergency Planning, Health and Safety and Fire Prevention).

5. **Ship Branch**

The Director, Ship Branch, is the National Program Advisor to the Department on all marine matters. The principle activities of the Branch are to acquire ships for the Department and to provide professional direction to operate the fleet safely, legally and efficiently. The Branch co-ordinates the helicopter resources for the Department and also manages the Search and Rescue resources and commitments.

The acquisition of vessels is managed through a comprehensive capitalization program (Vessel Acquisition Strategy Plan; VASP) to provide replacements for the fleet and to provide additional vessels if required by the supported programs. Vessels are also chartered for limited periods and for special purposes. Vessels may also be purchased directly if suitable for program purposes.

6. **Engineering & Architecture**

The functions of Engineering and Architecture are to manage the major construction program and the energy conservation program, both in accordance with plan, to provide competent and timely engineering and architectural advice to all DFO managers.

7. Internal Audit

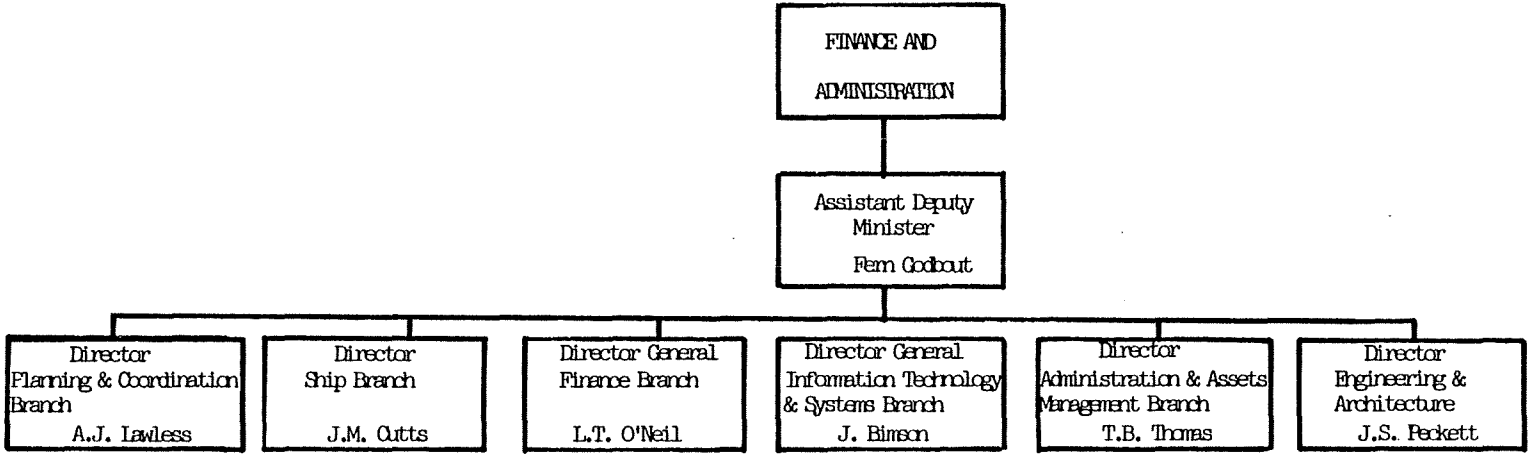
The internal audit function is required by Treasury Board policy.

Treasury Board Policy on internal audit is covered in the "Standards for Internal Audit in the Government of Canada" 1982. The policy is that:

> "Departments shall have an independent internal audit function that carries out a systematic review and appraisal of all departmental operations for purposes of advising management as to the efficiency, economy and effectiveness of internal management policies, practices and controls".

The department has established an Internal Audit Policy consistent with this statement. Internal audit provides, reviews and reports to the Deputy Minister and senior management on all departmental operations in order to advise on the efficiency, economy and effectiveness of internal management policies, practices and controls and identify where improvements are needed.

The responsibility for the implementation of this function within the department belongs to the Internal Audit Branch. There are no other independent audit functions within the department.


FINANCE AND
ADMINISTRATION
Assistant Deputy Minister
Fern Godbout
Director
Planning & Coordination Branch
A.J. Lawless
Director
Ship Branch
J.M. Cutts
Director General
Finance Branch
L.T. O'Neil
Director General
Information Technology & Systems Branch
J. Bimson
Director
Administration & Assets Management Branch
T.B. Thomas
Director
Engineering & Architecture
J.S. Peckett

COMMUNICATIONS DIRECTORATE

MANDATE

The Communications Directorate is responsible for planning, devising and implementing a comprehensive information and public relations program in support of the objectives and programs of the department. Major responsibilities are (1) to inform specialized audiences (client groups) about the utilization, management and study of renewable marine resources and the ocean and aquatic environment generally; (2) to inform the general public and client groups of the department's policies, programs and activities; (3) to foster public appreciation of, and positive support for, the basic values of fisheries and other aquatic and marine resources; and (4) provide feedback on public attitudes and acceptance, or otherwise, of DFO programs.

Clients, "customers" or "publics" served by DFO comprise the broad range of industries, occupations, sciences and communities affected by or involved in the oceans, inland waterways and the resources or use of these waters.

ORGANIZATION

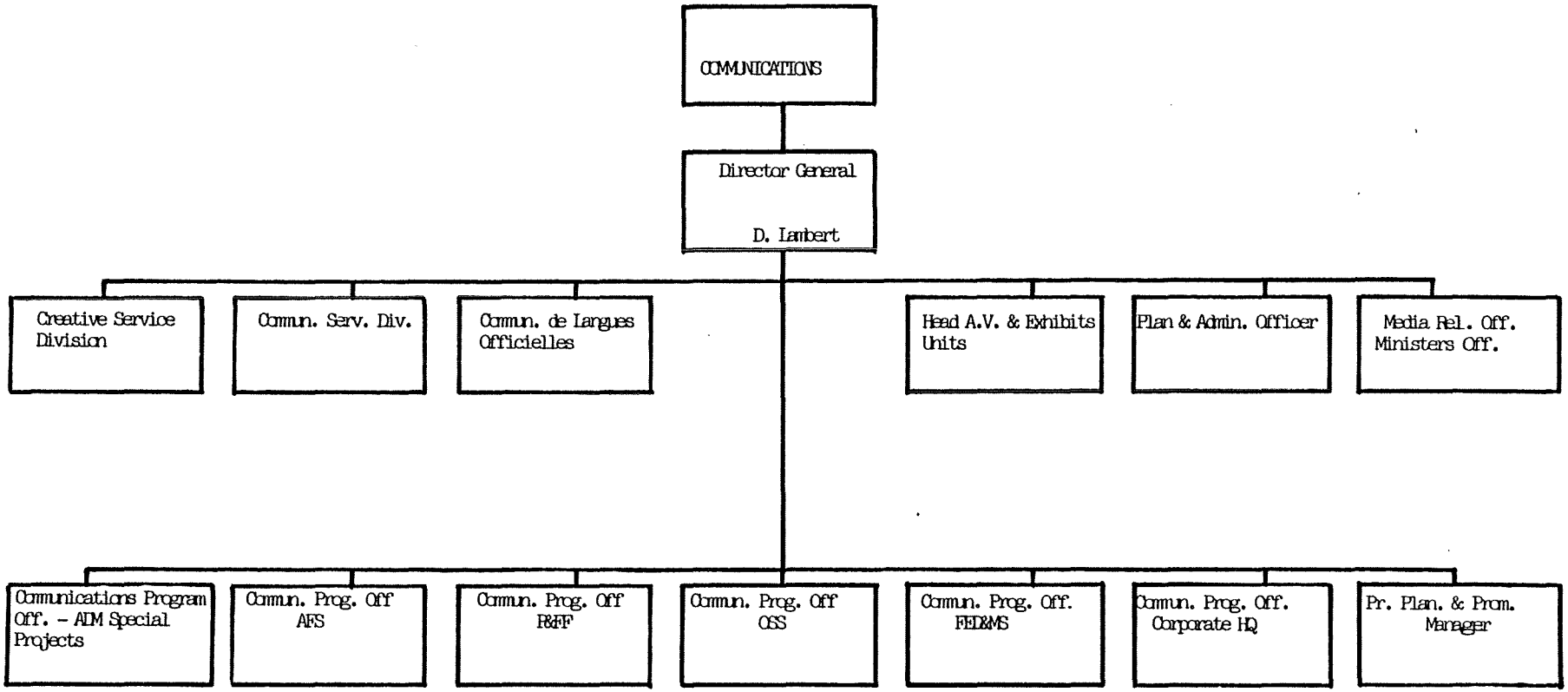
DFO Communications Directorate, based at headquarters, has a strength of approximately 39 PYs. It operates in close cooperation with regional information units which have a total strength of about 25 PYs.

The Director-General of Communications in Ottawa reports to the Deputy Minister and is a member of the DM's executive committee. Regional information chiefs report to their respective Regional Directors-General and the level of their resources and staff allocations are decided regionally. Regions look to Ottawa for broad policy guidance and specialized assistance. Communications Directorate expertise in such matters as design of exhibits, publications, audio-visual products and French quality control is made extensive use of by regions, and there is frequently a transfer of funds and staff to meet special regional requirements. These specialist services, including writing and editing functions, are grouped together in a Creative Services sector at headquarters. This sector is also responsible for responding to public enquiries and for word-processing services for the entire Branch. The Directorate's operational budget in 1983-84 was approximately $1.5 million.

The Directorate is also the focal point for implementation of the Federal Identity Program, Service to the Public, Metric Conversion, Access to Information and Privacy Act, French quality control, and the Regulatory Agenda.

THE PRODUCTS

Communications staff at HQ and the regions provide public relations advice and guidance to senior management; coordinate advertising programs; respond to media enquiries; prepare press releases, speeches and statements; and respond to enquiries from the public. Written material produced by the Directorate includes a wide range of pamphlets, booklets and reports dealing with all aspects of DFO programs and activities. The Directorate is also involved in the co-publishing of books, production of films in cooperation with NFB, design of exhibits, and production of slide shows. It maintains an extensive library of still photographs of fisheries and ocean subjects, as well as movie films and video tapes. The Directorate contracts for press monitoring services and distributes a media review of news items daily. Much of the graphic design work is produced in-house. The major vehicle for internal communications is a newsletter entitled "Pisces", which is distributed to all employees. Newsletters directed to staff and/or clients are also produced in most of the regions. (NOTE: Scientific publishing is the responsibility of a special unit within Ocean Science and Surveys at headquarters. It works co-operatively with Communications Branch in a number of areas.)


COMMUNICATIONS
Director General
D. Lambert
Creative Service Division
Commun. Serv. Div.
Commun. de Langues Officielles
Head A.V. & Exhibits Units
Plan & Admin. Officer
Media Rel. Off. Ministers Off.
Communications Program Off. - ADM Special Projects
Commun. Prog. Off AFS
Commun. Prog. Off R&F
Commun. Prog. Off CSS
Commun. Prog. Off. FED&MS
Commun. Prog. Off. Corporate HQ
Pr. Plan. & Prom. Manager

SMALL CRAFT HARBOURS DIRECTORATE

MANDATE AND HISTORY

Responsibility for administration of the approximately 2,300 fishing and recreational harbours rested, until 1973, with the Department of Transport, while the Department of Public Works was responsible for the programming and construction of these harbours. With a view to improving coordination between fisheries management and harbours organization, the responsibilities were transferred to the Department of Fisheries and the Environment in 1973. The mandate for the Small Craft Harbours (SCH) Program is provided through the Fishing and Recreational Harbours Act (1978) which gives the Minister the legislative authority for the administration, development, maintenance and operation of fishing and recreational harbours.

In the six years prior to the transfer of responsibility to the Department of Fisheries and the Environment in 1973, expenditures on fishing and recreational harbours averaged some $12 million annually. Beginning in 1974-75, the program A-Base averaged $32 million throughout the remainder of the 1970's. This annual base has been supplemented over the past several years with additional funds from other sources. Included in the 1984-85 Main Estimates provision of $103,791,000 is an amount of $40,725,000 representing the Program's A-Base.

Small Craft Harbours continues to participate significantly in joint funding projects with Canada Employment and Immigration Commission (Canada Works projects), with the Ministry of State for Economic and Regional Development (Special Recovery Capital Projects), and with regional ministers (Special Employment Initiatives) resulting in improved harbour infrastructures and employment of local labour, with considerable socio-economic impact especially in the Atlantic provinces. The attached chart represents the allocation of funding between Regions.

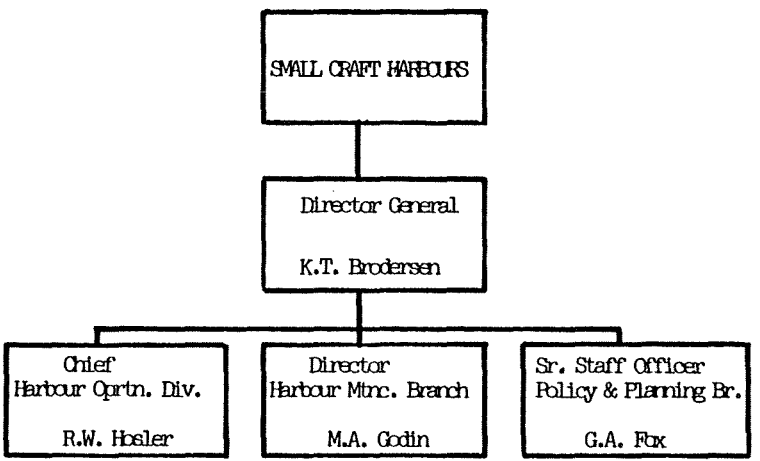
DESCRIPTION OF ORGANIZATION

The SCH program is administered through an Ottawa Directorate with the Director General reporting to the Deputy Minister. Program implementation is provided through departmental regional offices located at Vancouver, Winnipeg, Burlington, Quebec, Halifax, St. John's and Memramcook. The Department of Public Works acts as technical agent and provides professional services related to property purchase, engineering, construction and contracting. Presently 114 approved person years are being

utilized to deliver the Small Craft Harbours program, 18 at Headquarters and 96 in the Regions.

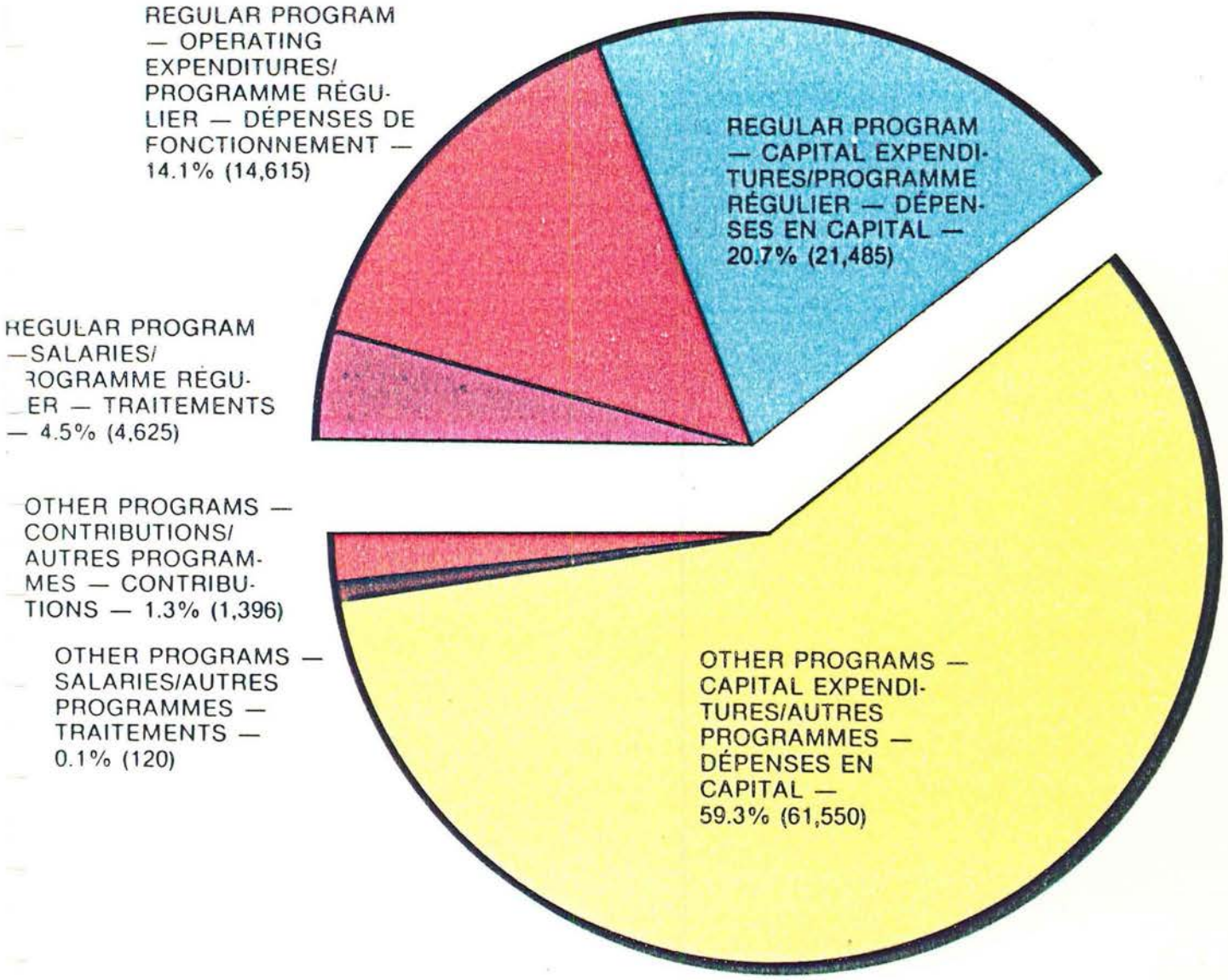
FACILITIES CONTROLLED BY SMALL CRAFT HARBOURS

The Small Craft Harbours program is responsible for the upgrading, maintenance and operation of existing regional harbour systems of some 2,300 harbours (2/3 fishing and 1/3 recreational) and for the administration of federal property at these harbours. Replacement value of these facilities is estimated at $2.0 billion. The present $40.0 million program Reference Level is subject each year to an 85/15 split in favour of commercial fishing facilities over recreational boating and sports fishing facilities.


SMALL CRAFT HARBOURS
Director General
K.T. Brodersen
Chief
Harbour Oprtn. Div.
R.W. Hosler
Director
Harbour Mtnc. Branch
M.A. Godin
Sr. Staff Officer
Policy & Planning Br.
G.A. Fox

Small Craft Harbours/
Ports pour petits bateaux
By Vote/par crédit

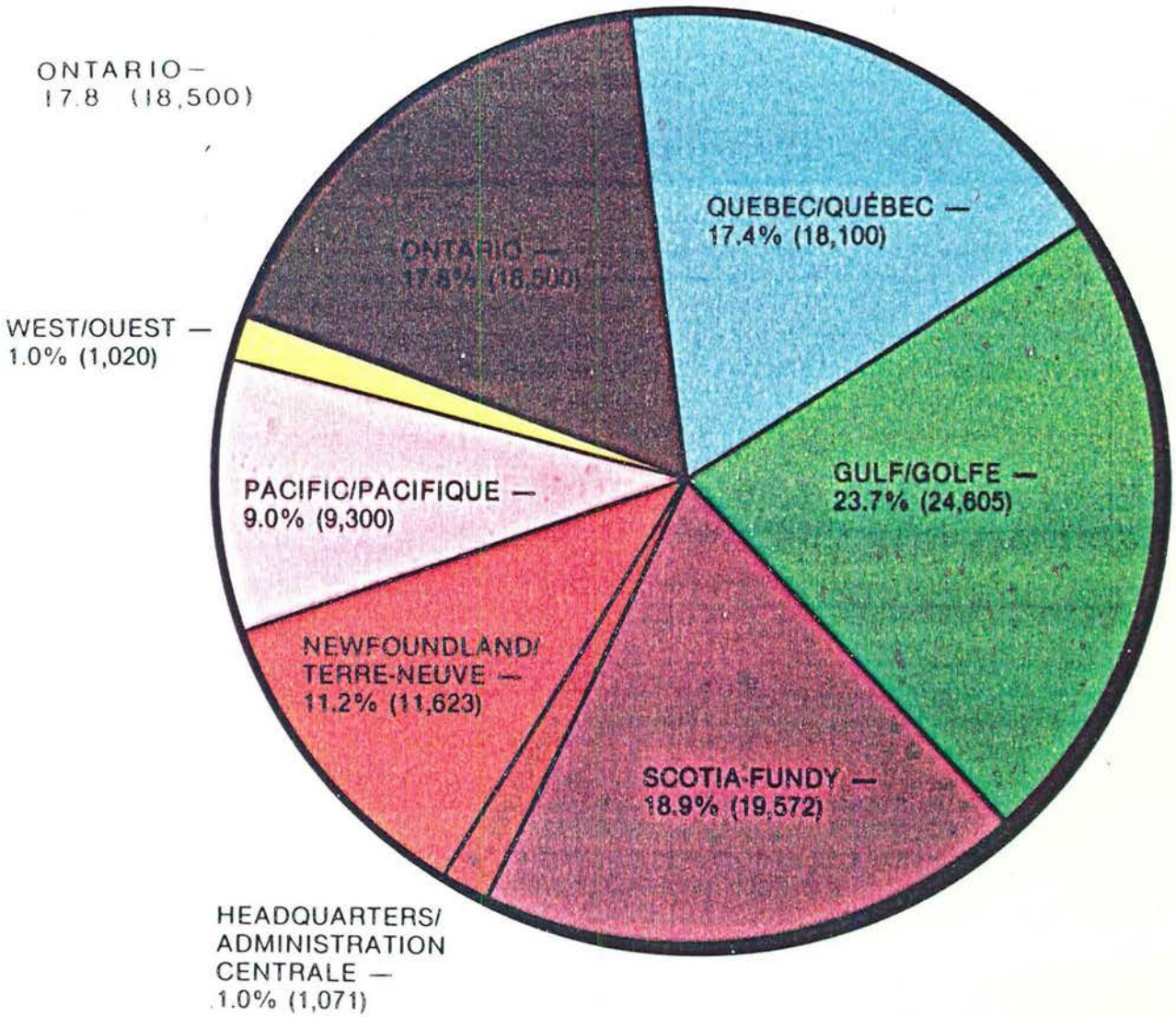
Financial Resource Allocation/
Allocation des ressources financières
($000's)
1984-85 — 103,791



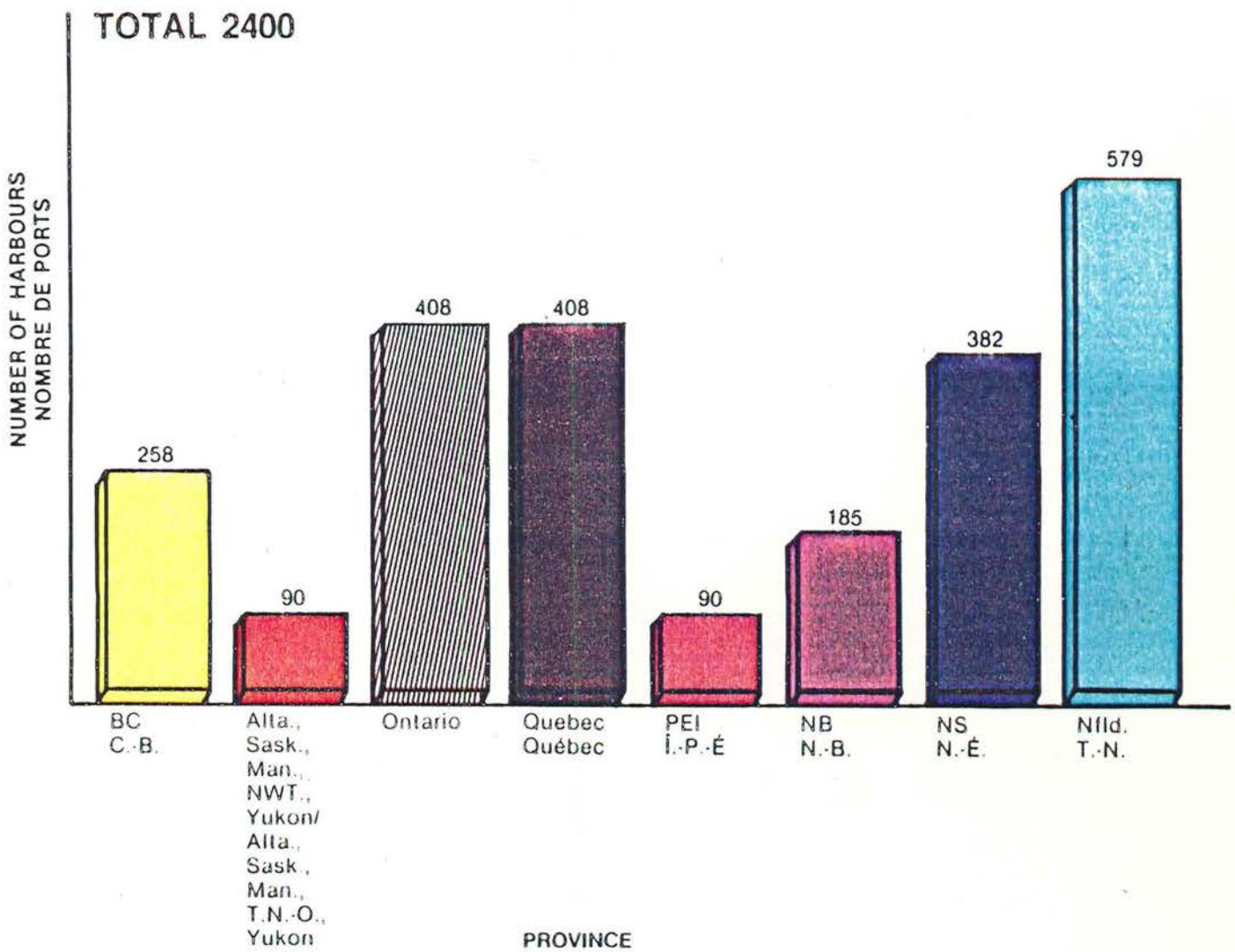
Small Craft Harbours/
Ports pour petits bateaux
All Programs By Region/
Tous les programmes par région

Financial Resource Allocation/
Allocation des ressources
financières
($000's)

1984-85 — 103,791



SMALL CRAFT HARBOURS 1984
BY PROVINCE
PORTS POUR PETITS BATEAUX 1984
PAR PROVINCE



PERSONNEL

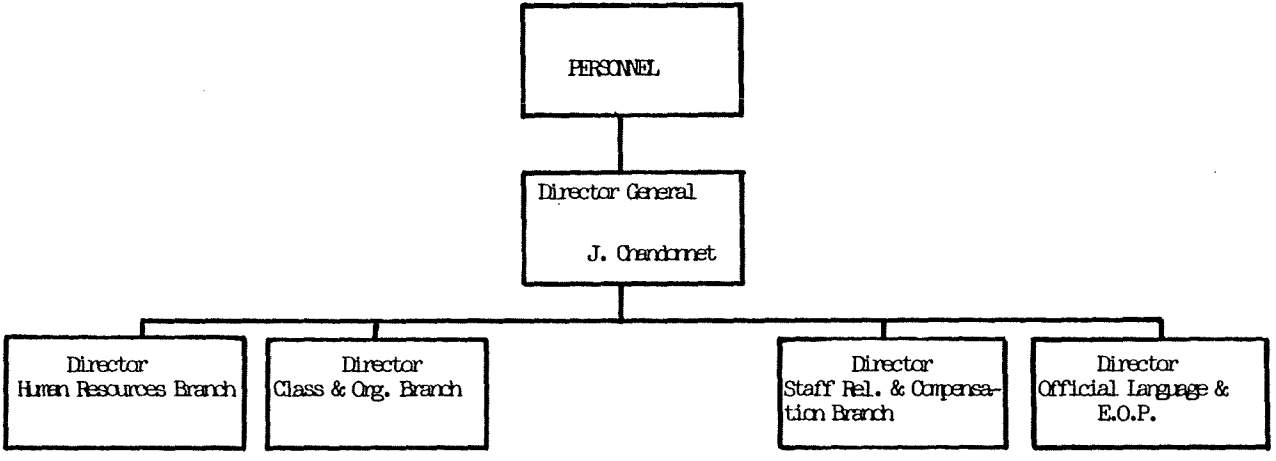
The mandate of Personnel is to assist line management in the discharge of their program responsibilities by providing advice and operational services, through the planning, development, direction and control of effective personnel management procedures, methods and practices related to classification and organization, human resources, staffing, staff relations, compensation, official languages and equal opportunity programs, in accordance with the priorities of the federal government and requirements of central agencies, including the exercise of delegated personnel authorities in a manner consistent with relevant Acts and Regulations.

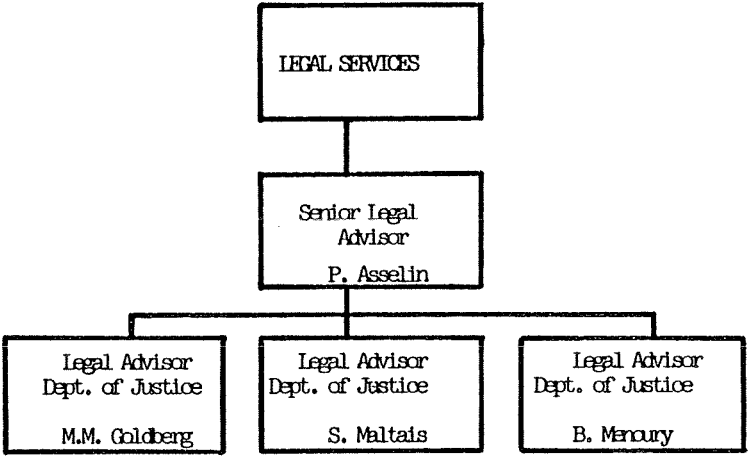
The Personnel function is administered from Headquarters Directorate, headed by a Director General reporting to the Deputy Minister. Headquarters Directorate is responsible for the quality of personnel services delivered by ten regional offices which report directly to the respective Directors General of the following regional organizations:

- Newfoundland Region (St. John's, Nfld.)
- Bedford Institute of Oceanography (Dartmouth, N.S.)
- Scotia-Fundy Region (Halifax, N.S.)
- Gulf Region (Moncton, N.B.)
- Quebec Region (Quebec, P.Q.)
- Bayfield Laboratory for Marine Science and Surveys, Central Region (Burlington, Ont.)
- Ontario Region (Burlington, Ont.)
- Freshwater Institute (Winnipeg, Manitoba)
- Pacific Region (Vancouver, B.C.)
- Institute of Ocean Sciences (Sidney, B.C.)

The National Capital Region Personnel Unit reports to the Director General of Personnel.

The Personnel organization operates with a budget (1984-85) of 180 person-years and 6 million dollars.


PERSONNEL
Director General
J. Chandonnet
Director
Human Resources Branch
Director
Class & Org. Branch
Director
Staff Rel. & Compensation Branch
Director
Official Language & E.O.P.


LEGAL SERVICES
Senior Legal Advisor
P. Asselin
Legal Advisor
Dept. of Justice
M.M. Goldberg
Legal Advisor
Dept. of Justice
S. Maltais
Legal Advisor
Dept. of Justice
B. Mercury

LEGAL SERVICES

MANDATE:

Pursuant to the Department of Justice Act, R.S.C. 1970, vol.5, ch. J-2, the Minister of Justice shall "... generally advise the Crown upon all matters of law referred to him by the Crown;"...

In most government departments, including Fisheries and Oceans, this mandate is exercised by the Department of Justice supplying lawyers to the client department while the client department supplies all other required services and support.

ORGANIZATION:

Legal Services consists of a Senior Counsel, Me Pierre Asselin, Q.C., assisted by three lawyers. The Deputy Minister of this department is the Senior Counsel's client. The Senior Counsel's hierarchical superior is the Assistant Deputy Minister - Legal Services, an employee of the Department of Justice.

SERVICES RENDERED:

It is the function of Legal Services to advise the Deputy on all legal matters of concern to him. This, however, does not generally include the conduct of litigation. This function is carried out by lawyers at Justice headquarters, Justice regional offices or by agents of the Attorney General of Canada.

Legal Services will, for example, advise on the constitutionality of legislation, enforcement practices and legalities, regulations, agreements, will assist in the drafting of regulations and legislation, will prepare contracts and agreements of all types, will lecture to various departmental groups on miscellaneous topics, etc.

The Senior Counsel is a member of the Departmental Management Committee.

PROGRAM OVERVIEW

I INTRODUCTION

The Department of Fisheries and Oceans of Canada is responsible for a range of activities which include fishery management and research within the 200 mile economic zone, inland waters and offshore marine waters of interest to Canada; services to the fishing industry, including the development and administration of fishing and recreational harbours and the inspection of fishing vessels, plants and products; fisheries economic development and marketing support; international fisheries negotiations; oceanographic research; and hydrographic surveying and charting.

Fisheries

The fisheries programs of the department are aimed at ensuring maximum economic and social benefit to Canada from the use of fisheries and other aquatic living resources of coastal and inland waters. Programs are also directed at conserving these resources and maintaining the aquatic environment in a healthy, productive state.

An important responsibility is the surveillance and management of fisheries within the 200-mile exclusive fisheries zones established since 1977 on both east and west coasts, and the associated research and stock assessments needed for rational decisions on management measures, including sharing access to the fisheries resources among Canadian fishing fleets and allocating quotas to foreign fleets where appropriate.

Programs are carried on in all regions of Canada to ensure the conservation and protection of fisheries resources and, within the limits of resources available, their development and expansion; the upgrading of the quality of fish and fishery products, and assistance to fishermen and industry in the development of new products and of more effective harvesting, production and marketing techniques.

Programs of fisheries and aquatic research directly supporting national and international fisheries activities are conducted from centres located in key coastal and inland areas. The scope of fisheries and aquatic research is extremely varied, covering studies in biology, ecology, population dynamics, distribution, and migrations of fish, marine mammals and shellfish, and the forecasting of sustainable yields of fish and marine mammal stocks harvested in the commercial, native and recreational fisheries. Studies are also directed towards the quality control of fish catches and fishery products, the

development and application of aquaculture techniques in salt and fresh water and the impact of toxic substances and habitat alterations on fishery species. In addition, specialists carry out social and economic analyses to assist in policy formulation for all significant aspects of fisheries use, potential and management.

Various financial assistance programs are available to commercial fishermen, including the Fishing Vessel Assistance Program and the Fishing Vessel Insurance Plan. The department also provides loan guarantees under the Fisheries Improvement Loans Act.

The department develops, maintains and administers fishing and recreational harbours and marine facilities at approximately 2,400 locations across Canada. A close liaison exists with the Department of Public Works which provides design, construction, maintenance and property services. Continuing liaison is also maintained with other branches of the department to ensure that harbour developments and programs are in harmony with present and future needs of the fisheries.

Small Craft Harbour activities also reflect the rapid growth of recreational boating in recent years that has led to acute harbour congestion in many parts of Canada, particularly in Ontario and British Columbia. Assistance in dredging and the construction of breakwaters, wharves, launching ramps and other harbour facilities is provided through the marina assistance policy and tourist wharf programs.

Support is given in various ways by the department to strengthen the fishing industry's capabilities to market and promote the sale of fish products and obtain the most favourable prices. In addition, long-range and strategic planning is aimed at the orderly economic dvelopment of the industry. This also involves the collection, analysis and distribution of data and information relating to fish catches, production and trade.

Working closely with the Department of External Affairs, staff of the department are actively involved in negotiating agreements or treaties with foreign countries concerning fishing rights or trade arrangements.

Departmental staff have played a key role in the development and negotiation of Canada's position in the United Nations' Law of the Sea Conference, and also provide departmental input into Canadian fisheries and marine overseas aid programs administered through such organizations as the Canadian International Development Agency and the Food and Agriculture Organization of the United Nations.

Ocean Science and Surveys (OSS)

An extensive range of programs contributes to the management and development of renewable and now-renewable ocean resources, and to the understanding of processes operating within the aquatic and marine environment. Precautions and remedies are sought to restore and protect that environment and the resources associated with it. This work is carried out in close cooperation with the Department of the Environment and other major governmental departments involved in the utilization of ocean resources.

Major physical, chemical and biological oceanographic research programs are conducted, while other activities include the operation of a Marine Environmental Data Service, which collects and distributes oceanographic and wave climate information, tide and water level measurements and other related data.

Ecological and environmental studies related to the marine and aquatic environment are directed primarily toward the control of pollution and the determination of safety margins of contaminants as they affect aquatic life. OSS must also respond to the constant demand for aquatic resource inventories and environmental impact assessments, particularly in relation to activities with potentially adverse effects upon aquatic life in the ecologically delicate Arctic and in sheltered coastal waters such as the Gulf of St. Lawrence and the Strait of Georgia.

A major responsibility is the planning and implementation of a national program of hydrographic surveying and charting of navigable coastal and inland waters. In addition to producing navigation charts for coastal and inland waters, the work includes production of special charts and maps for pleasure craft, the fishing industry, National Defence and offshore exploration. Publications related to navigation, such as Tides and Current Tables and Sailing Directions, are also produced. Activities are coordinated with those of the Coastguard Service of the Department of Transport.

II PROGRAMS

There are seven major programs operating within the Department. They are:

- Atlantic Fishery Management
- Pacific and Yukon Fishery Management
- Northwest Territories and Inland Fishery Management
- Services to the Fishing Industry
- Marketing and International Fisheries
- Ocean Science and Surveys
- Corporate Administration

More detailed information on each of these major program areas is provided below.

ATLANTIC FISHERY MANAGEMENT

The objective of Atlantic Fishery Management is to conserve, enhance and manage the Atlantic fishery resource and to promote the orderly development of commercial, native and recreational fisheries. This objective is achieved through:

- the conservation, protection and development of the Atlantic fishery resource and its habitat;
- the promotion of the orderly development of the fisheries, allocation of the common property resource among competing interests and regulation of its harvesting;
- endeavouring to maintain the ongoing viability of the fishing industry where viability implies an ability to survive downturns with only a normal business failure rate and without government assistance;
- the maximization of employment in the fishing industry, subject to the constraint that those employed receive a reasonable income as a result of fishery-related activities, including fishery-related income transfer payments; and

- endeavouring to ensure that fish available to Canadian fishermen are harvested and processed by Canadians in firms owned by Canadians wherever this is consistent with the above and with Canada's international treaty obligations.

Atlantic Fishery Management comprises the planning and delivery of those work-activities through which the Department manages the fisheries resource and the primary (harvesting) sector of the Atlantic fishing industry. The term "management" in this activity and in the two following refers not only to the regulation of fishing, but also the delivery of federal policies and programs to the primary fisheries sector and interventions into the natural resource systems, including measures aimed at conservation, protection, augmentation and culture of renewable resources.

The Atlantic Fishery Management Activity encompasses all federal fishery management and research work-activities in Atlantic Canada and the waters adjacent to Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island and Quebec, and within Canada's 200-mile fisheries zone. Also included are the river systems and lakes in all of these provinces except Quebec. The Department is responsible in the Atlantic zone for the management of 45,000 km of coastline, 300 scheduled salmon rivers (i.e., rivers where salmon fishing regulations apply) and numerous unscheduled rivers and lakes. The Atlantic fishery involves over 1,300 communities and employs approximately 22,000 plant workers in over 700 processing facilities. There are over 52,000 commercial fishermen operating approximately 30,000 vessels ranging in size from 5 to 65 metres. In addition, the Department regulates the fishing of more than 300 foreign fishing vessels operating annually in waters within Canadian jurisdiction. In order to fulfill obligations under the Northwest Atlantic Fisheries Organization of which Canada is a member, the Department must also monitor the operations of the fishing vessels of 13 countries which fish beyond the 200-mile limit.

Work-activities to achieve the management of the Atlantic fishery are as follows:

Fisheries Research: Research is carried out to acquire the knowledge needed for the management of fisheries and the fish habitat, and to provide scientific advice in those areas as well as in other specialized fields such as aquaculture, fish health, nutrition, toxicology, and the physiology of fish.

Research in support of fisheries and fish habitat management also provides information on environmental and human factors influencing the fisheries resources and potential yields from them, and produces indices of resources available for harvesting. These define the basis for management interventions and determine their impact, outlining in part the management options available in given circumstances. Scientific knowledge of the fishery resource and its habitat provides a foundation for policies and regulations, and plays a key role in support of international negotiations. The scientific basis for advice provided by this work-activity is evaluated in various scientific sub-committees of organizations such as the Canadian Atlantic Fisheries Scientific Advisory Committee, the Northwest Atlantic Fisheries Organization, and other international commissions, and through peer review as part of the publication process.

In addition, a variety of other research projects are undertaken. These can be grouped into three categories: resource assessment, aquaculture and resource development, and habitat assessment. Results are published in various technical and scientific journals and other publications, and form the basis for advice to clients in regulatory bodies, the fishing industry, various provincial, national and international agencies, and the public.

Fishery Management: Principal tasks are the establishment of total allowable catch (TAC) levels and other regulations; development of management plans for the allocation of the various fisheries based upon consultations with various user groups; controlling access to various fisheries through domestic and foreign licensing regimes; the monitoring/ surveillance of fisheries activity; and the conservation and protection of fishery stocks and their habitat through the enforcement of acts and regulations. The work is principally carried out by fishery officers located throughout the provinces of Newfoundland, Nova Scotia, New Brunswick and Prince Edward Island and in the coastal areas of Quebec, and by a coastal and inshore patrol fleet.

Through offshore surveillance, the Department also monitors the movements and operations of domestic and foreign fishing vessels and enforces management regulations within the 200-mile limit. This includes patrol aircraft, placing observers on domestic and foreign vessels, and the boarding and inspection of fishing vessels by fisheries officers operating from patrol boats.

PACIFIC AND YUKON FISHERY MANAGEMENT

Objective

The objective of the Pacific and Yukon Fishery Management Activity is to conserve, enhance and manage the fishery resource and to promote the orderly development of commercial, Native and recreational fisheries. This objective is achieved through:

- the conservation, protection and development of the fishery resource and its habitat;

- the promotion of the orderly development of the fisheries, allocation of the common property resource among competing interests and regulation of its harvesting;

- endeavouring to maintain the ongoing viability of the fishing industry where viability implies an ability to survive downturns with only a normal business failure rate and without government assistance;

- the maximization of employment in the fishing industry, subject to the constraint that those employed receive a reasonable income as a result of fishery-related activities, including fishery-related income transfer payments; and

- endeavouring to ensure that fish available to Canadian fishermen are harvested and processed by Canadians in firms owned by Canadians wherever this is consistent with the above and with Canada's international treaty obligations.

Description

The Pacific and Yukon Fishery Management Activity consists of the management of the fishery stocks, their harvesting and their habitat, in and adjacent to British Columbia and the Yukon Territory, including management in Canadian portions of transboundary rivers, shared management in international fisheries, management of foreign stocks in Canadian waters and of the Native, recreational and commercial fishing efforts.

The five species of Pacific salmon constitute the most valuable fishery resource in British Columbia. The total salmon resource is comprised of thousands of distinct stocks which spawn in nearly 1,500 different streams and rivers along the 17,000 km coastline of British Columbia. Salmon habitats

have been negatively affected by population growth and industrialization since the 1800s, and the productive capacity of some freshwater spawning and rearing areas is threatened. Additionally, poaching has proved to be a serious problem, and enforcement of regulations is a major endeavour.

The next most valuable fishery is the herring roe fishery which supplies the Japanese market. However, a large number of other species, particularly halibut, groundfish and shellfish, are also harvested by B.C. fishermen.

There are approximately 17,000 commercial fishermen and 350,000 recreational fishermen within the purview of this activity.

Work-activities to achieve the management of the fishery are as follows.

Fisheries Research: This work activity carries out research in a number of areas.

Research in the fields of fisheries population biology, fisheries stock assessments and fisheries ecology, including systems modelling and refinement of fisheries stock assessment methodology, is carried out to acquire the knowledge required for fishery resource management. Research in the fields of environmental biology, contaminants surveillance and habitat impact assessment is conducted to develop a more complete understanding of pollutant effects and habitat deterioration as a potential threat to the well-being of aquatic resources. Research in the fields of physiology, fish genetics, fish diseases, fish nutrition, histology and parasitology of fish and marine mammal habitats, and the expansion of the salmon resource.

Results of research are reviewed in various scientific subcommittees of international commissions, such as the International Pacific Halibut Commission, the North Pacific Fur Seal Commission, and others, and also through research publications.

Fishery Management: Fishery management includes the following: ensuring the perpetuation of the fishery resource through control of harvesting and maintenance of the required breeding population for each fish stock; monitoring stock abundance, distribution, composition and harvest rates as required for management; protecting, restoring and developing habitats to maintain and increase fish productive capacity; assessing the impacts of urban and industrial pollution, dyking, dredging and construction projects, forest

harvesting activities, hydro-electric, agricultural and other consumptive water use proposals and estuarine and foreshore use plans to provide information to support habitat protection; conducting surveillance of domestic and foreign fisheries and industrial developers operating within the Canadian eonomic zone, to ensure compliance with conservation, habitat protection, and harvesting regulations; formulation of Native fishing agreements; and allocating fishing opportunities through the operation of licensing regimes, resource allocation plans and regulatory controls to achieve an equitable sharing of fish resources.

Salmonid Enhancement (SEP): The enhancement of salmonid stock populations, primarily salmon, involves the construction and maintenance of fish culture facilities, the release of fish produced into selected waters, lake fertilization, the clearing of debris from natural spawning streams, improving natural spawning areas, and building fishways around obstructions.

Funds have been provided for on-going operations of existing facilities as well as for a two-year transitional phase. The funds for the transition phase will support evaluations of the returns from existing projects and preparatory studies required for probable future expansion. During the next two years many outstanding issues affecting the B.C. fishery, that were the subject of recommendations by Dr. Pearse, will be addressed with the advice of public and industry groups. As new policies are established, the future direction of SEP after the transition phase can be determined in light of new overall fisheries management strategies.

NORTHWEST TERRITORIES AND INLAND FISHERY MANAGEMENT

Objective

The objective of the Northwest Territories and Inland Fishery Management Activity is to conserve, enhance and manage the fishery resource and to promote the orderly development of commercial, native and recreational fisheries. This objective is achieved through:

- the conservation, protection and development of the fishery resource and its habitat;

- the promotion of the orderly development of the fisheries, allocation of the common property resource among competing interests and regulation of its harvesting;

- endeavouring to maintain the ongoing viability of the fishing industry where viability implies an ability to survive downturns with only a normal business failure rate and without government assistance;

- the maximization of employment in the fishing industry, subject to the constraint that those employed receive a reasonable income as a result of fishery-related activities, including fishery-related income transfer payments; and

- endeavouring to ensure that fish available to Canadian fishermen are harvested and processed by Canadians in firms owned by Canadians wherever this is consistent with the above and with Canada's international treaty obligations.

Description

This activity deals with the marine and freshwater fisheries in Ontario, Manitoba, Saskatchewan, Alberta, and the Northwest Territories. The extreme geographic and demographic diversity is concomitant with a diversity of mandates and responsibilities in different provinces and territories. In the Northwest Territories and in the Arctic Ocean, this activity exercises the complete Program mandate. In Manitoba, Saskatchewan, Alberta and Ontario, the federal government has delegated some authority to the provinces for the management of inland fisheries. As well, this activity comprises much of the Program's response to the need for new knowledge about the protection of freshwater fisheries habitats, and has developed a national and international prominence in freshwater fisheries research.

The inland fisheries resource supports a healthy and valuable commercial and recreational fishing industry, and sustains a large traditional use by Natives. The commercial fishery has a landed value of approximately $64 million and provides employment in areas where alternative economic opportunities are limited. The recreational fishery (4.8 million participants) make a sizeable contribution to tourism and has a significant impact on local economies. Native community fisheries are important as well, given that over half Canada's Native population live in the area covered this activity.

In the north there are both freshwater and marine fisheries. In the freshwater are found some 60 species of fish, both anadromous and resident. In the marine environment, besides known species, are a variety of marine fish which have not been accurately inventoried or catalogued, as well as several species of marine mammals (seals, whales and walrus). In addition, the fishery resources of the north are exploited for subsistence (food, fuel, clothing and a bond to historic and cultural use of the resource by Native peoples), commercially and for recreational purposes. In all these areas there are important fishery management concerns.

In addition, this activity carries out research on inland fisheries and aquatic problems which may be national in scope, as well as working in the Great Lakes in conjunction with the United States and the provinces.

Work-activities to achieve fisheries management objectives are as follows.

Fisheries Research: Research is carried out to acquire the knowledge required for the management of northern fisheries and the habitat they depend on, and to provide advice to other federal departments, provincial governments, bilateral commissions and industry. Additionally, research into the problems of environmental degradation, including acid rain, other contaminants and the impact of man-made reservoirs, is undertaken as a support to the provinces, the Department and Canada as a whole. Details of the research accomplishments are published in various scientific and technical journals and other publications.

Scientific information has been instrumental in the development of impact assessments in areas such as the Beaufort Sea, the MacKenzie Delta and Lancaster Sound. Problems such as acid rain, phosphates in sewage, and effluent dioxins in fish are addressed in support of the protection and rehabilitation of the Great Lakes. The science is reviewed as

part of the process of scientific publication, in international committees, and in ad hoc boards and committees by peer gorups of leading scientists.

Fishery Management: Principal tasks are: conservation and protection of fish and marine mammal stocks through the enforcement of acts and regulations in the Northwest Territories; establishment of total allowable catch levels and management systems and plans for the equitable allocation of the resource in the Northwest Territories; the monitoring and surveillance of fisheries in the Northwest Territories; the protection of fish habitat; and technical investigations assessing the impact of such industrial activities as hydrocarbon exploration and development, pipeline construction, hydroelectric projects, dredging and mining in the Northwest Territories, and the settlement of Native fishing agreements.

In addition, enhancement and rehabilitation of fish stock populations are undertaken in co-operation with the provincial governments, industry and private interest groups. In the Great Lakes, parasitic sea lamprey populations are controlled as part of an integrated Canada/U.S. program under th Great Lakes Fisheries Convention to facilitate the rehabilitation of desirable fish species.

SERVICES TO THE FISHING INDUSTRY

Objective

The objective of the Services to the Fishing Industry Program is to provide services and infrastructure in support of the achievement of the highest practical economic returns and social benefits from the fishery resource, the fish processing industry and the exploitation of non-renewable resources.

Description

National programs designed to assist both the primary and secondary fishing industry and to protect the consumer are delivered through this planning element. Unlike the three fishery management planning elements, which regulate and support the fish production sector in particular geographic areas, the Services to the Fishing Industry planning element achieves results that contribute to the entire Canadian fishing industry, with a particular focus on the development of infrastructure. This aggregation of work-activities has a mandate which is significantly different from those of the fishery management planning elements.

This program is comprised of six work activities:

Inspection: This work-activity encompasses two major programs - the Fish Inspection Program and the Quality Improvement Program, both of which are delivered by all fisheries management regions of the department. All activity in this area is continuing and regulatory in nature.

The Fish Inspection Program, conducted under the authority of the Fish Inspection Act, is a comprehensive program for inspection of fishing vessels, fish products and fish processing establishments. It concentrates on sanitary requirements for vessels and plants, quality standards for domestically produced and imported fishery products and grade standards for some traditional products. Fish health regulations are enforced. As well, many foreign countries require imported products to be certified as meeting specific health, quality, identity, composition and labelling specifications.

The Quality Improvement Program resulted from extensive consultations with fishermen's organizations, provincial governments and processors to establish guidelines for quality upgrading initiatives. It encompasses vessel certification; quality protection on board vessels; dockside grading of landings; facilities for unloading, handling and transportation to plants; in-plant quality control; and final product grade standards.

Economics and Statistics: The Economic Research function provides information and policy advice on social and economic factors relevant to the commercial, native and recreational fisheries and the fish processing sector. The advice includes recommendations for improving social benefits and economic returns. The general environment and business climate affecting commercial, sport and native fishermen, processors and fisheries-dependent communities are emphasized. Significant issues such as acid rain, oil and gas developments, energy savings and industry infrastructure and international and market developments are subject to continuing research. Assessments of foreign research, policies, developments, technologies and changes in product preferences are regularly undertaken.

Much of the Economic Research work is achieved with the active cooperation of the provinces, industry, fishermen, universities and specialized consultants.

The statistics and analysis function collects, stores and analyses data required by government, industry and independent researchers with respect to the harvesting, processing and marketing sectors of Canada's fishing industry. Data are collected through established statistical systems and through special or periodic surveys for specific purposes. Clients receive information in regular publications or in reports prepared for specific requirements.

Regular publications provide information on fish landings, prices, production and inventory levels, exports, imports, sportfishing and key industry performance indicators. Recent special reports have dealt with socio-economic analysis of incomes and expenditures of fishermen's households, the financial viability of fishing and processing enterprises, and the dependence of selected communities on the fisheries.

Fisheries Development: This work-activity comprises the analysis and identification of fisheries development requirements in relation to infrastructure development, technological and systems development and information transfer, as well as the coordination and implementation of programs to satisfy those requirements. Projects are undertaken to provide:

- for the more efficient exploitation of fishery resources and for the exploration for the development of new fishery resources;

- for the introduction and demonstration to fishermen of new types of fishing vessels and fishing equipment and of new fishing techniques; and,

- for the development of new fishery products and for the improvement of the handling, processing and distribution of fishery products.

The bait service for fishermen in Newfoundland, foreign arrangements, employment creation and improvements in vessel and dockside technology are also responsibilities under this work-activity.

Fisheries Assistance: This work activity is comprised of four parts.

In 1984, Parliament enacted the fisheries Prices Support Act under which was established the Fisheries Prices Support Board (FPSB) in order to protect fishermen and processors against sharp declines in prices and subsequent losses of income beyond their control. The Board has powers (subject to Governor-in-Council approval) to prescribe prices for fishery products, to compensate producers for the difference between such prescribed prices and the market prices, to purchase, process, store, ship, market or otherwise dispose of fishery products, to enter into contracts and to appoint agents for the foregoing purposes. The Board also acts as the procurement agency for fishery products used in international food aid and development programs administered by the Canadian International Development Agency and the World Food Program.

The Fishing Vessel Assistance Program (FVAP), administered under the Fishing Vessel Assistance Regulations, grants subsidies of part of the cost of construction, modification or conversion of vessels. The principal aims of the program are to help fishermen to modify their boats in the interests of greater efficiency to improve the quality of the product they land, and to convert them for different types of fishing.

The Fishing Vessel Insurance Plan (FVIP) addresses the problem of compensation for capital losses. The plan protects against total and partial loss of vessels and provides coverage for limited collision liability. Vessels may be insured for up to 100 per cent of their appraised value. Premium rates vary on the basis of factors related to the anticipated risk. The objective is to make marine insurance protection available to Canadian fishing vessel owners, wherever located, at the lowest possible cost consistent with the viable operation of the plan.

The Fisheries Improvement Loans Act (FILA) authorizes the Minister to guarantee designatd lending agencies

such as chartered banks, trust and loan companies, and credit unions against loss on term loans made to fishermen for the construction of fishing craft and ancillary installations ashore; the purchase of vessels, engines, gear and equipment; and the major repair or overhaul of vessels, installations and equipment. The guaranteed loan program provides a source of credit to fishermen which might not otherwise be available from the banking community.

Small Craft Harbours: This program is responsible for the development, maintenance and management of fishing and recreational harbours and wharves, and the administrtion of the Marina Assistance and Tourist Wharf Programs.

The harbour development function comprises the construction, maintenance and repair of harbour protection structures, wharves, slipways, launching ramps, breakwaters, dredging and associated services including water and electricity.

The harbour management function involves the provision of property administration services and the overall management of some 2,400 harbour facilities by controlling the day-to-day operation of the wharves, carrying out minor repairs and regulating traffic flow, enforcement of the fishing and recreational Harbours Act and Regulations and revenue collection to ensure a safe and economic use of harbour facilities in response to user needs.

MARKETING AND INTERNATIONAL FISHERIES

Objective

The objective of the Marketing and International Fisheries Program is to increase domestic and international sales of Canadian fish and fish products, to maximize the financial returns from the marketplace and preparing and negotiating Canadian fisheries positions in the international arena to ensure the protection and maintenance of Canadian intrests.

The sub-objectives of this planning element are identified as objectives within each of the work-activities.

Description

This program is comprised of two work-activities.

Marketing

Within this work-activity there are three major functions:

(i) Promotion: Develops strategies for promotion and advertising on the basis of extensive consumer research. Promotional programs are designed to improve the image of Canadian fish and seafood products and increase fish consumption and market returns to the industry. The range of activities include: the planning and implementation of major generic promotional programs such as the November Fish and Seafood Month Campaign and the Domestic Foodservice Promotion Program; recipe development, food photography, promotional material, product testing, food demonstrations, press releases, television and radio appearances, food shows and exhibitions. Technical assistance and support is also provided to other government departments (External Affairs, DRIE, provincial fisheries departments), as well as the fishing industry.

(ii) Policy and Extension Services: Develops and implements pilot projects and programs designed to improve market performance, product competitiveness and returns in the fishing industry. Activities include: market-related product costing and production systems for use by industry in improving plant profitability; pilot marketing projects in support of new business development which cannot be readily addressed by the industry, such as new packaging for fresh fish, seal market development, market penetration for underutilized species, import replacement with Canadian production etc.; product costing and profitability studies; and also the development and review of marketing policies.

(iii) Marketing Planning and Intelligence: Provides extensive market intelligence and analyses, research studies, market outlooks and forecasts and business-oriented advice to industry and government. The function also provides technical advice and assistance to the Fisheries Prices Support Board, the Freshwater Fish Marketing Corporation and the Canadian Saltfish Corporation. Major initiatives include: industry-wide species market forecasts and action plans; consultative advice to resource managers, industry sales and marketing staff, and government policy advisors; market opportunity identification; trade missions to selected markets; world-wide marketing studies.

International

Within this work-activity there are five major functions:

(a) initiatives and responses in Canada's fishery relations with foreign countries;

(b) interdepartmental consultations with External Affairs, Finance, CIDA, Justice, EMR and Agriculture;

(c) government-industry consultations to develop initiatives, negotiate positions and implement agreements, etc.;

(d) consultations and negotiations with representatives of other countries in bilateral and multilateral fora;

(e) development and implementaton of treaties, agreements and understandings with other countries.

OCEAN SCIENCE AND SURVEYS (OSS)

Objectives

OSS's mandate is to assist the Minister in the exercise of his responsibilities for hydrography and marine sciences and the coordination of ocean policies and programs. In a functional sense, its principal tasks are:

- To produce and make available navigation charts and associated publications covering (i) Canadian seacoast and navigable inland waters, and (ii) ocean areas of interest to Canada;

- To assist in the production of offshore natural resource maps and in the delimitation of marine boundaries;

- To provide scientific data, information, advice and assistance necessary for (i) the definition and solution of ocean-related problems; and for (ii) the safe, economically and environmentally sound utilization of marine resources;

- To support the continuing scientific and technical development of industrial and academic capability in ocean sciences, services and related technologies in Canada; and

- To meet the needs of the marine community in these matters.

Description

OSS carries out these functional objectives through two large, scientific research and development (R&D) programs: (i) Hydrography, and (ii) Oceanography;

Hydrographic Program

The Canadian Hydrographic Service (CHS) program has a constitutional foundation. Initially, its program supported navigation, shipping and defence but through evolution it now also supports fisheries, recreational boating and other regionally important socio-economic activities. Main tasks undertaken within this program are as follows:

- the conduct of systematic hydrographic surveys of marine waters of interest to Canada and of navigable inland waters;

- the processing and use of the hydrographic data, together with other information about navigational

aids and topographical features, to produce navigational charts and sailing directions;

- the maintenance of an adequate inventory of hydrographic reference documents, and the distribution of corrected Canadian navigation charts and other publications to meet the needs of all users;

- the conduct of research and development for improved surveying, positioning and charting methodology and equipment, and the transfer of the resulting technology to Canadian industry;

- (through a long-standing Memorandum-of-Understanding with EMR) the provision of ships, positioning data and bathymetric measurements, and the subsequent preparation and production of Geoscience Maps which provide bathymetric, magnetic, gravimetric, geomorphological and surficial geological information as a marine extension of the Canadian topographic mapping series;

- the provision of data, information and expertise relevant to the delineation of marine boundaries;

- the fulfillment of international obligations pertaining to safety of navigation, as embodied in the 1958 "Geneva convention on the Territorial Sea and the Contiguous Zone", and elsewhere; and

- the meeting of internationally accepted standards of charting in all facets of the program.

Oceanography Program

The foundations of the Federal concern for oceanography can also be traced to the British North America Act, 1867. Legislative authority for (i) navigation and shipping, (ii) sea coast and inland fisheries and (iii) external affairs and defence permitted the establishement of tidal observation stations and later a Canadian Tidal Survey before the turn of the century. Simultaneously a Department of Naval service and Board of Management for fisheries and marine research were established. Thus the authority for formal government involvement in the conduct of marine research, in support of one or another of these Federal responsibilities, was exercised in these early years; and it has been handed down to the present.

Following enactment of the Government Reorganization Act, 1979 responsibility for marine research has come to reside in several departments, and on both program sides of DFO. In general, applied research related to the development or

protection of the fisheries has been entrusted to the department's Fisheries Management components whereas ocean science per se and ocean technologies form the basis of the OSS Oceanography Program.

Main tasks performed within the Oceanography Program are as follows:

- the provision of science services, most notably -

  (i) acquisition and archiving of all oceanographic, tidal and water level data collected in Canadian waters;

  (ii) the subsequent processing and provision of oceanographic data and information products as a national service;

  (iii) operation of a national inventory of all Canadian oceanographic data (CAMDI);

  (iv) publication of scientific papers, reports, etc., and of the Canadian Journal of Fisheries and Aquatic Sciences; and

  (v) provision of scientific advice and expertise on request to the marine community at large and in support of the government marine regulatory activities;

- conduct studies in physical oceanography, i.e. concerning the physical properties, processes and phenomena within and at the interface of marine waters, i.e. (i) in near shore and estuarine areas; (ii) in coastal seas; (iii) on the continental shelves; and (iv) in the deep oceans;

- conduct studies in chemical oceanography, i.e. concerning the flux, distribution and behaviour of organic and inorganic materials (i) of natural origin, (ii) of man-made origin, and (iii) in the marine environment and/or entering or leaving the marine environment;

- conduct studies of marine ecology, i.e. concerning the dynamics of marine ecosystems in coastal, shelf and deep ocean waters, with special emphasis on the interdependence of biological communities, their changes through time and space and their relationship with the physical and chemical environment;

- conduct research and development, in-house and/or through contracts, to:

(i) provide methods, techniques and instrumentation for ocean sciences;

(ii) permit the transfer of ocean technology to the Canadian business sector for the development of a competitive marine science industry; and

(iii) to allow the transfer of ocean technology to developing countries;

- participate in bi- and multi-lateral programs involving ocean science and technology that advantage and interest Canada; and provide Canadian representation and participation in international organizations concerned with ocean sciences and policies; and

- provide ship and facility support to other government departments and agencies involved in ocean science-related activities; and provide financial ship and facility support for ocean-related research and research training in Canadian universities.

CORPORATE ADMINISTRATION

Objective

The objective of Corporate Administration is to provide management direction, policy and planning coordination, and corporate administrative services for the Program.

Description

Corporate Administration provides executive management to the Program as well as corporate support services. Included are the offices of the Minister, the Deputy Minister, and the Associate Deputy Minister, together with corporate finance, personnel, administrative and communications services, the management improvement, and internal audit functions, and legal and translation services for the department. Also included is the Chairman of the Fisheries and Oceans Research Advisory Council. Regional administrative services are not included here but are under the Administration work-activity within each planning element in which there are significant expenditures.

SENIOR

DEPARTMENTAL

PERSONNEL

Dr. Arthur W. May
Deputy Minister
Fisheries and Oceans

Dr. May was born in St. John's, Newfoundland. He graduated from Memorial University in 1958 with a B.Sc. (Honours) degree in Biology, followed by an M.Sc. in Fisheries Biology in 1964 and a Ph.D. in Marine Sciences in 1966 from McGill University.

From 1958 to 1971, Dr. May was employed as Research Scientist, Newfoundland Biological Station. In 1971, he was seconded to Ottawa as Biological Advisor, Strategic Planning Branch, Fisheries and Marine Service and, in July 1972, was appointed to the International Fisheries Branch, Ottawa, as Scientific Advisor. A year later, he returned to the Newfoundland Biological Station as Director.

Dr. May has extensive experience in the international fisheries field in the Atlantic. He has served as Canadian Commissioner and head of the Canadian delegation to the Northwest Atlantic Fisheries Organization (NAFO), and as a Canadian delegate and a Vice-President of the International Council for the Exploration of the Sea.

Dr. May became Acting Director General, Fisheries Research and Development in 1974 and was confirmed as Director General, Resource Services, Fisheries Management, in February 1977. In December 1978, he was appointed Assistant Deputy Minister, Atlantic Fisheries, and assumed his present position as Deputy Minister in October 1982. From February-September 1982, Dr. May served as a member of the Task Force on Atlantic Fisheries.

Kenneth C. Stein
Associate Deputy Minister

Mr. Stein was raised and educated in Manitoba, graduating with a B.Sc. in Electrical Engineering from the Univerisity of Manitoba in 1965. After four years with IBM Canada in Ottawa, he was involved with the establishment of a computer services company, Alphatext Ltd. in 1969.

Entering government service with the Department of Communications in 1972, he became Director of the Policy Secretariat two years later. In 1977 he was appointed to the Priorities and Planning Secretariat, Privy Council Office and in 1979 became Director of Long-Term Planning. In 1980, he was appointed Deputy Secretary, Finance and Coordination with the Ministry of State for Social Development.

Mr. Stein was appointed Associate Deputy Minister in the Department of Fisheries and Oceans in January 1984.

L.S. (Scott) Parsons
Assistant Deputy Minister
Atlantic Fisheries Service

As Assistant Deputy Minister, Atlantic Fisheries Service, Mr. Parsons is responsible for the planning, direction and coordination of fisheries management and research programs in the Department of Fisheries and Oceans' (DFO) Newfoundland, Scotia-Fundy, Quebec and Gulf regions, which together encompass the five eastern provinces.

Mr. Parsons is a native of Lumsden, Newfoundland. He joined DFO as a pelagic fish biologist with the Newfoundland Biological Station shortly after graduating with a B.Sc. degree from Memorial University in 1968. He continued part-time studies at Memorial and obtained an M.Sc. in 1971. Mr. Parsons served as Section Head, Pelagic Fishes and Section Head, Redfish, before moving to Ottawa in 1976 on secondment as a Marine Fish Advisor and member of the Extended Jurisdiction Working Group which was responsible for planning the implementation of Canada's 200-mile limit.

Following a period as Associate Director, Resource Assessment, in the Fisheries Research Branch in Ottawa, Mr. Parsons was named Director of that branch in September, 1977. Mr. Parsons was appointed Assistant Deputy Minister, Atlantic Fisheries Service in 1983.

Mr. Parsons has authored and co-authored more than 50 research papers dealing with the biology and population dynamics of several pelagic and groundfish species of Canada's Atlantic coast.

Dr. Victor Rabinovitch
Assistant Deputy Minister
Fisheries Economic Development and
Marketing

Dr. Rabinovitch, a native of Montreal, received a B.A. in economics and political science from McGill University and in 1978 was awarded a Ph.D. in the same field from Sussex University, England. While in Britain, he worked for a variety of labour-related periodicals and lectured at Sussex University on Participation and Planning in Modern Industrial Systems. He has published extensively in the areas of health, work organization and environmental issues.

Before assuming responsibility for the social and community aspects of the recent Atlantic fisheries study, Dr. Rabinovitch was Programme Officer for Workplace Health and Safety with the Canadian Labour Congress and Secretary of the CLC National Committee on Health and Safety. Previously, he had served as Senior Analyst with the Cabinet Secretariat of the Manitoba Government involved primarily with policy review and development relating to manpower training and occupational health and safety. Later, he became Executive Director for the Workplace Safety and Health Division of the Manitoba Department of Labour.

In 1982, Dr. Rabinovitch joined the Kirby Task Force where he assumed responsibility for organizing and overseeing the social and labour aspects of the project. Specifically, he was responsible for the income and expenditure survey of the East Coast fishermen, and for the analysis of various community, consultation and employment-related issues addressed by the Task Force.

In November 1982, he was appointed Assistant Deputy Minister, Fisheries Economic Development and Marketing, Department of Fisheries and Oceans. In July 1984, Dr. Rabinovitch was named Assistant Deputy Minister, Marketing and International.

David Griggs
Director General
Management Improvement & Review

(Acting Assistant Deputy Minister,
Pacific and Freshwater Fisheries)

David Griggs has been with the Department of Fisheries and Oceans (and its preceding agencies) since 1972, successively occupying the positions of Chief of Program Analaysis and Systems Development, Chief of Management Sciences, Coordinator of Program Evaluation and Director of Evaluation and Audit, before being appointed Director General of Management Improvement and Review in 1981. He is currently Acting Assistant Deputy Minister, Pacific and Freshwater Fisheries.

Mr. Griggs came to the department on the Career Assignment Program. He had previously spent five years in the Computer Services Bureau, Department of Supply and Services, as a Computer Programmer, Systems Analyst and Manager of Customer Services.

Before coming to Canada in 1967, Mr. Griggs held a number of positions in the computer field in the U.K., in retailing and heavy industrial corporations.

He was born in Sunderland, England, February 8, 1940, and is a graduate of Cambridge University (B.A., M.A.) in classics and law.

Gerald N. (Gerry) Ewing
Assistant Deputy Minister
Ocean Science and Surveys

Mr. Ewing was born in Hampton, New Brunswick. After graduating from high school in 1950, he served with the Canadian Army in Korea. Mr. Ewing started at St. Francis Xavier University in 1954 and in 1957 obtained a B.Sc. He was employed with Mobil Oil of Canada Limited as an exploration geophysicist from 1957 to 1961 and then joined the federal government's newly formed Division of Oceanographic Research and was assigned to the Bedford Institute of Oceanography. Mr. Ewing took educational leave in 1963 to attend Dalhousie University and, in 1965, returned to the Bedford Institute with a Master's Degree in Science. He became involved with the problems of integrating shipborne gravity and magnetic measuring techniques with the offshore bathymetric surveys being conducted by the Canadian Hydrographic Service.

Appointed Assistant Regional Hydrographer in 1969, Mr. Ewing has authored and co-authored a number of scientific papers on the geological interpretation of geophysical anomalies in offshore eastern Canada. In March, 1972, he was appointed to a post in Ottawa as Director General of the Canadian Hydrographic Service. His appointment as Acting Assistant Deputy Minister, Ocean and Aquatic Sciences, was effective November 1, 1977. In December 1978, he was appointed Assistant Deputy Minister, Ocean Science and Surveys.

He is a member of the Association of Professional Engineers of Nova Scotia, the Society of Exploration Geophysicists, the Geological Association of Canada, the Canadian Institute of Surveying and the Arctic Institute of North America.

Fernand Godbout
Assistant Deputy Minister
Finance and Administration

A native of New Brunswick, Mr. Godbout received a B.A. from Sacred Heart University in Bathurst, New Brunswick. He also received a B. Comm. from St. Joseph's University in Moncton and a M.Sc. in accounting from Laval University in Quebec.

From 1969 to 1973, Mr. Godbout served as Director of Finance and Director General, Finance and Administration, with the Department of Communications and, in July 1973, was appointed Director General, Personnel, Finance and Administration with the same department.

From 1974 to 1981, Mr. Godbout held several senior positions with the Canada Employment and Immigration Commission, including Director General, Administration, from 1974 to 1976, and Executive Director, Finance and Administration, from 1977 to 1981.

In 1981, he was appointed Vice-President, Finance, with the National Harbours Board.

Mr. Godbout was appointed Assistant Deputy Minister, Finance and Administration, Department of Fisheries and Oceans in July 1983.

Louis Tousignant
Assistant Deputy Minister
Policy and Program Planning
Department of Fisheries and Oceans

Mr. Tousignant was born in Quebec City. He received a Bachelor of Arts degree (1966) from Jean-de-Brébeuf College in Montreal and a Masters degree from Ottawa University (1974).

Mr. Tousignant joined the Public Service in 1967 as a translator and established a university training program for translators. From 1974-76, he worked with the Treasury Board Secretariat to develop official languages policies.

In 1976, Mr. Tousignant joined the Priorities and Planning Secretariat, in the Privy Council Office, handling the Speech from the Throne exercise and the government's work program; he was also secretary of the DM10 committee which developed post controls economic policy.

In 1977, Mr. Tousignant became Assistant Secretary to the Cabinet, Culture and Native Affairs and, in 1980, joined the Federal Provincial Relations Office as Assistant Secretary to the Cabinet (Social Policy).

In 1981, he was appointed Vice-President, Policy, Planning and Public Relations, at the Canadian Industrial Renewal Board (CIRB), a government agency directed by a board chaired by Mr. Paul Desmarais of Power Corporation. CIRB's mandate is to revitalize the textile, clothing and footwear industries and to strengthen the economy of areas highly dependent on these industries.

Mr. Tousignant joined the Department of Fisheries and Oceans as Assistant Deputy Minister of Policy and Program Planning in July 1984.

C. Wayne Shinners
Director General
Pacific Region
Fisheries and Oceans

Wayne Shinners was born in New Brunswick. He received a Bachelor of Science degree in 1960 from the University of Prince Edward Island.

Upon graduation, he joined the Fisheries Research Board of Canada in Halifax as an Assistant Scientist. In 1969, he came to Ottawa as a Staffing Officer in the Bio-physical Science Program of the Public Service Commission. In 1969, he became a Staffing Officer with the Department of Fisheries and Forestry. In 1971, he was appointed Executive Secretary of the Fisheries Research Board of Canada and Special Assistant to the Chairman. In 1971, he took leave without pay due to illness in the family.

In 1972, Mr. Shinners became Assistant to the Director in the Halifax Laboratory of the Fisheries and Marine Service. In 1976, he went on the Special Assignment Pay Plan to the Resource Branch, Fisheries Management, Halifax and, in 1977, became Director of the Field Service Branch, Maritime Region. In 1979, he transferred to the Pacific Region in Vancouver as Director of the Field Services Branch. In 1980, he became Acting Director General, Fisheries and Oceans, Pacific Region and, in 1981, was appointed to the position permanently.

Dr. G.H. (Herb) Lawler
Regional Director General, Fisheries
Western Region
Pacific and Freshwater Fisheries

Born in Kingston, Ontario, Dr. Lawler received a B.A. degree from Queen's University. Specializing in zoology, he obtained a M.Sc. degree from the University of Western Ontario in London, Ontario in 1948 and was awarded a Ph.D. by the University of Toronto in 1959.

He joined the Fisheries Research Board of Canada in 1950 in Winnipeg. Working in research stations in Winnipeg and London, Dr. Lawler carried out extensive scientific investigations on various freshwater fish species in the Great Lakes and Northern Lakes.

Since 1967, Dr. Lawler has served as honorary professor of zoology at the University of Manitoba. During 1968-69, he studied European techniques of fisheries research while on one year's sabbatical leave. He has also travelled to Thailand as an advisor on the establishment of a national institute of fisheries. Dr. Lawler is currently Regional Director General, Fisheries, Western Region, Pacific and Freshwater Fisheries.

P.S. Chamut
Director General, Fisheries Management
Ontario Region

Patrick S. Chamut is responsible for fisheries operational and research activities in the Ontario Region. This includes fish inspection and services to the fishing industry, Small Craft Harbours, the Sea Lamprey Control Program, Great Lakes research, and liaison with the Great Lakes Fishery Commission and the International Joint Commission.

After graduation from the University of British Columbia with a master's degree in marine biology and oceanography, Mr. Chamut served with the Department of Fisheries and Oceans in various capacities. In 1975 he was appointed Chief, Chemical Hazards Division of the Fish Habitat Management Branch in Ottawa, and was responsible for managing the department's program on acid rain and for the development and coordination of policies and programs on the effects of chemical wastes on fish.

He assumed his present position, based in Burlington, Ontario, in September 1982.

Richard A. Crouter
Regional Director General
Fisheries Management
Scotia-Fundy

Based in Halifax, Mr. Crouter manages federal fisheries operations and research in the Scotia-Fundy region, those sections of Nova Scotia and New Brunswick not fronting on the Gulf of St. Lawrence.

A native of Abbotsford, British Columbia, Mr. Crouter graduated from the University of British Columbia as a Fisheries Biologist in 1953 and joined the Resource Development Branch of the federal fisheries department in the Pacific Region. After working on a variety of studies related to fisheries management support and habitat protection, he moved to Ottawa in 1968 as Chief Biologist, Resource Development.

In July 1971, Mr. Crouter returned to British Columbia as Manager of Southern Operations and, five years later, was appointed Acting Director of Field Services, Pacific Region.

He returned to Ottawa in 1978 as Acting Director, Fishing Services, and later became Acting Director General Fishing Operations, Pacific and Freshwater Fisheries. He is currently Regional Director General, Fisheries Management, Scotia-Fundy.

Jean-Eudes Haché
Director General
Atlantic Fisheries
Gulf Region

A native of Ste-Marie-sur-Mer, New Brunswick, Mr. Haché attended New Brunswick Teachers' College in Fredericton, and received a B.A. degree from the Université de Moncton. He also received a Bachelor's degree in Political Science and a Master's in Political Science (thesis not completed) from the University of Ottawa.

From 1968 to 1972, he served as a Special Assistant to the Prime Minister, with special responsibilities for relations with the Atlantic provinces. He was Executive Assistant to the Minister of Veterans Affairs from 1972 to 1974 and Executive Assistant to the Minister of Fisheries from 1974 to 1976.

Mr. Haché joined the Department of Fisheries and Oceans in 1976 as a Special Advisor in the Resource Allocation Branch and, in 1978, became the Branch's Senior Staff Officer for domestic fisheries in the Atlantic. He served as Director of the Resource Allocation Branch from 1978 until his appointment as Assistant Director General of the Gulf Region in 1981.

In October 1982, Mr. Haché became Acting Director General of the Gulf Region and, in June 1983, was appointed to the position on a permanent basis. He is based in Memramcook, New Brunswick.

Denis Martin
Director General
Atlantic Fisheries
Quebec Region

Mr. Martin was born in Causapscal, Quebec, and was raised in Quebec City. He is a member of the Institute of Electrical and Electronic Engineers.

From 1960 to 1973 he worked in different marketing, technical and management positions with Quebec-Telephone in Rimouski. Later, he was Director of Marketing for the federal Government Telecommunications Agency.

From 1976 to 1980 he was Director of the Atlantic Region of the Department of Communications in Moncton, New Brunswick. In 1980 Mr. Martin became a Director in the Administration section of the House of Commons. He joined the Treasury Board of Canada in 1981 as Director of the General Government Services Division, Program Branch.

In 1984, Mr. Martin was appointed Director General, Atlantic Fisheries, Quebec Region.

Eric Dunne
Director General
Fisheries Management
Newfoundland Region

Mr. Dunne, a native of Renews, Newfoundland, and an honours economics graduate of Memorial University, joined the Department of Fisheries and Oceans' (DFO) Economic Branch in St. John's in 1965. He left the department in 1970 to join the Government of Newfoundland and Labrador as a Senior Economist. He returned to DFO in 1971 as Chief, Regional Economics and Statistics Branch, and later became its Director. Based in St. John's, Mr. Dunne is currently Director General, Fisheries Management, Newfoundland Region.

Dr. Alan R. Longhurst
Regional Director General
Ocean Science and Surveys
Atlantic Region

Dr. Longhurst is based at the Bedford Institute of Oceanography at Dartmouth, N.S., where he is responsible for overseeing a wide range of oceanographic programs and hydrographic surveys off Canada's east coast and in the eastern Arctic.

For two years prior to his present position, he was Director of the Marine Ecology Laboratory at the Bedford Institute where he was responsible for continuing research programs concerning the ecology of marine productivity.

Dr. Longhurst was formerly Deputy Director of the Institute for Marine Environmental Research at Plymouth, England, and before that was Director of the South West Fisheries Centre at LaJolla, California. During his career he has been involved in fisheries research in Africa, New Zealand, England and North America.

Educated in England, he obtained his Ph.D. and B.Sc. at the University of London.

Dr. Cedric R. Mann
Regional Director General
Ocean Science and Surveys
Pacific Region

Dr. Mann is based at the Institute of Ocean Sciences at Patricia Bay, B.C.

Born in Auckland, New Zealand, Dr. Mann obtained B.Sc. and M.Sc. degrees from the University of New Zealand. After emigrating to Canada in 1949, he studied at the University of British Columbia, where he obtained a Ph.D. in physics.

From 1953 to 1961 he worked for the Defence Research Board of Canada on acoustic problems related to submarine detection. He then joined the Bedford Institute of Oceanography (BIO) as a physical oceanographer studying currents in the deep ocean and, in 1975, was appointed Acting Director of the Atlantic Oceanographic Laboratory at BIO.

Dr. Mann was responsible for the organization of the Hudson-70 Expedition, a unique 58,000-mile, 11-month research cruise by the Dartmouth-based CSS Hudson, involving circumnavigation of the entire North American continent. Planning for the expedition, which began in November 1969, was a two-year job.

Dr. Mann is currently chairman of the Scientific Advisory Board of the Intergovernmental Oceanographic Commission.

G. Ross Douglas
Acting Director General
Central Region, OSS
(Bayfield Lab. for Marine Sciences
& Surveys)

Joining the Canadian Hydrographic Service as a junior hydrographer in 1960, Mr. Douglas worked on various surveys along the Eastern seaboard, the Arctic and Great Lakes and from 1964-66 was hydrographer-in-charge of surveys connected with the Polar Continental Shelf Program.

He was subsequently appointed head of hydrographic development in the Atlantic Region and in 1972 was named Assistant Regional Hydrographer, Atlantic. For periods between 1975 and 1978 he was granted educational leave to obtain a B.Sc. degree from Dalhousie University, majoring in geology.

In 1978 Mr. Douglas was appointed Regional Director, Hydrography, for Central Region and assumed his present position in 1983.

Mr. Douglas is commissioned as a Canada Lands Surveyor, is an adjunct professor at the University of Toronto, and a lay examiner for the Association of Ontario Land Surveyors.

Jean Piuze
Directeur régional intérimaire
Région du Québec du MPO
Sciences et levés océaniques
Centre Champlain des sciences de
la mer
Québec (Québec)

A titre de directeur général intérimaire de la Région du Québec du MPO (Sciences et levés océaniques), M. Jean Piuze est directement responsable, auprès du sous-ministre adjoint des Sciences et levés océaniques, de tous les programmes de recherche océanographique (physique, chimique et biologique) et de cartographie marine, du Ministère, dans les eaux marines et/ou navigables sur les côtes du Québec.

Né à Québec, le 22 octobre 1945, M. Piuze a poursuivi ses études à l'Université Laval où il a obtenu plusieurs diplômes: baccalauréat des arts (1965), baccalauréat des sciences avec spécialisation en chimie (1969) et doctorat en science avec mention chimie (1973). De 1973 jusqu'en 1976, il a fait un stage post-doctorat à l'Institut des sciences de la mer à Victoria (Colombie-Britannique) et s'est spécialisé dans les méthodes océanographiques à l'Université de la Colombie-Britannique. Il est, en plus, détenteur de plusieurs bourses, prix et médailles.

En plus de ses responsabilités au Centre Champlain, M. Piuze agit en tant que directeur de la Recherche et de directeur régional de l'Hydrographie.

Ses responsabilités exigent une collaboration étroite avec les éléments de la Gestion des pêches et de la Recherche sur les pêches, du MPO, avec plusieurs autres ministères fédéraux et provinciaux, les universités et le secteur privé, de même que de nombreuses organismes internationaux.

M. Jean Piuze fait partie de plusieurs sociétés et comités, dont la Société canadienne de météorologie et d'océanographie et le Groupe de travail du Conseil international pour l'exploration de la mer. Il est également représentant de la Région du Québec (Sciences et Levés océaniques) auprès de divers comités ministériels nationaux qui s'occupent, entre autres, de l'Arctique et des besoins en navires du SLO.

Dr. Barry Muir
Director General
Resource Services - Fisheries

As Director General of Resource Services, Dr. Muir is the senior scientific authority on the biology, abundance, availability and management of Canadian aquatic resources. As such, he is instrumental in developing and implementing national and international fisheries research policies and programs.

Dr. Muir is a native of Belleville, Ontario. He graduated from the University of Toronto with a Ph.D. in Zoology in 1961. Dr. Muir was an Associate Professor of Zoology at the University of Hawaii before joining the Department of Fisheries and Oceans in 1968 as a fishery scientist at the Marine Ecology Laboratory of the Bedford Institute of Oceanography in Dartmouth, Nova Scotia. From 1974-75, he served as the Acting Director of the Lab. Prior to his appointment as Director General of Resource Services in 1979, Dr. Muir was the Marine Director of the Fisheries and Oceans Research Branch in Halifax, Nova Scotia.

W.A. Rowat
Director General
Operations Directorate
Atlantic Fisheries

Mr. Rowat was born in Drayton, Ontario. He obtained a Bachelor of Arts degree in economics from Waterloo University and later attended graduate school at Queen's University.

Prior to joining the federal government in 1973, he worked with Labatt's Brewing Ontario Ltd. In 1973, he joined the Department of Regional Economic Expansion (DREE) as a Policy Analyst in Prince Edward Island. In 1975, he worked with the Department of Industry, Trade and Commerce in Ottawa as a Policy Analyst.

In 1976, Mr. Rowat returned to DREE in Prince Edward Island as a Senior Economist - Planner. Two years later, he moved to Transport Canada to work on the Task Force on Maritime Potato Transportation.

Mr. Rowat joined the Department of Fisheries and Oceans, Maritime Region, as a Senior Economist in 1979. He then became Director of Atlantic Development Programs in Ottawa (1980) and Director of the Resource Allocation Branch (1982). In 1983, he was re-deployed as Director General of the Operations Directorate, Atlantic Fisheries.

Dr. John Davis
Director General, Fisheries Operations
Pacific & Freshwater Fisheries

Based in Ottawa, Dr. Davis is involved with the planning, direction and coordination of fisheries management programs in the Pacific, Western and Ontario regions, and with policies governing the national management of the Salmonid Enhancement Program and the Indian subsistence fisheries.

An acknowledged authority in water quality criteria derivation and toxicological research, Dr. Davis is the author of four major scientific papers and reports, including two authoritative review articles on the dissolved oxygen requirements of Canadian aquatic life.

Dr. Davis joined the West Vancouver Laboratory of the then Fisheries Research Board of Canada in 1971 and was involved in research on the sublethal effects of pollutants on Pacific Salmon and other resource species. He was later named Head of the Pollutant Ecology and Tolerance Biology program at the West Vancouver Laboratory. He subsequently served as Acting Director, Resource Services Branch, assuming responsibility for salmon, groundfish, herring and shellfish and habitat research being conducted at the Pacific Biological Station, Nanaimo and the West Vancouver Laboratory.

Dr. Davis was appointed Director General, Fisheries Operations, Pacific and Freshwater Fisheries in 1982.

B. (Bob) I.M. Applebaum
Acting Director General
International Directorate

A native of Toronto, Mr. Applebaum received a Bachelor of Arts degree in history from the University of Toronto in 1958, a law degree from Osgoode Hall in 1962 and an LL.M. (International Law) from the London School of Economics in 1965. He was admitted to the Ontario Bar in 1968.

Mr. Applebaum joined the Federal Public Service in 1968 as a Foreign Service Officer with the Department of External Affairs. During his stay with that department, Mr. Applebaum served with the European Division and the Legal Operations Division. He was posted in Canberra, Australia, in 1970. He returned to Ottawa in 1972 and was appointed to the Legal Operations Division where he was involved with matters dealing with fisheries, environment and the Law of the Sea.

In 1975, Mr. Applebaum joined the Department of Fisheries and Oceans as Strategic Planning Officer with the International Directorate of Fisheries Policy. He was appointed Director of International Fisheries Policy of the International Directorate in July 1978. He is currently Acting Director General of the International Directorate.

Joshua John
Director General
Marketing Directorate

Joshua John heads the department's Marketing Directorate whose main function is to assess the market prospects for Canadian fisheries products at home and abroad and to develop marketing policies. The directorate is also responsible for the promotional activities of the Fisheries Food Centre.

Born in India, Mr. John studied at the universities of Madras, Delhi, Harvard and McGill, earning numerous awards and distinctions. He served as Secretary-Manager of the All India Management Association and lectured in economics before emigrating to Canada in 1960.

He became Supervisor of Marketing Research for Northern Electric Company in Montreal, while also teaching marketing at Loyola College. In 1965, Mr. John received Canadian citizenship and in 1967 joined the public service, working with the Atlantic Development Board and the Department of Regional Economic Expansion before coming to the Fisheries and Marine Service in 1970 as Manager of Marketing Services. In June 1976 he was Acting Director of Marketing Services and in 1977 was appointed Director.

After a period as Director of Sales and Marketing Services at H.B. Nickerson and Sons, Ltd., Mr. John rejoined the department in September 1981, as Director General of Marketing.

The author of numerous articles on business subjects, he served as Chairman of the Canadian Association of Fish Exporters, 1980-81.

Stephen B. MacPhee
Dominion Hydrographer and Director General
Canadian Hydrographic Service

Based in Ottawa, Mr. MacPhee is responsible for surveys and the production of navigational charts of Canada's coastal and inland waters, as well as other specialized charts and publications.

A native of Cape Breton, Nova Scotia, Mr. MacPhee joined the Bedford Institute of Oceanography, Dartmouth, N.S. in 1967, where he was involved in the design and testing of hydrographic and oceanographic sensors and data acquisition, and processing systems.

He was employed previously by E.M.I. Cossor Electronics on the design and evaluation of underwater acoustics instrumentation for military uses and with Sperry Rand Canada Ltd., where he was engaged in the design and operational aspects of naval sonar, radar, communications and fire control systems.

In 1975, Mr. MacPhee moved to Ottawa to join the Canadian Hydrographic Service as Manager, Planning and Development. In this position he was responsible for hydrographic and cartographic training and standards, hydrographic planning, nautical geodesy and geoscience mapping, and the Canadian involvement in GEBCO (General Bathymetric Chart of the Oceans).

Mr. MacPhee is the author of numerous technical papers and is a member of the Hydrographic Society, Canadian Hydrographic Association, Association of Professional Engineers of Ontario, and the Canadian Institute of Surveying.

Dr. N.J Campbell
Director General
Marine Sciences and Information
Directorate

Born in Los Angeles, California, Dr. Neil John Campbell received his B.Sc. and M.Sc. degrees from McMaster University where he specialized in experimental nuclear physics. He obtained a Ph.D. degree in physics in 1955 from the University of British Columbia with specialization in oceanography. He was the first Ph.D. student to graduate in oceanography.

During his career as an oceanographer, Dr. Campbell was employed by the Fisheries Research Board of Canada in Nanaimo, British Columbia, St. Andrews, New Brunswick, and Halifax, Nova Scotia, where he headed the Board's oceanographic program.

Before coming to Ottawa, he organized a two-year cooperative study with Columbia University on a study of the geology and geophysics of the Labrador Shelf and Gulf of St. Lawrence.

In 1963, Dr. Campbell organized the entry of the Department of Energy, Mines and Resources into the field of marine services. Acting as Chief Oceanographer, he directed the organization of the Canadian Oceanographic Data Centre and the recruitment and training of oceanographers. He also served on numerous committees and represented Canada on the NATO Sub-Committee on Oceanographic Research (1963-1972), as a member of the Canadian delegation to the Intergovernmental Oceanographic Commission (IOC), and Canadian observer to the International Council for the Exploration of the Sea (ICES).

In 1972, Dr. Campbell was elected Chairman of the Working Committee for the Integrated Global Ocean Station System of the IOC, and was appointed as the chief Canadian delegate to that organization. In the same year, he was selected by NATO to serve on the ad hoc Exploratory Panel on Oceanography, serving subsequently as an expert on the Marine Sciences Panel of NATO. In 1978, Dr. Campbell was appointed Chairman of the panel, a position he held until June 1979. He continues to serve as a consultant and advisor to the Secretariat, NATO Science Committee.

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While serving as Chief Oceanographer, Dr. Campbell organized the federal government's contribution to the study of the Great Lakes following the International Joint Commission (IJC) reference of October 7, 1964, for studies of pollution of Lake Erie and Lake Ontario. This program continued for two years and led to the establishment of the Inland Waters Branch of Energy, Mines and Resources. The role of the Marine Sciences Branch was completed on publication of the IJC study for which Dr. Campbell served as the Chairman of the Editorial Board.

In 1968, he assumed the responsibility for the transfer and direction of the nucleus of the West Coast Institute from the Fisheries Research Board.

With the reorganization of the Marine Sciences Branch to a directorate, and with increased responsibility in international marine sciences, ocean technology and data services, Dr. Campbell served as Special Advisor on Law of the Sea problems and attended the organizational meetings for the drafting of a Convention on Ocean Dumping and the Stockholm Conference. He was later appointed Chairman of an interdepartmental committee for preparation of Canadian legislation on the control of ocean dumping. When the bill was passed in December 1975, Canada ratified the International Convention and Dr. Campbell became the departmental authority for its administration.

Currently, Dr. Campbell is Chairman of the Departmental Research Scientist Appraisal Committee on the Departmental Science Subvention Program. He served as Chairman of the Natural Sciences and Engineering Research Council (NSERC), Marine Sciences Panel (1977-78), and is now a member. He is also responsible for the departmental Post-Doctorate Fellowship Program and is a member of the NSERC interdepartmental committee on post doctorate fellowships. Dr. Campbell served as first Vice-Chairman of the IOC (1977-79) and, as such, represented UNESCO and the IOC at the third Law of the Sea Conference. He is heading up a major study on the future role and functions of the Commission.

Dr. Campbell continues to serve on numerous departmental and interdeparmtental committees and acts for the Assistant Deputy Minister in his absence.

Dr. Campbell has authored numerous marine publications and has undertaken invited studies and reviews for several international organizations.

Jean Chandonnet
Director General, Personnel
Fisheries and Oceans

Based in Ottawa, Jean Chandonnet has been in charge of personnel at the Department of Fisheries and Oceans since 1978.

Educated in Quebec, Mr. Chandonnet obtained bachelor degrees in arts and social sciences, and a master's degree in industrial relations from Laval University in 1956.

Mr. Chandonnet began his career in the personnel division of C.I.L. (explosives section) at Beloeil, Quebec. He later became Personnel Director at Chemcell Ltd., Sorel and at the Coopérative fédérée du Québec. In 1971, he joined Transport Canada in Ottawa where he held a number of senior positions in personnel administration.

L.J. (John) O'Neil
Director General
Finance

Educated at Carleton University, Mr. O'Neil obtained a Bachelor of Commerce (Econ.) degree in 1965 and became a Registered Industrial Accountant (Ont.) in 1969.

He began his government career with Customs and Excise in 1965 and, following completion of a Career Assignment Program course, moved to Quebec City in 1974 as Manager of Quebec border operations for Customs and Excise.

He returned to Ottawa as Director, International Programs Division, with responsibility for developing Canada's policy with respect to the international simplification of customs procedures and systems. He served as Canada's representative at international meetings held to consider customs bilateral and multilateral agreements.

Mr. O'Neil joined the Privy Council Office in 1978 to provide analysis and advice on organization and management issues relating to the government as a whole, with special interest in the Lambert Commission Report. He joined the Department of Fisheries and Oceans (DFO) to create the Comptroller's function in 1980. He is currently Director General of Finance, DFO.

Dixi Lambert
Director General
Communications Directorate

As Director General of the Communications Directorate, Ms. Lambert is responsible for departmental public information, media relations, audio-visual and publishing programs, as well as the conference secretariat and units dealing with parliamentary relations, ministerial correspondence, the Federal Identity Program and Access to Information.

Born in Victoria, B.C., Ms. Lambert obtained her early education in Montreal, receiving a B.A. (History and Economics) from McGill University in 1964, and a Diplôme de lettres françaises from the Université d'Aix-en-Provence, France, the following year. She completed the federal government's Career Assignment Program management course in 1977.

Joining the International Service of the Canadian Broadcasting Corporation in 1967, Ms. Lambert was appointed Manager of Information and Public Relations at Telesat Canada in 1972, and from 1974 to 1977 served as Chief, Information Services, with the National Capital Commission, during which time she implemented a major reorganization of the Commission's information function.

In 1977, she became Head of Promotion and Communications, Fitness and Amateur Sport, where she organized a number of special projects, including the Grey Cup half-time show in 1977 and the cultural program for the Commonwealth Games in 1978.

Ms. Lambert joined the Department of Fisheries and Oceans in 1978 and was responsible for organizing and managing a ministerial correspondence unit and for providing an analysis of public issues relating to the department. She was appointed Acting Director General of the Communications Directorate in October 1982 and, in June 1983, was assigned to the position on a permanent basis.

Nelson Strang
Director General
Evaluation and Audit

Mr. Strang received a Bachelor of Arts degree in Political Science from Carleton University in 1967 and a Diploma in Public Administration in 1973 from the same institution.

In 1967, Mr. Strang became an Administrative Trainee with the Public Service Commission and, the next year, joined the Department of Indian and Northern Affairs as a Management Analyst. In 1974, he became Chief, Evaluation and Assessment Division, Canada Pension Plan, Department of National Health and Welfare. In 1976, Mr. Strang was appointed Senior Operational Auditor with the Department of Supply and Services. In 1978, he moved to the Public Archives and National Library as Director of Internal Audit.

In June 1981, Mr. Strang joined the Department of Fisheries and Oceans as Acting Director of the Program Evaluation Branch and then became Director of the Internal Audit Branch. In October 1983, he was appointed Acting Director General, Evaluation and Audit Directorate, Department of Fisheries and Oceans.

Dr. K.T. (Ken) Brodersen
Director General
Small Craft Harbours Directorate

As Director General of the Small Craft Harbours Branch, Dr. Brodersen is responsible for the federal programs which administer 2,300 commercial fishing and recreational craft harbours in Canada.

A native of Saint John, New Brunswick, Dr. Brodersen received a B.Sc. degree in Civil Engineering in 1963 from the University of New Brunswick and M.Sc. and Ph.D. degrees in Environmental Engineering from the University of Waterloo in 1958 and 1970 respectively.

Prior to his position in Small Craft Harbours, Dr. Brodersen was Executive Secretary with the Federal Environmental Assessment Review Office. From 1972-76, he was with the Federal Activities Branch of the Environmental Protection Service, the last year as Acting Director of that branch. From 1969 to 1972 he was an Assistant Professor with the Department of Civil Engineering, University of Ottawa.

Pierre Asselin
Director
Legal Services

Mr. Asselin was born in Montreal, Quebec. He obtained a Bachelor of Arts degree in Bio-chemistry from Collegе St-Viateur in Outrement, and a Licence in Law (Honours) from the University of Montreal in 1963. He articled in 1964.

In 1964, Mr. Asselin joined the Department of External Affairs as a Foreign Service Officer. In May 1965, he was posted to Lima, Peru as Third Secretary and Vice-Consul. In 1966, he was transferred to New York City as Vice-Consul and later as Consul in the Information Section. In 1968, Mr. Asselin was appointed Second Secretary and Consul in the Canadian Embassy in Washington, D.C. He returned to Ottawa in 1968, serving in both the Cultural Affairs and Information divisions. He resigned from the Foreign Service in 1969.

In January 1970, Mr. Asselin joined Steinberg's Limited as Solicitor. Later that year, he accepted a position with the Department of Justice to serve Assistant Crown Attorney in Yellowknife, Northwest Territories. In 1973, Mr. Asselin was appointed Chief Crown Attorney for the Yukon Territory. He took a one-year leave of absence and, in 1976, returned to the Department of Justice as Director of Federal Criminal Prosecutions for western Quebec. In 1978, he became Director of the Department of Justice Regional Office in Yellowknife.

In 1980, Mr. Asselin was appointed Queen's Counsel. Later that year, he was appointed Director of Legal Services for the RCMP and, in 1982, moved to the Security Intelligence Transition Group as Senior Counsel.

Mr. Asselin joined the Department of Fisheries and Oceans Legal Services as Senior Counsel in August 1982. He subsequently became Director of Legal Services.

Aidan Maloney
Chairmman
Fisheries Prices Support Board

Mr. Maloney was born in St. John's, Newfoundland, and has been actively involved in Canadian fisheries for the last 40 years.

From 1966-70, he represented the District of Ferryland in the Newfoundland House of Assembly and served as provincial Minister of Fisheries. Prior to that, he was employed as Assistant Deputy Minister in the Newfoundland Department of Fisheries.

In 1970, Mr. Maloney was appointed President of the Canadian Saltfish Corporation. In 1979, he assumed his present position as Chairman of the Fisheries Prices Support Board.

James Thomas Dunn
President
Freshwater Fish Marketing Corporation

Mr. Dunn was born in Winnipeg, Manitoba. He received a Bachelor of Commerce degree from the University of Manitoba in 1965 and, in 1968, became a Chartered Accountant.

Mr. Dunn joined Clarkson Gordon & Co. in 1965 as an articling student. In 1969, the company appointed him Audit Manager and, in 1972, Special Projects Manager.

In 1973, Mr. Dunn joined the Freshwater Fish Marketing Corporation as Controller and in 1976 became Vice-President of Finance. He is currently President of the Freshwater Fish Marketing Corporation.

Donald D. Tansley
Chairman, Canadian Saltfish Corporation
Chairman, Freshwater Fish Marketing Corporation

Mr. Tansley was born in Regina in 1925 and graduated from the University of Saskatchewan in 1950 with B.A. and B.Comm. degrees in Economics and Business Administration. He served overseas during the Second World War with the Regina Rifle Regiment.

From 1950 to 1960, he worked in the Treasury Department of the Government of Saskatchewan. In 1957, he became Deputy Provincial Treasurer, and until 1960 he held the position of Director of the Budget Bureau in the Treasury Department. In this capacity he had supervisory responsibility for the budget formulation process for the government as a whole.

From 1960 to 1962, as Executive Director of the Government Finance Office, Government of Saskatchewan, Mr. Tansley was responsible for the activities of all Saskatchewan's crown corporations, including industrial relations, and for the Industrial Development Fund.

In 1962, he was appointed Chairman of the Saskatchewan Medical Care Insurance Commission, a position he held until 1964.

During his time in Saskatchewan, Mr. Tansley served as a member of the Board of Directors of all of Saskatchewan's crown corporations. He also served as the Government Director on the Board of Interprovincial Steel and Pipe Corporation and was Chairman of IPSCO's Management Committee for four years.

Other appointments included a term on the Board of Governors of the University of Saskatchewan and on the Board of the University Hospital.

Mr. Tansley held the position of Deputy Minister of Finance and Industry in the Government of New Brunswick from 1964 to 1968. In this capacity he was also Director of the New Brunswick Development Corporation, and Secretary of the Treasury Board.

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In 1968, he joined the Federal Public Service as Vice-President of the Canadian International Development Agency (CIDA) and, in 1970, was named Executive Vice-President of CIDA.

Mr. Tansley took a leave of absence from CIDA in 1973 to conduct a study for the International Red Cross on its future role. He returned to CIDA in August 1975 as Senior Vice-President, Multilateral Programs, a position he held until his appointment as Administrator under the Anti-Inflation Act in December 1975.

During the course of his international work, Mr. Tansley travelled extensively to all continents. He has lived abroad at various times in East and West Africa, South-East Asia, and Europe.

On May 1, 1978, Mr. Tansley was appointed Chairman of the Fisheries Research Board and Associate Deputy Minister (Fisheries and Oceans) in the Department of Fisheries and the Environment, pending the establishment of the new Department of Fisheries and Oceans at which point he became Deputy Minister of Fisheries and Oceans.

Mr. Tansley retired from the federal government in 1982 and subsequently assumed the role of Special Advisor to the Deputy Minister. In Spring 1983, he was appointed Chairman of the Canadian Saltfish Corporation and, a few months later, Chairman of the Freshwater Fish Marketing Corporation. He holds the two positions consecutively.

William E. Wells
President
Canadian Saltfish Corporation

A native of Badgers Quay, Newfoundland, Mr. Wells received a Bachelor of Arts Degree from the University of Kings College, Halifax, in 1964, and a Bachelor of Law Degree from Dalhousie University in 1968. He was a staff announcer with the Canadian Broadcasting Corporation from 1964 to 1965, and hosted the regional CBC-TV public affairs program "In the Public Eye" from 1976 to 1978. He practised law in St. John's from 1968 to 1979 with the firm of Stirling, Ryan and Company, specializing in labour law.

Mr. Wells has been President of the Fisheries Association of Newfoundland and Labrador since 1979. He is a Director of the Atlantic Region Management Training Centre and the Newfoundland Employers Labour Relations Council, and Chairman of the Fisheries and Environment Advisory Council in Newfoundland. He served for nine years as a Director of the Waterford Hospital Corporation, and is at present Chairman of the St. John's Hospital Council.

Mr. Wells was appointed President and Chief Executive Officer of the Canadian Saltfish Corporation, Department of Fisheries and Oceans, in July 1983.

Dr. W.E. (Wally) Johnson
Chairman
Fisheries and Oceans Research Advisory Council

Dr. Johnson received his education at the University of Wisconsin, graduating in 1950 with a B.Sc. in Biological Aspects of Conservation. In 1952 he received a M.Sc. in Zoology and Limnology, and a Ph.D. in Zoology - Fisheries Ecology in 1954.

He is a member of the Editorial Board of the scientific journal "Freshwater Biology" and the author of many scientific publications on the subject of fisheries.

Dr. Johnson is Canadian Project Director of the National Inland Fisheries Institute Project in Thailand, a project being carried out for the Canadian International Development Agency by the Department of Fisheries and Oceans.

KEY PERSONALITIES

NATIONAL

Jess Frontain (UMF, Moncton)	Chairman, Fisheries Council of Canada
Ron Bulmer	President, Fisheries Council of Canada
Bruce Chapman	Vice-president, Fisheries Council of Canada
Ron Bulmer	President, Canadian Association of Fish Exporters, Ottawa
Donald Tansley	Chairman, Canadian Saltfish Corporation
	Chairman, Freshwater Fish Marketing Corporation
Aidan Maloney	Chairman, Fisheries Prices Support Board
Dr. W.E. Johnson	Chairman, Fisheries and Oceans Research Advisory Council

ATLANTIC

Hon. Jim Morgan	Newfoundland Minister of Fisheries
Ray Andrews	Newfoundland Deputy-Minister of Fisheries
Hon. John Leefe	Nova Scotia Minister of Fisheries
D.A. (Sandy) MacLean	Nova Scotia Deputy-Minister of Fisheries
Hon. Jean Gauvin	New Brunswick Minister of Fisheries
Robert Saint-Onge	New Brunswick Deputy-Minister of Fisheries

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Hon. Roddy Pratt	P.E.I. Minister of Fisheries and Labour
Harry O'Connell	P.E.I. Deputy-Minister of Fisheries and Labour
Hon. Jean Garon	Quebec Minister of Agriculture, Fisheries and Food
Ferdinand Ouellet	Quebec Deputy-Minister of Agriculture, fisheries and Food
Hon. Guy Chevrette	Quebec Minister of Recreation, Hunting & Fishing
Pierre le Francois	Quebec Deputy-Minister of Rcreation, Hunting and Fishing
Richard Cashin	President, Newfoundland Fishermen, Food & Allied Workers Union (NFFAWU)
Allan Billard	Executive Director, Eastern Fishermen's Federation, Halifax.
Aurel Comeau	President, Maritime Fishermen's Union (MFU)
Walter Kozak	Manager, Fundy Weir Fishermen's Assoc.
Roger Stirling	Executive-Director, Seafood Processors Assocn. of Nova Scotia (SPANS)
E.A. Harvey	Secretary-Manager, Fisheries Assocn. of Newfoundland and Labrador
Conrad Sullivan	President, Independent Fish Producers Assocn. of Nfld. & Labrador

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William Wells	Prsident, Canadian Saltfish Corpn., St. John's
Dave Hiscock	President, Saltfish Producers Assocn.
David Barrett	President, Pêcheries Cartier Inc.
Jean-Yves Bérubé	Chairman, Pêcheries Cartier Inc.

PACIFIC REGION

Hon. Tony Brummet	B.C. Minister of the Environment
Ben Marr	Deputy-Minister, B.C. Ministry of the Environment
Jack Nichol	Chairman, Minister's Advisory Council (MAC) for Pacific Fisheries
	President, United Fishermen & Allied Workers' Union
Edwin Newman	President, Native Brotherhood Association of British Columbia
Alan Meadows	President, Pacific Trollers Association
L.P. (Paddy) Greene	President, Prince Rupert Fishermen's Co-operative Association
John Leric	President, Fishing Vessel Owner's Association of British Columbia
Luis Souza	Secretary-Manager, Fishing Vessel Owner's Association of British Columbia

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Fred Penland	President, Pacific Gillnetters Association
D.E. Kooth	Secretary-Treasurer, Pacific Gillnetters Association
R. Pilfold	President, Prince Rupert Fishing Vessel Owners' Association
Toby Gjelsvik	Secretary, Prince Rupert Fishing Vessel Owners' Association
Foster Husoy	President, Prince Rupert Co-operative Fishermen's Guild
Mark Forand	President, Northern Trollers Association
Lorne O'Borne	Secretary, Northern Trollers Association
Chris cooke Jr.	President, Central Native Co-operative
Bill Murdock	General Manager, Central Native Co-operative
Erick Wickham	President, Pacific Coast Fishing Vessel Owners' Guild
Benny Hughes	President, Port Simpson Native Co-op
Louis Bannerman	General Manager, Port Simpson Native Co-op
William Prowse	Business Manager, Deep Sea Trawlers Association of British Columbia
W. Kitzul	President, British Columbia Independent Fishermen's Co-operative Association

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Ted Assu	President, Pacific Coast Salmon Seiners Association

SPORTSFISHING ORGANIZATIONS

Carmen Purdy	President, British Columbia Wildlife Federation
Ted Peck	President, Pacific Salmon Society
Rick Duncan	President, Sportfish Institute of B.C.
B. Rogerson	Contact, Amalgamated conservation Society
W.R. Braidwood	President, Steelhead Society of B.C.

PROCESSORS

Garnet E. Jones	President, Fisheries Association of B.C.
Jack Rowbotham	President, Prince Rupert Fish Exchange

WESTERN REGION

Hon. Alvin H. Mackling	Minister of Natural Resources, Government of Manitoba
R.L. (Nick) Carter	Deputy Minister, Ministry of Natural Resources (Manitoba)
Hon. Robert Pickering	Minister of Parks and Renewable Resources, Government of Saskatchewan
William Klassen	Deputy Minister, Parks and renewable Resources (Saskatchewan)

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Hon. John B. Zaozirny	Minister of Energy and Natural Resources, Government of Alberta
F.W. McDougall	Deputy Minister, Renewable Resources, Department of energy and Natural resources (Alberta)
Jack Felming	President, Manitoba Commercial Fishermen's Federation
Tom Dunn	President, Freshwater Fish Marketing Corporation

ONTARIO REGION

Hon. Alan Pope	Ontario Minister of Natural Resources
John R. Sloan	Deputy Minister, Ontario Ministry of Natural Resources
Murray Loop	President, Ontario Council of Commercial Fisheries
Gordon Jackson	President, Ontario Steelhead & Salmon Fishermen

GLOSSARY

LEXIQUE

MAIN SPECIES CAPTURED ON EAST AND WEST COASTS/

PRINCIPALES ESPÈCES CAPTURÉES SUR LES CÔTES EST ET OUEST

SPECIES	ESPÈCES F(féminin) M(masculin)
GROUNDFISH	**POISSON DE FOND**
Cod	Morue F
Haddock	Aiglefin M
Redfish	Sébaste M
Halibut	Flétan M
Flatfishes (incl. Turbot)	Flet M (y compris le turbot)
Pollock	Goberge F
Hake	Merlu M
Cusk	Brosme M
Catfish	Loup M
PELAGIC AND ESTUARINE	**PELAGIQUE ET D'ESTUAIRE**
Herring	Hareng M
Mackerel	Maquereau M
Tuna	Thon M
Albacore	Germon
Atlantic bluefin tuna	Thon rouge de l'Atlantique
Blackfin tuna	Thon à nageoires noires
Northern bluefin tuna	Tonggol
Pacific bluefin tuna	Thon rouge du Pacifique
Yelowfin tuna	Thon à nageoires jaunes ou albacore
Alewife	Gaspareau M
Eel	Anguille F
Salmon	Saumon M
Arctic char	Omble chevalier
Atlantic salmon	Saumon de l'Atlantique
chinook salmon	Saumon quinnat
Chum salmon	Saumon kéta
Coho salmon	Saumon coho
Sockeye salmon	Saumon rouge
Steelhead salmon	Saumon arc-en-ciel
Skate	Raie F
Smelt	Eperlan M
Capelin	Capelan M

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SHELLFISH	MOLLUSQUES ET CRUSTACES
Clams	Clams M
Oyster	Huître F
Scallop	Pétoncle M
Squid	Calmar M
Lobster	Homard M
Shrimp	Crevette F
Crab	Crabe M
Swordfish	Espadon M
Irish Moss	Mousse irlandaise F

GEAR	ENGINS
Cod trap	Trappes à morue
Danish seine	Senne danoise
"Dildo" pot (gear used in eel fishery)	Casier "dildo" (utlisé pour la capture des anguilles)
Dip and roll net	Filet à rouleaux
Dipnet	Carrelet, haveneau, épuisette
Dragnet	Drague
Dredge (gear used for catching oysters and other shellfish)	Drague (engin utilisé pour la pêche des coquillages)
Gillnet	Filet maillant, filet flottant
Fixed gear	Engin fixe
Gurdy	Treuil, monte-ligne
Jigger	Turlutte
Lampara	Lampara
Longline	Palangre, palancre, ligne du fond
Mechanical harester (used	Râteau mécanique (engin utilisé pour la récolte de la mousse irlandaise)
Midwater trawl	Chalut pélagique, chalut flottant
Mobile gear	Engin mobile
Otter trawl	Chalut à panneaux, chalut à plateaux
Pair Trawl	Chalut boeuf
Ring net	Bolinche
Tong	Pince, pince à filet
Trawl	Palangre, palancre, ligne de fond
Troll	Cuillère
Weir	Fascines

VESSELS	BATEAUX
Danish seiner	Bateau de pêche à la senne danoise
Dory	Doris
Dragger	Petit chalutier
Dredger	Drageur
Factory vessel (ship)	Navire-usine, bâtiment-usine
Factory stern trawler	Chalutier-usine à pêche arrière
Factory trawler	Chalutier-usine
Gillnetter	Batau de pêche aux filets maillants
Lampara boat	Bateau lampara
Longliner	Palangrier, cordier
Longliner-trawler	Cordier-chalutier
Mid-water trawler	Chalutier pêchant entre deux eaux Chalutier pélagique
Otter-trawler	chalutier
Pair-trawler	Chalutier-boeuf
Purse seiner	Senneur, bateau senneur
Side-trawler	Chalutier pêchant par le côte Chalutier conventionnel
Skiff	Petite embarcation, esquif
Trawler	Chalutier
Troller	Bateau pour la pêche à la traîne

FISHERY TERMINOLOGY	LE VOCABULAIRE DES PÊCHES
Allocation/quota	Affectation/contingent
Area licensing	Délivrance de permis de secteur
Bona Fide fisherman	Pêcheur professionnel
Bycatch	Prises accidentelles (ou accessoires)
Combination fishing vessel	Bateau de pêche polyvalent
Directed fishery	Pêche sélective
Direct sales	Ventes directes
Dressed fish	Poisson paré, poisson vidé
Dressed weight	Poisson apprêté
Fmax	Fmax
Fisherwoman	Pêcheuse
Fish finder	Appareil à repérer le poisson
Fishing district	Arrondissement de pêche
Fish-meal	Farine de poisson
Fixed gear	Engin fixe
F0.1	F0.1
Full-time fisherman	Pêcheur à plein temps, pêcheur professionnel
High-sea fishery	Grande pêche, pêche en haute mer
Inshore fishery	Pêche côtière
Joint venture	Entreprise conjointe, risque conuoint
Landsmen	chasseurs côtiers, chasseurs de terre
Limited entry licensing policy	Politique d'émission des permis pour les pêches à entrée limitée
Maximum sustainable yield	Rendement maximal soutenable
Mesh size	Longeur de la maille
Mobile fleet	Flotte hauturière, flotte mobile
Mobile gear	Engin mobile
Moonlighter	Pêcheur amateur, "pêcheur de fin de semaine"
Non Tade & Underutilized Species	Espèces non commerciales et sous-exploitées
Offshore fishery	Pêche hauturière, pêche au large
Optimum sustainable yield (OSY)	Le rendement optimal soutenu (ROS)
Part-time fisherman	Pêcheur à temps partiel
Reduction plant	Usine de farine de poisson
Round weight	Poids entier
Subsistence fishery (food fishery)	Pêche de subsistance
Surplus	Excédent
Terminal fisheries	Pêche d'embouchure
Total allowable catch (TAC)	Le total des prises admissibles (TPA)

COMMISSIONS

- Canada-Norway Sealing Commission (CNSC
  Commission Canada-Norvège sur la chasse aux phoques (CCNCP)

- Great Lakes Fishery Commission (GLFC)
  Commission des pêcheries des Grands lacs (GPGL)

- Inter-American Tropical Tuna Commission (IATTC)
  Commission interaméricaine de thon tropical (CITT)

- International Commission for the Conservation of Atlantic Tuna (ICCAT)
  Commission internationale de la conservation des thonidés de l'Atlantique (CICTA)

- International North Pacific Fisheries Commission (INPFC)
  Commission internationale des pêcheries du Pacifique du Nord (CIPPN)

- International Pacific Halibut Commission (IPHC)
  Commission internationale du flétan du Pacifique (CIFP)

- International Pacific Salmon Fisheries Commission (IPSFC)
  Commission internationale de la pêche du saumon dans le Pacifique (CIPSP)

- North Pacific Fur Seal Commission (NPFSC)
  Commission du phoque à fourrure du Pacifique nord (CIPPN)

- Northwest Atlantic Fisheries Organization (NAFO)
  Organisation des pêches de l'Atlantique nord-ouest

COMMITTEES/COMITÉS

ATLANTIC/ATLANTIQUE

- Advisory Committee on Seals and Sealing
  Comité consultatif sur les phoques et leur chasse

- Atlantic Bluefin Tuna Advisory Committee
  Comité consultatif de thon rouge de l'Atlantique

- Atlantic Groundfish Advisory Committee
  Comité consultatif du thon rouge de l'Atlantique

- Atlantic Herring Purse Seiners Advisory Committee
  Comité consultatif de la pêche à la senne coulissante du hareng de l'Atlantique

- Atlantic Salmon Board
  Office du saumon de l'atlantique

- Atlantic Snow crab Advisory Committee
  Comité consultatif sur le crabe des neiges de l'Atlantique

- Bay of Fundy Scallop Advisory Committee
  Comité consultatif des pétoncles de la baie de Fundy

- Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC)
  Comité consultatif scientifique des pêches canadiennes de l'Atlantique (CCSPCA)

- Gaspereau Management Advisory Committee
  Comité consultatif de la pêche du gaspareau

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- Mackerel Management Advisory Committee
  Comité consultatif de gestion de la pêche du maquereau

- Offshore Scallop Advisory Committee
  Comité consultatif des pêcheurs de pétoncles hauturiers

- Scotia Shelf Shrimp Advisory Committee
  Comité consultatif de la crevette du plateau scotian

- Southwestern Nova Scotia Marine Plant Advisory Committee
  Comité consultatif des plantes marines du Sud-Ouest de la Nouvelle-Écosse

- Squid Management Advisory Committee
  comité consultatif de gestion de la pêche du calmar

- Swordfish Advisory Committee
  Comité consultatif de l'espadon

FISHERY TERMINOLOGY: A SELECTED LIST

TAC	:	Total allowable catch is the total permitted catch from a stock in a given year.
OSY	:	Optimum sustainable yield is the annual harvest in weight which can be taken from the stock year after year while maintaining the stock size and allowing the greatest socio-economic benefit. Inherent in the concept are economic and social as well as biological considerations. The OSY will vary among species, over time, and among areas for a given species.
Allocation/Quota	:	The maximum amount of a particular stock that can be taken by a particular country.
Non Trade and Underutilized Species	:	Species that canadian fishermen do not catch either because of low value or lack of catching capacity suited to the species (e.g. silver hake, makerel)
Round Weight	:	Weight of fish that has been gutted at sea.
Directed Fishery	:	A fishery targeted at a particular species.
Bycatch	:	Species of fish caught incidently when pursuing a directed fishery for another species. Bycatch levels are often limited to 10% of a particular species on board at any one time.
Fmax	:	The rate of fishing mortality for a given method of fishing which maximizes the harvest in weight taken from a single year-class of fish over its entire lifespan.

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F0.1	:	The instantaneous fishing mortality rate at which the slope of the yield per recruit vs. F. curve is 0.1 of the slope at the origin.
Mesh Size	:	The size of the mesh of a net. different fisheries have different minimum mesh sizes.
Silver Hake Box	:	Also called the "small mesh gear line". An area along the continental shelf off Nova Scotia (about 120 miles from land) in which vessels (using small mesh gear) fishing squid, silver hake and argentine must stay seaward of.
Surplus	:	The difference between the TAC and the Canadian requirement. The surplus may be allocated to other countries.
Inshore Fishery	:	Fishery pursued mainly by vessels less than 65 feet LOA.
Offshore Fishery	:	Fishery pursued mainly by vessels more than 65 feet LOA.
Trollers	:	Baited lines are strung out behind a moving vessel so tat bait is pulled along the surface of the water and fish see the movement and strike the bait.
Wetfish Trawlers	:	Vessel fishing by means of trawl wherin catch is stowed below deck using ice for preservation.
Freezer Trawler	:	Vessel fishing by means of trawl wherein catch is stowed below deck and freezing is used as the method of preservation.
Factory Freezer Trawler	:	When catch is brought aboard, it is filleted and fillets are frozn and stowed in freezer compartments.
On-bottom Tawl	:	Any trawl gear wherein the groundline of the net is in contact with the seabed during the fishing operation.
Midwater Trawl	:	Any trawl wherein neither the trawl net nor any segment of it (including the

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trawl doors) in in contact with the seabed during the fishing operation.

Longline Gear : The method of fishing wherein fish are caught on hooks attached by short gangions to a long mainline. This gear may be floating or laid along the seabed. The size of hook, length and spacing of gangions, and the length of the longline vary among fisheries with different target species.

Gillnet Gear : The method of fishing employing netting intended to intercept and hold the fish. This gear generally works passively, i.e., it is anchored or drifts in the water rather than being towed or pushed. Gillnets may be used to exploit either pelagic or demersal species. Crab tanglenets are also of the gillnet type gears.

Purse seine : The method of fishing wherein a body of fish is surrounded by a net which is then gathered or "pursed" at the bottom. The net is then hauled toward the vessel and the fish are brailled, pumped or dipnetted out of the net as it is gradually hauled aboard the vessel.

Direct Sales : Direct sales of fish to foreign vessels, or as commonly referred to as "over the side" sales, permits fishermen to sell certain species of fish directly to a foreign vessel where potential catches are surplus to the processing and marketing capability of Canadian industry, or where no domestic market exists at an acceptable economic return to fishermen.

OCEAN SCIENCE AND SURVEYS - ACRONYMS

Abbreviation	Organization
	Departmental
OSS	Ocean Science and Surveys
CHS	Canadian Hydrographic Service
MSID	Marine Science and Information Services
SIPB	Scientific Information and Publications Branch
MEDS	Marine Environmental Data Service
BIO	Bedford Institute of Oceanography (Dartmouth, N.S.)
IOS	Institute of Ocean Sciences (Sidney, B.C.)
CCIW	Canada Centre for Inland Waters (Burlington, Ont.)
BLMSS	Bayfield Laboratory for Marine Science & Surveys (CCIW)
	Interdepartmental
OERD	Office of Energy Researc and Development
SCOPE	Science committee on Protection of the Environment
ACMMR	Advisory Committee on Marine resource Research
ACND	Advisory Committee on Northern Development

Interdepartmental

AWAC	Arctic Waters Advisory Committee
CEA	Committee on Environment Assessment
EARP	Environmental Assessment and Review Process
ICO	Interdepartmental Committee on Oceans
ICS	Interdepartmental commitee on Search and Rescue

National

CCSM	Canadian Council on Surveying and Mapping
NACCSM	National Advisory Committee on Control Surveys and Mapping
CCO	Canadian Committee on Oceanography
ESRF	Environmental studies Revolving Fund
WESPAC	Working Group for the Western Pacific
CNC/SCOR	Canadian National Committee on the Scientific Committee on Ocean Research
IRIS	International Recruitment Investigation in the Sub-Arctic
CNC/ECOR	Canadian National Committee of the Engineering Committee on Oceanic Resources
CIS	Canadian Institute of Surveying
AWOGAC	Arctic Waters Oil and Gas Advisory Committee
CARC	Canadian Arctic Resources Committee

National

C-CORE	Centre for Cold Oceans Research (Newfoundland)
CCREM	Canadian Council of Resource and Environment Ministers
CHA	Canadian Hydrographers Association
CIS	Canadian Institute of Surveying
CMOS	Canadian Meteorological and Oceanographic Society
FORAC	Fisheries and Oceans Research Advisory Council

International

IHO	International Hydrographic Organization
ICA	International Cartographic Association
IOC	Intergovernmental Oceanographic Commission
IGOSS	Integrated Global Ocean Services System
ICSU	International Council of Scientific Unions
WMO	World Meteorological Organization
NOAA	National Oceanic and Atmospheric Administration (USA)
ASFIS	Aquatic Sciences and Fisheries Information System
CASLE	Commonwealth Association of Surveyors and Land Economists

International

EUROCEAN	Association Européene Océanique (Monaco)
GEBCO	General Bathythermic Chart of the Oceans
GEMS	Global Environment Monitoring System
GIPME	Global Investigation of Pollution in the Marine Environemtn
IAGLR	International Association for Great Lakes research
IAMP	International Association of Meteorology & Atmospheric Physics
IAPO	International association of Physical Oceanography
IAPSO	International association of the Physical Sciences of the Ocean
IAWPR	International association for Water Pollution Research
IBC	International Boundary Commission
ICSU	International Council of Scientific Unions
UNCLOS	U.N. Conference on Law of the Sea
UNCSTD	U.N. Conference on Science and technology for Development