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The United Nations Convention on the Law of the Sea, and Canadian Official Development Assistance

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THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, AND
CANADIAN OFFICIAL DEVELOPMENT ASSISTANCE.

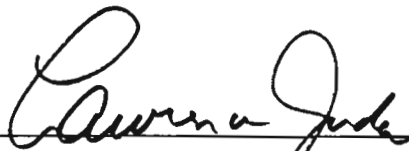
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May 1989

MASTER OF MARINE AFFAIRS

MAJOR PAPER OF

LENNOX O'RILEY HINDS

APPROVED:

A handwritten signature in black ink, appearing to read "Lawrence Juda", written over a horizontal line.

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UNIVERSITY OF RHODE ISLAND

1989

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CHAPTER I
INTRODUCTION

Canadian Official Development Assistance was initiated in 1940 with contributions to multilateral organizations, followed by contributions to the Colombo Plan. By 1960 an External Aid Office was established in the Department of External Affairs. Then, in 1968 the Governor General in Council on recommendation from the Secretary of State for External Affairs issued an order that created the Canadian International Development Agency (CIDA).¹ This agency was created in response to increasing request from several developing countries and also formed the foundation for Canadian foreign assistance policy formulation. Finally in 1983 The House of Commons of Canada passed Bill C-152 which provided the Minister of External Affairs with powers to control and supervise the Canadian International Development Agency.²

Canada's contribution to world ocean and fisheries development is significant. In particular, its foreign policy as expressed at the conference on the Law of the Sea has gained the country a favorable reputation as a relatively unbiased and progressive participant in third world ocean affairs. Resulting from common, historical and cultural linkages with the British Commonwealth and Francophone countries, Canada enjoys a place of privilege with these communities out of proportion to its global economic and political power.

Canada has a vital interest in the Law of the Sea due to Canada's natural characteristics: having the longest coastline of any nation in the world, and the second largest continental shelf; being a major fishing nation dependent on cooperation with distant-water fishing fleets of other nations; a mineral producing nation affected by competition from the exploitation of seabed minerals; a trading nation dependent on the sea for transport of goods; possessing large coastal areas vulnerable to pollution and mismanagement; and having an Arctic archipelago.³

Senior Government Officials of Canada have made public statements vis-a-vis Canadian foreign policy and the United Nations Convention on the Law of the Sea. The following instances highlight and exemplify such statements:

1. The Honorable Allan J. MacEachen Secretary of State for External Affairs appearing before the House of Commons Standing Committee for External Affairs and National Defence, March 11, 1975 states.

"Three paramount Canadian concerns are relations with developing countries, the United Nations, and the Law of the Sea."

2. In May of 1976 the Canadian Minister of External Affairs, speaking to the Standing Committee on External Affairs, concerning the Single Negotiating Text for the Law of the Sea meeting said,

"The articles on the transfer of technology provides that states shall cooperate in providing countries with the scientific and technical capabilities they need for the

utilization and management of their marine resources and the protection of the marine environment."

3. On September 21, 1981, the Secretary of State for External Affairs in his statement to the 36th General Assembly of the United Nations declared:

"I wish to emphasize that the conference is not merely an attempt to codify technical rules of law. It is a resource conference. It is a food conference. It is an environmental conference. It is an energy conference. It is a conservation conference. It is an economic conference. It is a transportation and freedom of navigation conference. It is a maritime boundary delimitation conference. It is a scientific research and transfer of technology conference. It is a conference which can have tremendous implications for East-West relations. It is fundamentally a conference on peace and security."⁴

The concept of the Exclusive Economic Zone was put forward by Kenya in 1971 as a compromise between states claiming a 200-mile territorial sea and countries opposed to extend coastal state jurisdiction.⁵ In 1974, Canada and eight other countries presented draft articles at the Caracas Law of the Sea Conference which supported the

concept of an exclusive economic zone to 200 miles from the applicable baseline of sovereign states. The proposal included the sovereign rights of coastal states for exploring and exploiting the natural resources, (living and non-living) of the seabed and subsoil and the super-adjacent waters.⁶ The coastal state was also to be responsible for the protection and preservation of the marine environment and scientific research.⁷ Canadian principles were also expressed on marine scientific research. One such principle stated that knowledge and information of a non-proprietary or non-military nature should be exchanged and made available to the world community.⁸

In working toward a new convention on the Law of the Sea, Canada has been in the forefront of attempts to modernize the laws governing the use of the ocean. Papers sponsored and co-sponsored by Canada during the Law of the Sea negotiations included:

1. Zonal approach to the preservation of the marine environment;
2. The exclusive economic zone;
3. Draft articles on fisheries;
4. Prevention of pollution from ships;
5. Draft articles on a comprehensive marine pollution convention;
6. Working papers on preservation of the marine environment;

7. Management of living resources of the sea;
8. Principles of marine scientific research.⁹

The Problem

With the signing of the Law of the Sea convention in 1982 coastal states have a framework for management and development of the ocean and its resources under their jurisdiction. In anticipation of the ratification of the convention important bilateral and regional shifts have taken place with respect to ocean uses. Many developing countries have embarked on vigorous long term ocean related programs that are geared towards the objectives of UNCLOS III.¹⁰ Many states have established EEZs and have enacted laws to regulate foreign fishing effort in waters under their jurisdiction. These states have neither the scientific or technical capabilities: they also lack the administrative skills and the financial resources to successfully explore, exploit, manage, and develop the living or the non-living resources available to them. In this context foreign assistance could be of very great importance.

Canada has established four Federal Agencies that disburse Canadian Official Development Assistance:

1. The Canadian International Development Agency (CIDA);
2. The International Development Research Centre (IDRC);

3. The International Centre for Ocean Development (ICOD);

4. Petro-Canada International (PCI).

No single agency is specifically mandated to support activities relating to UNCLOS III. Neither is there an effective coordinating mechanism to link Canadian Official Development Assistance with the requirements of UNCLOS III.

The purpose of this paper is to examine the needs of developing states created by the 1982 U.N. Convention on the Law of the Sea and the capability of the above cited Canadian aid agencies to provide needed assistance.

To achieve the above objective the articles of the Third Convention of the Law of the Sea will be analyzed to establish requirements that coastal states must satisfy when the convention comes into force. Next, the mandates, policies, and programs of the aforementioned agencies will be examined to ascertain their potential to assist developing countries meet their obligations under UNCLOS III.

The study will also consider the degree to which use has been made by coastal states of Canadian Development Assistance for activities related to UNCLOS III. The paper will conclude with future policy implications for Canada and Conclusions.

1.1 THE UNITED NATIONS CONFERENCE ON THE LAW OF THE SEA

The United Nations Convention on the Law of the Sea provides that the coastal state has sovereign rights in the

exclusive economic zone of 200 nautical miles over the living and non-living resources of the continental shelf and the subsoil and the superjacent waters. The sovereign rights are for the purpose of exploring, exploiting, conserving and managing the resources in the EEZ.¹¹

The extension of exclusive economic zones by coastal states has literally affected coastal states' control over 90 percent of the living resources of the oceans, an estimated 24.5 million square miles, or about as much as the entire land surface of the earth.¹²

Coastal states also have management jurisdiction over non-living resources such as oil and gas explorations; they have the exclusive right to authorize and regulate seabed drilling for all purposes within their EEZ or on the continental shelf.¹³ Coastal states may also establish baselines from which the breadth of the territorial sea, the contiguous zone, the exclusive zone, and the continental shelf are measured.¹⁴ The coastal state may establish sea lanes and traffic separation schemes in the territorial sea and in archipelagic waters.¹⁵ Coastal states may also participate in the development of the resources of the "AREA."¹⁶

There is considerable provision for management and conservation of resources of the EEZ. Based on the best scientific knowledge available, the coastal state has the right to determine the total allowable catch within the

EEZ, and to share the surplus with other states. The coastal state may also establish regulations for foreign fishing effort within its EEZ.¹⁷

The Convention deals with the enforcement of pollution standards and other rights in its EEZ. Coastal states in the exercise of their sovereign rights, can take judicial action against vessels that contravene the laws of the state.¹⁸

The EEZ therefore, can be described as a multi-purpose regime in which the resources are the property of the coastal state.¹⁹ As property owner of the resource the coastal states must be equipped to regulate use as outlined in UNCLOS III. Coastal states that have ratified the Convention, or anticipate doing so are therefore faced with a number of problems, the major ones concerning limitations or lack of:

1. Technology and skills to develop their primary, secondary, and tertiary subsectors relating to ocean space under their jurisdiction;
2. Infrastructural facilities, including trained staff to manage and operate these facilities;
3. Organizational and institutional arrangements at the national, local, and regional levels of government, and adequate private sector support facilities;

4. Research capabilities to determine the magnitude and distribution of resources, and the management capabilities for the exploitation of the resources;
5. Environmental programs and trained resources, and the political support to make environmental issues a priority developmental activity;
6. Adequate marine personnel and facilities to manage international shipping in national waters;
7. Enforcement capabilities.

In summary, developing countries do not have the economic base, the capital, the infrastructure, industrial capacity or trained manpower to overcome constraints to the development of their oceans.

To ascertain the general and specific requirements of UNCLOS III, an analysis will be made of the three hundred and twenty articles of the Convention.

Methodology

Each article of the Convention was analyzed to identify the following: general requirements, special requirements, infrastructure, equipment, technical assistance and training within the context of ocean development.

General requirements refers to the services that the coastal state should provide. For example to conduct research surveys in order to establish the total allowable catch, or the effects of pollution on fishing.

Special requirements refers to the need for example of an experienced cartographer to establish baselines in keeping with the rules of the convention, training programs to upgrade skills.

Infrastructure pertains to facilities such as buildings, vessels, and laboratories within which experts can perform their duties.

Equipment indicates the tools to do the job, computers, marine plotting machines, scientific and technological equipment required for marine scientific research and development.

Technical assistance includes external/foreign experts contracted to assist developing countries to acquire technology.

Human resource development (HRD) focuses on training courses long/short term geared towards the upgrading of skills, and contributing to the transfer of technology.

The findings that appear in Table 1 page 17 reflect the type of expertise and not the number or amount that is required by the coastal state to comply with the requirements of UNCLOS III.

Management Responsibilities

UNCLOS III has provided coastal states with jurisdiction and access to offshore resources that would require a variety of management, development, and administrative inputs. The rights of the coastal states over its EEZ are as follows:²⁰

1. Sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the seabed and subsoil and the superjacent waters, and;
2. Jurisdiction with regard to: (a) the establishment and use of artificial islands, installation and structures, (b) marine scientific research in the zone; and (c) the protection and preservation of the marine environment in the zone.

The Convention establishes the rules that must be followed when establishing, i.e. baselines, territorial sea, exclusive economic zones, and the high seas. Such delimitation shall be by agreement in conformity with international law and in accordance with equitable principles, taking account of all circumstances prevailing in the area concerned.²¹ States which do not conclude an agreement within a reasonable time must resort to the dispute settlement procedure outlined in part XV of the Convention.²² There is also provision for the drawing of charts and lists of geographical coordinates defining the limits and boundaries of the EEZ. The coastal states have the obligation to publicize such charts and lists.²³

There are provisions for the management and utilization of the living resources in the EEZ. The 200 mile exclusive economic zone that coastal states may adopt places the management of a major portion of the world's fisheries resources under their jurisdiction. Coastal states are

expected however, based on the best scientific advice available, to determine the total allowable catch available, in relation to its capacity to harvest the catch. When the coastal state does not have the technology and the general capacity to harvest the entire quantity identified as the total allowable catch, the state shall share the surplus with other states. In sharing the surplus the coastal state is required to pay due regard to the rights of land-lock states in the region, or of the rights of those states whose nationals have traditionally fished in the zone or have carried out substantial efforts in research and general development of the resources now under their jurisdiction. The coastal state may also establish regulations covering nationals fishing in their EEZ. Special provision is also made for the management of highly migratory species, marine mammals, anadromous stocks and catadromous species.²⁴

The coastal state also has jurisdiction with regards to the economic exploitation of the non-living resources found in the EEZ. The coastal state has the sovereign right to authorize and regulate mining of the seabed for all purposes within its EEZ or on its continental shelf.²⁵ The coastal state may establish safety zones, not to exceed 500 meters wide, around structures that are established in its offshore area, taking into account international standards or the rules and regulations of international organizations that are mandated to establish standards.

The Convention also deals with the critical issue of enforcing the coastal states' rights in its EEZ. Embodied in several articles of the Convention are the freedoms of transit passage arrangements for international straits; together with the provisions for archipelagic sea lanes passage, and the limitations placed on the extent and nature of the territorial sea and archipelagic waters. Freedom of navigation, freedom to lay submarine cables and pipelines, and freedom to fly over the high seas are important requirements of the Convention.

In the exercise of sovereign rights coastal states may take measures such as the boarding, inspection, arrest and other judicial proceedings on vessels, but not the imprisonment or corporal punishment of offenders.²⁶ When such measures are taken, the coastal state has the duty to notify the flag state promptly of any arrest or detention of the flag state's vessel, and to release vessel and crew on the posting of security. The Convention also contains requirements that relate to safety of life and property at sea.

Apart from the utilization of non-living resources within the jurisdiction of the coastal state they may also exploit deep seabed minerals that are under the jurisdiction of the "AREA."²⁷ The activities in the AREA as specifically provided for in the Convention shall be carried out for the benefit of mankind as a whole,

irrespective of the geographic location of states, whether coastal or land-locked, and taking into particular consideration the interest and needs of developing states and of people who have attained full independence.²⁸

The participation of developing states in the activities of the AUTHORITY²⁹ offers an additional source of economic development. Part XI of the Convention details the approach which developing states may follow in exploiting the resources of the AREA. Coastal states have an additional advantage; the convention provides for their intimate participation in all aspects of management and operations of the AUTHORITY.

International organizations are requested to cooperate among themselves in order to avoid duplication of effort and to make the most efficient use of development funds.³⁰

This new regime of the sea is governed by international law and hence requires that capabilities be acquired by the coastal state that exercises jurisdiction. Important requirements are an institutional structure capable of responding to the requirements of the convention, based on possession of resources human and physical to enforce and provide the services that the convention demands.

The convention addresses pollution of the environment from activities within the jurisdiction of the coastal state and pollution derived from general use of ocean space.³¹ It suggests that coastal states harmonize

policies, take individual or joint action to prevent, reduce, and control marine pollution, and to ensure that pollution arising from sources within their jurisdiction does not spread beyond the area, under their jurisdiction.³²

To implement the above activities, and/or to comply with the requirements of the convention calls for a consistent policy, considerable management, operational support services, physical infrastructure and equipment. The convention suggests global and regional cooperation, together with international cooperation for the development and transfer of marine technology, new programs to support marine scientific research, and appropriate international funding for ocean research and development.³³

The convention contains 320 articles, 9 annexes and 4 resolutions. Table 1. provides the results of a detailed analysis of each article of the convention, and shows (a) general requirements and, (b) the special requirements. Table 2. identifies the expertise, the infrastructure and equipment relevant to the achievement of the objectives of the convention. Table 8. provides a summary of expertise, infrastructure, and equipment that is associated with fisheries management, development, environmental management, marine navigation and shipping, ocean mining and scientific research. Table 10. is a summary of expertise requirements identified in UNCLOS III.

From the above analysis it can be seen that the UNCLOS III with its benefits to coastal states also places responsibilities on states that ratify the convention. It requires coastal states:

1. to establish management and development policies for the living and non-living resources under their jurisdiction;
2. have adequate enforcement and operational capabilities available for the implementation of the above management programs, pollution abatement and control;
3. prepare to upgrade their technical and scientific capabilities to undertake marine scientific research, and to participate in the "AREA" development programs;
4. implement the requirements relating to the freedom of navigation.

These responsibilities imply the need for assistance in developing countries. The possible role of Canadian agencies in providing assistance will be examined in the next chapter.

TABLE 1. ANALYSIS OF ARTICLES OF UNCLOS III: IMPLIED NEEDS

Part I:	Section:	Description: Use of Terms General and Special Requirements ³⁴
Articles:	1	General requirements: - Marine Affairs Graduates
Part II:	Section 1:	Description: Territorial Sea and Contiguous Zone.
Articles:	2-33	General requirements: - Boundary delimitation expertise; - Marine Affairs Graduates; - Nautical Science Graduates; - Cartographers; - Communications Specialists; - Lawyers, Maritime/Inter. Special requirements: - Training Programs; - Technical Assistance; - Shore Infrastructure; - Equipment.
Part III:	Section 1:	Description: Straits Used for International Navigation.
Articles:	34-46	General requirements: - Boundary delimitation expertise; - Marine Affairs Graduates; - Nautical Science Graduates - Maritime Traffic Management and Operations Expertise; - Lawyers, Maritime/Inter. - Hydrographic Surveyors; - Ship Surveyors; Special requirements: - Same as for Article 2-33.
Part IV:	Section:	Description: Archipelagic States.

Articles: 47-54

General requirements:

- Negotiators;
- Same as Article 2-46.

Special requirements:

- Same as for Article 2-33.

Part V: Section:

Description: Exclusive Economic Zone.

Articles: 55-75

General requirements:

- Marine Affairs Graduates;
- Nautical Science Graduates;
- Policy, Planning, Management Expertise;
- Research Biologist;
- Environmentalist;
- Oceanographers, (Chemical/Physical)
- Resource Management Experts;
- Institutional Bld. Experts;
- Business Managers;
- Evaluation/Monitoring Experts;
- Data Collection, Analysis, Dissemination Experts;
- Fisheries and Maritime Enforcement Experts;
- Economist, (Planning/Analyst)
- Socio-Economist;
- Fisheries Technologist;
- Fisheries Engineers;
- Fisheries Extension Experts;
- Fish Quality Control;
- Fish Marketing & Distribution Experts;
- Naval Architect/Boatbuilders;

Special requirements:

- Technical Assistance;
- Shore Infrastructure;
- Training.

Part VI: Section: Description: Continental Shelf.
Articles: 76-85 General requirements:
- Ocean Policy & Management Experts;
- Ocean Mining Environmentalist;
- Ocean Engineers;
- Offshore Drilling;
- Offshore Emergency Operations;

Special requirements:
- Same as Articles 2-85.

Part VII: Section 1: Description: High Seas.
Articles: 86-107 General requirements:
- International Shipping Experts;
- Ship Surveyors;
- Marine Affairs Graduates;
- Nautical Science Graduates;
- I M O Expertise;³⁵

Special requirements:
- Same as Articles 2-84.

Articles: 108-115 General requirements:
- Covered in previous sections;

Part VII: Section 2: Description: Conservation and Management of the Living Resources of the High Seas.
Articles: 116-120 General requirements:
- High Seas Fishing Technologist;
- High Seas Marine Researchers;

Special requirements:
- Same as Articles 2-107.

Part VIII:Section: Description: Regime of Islands.
Article: 121 General requirements:
- Covered in Articles 2-120.

Part IX: Section: Description: Enclosed or
Semi-enclosed Seas.
Articles: 122-123 General requirements:
- Same as Above.

Part X: Section: Description: Rights of Access of
Land-Lock States to and from the Sea
and Freedom of Transit.
Articles: 124-132 General requirements:
- Policy & Program Management
Experts;
- Negotiators;
- Transportation Experts;
- Engineers;
- Management Experts
Special requirements:
- Technical Assistance;
- Infrastructure, including;
- Roads, Rail, Vessels;
- Training.

Part XI: Section 1: Description: The AREA.
Articles: 133-135 General requirements:
- Covered in previous
sections.

Part XI: Section 2: Description: Principles Governing the
Area.
Articles: 136-149 General requirements:
- Marine Affairs Graduates;
- N a u t i c a l S c i e n c e
Graduates³⁶
- Institutional Bld. Experts;
- Management Experts;
- Marine Scientific
Researchers;
- Offshore Mining, Management
and Operations Experts;

Special requirements:

- Training.

Part XI: Section 3: Description: Development of Resources in the Area.

Articles: 150-155

General requirements:

- Program Planning and Design Experts;
- Resource Management; Non-living;
- Environmentalist;
- Personnel Management;
- Security and Safety Experts;
- Ocean Mining Engineers;
- Ocean Mining Technologists;
- Economist Mineral Marketing;
- Economist Development; Planning;
- Marine Surveyors;
- Lawyers. Maritime/International;
- Naval Architect;
- Marine Affairs Graduates;
- Nautical Science Graduates;
- Economist Planning and Forecasting;
- Oceanographers, Chemical & Physical;
- Meteorologist;
- Climatologist;
- Geographers;
- Geologist;
- Dispute Settlement Experts;
- Workman Compensation Experts;
- Program Evaluation, Monitoring Experts;

Special requirements:

- Same as Articles 2-148.

Part XI: Section 4: Description: The Authority.
Subsection A: Description: General Provisions.

Articles: 156-158

General requirements:

- Covered in Previous Sections.

Part XI: Section 4: Description: The Authority.
 Subsection b: Description: The Assembly.

Articles: 159-160 General Requirements:
 - Administrative Management;

 Special requirements:
 - Training.

Part XI: Section 4: Description: The Authority.
 Subsection c: Description: The Council.

Articles: 161-165: General requirements:
 - Ocean Mining Administration;
 - Lawyers. Maritime/
 International.

Part XI: Section 4: Description: The Authority.
 Subsection D: Description: The Secretariat.

Articles: 166-169 General requirements:
 - Ocean Mining Administration;
 - Support Staff;
 - International Development
 Experts;

 Special requirements:
 - Same as Articles 133-165.

Part XI: Section 4: Description: The Authority.
 Subsection E: Description: The Enterprise.

Article: 170 General requirements:
 - Same as Articles 133-169.

Part XI: Section 4: Description: The Authority.
 Subsection f: Description: Financial Arrangements
 of the Authority.

Articles: 171-175 General requirements:
 - International financing;
 - Financial Analyst;
 - Business Management;
 - Banking Experts;
 - Budget Preparation and
 Management;
 - Auditors;

 Special requirements:
 - Same as Articles 133-170.

Part XI: Section 4: Description: The Authority.
 Subsection G: Description: Legal Status,
 Privileges and Immunities.

Articles: 176-183 General requirements:
 - Diplomatic Administrative
 Experts;

 Special requirements:
 - Same as Articles 133-170.

Part XI: Section 4: Description: The Authority
 Subsection H: Description: Suspension of the
 Exercise of Rights and Privileges of
 Members.

Articles: 184-185 General requirements:
 - Dispute Settlement Experts;

 Special requirements:
 - Same as Articles 133-170.

Part XI: Section 4: Description: Settlement of Disputes
 and Advisory Opinions.

Articles: 186-191 General requirements:
 - Same as Articles 133-185.

 Special requirements:
 - Same as Articles 133-185.

Part XII: Section: Description: Protection and
 Preservation of the Marine
 Environment.

Articles: 192-196

Section 1: General Provisions.

General requirements:

- Deep Sea Environmentalist;
- Plate Tectonics Expert;
- Same as Articles 133-185;

Special requirements:

- Training;
- International and Regional Pollution Training Programs.

Part XII:

Subsection 2:

Description: Global and Regional Cooperation.

Articles: 197-201

General requirements:

- Policy and Program Formulation Experts;
- Pollution Planning Experts;
- Emergency Measures, Planning and Operations.
- Same as Articles 133-196.

Special requirements:

- Technical assistance;
- Training;
- Infrastructure;
- Equipment.

Part XII: Section 3: Description: Technical Assistance.

Articles: 202-203

General requirements:

- Qualified Scientific and Technical Experts;
- Researchers in all Related Fields;

Special requirements:

- Technical Assistance.

Part XII: Section 4: Description: Monitoring and Environmental Assessment.

Articles: 204-206

General requirements:

- Covered in Previous Articles 133-170.

Special requirements:

- Same as Above.

Part XII: Section 5: Description: International Rules and National Legislation to Prevent, Reduce and Control Pollution of the Marine Environment.

Articles: 207-212

General requirements:

- Expertise in International Pollution Control Regulations;
- Same as Articles 133-170.

Special requirements:

- Same as Above.

Part XII: Section 6: Description: Enforcement.

Articles: 213-222

General requirements:

- Pollution Standards Expert:

Part XII: Section 7: Description: Safeguards.

Articles: 223-233

General requirements:

- Surveillance and Enforcement Experts;
- Marine Affairs Graduates;
- Nautical Science Graduates;

Special requirements:

- Technical Assistance;
- Infrastructure;
- Equipment;

Part XII: Section 8: Description: Iced Covered Areas.

Articles 234

General requirements:

- Navigators, Ice-Covered Areas;
- Environmentalists Northern Areas;

Special requirements:

- Technical Assistance;
- Training.

Part XII: Section 9: Description: Responsibility and Liability.

Article: 235

General requirements:

- Lawyers. Maritime/International.

Special requirements:
- Same as Article 234.

Part XII: Section 10: Description: Sovereign Immunity.

Article: 236 General requirements:
 - Same as Above.

Special requirements:
- Same as Above.

Part XII: Section 11: Description: Obligations Under Other
Conventions on the Protection and
Preservation of the Marine
Environment.

Article: 237 General requirements:
 - Same as Above.

Special requirements:
- Same as Above.

Part XIII:Section 1: Description: Marine Scientific
Research General Provisions.

Articles: 238-241 General requirements:
 - Marine Science Policy
 Experts;
 - Marine Science Management
 Experts;
 - Legal Scientific Advisors;

Special requirements:
- Technical Assistance;
- Training.

Part XIII:Section 2: Description: International
Cooperation.

Articles: 242-244 General requirements:
 - Marine Science Research
 Specialist with
 International Experience;
 - Scientific Research
 Coordinators;
 - Information Sciences Expert;

Special requirements:
- Technical Assistance;
- Training

Part XIII:Section 3: Description: Conduct and Promotion of Marine Scientific Research.

Articles: 245-257

General requirements:

- Research Program Managers;
- Research Project Formulation, Monitoring and Evaluation Experts;
- Regional Research Planners;

Special requirements:

- Technical Assistance;
- Training;
- Infrastructure Including Laboratory
- Equipment.

Part XIII:Section 4: Description: Scientific Research Installations or Equipment in the Marine Environment.

Articles: 258-262

General requirements:

- Ocean Engineers;
- Marine Safety and Pollution Experts;
- Marine Affairs Graduates;
- Nautical Science Graduates;

Special requirements:

- Technical Assistance;
- Training.

Part XIII:Section 5: Description: Responsibility and Liabilities.

Article: 263

General requirements:

- Legal Scientific Advisors;
- Lawyers. Maritime/International;

Special requirements:

- Technical Assistance;
- Training.

Part XIII:Section 6: Description: Settlement of Disputes and Interim Measures.

Special requirements:
- Technical Assistance;
- Training;
- Infrastructure;
- Equipment.

Part XIV: Section 4: Description: Cooperation Among International Organizations.

Article: 278 General requirements:
- International Development Experts;

Special requirements:
- Technical Assistance.

Part XV: Section 1: Description: Settlements of Disputes General Provisions.

Articles: 279-285 General requirements:
- Lawyers. Maritime/
International
- Marine Affairs Graduates;
- Nautical Science Graduates

Special requirements:
- Technical Assistance;
- Training.

Part XV: Section 2: Description: Compulsory Procedures Entailing Binding Decisions.

Articles: 286-299 General requirements:
- Lawyers. Maritime/
International;
- Marine Affairs Graduates;
- Nautical Science Graduates;

Special requirements:
- Technical Assistance;
- Training.

Part XVI: Description: General Provisions.

Articles: 300-304 General requirements:
- Archaeological Experts.

Special requirements:
- Technical Assistance.

Part XIV: Description: Final Provisions.

Articles: 305-320

General requirements:

- Protocol Experts;
- Lawyers. Maritime/
International;

Special requirements:

- Technical Assistance.

The general and special requirements of annexes 1-1X have been covered in the overall analysis.

TABLE 2. COASTAL STATES REQUIREMENTS UNDER UNCLOS III.

<u>PART-SECTION</u>	<u>EXPERTISE</u> ³⁷	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
I-1	Marine Affairs	Office Equipment	Administrative Buildings
II-1	Nautical Science	Maritime Traffic Control Systems Enforcement Vessel	Buildings Wharfs
	Lawyers Maritime/	Office Equipment	Office Space
	Cartographers	Cartographic Equipment	Facilities
	Geographers	Geographic Equipment	Facilities
	Communications	Media Publishing, Video, and Broadcasting	
III-1	Hydrographer	Hydrographic Equipment	Facilities
IV-	Negotiators		
V-	Policy Management Researchers	Office Equipment Laboratory Equipment Research Vessel Equipment	Facilities
	Research Managers	Computers Office Equipment	Research Facility
	Environmental-- mentalist	Environmental Laboratories	Environmental Facility
	Evaluation Expert	Office Equipment	Office Space
	Monitoring Expert	Office Equipment	Office Space

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
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V.	Data Analyst	Office Equipment Computer	Office Space
	Fisheries Technologist	Fish Technology Laboratory Equipment	Fisheries Laboratory
	Fish Processing Technologist	Fish Processing Laboratory Equipment	Fish Processing Facility
	Fish Product Development Technologist	Fish Processing Equipment	Product Development Laboratory
	Fish Quality Control Technologist	Fish Inspec- tions and Quality Control Equipment	Fish Inspec- tions and Quality Control Laboratory
	Fisheries Economist	Computer and Office Equipment	Office Space
	Fisheries Socio- Economist	Computer and Office Equip- ment	Office Space
	Fisheries Engineer	Fishing Gear Design Equipment; Flume Tank, i.e.	Fishing Gear Laboratory
	Fisheries Extension	Audio Visual Equipment Transportation Office Equipment	Fisheries Extension Facility
	Naval Architect	Drawing Office Equipment Office Equipment	Office Space
V-1	Ocean Mining	Office Equipment	Office Building

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
	Ecologist	Laboratory Equipment Office Equipment	Laboratory Facility
	Ocean Engineer	Engineering Office and Equipment	Office Space
	Offshore Drilling	Drill Rigs Oil Produc- tion Equip- ment	Office Buildings
	Offshore Emergency Operations	Search and Rescue Equipment Oil Spill Cleanup Equipment Vessels Office Equipment	Office Building Vessels Planes
VII.	IMO	Office Equipment	Office Space
	International Shipping	Computers Office Equipment	Office Space
	Ship Surveyors	Office and Ship Sur- veying Equipment	Office Space
VII-2	Stock Management	Computers	Office Space
	High Seas Researchers	Research Equipment and Vessel	Laboratory Facility
VIII.	Researchers	Research Equipment	Laboratory Facility
IX.	Researchers	Research Equipment	Laboratory Facility

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
X.	Transportation	Transportation and Office Equipment	Office Space
XI-1	Transportation	Office Equipment	Transportation Storage Facility Office Space
XI-2	Policy/ Management	Office Equipment	Office Building
	Institutional Building	Office Equipment	Office Space
	Marine Scientific Researchers	Research Equipment Vessels	Laboratory Facility Wharfs
	Management Offshore Mining	Office Equipment Mining Laboratory Equipment	Office Building
XI-3	Resource Management Non-Living	Office Equipment Computers	Office Space
	Environmental- list Non-Living	Environmental Laboratory Equipment	Laboratory Facilities
	Ocean Mining	Ocean Mining Equipment	Ocean Mining Vessels
	Engineers	Engineering Equipment	Office Space
	Economist, Mineral	Office Equipment Computers	Office Space
	Marketing Economist, Planning and Development	Office Equipment Computers	Office Space Laboratory Facility

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
XI-3	Oceanographers Chemical/ Physical	Oceanographic Equipment	Office Space Laboratory Facility Vessels
	Geographers	Cartographic Equipment	Cartographic Facility
	Geologist	Geological Laboratory Equipment	Geological Laboratory Facility
	Dispute Settlement	Office Equipment	Office Space
	Workman Compensation	Office Equipment	Office Space
XI-4A	Administrators	Office Equipment	Office Space
XI-4B	Protocol and Administrative Management	Office Equipment	Office Space
XI-4C	Ocean Mining Executives	Office Equipment	Office Space
XI-4D	Ocean Mining Management & Operations	Office Equipment	Office Building
XI-4E	International	Office Equipment	Office Space
XI-4F	Financial	Office Equipment	Office Space
XI-4G	Diplomatic Administrative Management	Office Equipment	Office Space
XI-4H	Dispute	Office Equipment	Office Space
	Settlement Ocean Mining	Office Equipment	Office Space

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
XI-5	Lawyers Maritime International Mining	Office Equipment	Office Space
XII-1	Plate Tectonics	Oceanographic Laboratory Equipment	Oceanographic Laboratory Vessel
XII-2	Pollution Planning	Pollution Laboratory Deep Sea Equipment Office Equipment	Pollution Laboratory
XII-3	Researchers	Research Equipment Office Equipment	Research Facility
XII-4	Pollution Control	Pollution Control Equipment	Pollution Control Facility
XII-5	Lawyers Maritime International	Office Equipment	Office Space
XII-6	Pollution Standards	Office Equipment	Office Space
XII-7	Surveillance and Enforce- ment	Monitoring Control and Surveillance Systems	Office Facility Wharfage Vessels
XII-8	Nautical Science	Merchant Marine Training Equipment Office Equipment	Office Building
	Ice-Covered Areas	Ice Research Laboratory Equipment	Research Facility
XII-9	Lawyers Maritime International	Office Equipment	Office Space

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
XII-10	Lawyers Maritime International	Office Equipment	Office Space
XII-11	Marine Affairs Graduates	Office Equipment	Office Space
XIII-1	Legal Scientific Advisors	Office Space	Office Space
XIII-2	International Marine Research Expert	Office Equipment Research Equipment	Office Space Laboratory Facility
XIII-3	Research Program	Office Space	Deep Sea Research Vessel
	Management	Deep Sea Research Equipment and Vessel Equipment	Wharfage Office Building
XIII-4	Ocean Engineer	Ocean Engineering Equipment Office Equipment	Engineering Office Facility
XIII-5	Legal Scientific Advisors	Office Equipment	Office Space Curriculum Laboratory
XIII-6	Advisors	Office Equipment	Office Space
XIV-1	Marine Curriculum Development Adult Educators	Curriculum Development Equipment Office Equipment Teaching Equipment Text Books	Curriculum Laboratory Office Space Training Facilities
XIV-2	Conference Organizers	Conference Organization Equipment Vehicles	Office Space

<u>PART-SECTION</u>	<u>EXPERTISE</u>	<u>EQUIPMENT</u>	<u>INFRASTRUCTURE</u>
XIV-3	Researchers; Systems and Program	Office Equipment Research Equipment	Research Laboratory Office Space
	Management	Office Equipment	Office Space
XIV-4	International Development	Office Equipment	Office Space
XV-1	Lawyers Maritime International	Office Equipment	Office Space
XV-2	Lawyers Maritime/ International	Office Equipment	Office Space
XVI.	Archaeologist	Archaeological Equipment	Museum Office Space
XVII.	Lawyers Maritime International	Office Equipment	Office Space

CHAPTER II
REVIEW OF CANADIAN ASSISTANCE AGENCIES
WITH REFERENCE TO UNCLOS III

- 1-THE CANADIAN INTERNATIONAL DEVELOPMENT AGENCY: (CIDA)
- 2-THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE: (IDRC)
- 3-THE INTERNATIONAL CENTRE FOR OCEAN DEVELOPMENT:(ICOD)
- 4-PETRO-CANADA INTERNATIONAL ASSISTANCE CORP.: (PCIAC)

1. THE CANADIAN INTERNATIONAL DEVELOPMENT AGENCY (CIDA).

CIDA was established in 1968 as a government agency reporting to parliament through the Secretary of State for External Affairs as the international development assistance arm in Canada's foreign policy.³⁸

Mandate

CIDA is the principal agency responsible for implementing, monitoring, and coordinating Canada's Official Development Assistance (ODA) program. It also advises the Secretary of State for External Affairs and Cabinet, through the Minister of External Relations, on policies and issues relating to international development.

The mandate under which Official Development Assistance is dispersed is outlined by the Minister of External Relations and International Development as follows;

The ODA charter has four pillars:

1. The primary purpose of our development effort is to help the world's poorest countries and people.
2. Canada's aid policies must strengthen the human and institutional capacity of developing countries to solve their own problems in harmony with their natural environment.

3. In setting objectives for development assistance, developmental priorities must prevail.
4. We must strengthen the links between Canadian citizens and institutions, and those in the Third World -- in short, partnership.

With these four principles as the foundation of our policy, our priorities to help focus our projects and programs are:

- Alleviate poverty;
- Design structural adjustment policies that take into account their human impact on the people they are designed to assist;
- Strengthen our emphasis on the role of women in development;
- Foster environmentally sound and ecologically sustainable programming;
- Strive for food security; and
- Emphasize energy availability.

The four pillars complemented by the priorities constitute the charter for Canada's Development Assistance Program.³⁹

Structure

The programming structure is divided as follows:

(a) A number of service branches whose mandates are to support the President and the actual operational programs; and (b) seven operational programs each of which has its own mandate, namely:

- the Multilateral program, whose function is to channel Canadian funding to international institutions;
- four bilateral programs of regional focus whose mandate is to answer the specific needs of developing countries that qualify for Canadian development assistance;

- two programs of the Business Cooperation Branch that work with the private sector, and
- Special Programs Branch which supports the work of non-governmental organizations, educational institutions, trade unions, etc.⁴⁰

Strategic Planning and Policy Coordination

Overall program coordination is the responsibility of the office of the Senior Vice-President, while interdepartmental relations is the responsibility of the policy branch. Operations in the field are carried out by CIDA field representatives assigned to missions, with overall responsibility invested in the head of the mission. The actual implementation of projects is carried out by private sector experts under contract to CIDA.

Policy Formulation and Planning

Policy formulation in CIDA is established by the Government of Canada. Macro planning and operational policies are coordinated through inputs from the programming sections by the policy branch.

Programing and Project Development

The four bilateral programs (Americas, Asia, Francophone Africa, and Anglophone Africa) receive budgetary allocations in accordance with their operational policies that best suit the implementation of the Agency's overall strategy and in direct response to the request and needs of recipient countries.

With multilateral programs, allocations are given to international institutions in accordance with pledges established through international negotiations and specific Canadian principles. Programing in the Special Programs and in the Business Cooperation Branches is left to the initiatives of private Canadian organizations.

Project development within CIDA occurs only within the bilateral channel, in consultation with the recipient country, and in accordance with Canadian capabilities and mutual interest. Some research is funded by CIDA through the Multilateral Branch's contributions to international research institutions. The Bilateral Branch supports specific projects of an applied research nature, and through core funding to national and international research organizations. The Special Programs Branch supports research through its institutional cooperation activities.

Institutional Linkages

CIDA, IDRC, ICOD, and PCIAC are all Official Development Assistance Agencies of the Government of Canada. The Senior officials of these agencies are inter-linked by membership on agency management boards.

The United Nations Convention on the Law of the Sea (UNCLOS III) and CIDA.

The organization structure of CIDA that facilitates support to projects relating to UNCLOS III consists of four operational branches. Projects that have been undertaken have generally covered: living resource development, research (fisheries and to a lesser degree, non-living resources) policy, and human resource development.

The branches (a) Multilateral Programs, serve the international community by supporting international and regional institutions including: Consultative Group on International Agriculture Research (CIGAR), United Nations Development Programme (UNDP), Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), etc. (b) Bilateral Programs serve government to government or national communities and represents assistance to specific countries that qualify for Canadian Official Development Assistance. (c) Special Programs Branch are for the non-governmental, and educational institutional communities in developing countries. (d) Business Cooperation Programs support private sector initiatives in developing countries. The Multilateral Branch together with the Fisheries Sector of the Professional Services Branch form the key groups that address UNCLOS III issues at CIDA. The prime objective of the Professional Services Branch is to provide sound

technical sectorial services and advice to the various client branches in an efficient and effective manner.

CIDA's support of UNCLOS III related activities have been primarily in response to requests from developing countries for assistance to develop the living resources in their exclusive economic zone (EEZ). Table 11: page 106 Appendix 1. provides an insight into the scope of CIDA's involvement with fisheries development (living resources) between 1970-1983.⁴¹

CIDA/UNCLOS III. Living Resources Related Projects

The CIDA Official Development Assistance program as stated above seeks to support efforts of developing countries in fostering economic and social programs, placing emphasis on poorer developing countries and the needy of these nations.⁴² This overall objective is particularly relevant to fisheries, since artisanal fisheries in particular is generally highly related to the poorest countries and affects the livelihood of the poorest segment of their labor force. However, CIDA's mandate for fisheries falls under a more specific objective for poverty alleviation, structural adjustments, increase participation of women in development, environmentally sound development, food, security, and energy availability which include the following:

1. increasing the production of fish to ensure increased availability, and reducing post harvest losses;

2. providing foreign exchange to make available the tools of the fishing business to countries that must find as much as 95% foreign exchange for the lowest technology involved in harvesting the living resources of the oceans;
3. increasing the visibility and inputs of women in fisheries operations, management, and general business activities of the sector;
4. accentuating ecologically sustainable development, environmental impact assessment of all capital projects and support for environmental strategies in developing countries;
5. increasing import substitution of fish and fisheries products in developing countries through maximizing utilization of marine resources in their EEZ;
6. upgrading artisanal and coastal fishery technology in order to reduce fuel consumption in traditional fisheries.

With respect to the above objectives and consistency with Canadian positions relating to UNCLOS III, these issues are governed directly by the policy that CIDA is a client oriented agency in a partnership program arrangement with recipient countries. Table 8: Appendix I and Table 11 provides an analysis of projects that relate to UNCLOS III and the requirements of developing countries.

6. Marine Scientific Research in the EEZ and on the high seas, or in the coastal zone, biological, environmental, oceanographic activities;
7. Non-Living Resource Resources on and beneath the ocean floor, seabed minerals, oil and gas.

CIDA UNCLOS III Related Expenditures

CIDA assistance to coastal states for the development of the living resources within their EEZ is consistent with Canadian Official Development Assistance policy.

The analysis of projects used in the preparation of this paper cover various geographical areas of the world, and includes regions like the South Pacific that is not a traditional recipient of Canadian Assistance. The bulk of the agency's support for ocean related activities is through the Bilateral Programs Branch. In recent years, indirect support to UNCLOS III, has been made by the Multilateral, Special Programs, and Business Cooperation Branch, through funding of international, regional, and non-governmental ocean related activities. Between 1975 and 1988 CIDA has spent over \$120 million ⁴³ directly on fisheries development projects in thirty countries where an estimated 2.4 million small scale fishermen produce the majority of animal protein available to the population.

Based on the eighty three projects analyzed in Table 11, page 106 the following linkages with UNCLOS III have

occurred. Human resources upgrading to increase exploitation of the living resources in the EEZ of coastal states was achieved through the provision of equipment and the establishment of facilities for the training of technical officers and fishermen. Facilities included technical schools complete with all teaching aid, training vessels, text books, etc.

Sixty one percent of the total activities were related to the EEZ; they covered the primary sector, providing basic fishing materials such as synthetic rope and twine, floats, outboard engines and spare parts, landing facilities for the discharge of the catch, and the repairs of fishing vessels. To support the primary sector basic shore infrastructure consisting of small scale fish processing, storage, marketing and distribution facilities were provided.

Institutional building and the development of management skills to ensure sustainable development was supported through the provision of technical advisors to assist coastal states with policy, program, and project formulation.

During the period of the analysis only one program was directly related to monitoring control and surveillance, while eleven were directly related to marine research in the EEZ. With respect to general maritime activities, only basic navigational training programs were provided. There

was some support to environmental marine scientific research and non-living resource requirements of the convention.

The overall program focus between 1970-83 is a dispersed one with a heavy emphasis on technical assistance and institutional building. Because of the multi-faceted nature of many projects, it is not easy to categorize them, but a percentage distribution of the projects activities are listed in Table 3.

Consistency between Canadian foreign policy and assistance to developing countries within the context of UNCLOS III is governed by the covenant that CIDA is a client oriented agency established to promote projects and programs with developmental impact in developing countries. The analysis of Table 3 shows, for countries receiving Canadian assistance, that the entire program was related to development and management of resources in the EEZ.

TABLE 3 CIDA UNCLOS III PROGRAM ACTIVITIES BREAKDOWN(%)

1. Exclusive Economic Zone (General)	16.4
2. Human Resource Development	12.3
3. Technical Assistance	23.0
4. Infrastructure (Physical)	9.3
5. Equipment	13.5
6. Institutional Building	21.7
7. Marine Scientific Research	3.8
8. Non-Living Resource Development	-

2. THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE: (IDRC)

IDRC was established by an act of parliament in 1970 as Canada's response to a finding of the World Bank Commission on international development that developing countries had "become increasingly dependent on a technology conceived and produced outside their borders and without reference to their specific needs."⁴⁴

Mandate of IDRC

The mandate of the organization is to support the indigenous scientific research of developing countries and assist them in the pursuit of solutions to their own unique problems.

IDRC is established for development research as a unique public corporation politically independent, with an international orientation. Its broad mandate is to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adopting scientific, technical, and other knowledge to the economic and social advancement of those regions. Specifically, the center is responsible for the following:

1. to enlist the talents of natural and social scientists and technologists of Canada and other countries;
2. to assist the developing regions to build up the research capabilities, the innovative skills, and the institutions required to solve their problems;

3. to encourage generally the coordination of international development research; and
4. to foster cooperation in research on development problems between the developed and developing regions for their mutual benefit.⁴⁵

Structure of IDRC

IDRC is organized along sectorial lines, with seven main divisions: Agriculture, Food and Nutrition Sciences (AFNS), Communications (COMM), Earth and Engineering Sciences (EES), Fellowships and Awards (FAD), Health Sciences (HS), Information Sciences (IS), and Social Sciences (SS).⁴⁶

The policy function is directed by the board of governors, and the overall planning is centered in the office of the President.⁴⁷ Field operations are carried out through six field offices (Nairobi, Kenya; Cairo, Egypt; Dakar, Senegal; Bogota, Colombia; Singapore, Singapore; and New Delhi, India.) whose functions are to work with local authorities to develop viable research projects and assist in their implementation.

Because of the independent status of the center, its administrative policies and practices are less bound by government of Canada regulations.⁴⁸ The personnel of the center consists of Canadian citizens and nationals from

other countries. IDRC does not implement projects, but rather provides funds to outside organizations to do so.

IDRC allocates program funds to its sectorial divisions. Support for project proposals from outside bodies is drawn from these funds. The criteria for funding is entirely technical and related to the merit of research proposals in support of IDRC's objectives.

Most project proposals originate from developing countries, a small percentage of proposals are entertained from Canadian researchers. Most projects supported by IDRC are small and relate to emerging technology and basic research. IDRC also supports international research institutions.

Institutional Linkages

The main institutional link with CIDA is via the President of CIDA who is a member of the Board of Governors of IDRC. There is also an IDRC liaison officer to CIDA who attends the President's committee meetings when research projects are on the agenda. A CIDA senior official also attends IDRC's project review meetings.

The United Nations Conference on the Law of the Sea and IDRC

The organizational structure of IDRC that facilitates support to projects relating to UNCLOS III is the Agriculture, Food and Nutrition Science Division. In 1970 a fisheries program was established within the AFNS division. To meet the center's objectives with the limited

resources at hand the division choose aquaculture (including mariculture) and artisanal fisheries as the two main sub-programs for support and designated commercial and industrial fisheries as low priorities.⁴⁹

IDRC Fisheries Objectives and Priorities

The prime objective of the fisheries program is to increase production by methods that will benefit the poor. Added to the direct benefit of producing more fish or fish products, every project supported by the program seeks to develop institutional research capabilities by training staff and producing research experience.

Research priorities are decided and defined in consultation with regional researchers, and executing and donor agencies through specific discipline, regional workshops, and other information exchange meetings. Other underlining objectives include developing and highlighting new fisheries opportunities for future large scale development or implementation through extension services on a national or regional level. Efforts are made to encourage regional exchange of all information and technology developed with the program's support.⁵⁰

IDRC Fisheries Program⁵¹

From 1975 to 1989 two hundred and sixty seven projects were supported by IDRC that related to aquaculture, mariculture, and marine related fisheries research.⁵² Based on an analysis of the projects appearing in Table 12 |

page 113 the following linkages to UNCLOS III have been established.

Twenty seven percent of the activities related to the territorial sea and the exclusive economic zone of coastal states. Human resource development made up twenty nine percent of activities, and there was an element of technical assistance in each project sponsored by the agency.

Nine small scale fisheries, and twenty eight related post harvest technology activities also related to the EEZ. Marine pollution activities included studies relating to the pathways and fate of toxic chemicals, the effects of discharging dredging spoils, ecosystem pollution, coastal erosion and environmental degradation.

IDRC also supported twelve activities that were related to resource management and marine scientific research. The transfer of marine scientific research to developing countries was the focus of thirteen information, dissemination collection activities included in the program package. IDRC made direct contributions to UNCLOS III via the following program activities; (a) assistance to the ASEAN community to establish a network to address contentious maritime issues relating to UNCLOS III and strengthening research capabilities in this field. (b) Support to a researcher from a developing country to write a book on UNCLOS III. (c) Support to IOC and UNESCO to establish a marine scientific information systems. (d) Support to study the role and practice of shipping

conferences in the ASEAN region. (e) Supported studies to address the legal, political, diplomatic, administrative aspects of ship generated pollution control. (f) Ice-basin studies. (g) Studies relating to port safety. One project was also supported that related to offshore mining.

From the above it can be seen that IDRC has made a tremendous contribution to coastal states under its mandate to encourage indigenous research and also has made a contribution towards meeting the objectives of UNCLOS III.

TABLE 4. IDRC UNCLOS III, PROGRAM ACTIVITIES BREAKDOWN (5)

1.	Exclusive Economic Zone	36.4
2.	Human Resource Development	29.7
3.	Technical Assistance	3.5
4.	Infrastructure	-
5.	Equipment	-
6.	Institutional Building	23.8
7.	Marine Scientific Research	5.6
8.	Non-Living Resource Development	1.0

3. THE INTERNATIONAL CENTRE FOR OCEAN DEVELOPMENT: (ICOD)

ICOD was established as a Canadian Crown Corporation in February 1985. As Canada's response to assist third world countries in the realization of their marine assets.⁵³

ICOD's Mission and Mandate⁵⁴

The objectives of the center is to initiate, encourage, and support cooperation between Canada and developing countries in the field of ocean resource development by:

1. initiating and supporting programs in developing countries for the improvement, management, and utilization of ocean resources, particularly as a source of food;
2. supporting the development of indigenous expertise and institutions in developing countries in integrated ocean use management;
3. enlisting the expertise of people and institutions in Canada, developing countries and elsewhere;
4. developing and sponsoring the collection and dissemination of information relating to ocean use development;
5. developing and sponsoring training programs, technical assistance and advisory services, relating to ocean development; and
6. supporting research relating to ocean resource development.

Structure of ICOD

ICOD is organized to discharge its responsibility at a global level in four geographic areas: 1. the Caribbean, 2. the South Pacific, 3. South and West Indian Ocean, and 4. West Africa. Programs are developed in the areas of advisory and technical assistance, information and training.

The policy functions of ICOD is developed by the Board of Directors. The Board consists of a chairman, a President, and not more than twelve other directors.

ICOD program focus is on human resource development and stresses expertise rather than capital spending. Funding is provided to programs that relate to national and/or regional marine priorities and objectives. Projects supported by ICOD are to satisfy the following criteria:

1. form a coherent policy promoting the integrated development and management of ocean resources in a developing country or region;
2. demonstrate a clear potential to contribute to the economic and social development of developing countries through realization of national and/or regional marine priorities and objectives;
3. demonstrate the capacity to become self sustaining;
4. receive approval from the government of the country involved or the regional inter-governmental agency.

Special emphasis is placed on training programs aimed at establishing or strengthening marine institutions in

developing countries. Within this context, research projects are also considered for support.⁵⁵

Institutional Linkages

The main institutional linkage between ICOD and CIDA involves a senior member of CIDA acting as a Board Director of ICOD. There is a liaison between CIDA's policy and sectorial specialist.

The United Nations Convention on the Law of the Sea and ICOD

ICOD's mandate, policies, and program are all related to UNCLOS III. The center has been in the lead among other Canadian agencies in this area from its creation, and evidence of this achievement is in the analysis of its activities that follows.

The ICOD list of approved projects⁵⁶ dated October 10, 1989 contained one hundred and forty projects. Based on an analysis of the projects appearing on Table 13 page 136 the following linkages to UNCLOS III have been established.

All projects supported by ICOD related to the Convention and activities in the exclusive economic zone of coastal states. Human resource development constituted the largest single activity of the ICOD program. The fact that ICOD is implementing scholarship programs for CIDA makes it the major Canadian agency handling human resource development activities.

Thirty one activities were directly related to resource assessment, and fisheries management. The center supported twenty eight boundary delimitation, surveillance and enforcement activities. Eleven activities in the territorial seas of developing countries were related to small scale fishing. Only three activities in the program list were concerned with environmental issues, while five related to marine scientific research.

Fish processing, quality control and inspection, industrial fishing received minor consideration in ICOD's program. Thirty activities relating to Marine Affairs, and non-living resources were also supported by ICOD.

From the above, it can be seen that ICOD has focused on critical requirements of coastal states and has recognized the importance of Marine Affairs, ocean development, and seabed issues; areas that are in complete accord with UNCLOS III.

TABLE 5: ICOD UNCLOS III, PROGRAM ACTIVITIES BREAKDOWN (%)

1.	Exclusive Economic Zone	28.6
2.	Human Resource Development	25.7
3.	Technical Assistance	15.0
4.	Infrastructure	-
5.	Equipment	3.0
6.	Institutional Building	18.9
7.	Marine Scientific Research	6.3
8.	Non-Living Resource Development	2.5

4. PETRO-CANADA INTERNATIONAL ASSISTANCE CORPORATION:
(PCIAC)

PCIAC was established in 1981 by an Order-in-Council, to help coastal states develop their petroleum industry, reduce their dependence on imported hydrocarbons and stimulate private sector involvement in the commercial exploitation of these non renewable resources.⁵⁷

PCIAC Mission and Mandate

The mission and mandate of PCIAC is to:

1. assist developing countries to reduce or eliminate their dependence on imported oil, by using Canadian technology and expertise where possible:
 - a) participate in exploration for hydrocarbon resources, particularly oil and gas, in developing countries;
 - b) conduct pre-exploration and related studies in developing countries;
 - c) provide technical assistance and training to personnel from developing countries in hydrocarbon resource explorations, development, and production-related activities; and
2. Operate as an instrument of Canadian Official Development Assistance in a manner consistent with the Government's foreign aid objectives and programs.⁵⁸

Structure of PCIAC

Petro-Canada Inc.⁵⁹ provides PCIAC with all the resources necessary for its management, administration, and operations pursuant to an operating service agreement. PCIAC is organized to discharge its responsibilities through facilities under the control of the Department of External Affairs. PCIAC maintains ongoing contact with the Canadian and International community associated with development assistance and the energy sector.

PCIAC activities are directed by a five-member Board of Directors, the membership of which is appointed by Petro-Canada and confirmed by Order-in Council. The membership of the Board consists of one nominee of the Minister of Energy, Mines and Resources (the deputy minister of EMR); one nominee of the Secretary of State for External Affairs (the President of CIDA); and three senior executives of Petro-Canada one of whom has been designated as Chairman. The composition of the Board of Directors ensures that PCIAC activities reflect Canadian aid, energy, and foreign policy priorities and use the most appropriate oil industry technology, practice, and procedures.

PCIAC Program Focus

The PCIAC program focus is in accordance with Canada's Official Development Assistance principles and priorities. PCIAC gives priority to projects in several of the poorest countries of the world, which will strengthen human and

institutional capacity and help develop new relationships between Canada's oil and gas sector and that of developing countries. Projects supported by PCIAC satisfy the following criteria:

1. the geological potential of the region and the technical feasibility of the requested project;
2. the specific needs of the country in terms of its reliance on foreign oil sources;
3. the existence of administrative and industrial infrastructure enabling the recipient country to utilize oil and gas finds, and to manage their commercialization;
4. the possibility of using Canadian technology, expertise, goods and services;
5. the opportunity for Canadians to gain international experience and exposure;
6. the traditional development assistance relationships between Canada and the potential recipient country.⁶⁰

Special emphasis is placed on project implementation by private sector contractors. The participation of Canadian specialists from government departments concerned with oil and gas activities is a key factor in PCIAC corporate strategy.

PCIAC recognition of the need to maintain the highest safety standards and the prevention of social and

environmental disruptions, applies Canadian standards in the process of implementing its program. Environmental and social impact assessment are carried out before, during, and after all physical assessment projects (e.g. drilling, geophysics) of a significant size.

Institutional Linkages

To ensure that PCIAC activities complement other Canadian Official Development Assistance in developing countries a close working relationship is maintained with CIDA. The President of CIDA is a member of the Board of Directors of PCIAC.

The United Nations Convention on the Law of the Sea and PCIAC

PCIAC's mandate, policies and program are all related to UNCLOS III. PCIAC is the only Canadian agency whose current program outcome is visible evidence of Canada's support to developing countries for energy self-sufficiency. Table 14 page 152 provides a summary analysis of projects undertaken by PCIAC. The analysis indicates that from 1982 to March 1988 PCIAC carried out more than forty projects in thirty developing countries, and these projects were all located in their exclusive economic zones.

PCIAC, based on the analysis of project data, expended thirty nine percent of its activities on institutional strengthening and human resource development. These

activities were important since the geological and geophysical data base in most developing countries is non-existent. In the area of onshore and offshore drilling including seismic stratigraphic activities thirty six point six percent of inputs were expended.

With respect to UNCLOS III the major focus of PCIAC activities was concerned with the development and exploitation of non-living resources of the oceans.

TABLE 6: PCIAC UNCLOS III, PROGRAM ACTIVITIES BREAKDOWN (%)

1.	Exclusive Economic Zone	13.0
2.	Human Resource Development	22.8
3.	Technical Assistance	22.9
4.	Infrastructure	-
5.	Equipment	2.1
6.	Institutional Building	16.3
7.	Marine Scientific Research	-
8.	Non-Living Resource Development	22.9

CHAPTER III
CANADIAN OFFICIAL DEVELOPMENT ASSISTANCE AND THE NEEDS OF
DEVELOPING COUNTRIES RELATING TO UNCLOS III

General

Table 8 page 91 summarizes the coastal state requirements under UNCLOS III for expertise, infrastructure, and equipment. Seventy three areas of expertise were identified as needed to respond to the seventeen parts of the convention. Table 10 page 102 presents the general area of expertise identified, and Table 9 shows which agencies provided assistance to developing countries that directly or indirectly utilized such expertise. Analysis of this table reveals that sixty seven percent of skills required by the convention were provided by the four Canadian agencies. Of the remaining 24 specialized areas, 6 were skills required for deep seabed mining and eight were related to merchant marine and pollution aspects of the Convention. The remaining 10 disciplines reflect activities that overlap and were covered by one specialist, for example, a Geographers is utilized for boundary delimitation and dispute settlement.

The Exclusive Economic Zone

Twenty three percent of the combined efforts of CIDA, IDRC, ICOD, and PCIAC were directed towards supporting coastal states' activities in their respective EEZ. Management included fisheries resource assessment, though uncoordinated was the most single supported activity in the

combined program. With the exception of PCIAC small scale fishing and post harvest technology were important activities supported by all other agencies.

Human Resource Development

Twenty two percent of the combined effort of all agencies was linked to human resource development. In some cases each project supported by an agency had a component that related to HRD. The most impressive among the agencies was ICOD, whose HRD program focus was on Marine Affairs. Despite the fact that the geographic focus of their program does not contribute to logical concentration on HRD, the short time frame within which this focus was achieved represents a substantial contribution towards coastal states meeting a fair percentage of their resource needs relating to the Law of the Sea Convention.

Technical Assistance

The combined effort of all Canadian agencies in the area of technical assistance to coastal states that related to UNCLOS III was sixteen percent of total program activities. CIDA was the leader in this area and this was probably due to the experience and budget available to support CIDA programs. With respect to technical assistance and IDRC it must be noted that as a research agency mandated to support indigenous research, their utilization of Canadian expertise would be of a minimum. Technical assistance was and still is the deciding factor

in upgrading capabilities and initiating the start up process of coastal states in their attempt to exploit ocean resources under their jurisdiction.

Infrastructure

The overall percentage distribution of effort of all agencies on infrastructural activities was two point three with CIDA the only agency involved with infrastructural projects. This is not surprising since the remaining Canadian agencies are not geared to respond to infrastructural projects, due to budgetary and staffing limitations.

Equipment

An average of four point six percent reflect activities that relate to the provision of equipment in the combined program of assistance to coastal states. Although there is considerable need for equipment in many countries to address the needs of UNCLOS III the utility is restricted by the shortage of trained and experienced staff, inadequate infrastructure, unavailability of operating budgets and competitiveness of Canadian equipment.

Institutional Building

Institutional building was the third highest component of activities provided in the combined program. All programs included institutional building as the cornerstone of their program and as a means of ensuring sustainable development. An important activity supported by ICOD in

this area was assistance to the ASEAN community to establish a network relating to natural resources and contentious maritime issues and UNCLOS III.

Marine Scientific Research

Only three point nine percent represented activities that related to marine scientific research. When reviewing the data on this subject it must be remembered that IDRC's research efforts were directed to mariculture, and ICOD towards planning, policy and project formulation. These are essential building blocks for research and would be essential for the future expansion of national research efforts.

Non-Living Resources

The combined effort of all agencies on activities relating to non-living resource development was six point six percent, PCIAC was the dominant agency followed by ICOD. One project was supported by IDRC that related to offshore mining. Table 7 page 73 provides a summary of the main components of Canadian assistance to coastal states relating to UNCLOS III.

TABLE 7: Main Components of Canadian Development
Assistance to Coastal States Relating to UNCLOS III

Project Activities					
Relating To	CIDA	IDRC	ICOD	PCIAC	% AVG.
1. Exclusive Economic Zone	16.4	36.4	28.6	13.0	23.8
2. Human Resource Dev.	12.3	29.7	25.7	22.8	22.6
3. Technical Assistance	23.0	3.5	15.0	22.9	16.0
4. Infrastructure	9.3	-	-	-	2.3
5. Equipment	13.5	-	3.0	2.1	4.6
6. Institutional Building	21.7	23.8	18.9	16.3	20.2
7. Marine Scientific Res.	3.8	5.6	6.3	-	3.9
8. Non-Living Resource Dev.	-	1.0	2.5	22.9	6.6

Agency Practices and Development Needs of Coastal States

The four agencies involved with international development have the potential to contribute toward the overall developmental objectives of the Canadian Government as well as those of the recipient countries. The following pages will attempt to link the needs of the coastal states requirements relating to UNCLOS III to mandates of the above agencies and to identify how overlap could be reduced.

Firstly, developing countries must address their new responsibilities that accompany UNCLOS III. Secondly, they must be prepared to address common problems, and to share experiences in order to avoid duplication of effort or implementation of conflicting policies.

The development of the living resources of the EEZ as an economic unit is able to exert considerable linkage effects on other industries of national economies; linkages with shipbuilding, repair and maintenance, forward linkages on the food processing and service industries, and demand linkages on employment. The development of the living resources of the EEZ can have significant effects on employment and incomes in other sectors. To initiate the process of efficient development of the EEZ of coastal states development agencies should modify their programs or coordinate their efforts to achieve increased efficiency in their overall programs.

CHAPTER IV
POLICY IMPLICATIONS AND FUTURE DIRECTIONS OF CANADIAN
OFFICIAL DEVELOPMENT ASSISTANCE RELATING TO UNCLOS III

Canadian Policy Framework

The Government of Canada has established a development mandate to support the development activities of countries of the third world by collaborating with their efforts to achieve an autonomous self sustaining economic and social development which responds to their needs and respects their environment. In Canada's International Relations, the Government committed itself:⁶¹

to promote the safer, more prosperous and more humane world which is a prerequisite to the kind of society Canadians want at home Strengthening the fabric of international cooperation is a fundamental Canadian objective A broad consensus exist in Canada and internationally that development assistance works, and that we should not only continue but increase our efforts.⁶²

The Government is committed to provide increased funds for development, to promote a strengthened, a more stable economic order, and wishes to emphasize that the goal of Canadian Development Assistance is to increase the capacity of people in developing countries to achieve growth, to develop technology and to manage the process of economic and social change in a sustainable and increasingly self-reliant manner for the benefit of all. The analysis in this study clearly indicates that the future focus of Canadian assistance should be: the development of the living and non-living resources in territorial waters, archipelagic waters, the exclusive economic zone, improved

zone, improved resource management and assessment, and increased marine and environmental research.

Resource Management

Management of the living resources has certain peculiarities that make it difficult to manage and control in a manner that growth and development can be assured.⁶³ Common property management systems and/or free entry have led to a competitiveness in resource exploitation that results in over-exploitation of resources, both from a biological and economic perspective.⁶⁴ Canadian support for resource management has traditionally concentrated on resource problems from a biological base, i.e. with the objective of protecting and conserving resources. Even when successful, this approach did not solve the economic problems of poor and decreasing returns which emanate from resource exploitation or from marketing and other factors. Resource management in the future will have to consist of a package including assessment and management (biological and economic).

The Environment and Ocean Development

The world oceans may be viewed as an integrated ecosystem. UNCLOS III has categorized the various uses and has established the framework within which they may be utilized. The coastal state concerns over the continuing degradation of the marine environment; and more particularly, their capabilities to implement management

activities requires that priority be given to marine environmental issues. The daily treat of oil spills or seepage from the seabed, ship source pollution, ocean dumping, disposal of dredge spoils, industrial disposal of toxic waste at sea, atmospheric pollution, all contribute to the degradation of the ocean environment. UNCLOS III provides standards that all user groups should follow. Canadian support to developing countries in this area is essential if sustainable development is to be realized.

The Potential of the Living Resources of the EEZ

The potential of the living resources of the EEZ can be realized by projections made for the period 1980-2000.⁶⁵ These projections indicate that, due to population and income increases, world demand for fish and fish products should increase at a faster rate of growth than world fish supplies. It is estimated that demands for fishery products would increase to nearly 115 million tones per year by year 2000. About 20 percent of the increase in demand for fishery products will emanate from developed countries.⁶⁶ On the supply side, landings from the oceans will take place primarily in the EEZ.

The projected increases from developing states suggest that Canadian development agencies should orient their policies and programs towards assisting coastal states increase fish production by the adoption of efficient harvesting, processing, and marketing technologies in

countries where there is low pressure on stocks, and on resource management strategies where the resources are being over exploited.

In planning for the future, Canadian contributions towards the development of EEZ's interventions should support the entire sector, and should not bypass existing or past interventions regardless of the source of support. UNCLOS III provides the international framework for the orderly development of ocean resources and also provides a list of items that require national and international support.

The Exclusive Economic Zone and Resource Development

EEZ development should aim at improving incomes and returns to the primary producer, and at the same time supporting the community as a whole, facilitating the sharing of benefits that extended jurisdiction has provided. Canadian supported developmental activities should seek to provide alternative employment and income generation opportunities for fishermen and other community members who might be displaced as a result of changes in the organization of fisheries or because of resource management strategies that may become necessary. For countries to make the best use of their EEZ would require long term programs, consisting of upgrading political understanding and initiating sector appropriate policies and programs.

Expansion of primary sector operations is likely to take place within the artisanal section, through increasing the range of operation of fishing effort, and the utilization of improved technology. This change in production strategy will impact upon existing institutional and financial structures, and shore infrastructural facilities. The most logical intervention therefore, would be that which responds to the total requirement of the EEZ taking full consideration of the following: the existing primary production participants, ensuring that appropriate technology is utilized and socio-cultural values are protected.

Marine Scientific Research

The mandates of CIDA, IDRC, and ICOD not only overlap but these agencies appear to be competing among themselves. These agencies support pure and applied research projects in several developing countries. Table 7: provides data on the percentage of research activities that were supported by these agencies. If the project list of each agency is examined it will be observed that the interagency split of projects was targeted to two specific constituents in developing countries, universities, and government research agencies.

Although at first glance this appears logical, problems exist in the area of program/project efficiency and utilization. Canadian support to universities relates to

the research priorities established by the institution and/or the interest of the academic community of the country. Assistance to government research agencies is not normally linked to universities, and at times are outside the priority developmental activities of the government. For research to contribute to sustainable development strong linkages must be established between these three forces that currently benefit from Canadian ODA; universities, government laboratories, and the academic community [Non-University].

Mandates of all Canadian Agencies and UNCLOS III

The objective of this paper is to determine if Canadian aid agencies provided the assistance needed by developing countries to meet their obligations under the 1982 Law of the Sea Convention.

CIDA's mandate differs fundamentally from all other agencies on two points: firstly, CIDA can support large development projects. Secondly, CIDA is primarily a development agency. IDRC is a research focused agency: ICOD is mandated to address ocean research and development, and PCIAC is mandated to address energy development (oil and gas). There is limited reference in PCIAC's mandate that indicates that this agency is to support seabed mining in the context of UNCLOS III. ICOD's mandate on the other hand provides room for interpretation that suggest that seabed mining falls within their mandate.

IDRC's research mandate does not specify a particular subsector focus, but from their traditional programming living resource activities have been the major focus. The following are general observations associated with the mandates of all agencies:

1. All mandates focused on helping the poor who make up a substantial proportion of people in developing countries that are affected by UNCLOS III;
2. With respect to developmental priorities, CIDA responds to the priorities set by the coastal state. IDRC and ICOD initiate, encourage, and support programs. PCIAC is to assist developing countries to eliminate their dependence on external sources of energy etc.;
3. All agencies strive to strengthen linkages between Canadian institutions and their counterparts in the third world;
4. CIDA priorities include a concern for food security; ICOD is to support programs for the improved management and utilization of ocean resources, particularly as a source of food.
5. Specific reference is made in CIDA's mandate to foster environmentally sound and ecologically sustainable programming; this requirement is implied also in the mandates of IDRC and ICOD;

6. The reference to energy in the CIDA mandate is not as specific as PCIAC's mandate. ICOD's mandate states that research relating to ocean resource development would be supported.

The overlapping mandate between CIDA and ICOD in the food security area is an obstacle in providing a combined efficient program that relates to the exploitation of the living resources in the exclusive economic zone of developing countries.

There have been considerable contributions from Canada to developing countries in support of their meeting the requirements of UNCLOS III. This has been achieved by the activities of the four Canadian agencies: CIDA, IDRC, ICOD, and PCIAC executing their respective mandates within the general framework of Canadian foreign policy.

The problems identified in the analysis associated with the preparation of this paper stems from the following:

1. A lack of clear boundary delimitations relating to the lead agency that would support food production from the ocean;
2. Limited scientific marine scientific research inputs into the program;
3. The inability of agencies to support efficient ocean integrated projects.

4. The lack of a focus in any agency to start the process of preparing the developing world to participate in seabed mining;
5. A lack of an official coordinating mechanism to ensure program efficiency and consistency.

Maintaining support to developing countries in order for them to respond to the requirements of UNCLOS III should be the objective of future Canadian Development Assistance associated with the oceans.

Marine Affairs Coordinating Group

The mandates of IDRC, ICOD, PCIAC and CIDA could be the basis for the formulation of a CANADIAN OCEAN DEVELOPMENT AGENCY. The feasibility of this suggestion at present appears impossible; for this reason, it is suggested that a Marine Affairs Coordinating Group be established to assist in achieving improved program consistency.

The report of the Standing Committee on External Affairs and International Trade expressed concern about maintaining certain unique aspects of ICOD. It was stated that its small size allows the center to concentrate on small, discrete projects that often fall below the threshold of major funding agencies.⁶⁷ The reality is that ICOD is now a major player in certain areas of development relating to UNCLOS III. The agency is so effective that it is essential to coordinate or concentrate its focus so as to enrich the national effort in the area of human resource development.⁶⁸

The analysis carried out in this paper demonstrates that despite the research mandate of IDRC; marine scientific research, including a scientific approach to environmental pollution controls, has been neglected in the over all program. To quote the Standing Committee's report on External Affairs and International Trade.

"Times change and the field of development research is no exception. Many developing countries have greatly expanded their own scientific and technical resources over the past twenty years. Increasingly the question is asked whether the Burgeoning research results have translated as well as they might have into development action. It was this concern that led us earlier in the report to recommend closer collaboration between IDRC and CIDA."⁶⁹

In support of the above comments, and in the process of planning for the coming into force of the convention on the Law of the Sea, the Canadian Foreign Policy can enrich its consistency criteria through the coordination of activities relating to UNCLOS III. This improvement can be realized through the establishment of a "Marine Affairs Coordinating Group" with the following mandate:

1. To ensure that all agencies programs are consistent with Canadian Foreign Policy;
2. To ensure minimum overlap of programs at the management and operational levels;
3. To provide policy advise to the management group of all agencies concerned with disbursing of Official Development Assistance associated with UNCLOS III;

4. This group should report to the Minister responsible for External Relations, in order to ensure an enriched consistent Canadian Official Development Assistance Program.

Conclusion

The trends in ocean development and the requirements of UNCLOS III for the foreseeable future will, as pointed out earlier, demand increased Canadian involvement. Canada as a donor agency, and a country that has been partners with the developing world in the formulation of the convention is in a unique position to assist them in meeting the requirements of UNCLOS III.

It is recognized, however, that ocean development issues will have to compete with other sectors for a share of Canadian Official Development Assistance budget, and its success or failure to obtain a larger share of this budget will depend on the efficiency and effectiveness of their combined programs.

These programs must be efficient and effective not only from the Canadian standpoint but also from the outlook of the recipient country. Notwithstanding that the performance of the recipient will be difficult to control, Canadian development agencies as a group can exert some impact on their performance by means of the programming strategy that is developed for specific countries.

Canada can improve its ocean related ODA program by utilizing experience gained over the past twenty years to adjust mandates of Canadian agencies to be representative of their strengths as demonstrated from the analysis in this paper. A reorientation of Canadian program activities along the following lines, and the establishment of a Marine Affairs Coordinating Group could contribute to future efficiencies.

Recommended Future Program Orientation

Based on analysis carried out in this paper, program consistency with Canadian External Development Assistance Policy and the requirements of UNCLOS III, can occur if agencies programs reflect the following:

CIDA

1. The program focus should be developmental/applied research oriented, utilizing Canadian private sector expertise for all aspects of the project cycle. Technical assistance should reflect a practical strategy, representative of the Canadian industrial approach.
2. This agency should be responsible for all infrastructural activities and the provision of equipment.
3. Food production activities should be centralized within this agency, and concentrate on commercial production.

4. Nautical science/merchant marine/marine affairs⁷⁰ related activities should be restricted to this agency.
5. Operational management policy, planning, developmental activities relating to the living resources in the EEZ of coastal states should be handled by this agency.

IDRC

1. Research activities linking marine scientific institutions in Canada with those of developing countries should be the major focus of this agency.
2. This agency should be responsible for environmental research, supporting indigenous scientist, and providing help from Canada.
3. Resource management; including all aspects relating to biological characteristics, resource assessment, environmental impact on resource availability, should be the responsibility of this agency.

ICOD

1. This agency should specialize in the human upgrading aspects of the entire Canadian external assistance program. They should particularly harness the Canadian resources to be found in all provinces.
2. This agency should have sole responsibility for activities that relate to seabed development.

PCIAC

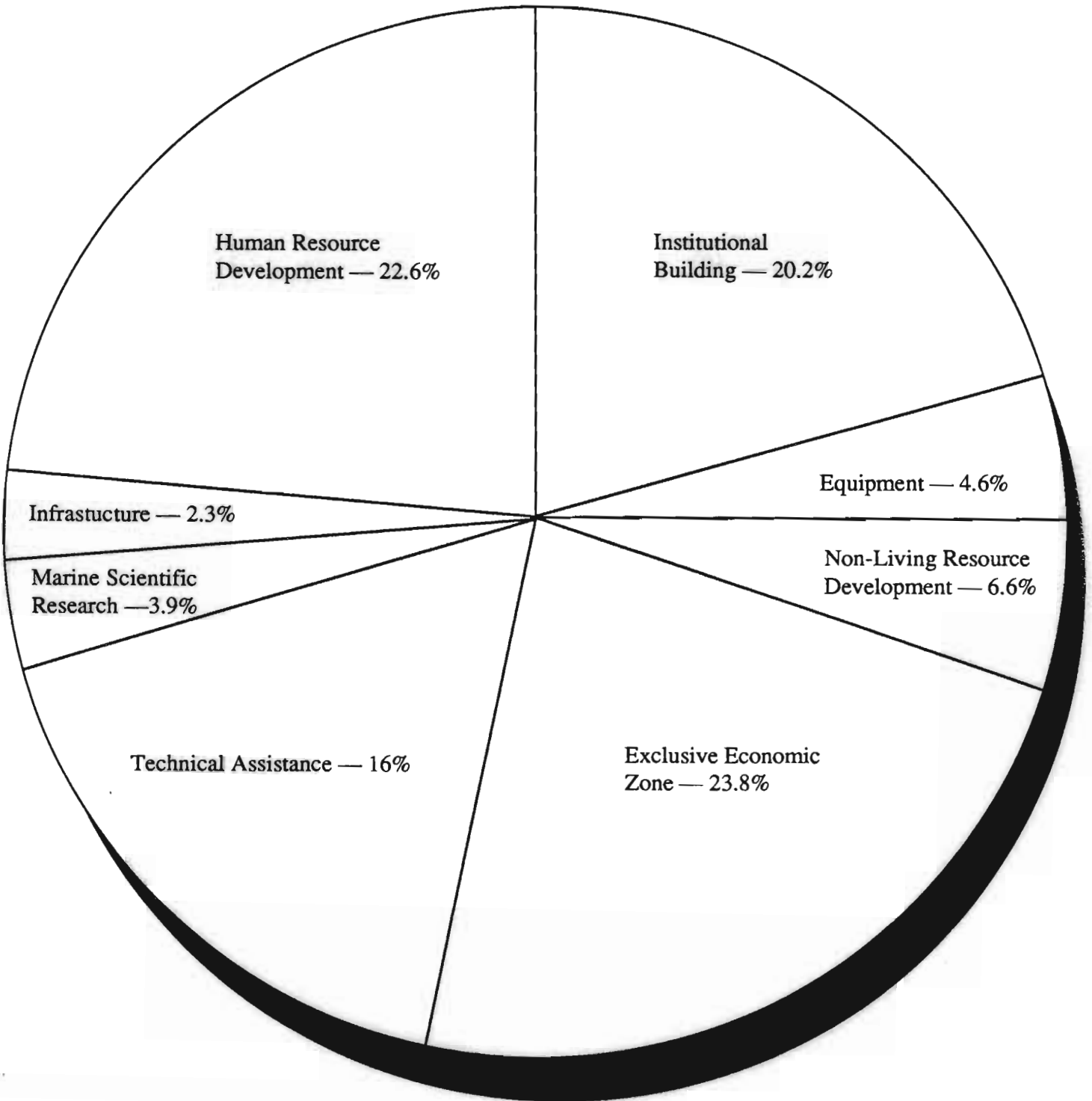
1. This agency should maintain its focus on the development of oil and gas reserves.

As seen in this study the Law of the Sea Convention creates a number of identifiable needs for developing countries in terms of skilled personnel, technical assistance, institutional buildings, infrastructural facilities, equipment, marine scientific research, and the development of the non-living resources of the seabed.

The Convention provides the legal framework for the orderly development of ocean resources. Proceeding towards year 2000 requires that Canadian Official Development Assistance be coordinated in order to be more efficient and thus enhance consistency with Canadian Official Development Policy and the objectives of the UNCLOS III.

— Figure 1 —

**MAIN COMPONENTS OF CANADIAN DEVELOPMENT ASSISTANCE
TO COASTAL STATES RELATING TO UNCLOS III**



Source: Official agency project lists

VI. APPENDICES

Table 8 :Summary of Expertise, Infrastructure & Equipment Related to

UNCLOS - III

Expertise	Infrastructure	Equipment
<u>Fisheries Management</u>	Facilities	Facility Equipment
Fisheries Researchers Equipment	Laboratories	Laboratory
Fisheries Economist	Office Space	Computer Time
Fisheries Statistician	Office Space	Computer time
Fisheries Surveillance Enforcement	Vessels	Communication Equipment
Fisheries Environmentalist	Vessels	Laboratory Equipment
Fisheries Ecologist	Laboratory	Laboratory Equipment
Marine Affairs Graduates	Office Space	Office Equipment, Transportation
Nautical Science Graduates	Office Space	Office Equipment, Transportation
Geographers	Office Space	Office Equipment Transportation
Cartographers	Office Space	Cartographic Instrument

Expertise	Infrastructure	Equipment
Information Sciences	Facilities Libraries	Printing, A/V Equipment
Lawyers : Maritime/ . International	Office Space	Office Equipment
Diplomats	Office Sapce	Office Equipment
Policy Analyst	Office Space	Computer Time
Management/ Administration	Office Space	Office Equipment
<u>Fisheries Development</u>		
Fishing Gear Technologist	Facilities / Office Space	Fishing Gear
Fisheries Food Technologist	Facilities / Office Space	Food Process Laboratory
Fisheries Engineers	Office Space	Office Equipment
Fisheries Economist	Office Space	Office Equipment
Fisheries Biologist	Office Space	Laboratory Equipment
Fisheries Socio. Economist	Office Space	Office Equipment
Fisheries Policy / Advisor Evaluation Expert	Office Space	Office Equipment

Expertise	Infrastructure	Equipment
Fisheries Hydrographer	Vessels	Hydrographic Equipment
Fisheries Oceanographer	Vessels	Hydrographic Equipments
Fisheries Lawyer	Office Space	Office Equipment
Fisheries Extension	Facilities	A/V extension Equipment
Marine Science Graduates	Office Space	Office Equipment
Nautical Science Graduates	Office Space	Office Equipment
Information Science Experts	Facilities	Publication Equipment
Education Specialist	Office Space	Teaching Equipment
Development Management & Administrator	Office Space	Office Equipment
<u>Environmental Management</u>		
Oceanographers	Vessels	Oceanographic Equipment
Ocean Ecologist	Laboratory	Laboratory Equipment

Expertise	Infrastructure	Equipment
Ocean Researchers	Vessels	Laboratory Equipment
Plate Tectonics Researchers	Vessels	Laboratory Equipment
Ocean Engineers	Office space	Office Equipment
Offshore Drilling	Offshore Rigs	Drilling Equipment
Emergency Operators	Office Space	Emergency Operation Equipment
Ship Surveyors	Office Space	Surveying Equipment
Educationalist	Office Space	Teaching Equipment
Information Services	Facilities Libraries	Publication Equipment
Marine Affairs Graduates	Office Space	Office Equipment
Nautical Science Graduates	Office Space	Office Equipment
Maritime Lawyers	Office Space	Office Equipment
Management & Administration	Office Space	Office Equipment

Expertise	Infrastructure	Equipment
<u>Marine Navigation & Shipping</u> Surveillance & Enforcement Maritime Shipping Maritime Surveyors Naval Architect Marine Affairs Graduates Nautical Science Graduates Maritime Lawyers Hydrographers Diplomats Communications Emergency Operations Transportation	Vessels Facilities Office Space Office Space Office Space Office Space Office Space Office Space Vessels Office Space Facilities Office Space Office Space	Surveillance & Enforcement Equipment Monitoring & Shipping Equipment Office Equipment Office Equipment Office Equipment Office Equipment Office Equipment Office Equipment Hydrographic Equipment Office Equipment Communication Equipment Emergency Operating Equipment Transportation Equipment

Expertise	Infrastructure	Equipment
Management & Administration <u>Ocean Mining</u>	Office Space	Office Equipment
Ocean Management & Administration	Facilities	Office Equipment
Ocean Engineers	Facilities	Office Equipment
Ocean Miners	Facilities	Mining Equipment
Ocean Ecologist	Vessels	Laboratory Equipment
Ocean Researcher [Deep Sea]	Vessels	Laboratory Equipment
Ocean Environmentalist	Vessels	Laboratory Equipment
Ocean Lawyers	Office Space	Office Equipment
Policy Analyst	Office Space	Office Equipment
Ocean Administrator	Office Space	Office Equipment
Ocean Financial Analyst	Office Space	Office Equipment
Ocean Communications	Facilities	Communication Equipment

Expertise	Infrastructure	Equipment
Ocean Educationalist	Office Space	Educational Equipment
Marine Affairs Graduates	Office Space	Office Equipment Transportation
Nautical Science Graduates	Office Space	Office Equipment Transportation
<u>Marine Scientific Research</u>		
Marine Scientific Policy	Facilities	Office Equipment
Marine Scientific Programming	Facilities	Office Equipment
Marine Scientific Program Evaluation	Facilities	Office Equipment
Marine Scientific Researchers	Vessels	Laboratory Equipment
Marine Scientific Administrator	Office Space	Office Equipment

Table 9 : Expertise used To Implement Projects

Expertise	IDRC	CIDA	ICOD	PCIAC
1. Marine Affairs			X	
2. Maritime Law			X	
3. Cartographers			X	
4. Geographers			X	
5. Communications	X	X	X	
6. Hydrographers		X		X
7. Negotiators			X	
8. Policy/Planning	X	X	X	
9. Management	X	X	X	X
10. Researchers	X	X	X	X
11. Research Managers	X	X	X	X
12. Data Analyst	X		X	X
13. Fisheries Technologist		X	X	
14. Fish Processing Technologist	X	X	X	

Expertise	IDRC	CIDA	ICOD	PCIAC
15. Fish Product Development	X	X		
16. Fish Quality Control	X	X		
17. Fisheries Economist	X	X	X	
18. Fisheries Socio-Economist	X	X	X	
19. Fisheries Extension		X	X	
20. Naval Architect		X	X	
21. Ocean Mining			X	
22. Ecologist			X	
23. Ocean Engineers			X	
24. Offshore Drilling				X
25. IMO Related Activities			X	
26. International Shipping	X	X	X	
27. Resource Management	X	X	X	

Expertise	IDRC	CIDA	ICOD	PCIAC
28. High Seas Research			X	
29. Transportation			X	
30. Institutional Building	X	X	X	X
31. Marine Scientific Researcher	X	X	X	X
32. Offshore Mining	X		X	
33. Resource Management (Non-Living)			X	X
34. Oceanographers	X	X	X	
35. Geologist				X
36. Administrators	X	X	X	X
37. Protocol & Administrative Management			X	
38. Ocean Mining			X	X
39. Pollution Planning	X	X	X	X
40. Offshore Researchers	X	X	X	

Expertise	IDRC	CIDA	ICOD	PCIAC
41. Pollution Standards			X	
42. Surveillance Equipment		X	X	
43. Ice Covered Areas			X	
44. International Marine Research Experts			X	
45. Research Program Management			X	
46. Marine Curriculum Development	X		X	
47. Adult Education			X	
48. Research System & Management Program	X		X	
49. International Development	X			X

Table 10 : Summary of Expertise Requirements Identified In UNCLOS- III

Auditors	Boundary Delimitation
Administrative Management	Biologist
Adult Educators	Business Management
Archaeologist	Banking
Agreements	Budget Preparation & Management
Cartographers	Dispute Settlement
Communications Specialist	Diplomatic Administrative Arrangement
Climatologist	Ecologist
Conference Organizer	Economic Planning and Forecasting
Fisheries Technologist	Geologist
Fish Processing Technologist	Geographer
Fish Marketing and Distribution Specialist	Hydrographic Surveyors
Fish Quality Control & Inspection Specialist	High Seas Fishing Technologist
Fisheries Extension Specialist	High Seas Marine Scientific & Biological Researchers
	International Lawyers

Summary of Expertise Requirements Identified In UNCLOS- III

Fisheries Engineers	International Maritime Organization
Fisheries Monitoring and Evaluation Specialist	International Development
Fisheries Data Collection Analyst & Dissemination Specialist	International Marine Science Management
Fisheries Regulations & Enforcement Specialist	International Financing
Fisheries Economic Planning & Policy Analyst	Ice Covered Area Merchant Marine Expertise
Fisheries Development Management	Information Sciences Expertise
Fisheries Socio-Economist	Legal Scientific Advisors
Fleet Management	Marine Affairs
Financial Analyst	Master Fishermen
Nautical Science	Marine Science Institutional Specialist
Northern Navigational Specialist	Marine Engineers
Northern Environmentalist	Mineral Marketing Specialist
Naval Architecture/Boat Builder	Mineral Planning & Development Specialist

Summary of Expertise Requirements Identified In UNCLOS- III

<p>Navigation Policy & Program</p> <p>Oceanographers, Chemical & Physical</p> <p>Ocean Management</p> <p>Ocean Policy & Program Formulation</p> <p>Ocean Mining</p> <p>Ocean Ecologist</p> <p>Ocean Engineering</p> <p>Offshore Drilling</p> <p>Offshore Engineering</p> <p>Ocean Mining Policy & Management</p> <p>Ocean Mining Operators</p> <p>Ocean Mining Management Planning & Explorations</p> <p>Ocean Mining Resource Management</p> <p>Ocean Mining Resource Conservation</p>	<p>Meteorologist</p> <p>Multilateral Program Management</p> <p>Multilateral Environmental Management</p> <p>Marine Research Specialist</p> <p>Marine Curriculum Development Specialist</p> <p>Marine Lawyers</p> <p>Maritime Traffic Management</p> <p>Marine Environmentalist</p> <p>Personnel Management</p> <p>Protocol</p> <p>Plate Tectonics</p> <p>Pollution Planning</p> <p>Pollution Standards</p> <p>Resource Managers</p>
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Summary of Expertise Requirements Identified In UNCLOS- III

Ocean Mining Environmental Protection	Resource Management (Fisheries) [Highly Migratory Species]
Ocean Mining Engineering & Technology	Researchers
Survey Planning	Research Project Formulation
Survey Implementation	Research Program Management
Survey Monitoring & Evaluation	Research Program Monitoring & Evaluation
Ship Surveyor	Regional Research Planning
Security & Safety	Transportation / Shipping
Support Staff	Teachers / Trainers
Surveillance & Enforcement	Workman Compensation
Scientific Coordinators	

Table 11 : Fisheries Projects Supported by CIDA (Bilateral Projects Only)*

No.	Country	Project Description	Project Focus									
			1	2	3	4	5	6	7	8		
1.	Algeria	Des Peches De Bou Ismail	X	X	X	X	X	X				
2.	Algeria	EL Kala - PH II	X			X						
3.	Reg. Insts.	Fisheries Training USP	X		X				X	X		
4.	Regional	Pelagic Fisheries Development	X									
5.	Reg. Inst.	SPC. Outer Reefs Fisheries	X	X	X			X	X	X	X	
6.	Barbados	Fishing Gear	X					X				

- | | |
|----------------------------------|-------------------------------------|
| 1. Exclusive Economic Zone [EEZ] | 2. Human Resource Development [HRD] |
| 3. Technical Assistance [TA] | 4. Infrastructure |
| 5. Equipment | 6. Institutional Building |
| 7. Marine Scientific Research | 8. Aquaculture / Pisciculture |

* Bilateral Programme Branches are responsible for regional projects

7.	Barbados	Tech. Assist. Fisheries Dev.	X			X		X	X				
8.	Brazil	Seafood Nat. Inspect. Serv.			X		X						
9.	Cameroon	Modernization Peche Artisanale	X	X	X	X	X	X	X				
10.	Caribbean	Fisheries for the CDB Team	X		X					X			
11.	Chad	La Direction Des Eaux Et Forets		X	X	X	X	X	X				
12.	Colombia	Sena-Peche PH II	X	X	X	X	X	X	X				
13.	Colombia	Inderena Peche	X	X	X	X	X	X					
14.	Colombia	Sena Fisheries Training	X	X	X		X						
15.	Costa Rica	Integration Des Marginaux	X	X	X				X				
16.	Cuba	Pecheries	X	X			X	X					
17.	El Salvador	Ecole De Peche-La Union	X	X	X	X	X	X	X				
18.	El Salvador	Dev. of Freshwater Fisheries			X		X	X					

19.	El Salvador	Ecole De peche La Union Phase II	X	X	X	X	X	X	X		
20.	Grenada	Grenada Fish Marketing			X	X	X	X	X		
21.	Grenada	Fish Storage Plant			X	X	X	X	X		
22.	Guinea	Motorisation Embarcapach	X		X		X				
23.	Guyana	Fisheries Dev. Plan	X	X	X	X	X	X	X		
34.	Guyana	Line of Credit Art Fisheries	X		X	X	X	X	X		
35.	Guyana	Emergency Spares Facility	X		X	X	X	X	X		
36.	Haiti	Transfert Ong-St-Michel Ph I	X		X	X	X	X	X		
37.	Korea	Fisheries Management Info Systems									
38.	Peru	Assist. for Instituto Del Mar	X		X		X		X		
39.	Peru	Assist. to Office of Co-op & Community	X		X			X	X		

40.	Peru	T. A. to Fisheries Inspection System	X	X	X			X			
41.	Peru	Imarpe-Anchovy Research	X	X	X		X	X	X	X	
42.	Regional	CECAF	X	X	X				X		
43.	Senegal	Motopirogues	X		X		X				
44.	Senegal	Chaine Du Froid				X	X	X	X	X	
45.	Senegal	Amelioration Pirogues	X		X		X				
46.	Senegal	Plan Directeur Sud	X	X	X				X		
47.	Singapore	Asean fisheries Dev. Center	X	X	X		X	X	X		
48.	St. Lucia	Fisheries Dev. Plan	X	X	X	X	X	X	X		
49.	St. Lucia	Castries Fish Plant Complex	X	X	X	X	X	X	X		
50.	St. Lucia	Fisheries Training	X	X					X		
51.	Thailand	Fisheries Institute			X		X	X	X		
52.	Thailand	Fisheries Advisor	X	X	X				X		
53.	Thailand	Fisheries Development	X		X	X	X	X	X		

54.	Zambia	Feeder RD's Fish Dev			X	X												
55.	Zambia	FRFDP Evaluation-Zambia			X													
56.	Asean Reg.	Asean Pht. Fisheries	X	X	X		X	X										
57.	Regional	Pacific Economic Coop. Conference			X							X						
58.	Brazil	Labomr : A.T.EN Genie De Pêche			X		X	X				X	X					
59.	Brazil	Aquaculture Fish Production			X			X	X			X	X					
60.	Cameroon	Superstructure Port Pêche II	X	X	X	X	X	X	X			X	X					
61.	Cameroon	Pieces Rechange ONPC	X		X							X						
62.	Caricom	Maritime Trianing asis II	X	X	X								X					
63.	Caricom	Marine Resource Survey- SEA FEAS	X	X		X	X	X				X	X					
64.	Sri Lanka	Inland fisheries			X				X		X		X					
65.	Guyana	Shrimp By-Catch Utilization	X	X	X				X	X		X	X					

66.	Guyana	Art. Fish Infrastructure	X	X	X	X	X	X	X	X		
67.	Indonesia	INFIDEP	X		X			X	X	X		
68.	Indonesia	Marine Resource Sector Mission			X					X		
69.	Jamaica	Fisheries Enhancement Program	X		X			X	X	X	X	
70.	Malaysia	Kuala Besut Fisheries Dev.	X	X	X	X	X	X	X	X		
71.	Philippines	Phil. Fish Dev. Proj. PH. II	X	X	X	X	X	X	X	X		
72.	Philippines	Fisheries Dev.				X					X	
73.	Senegal	Relance Peche Artisanale DJIFERE	X	X	X	X	X	X				
74.	Senegal	Commercial De Peche Artisanale	X	X	X			X	X	X		
75.	Senegal	Protection & Surveillance Des. Peches	X	X	X	X	X	X	X	X		

76.	Senegal	Prog. Assistant Peche Artisan	X		X				X				
77.	Senegal	Appui Maritime A Surv. Peches	X		X				X	X			
78.	Senegal	Das/SDID-Centers Mareyage			X	X			X				
79.	Senegal	Das/Appui Aux Projects Peches	X		X				X				
80.	St. Vincent	Fisheries Dev. Phase 1	X	X	X	X	X	X	X				
81.	St. Vincent	St. Vincent Fisheries Feas (SAE)			X								
82.	Thailand	IBRD Fisheries Sub-Project		X	X	X	X	X	X				
83.	Zambia	Katue Fisheries Dev./Zambia			X				X				

Source : Professional Services Branch (CIDA)

Table 12 : IDRC Fisheries Project List

Country	Project Description	1	2	3	4	5	6	7	8	9
1. Chile	Remote Sensing for Artisanal Fishing of Tuna & Swordfish	X	X				X			
2. Trinidad & Tobago	Fisheries Management Information System	X	X				X			
3. China	Mariculture	X	X				X			
4. Canada	Induced Spawning	X								X
5. China	Fish Breeding									X
6. Thailand	Fish Poison	X	X				X			
7. Colombia	Aquaculture		X				X			X
8. Chile	Mariculture	X	X				X			
9. Asean	Drying & Storage	X	X				X			

1. Exclusive Economic Zone [EEZ]
3. Technical Assistance [TA]
5. Equipment
7. Marine Scientific Research
9. Aquaculture / Pisciculture

2. Human Resource Development
4. Infrastructure
6. Institutional Building
8. Non-Living Resource Development

	Country	Project Description	1	2	3	4	5	6	7	8	9
10.	Tanzania	Inland Fisheries		X				X			X
11.	Philippines	Canadian Economic Advisor			X						
12.	China	Post Harvest System	-	-	-	-	-	-	-	-	-
13.	Asia Regional	Small Scale Processing and Socio-Economic Studies	X		X			X			
14.	China	Harbour Siltations	X		X			X			
15.	Burma	Rice Farming Systems									
16.	Nepal	Human Resources Development			X			X			
17.	Malaysia	Marine Fish Disease	X	X				X			
18.	Chile	Plankton Ecology	X	X				X			
19.	Brazil	Tuna	X	X				X			
20.	Brazil	Fish Reproducing Techniques		X				X			X
21.	Liberia	Rice Storage									

	Country	Project Description	1	2	3	4	5	6	7	8	9
22.	Chile	Seaweed	X	X				X			
23.	Chile	Fish Processing Enterprise	X	X				X			
24.	Cote d'Ivoire	Library Expansion	X	X				X			
25.	Peru	Women and Andean Post Harvest Tech	-	-	-	-	-	-	-	-	X
26.	Peru	Andean Food Processing	-	-	-	-	-	-	-	-	X
27.	Malaysia	Oyster seed	X	X				X			
28.	India	Apples	-	-	-	-	-	-	-	-	-
29.	Philippines	Fish Disease	-	-	-	-	-	-	-	-	X
30.	Chile	Artisanal Fisheries Network	X	X				X			
31.	Asia Regional	Fish Nutrition Network	-	-	-	-	-	-	-	-	X
32.	Asia Regional	Fish Nutrition Network [AITT]	-	-	-	-	-	-	-	-	X
33.	Kenya	Manufacturing Sector Study	X	X				X			

	Country	Project Description	1	2	3	4	5	6	7	8	9
34.	Canada	SEAPOL Phase II	X	X	X			X			
35.	Colombia	Artisanal Fisheries Development	X	X				X			
36.	Indonesia	Rice - Fish	-	-	-	-	-	-	-	-	X
37.	Senegal	Artisanal Fisheries	X	X				X			
38.	Chile	Bivalve Genetics	X	X				X			
39.	Barbados	Sea Urchins		X	X				X		
40.	Asia Regional SEAFDEC	Curriculum Development Training		X				X			
41.	Malaysia	M. Sc Programme : Fish Diseases Diagnosis		X				X			
42.	Mauritania	Pisciculture	-	-	-	-	-	-	-	-	X
43.	Cameroon	Integrated Livestock / Aquaculture	-	-	-	-	-	-	-	-	X
44.	Chile	Inshore Fisheries Info System	-	-	-	-	-	X	-	-	-
45.	ICLARM	Information Service	X								

	Country	Project Description	1	2	3	4	5	6	7	8	9
46.	Asia Regional AFSSRN	Fisheries Management	X	X				X			
47.	Brazil	Fish Reproduction	-	-	-	-	-	-	-	-	X
48.	Thailand	Groundnut Mechanization									
49.	Cote d'IVOIRE	Fish Farming									X
50.	Philippines	Groundnut Industry									
51.	Philippines	Seaweed	X	X				X			
52.	Chile	Seaweed	X	X				X			
53.	Jamaica	Oysterculture	X	X	X			X			
54.	Thailand	Rice - Fish									X
55.	Malayasia	Graduate Fisheries Program		X				X			
56.	Sri Lanka	Fish Marketing	X	X							
57.	Senegal	Fisheries Information System	X	X				X			

	Country	Project Description	1	2	3	4	5	6	7	8	9
58.	Colombia	Rural Agriculture Systems									
59.	Ecuador	Quinoa Processing									
60.	Philippines	Post-Harvest Economic Advisor			X			X			
61.	Thailand	Passive Cooling (Fruits)									
62.	China	Aquaculture Training Course									X
63.	Chile	Artisanal Fisheries Video Tapes		X							
64.	Ivory Coast	Mariculture	X	X							
65.	Mauritania	Processing Utilization and Nutrition	X								
66.	Peru	Native Fruit Trees									
67.	Brazil	Aquaculture									X
68.	Colombia	Geographic Info System Caribbean Coastal Zone									
69.	Asia Regional	Information Coordinator		X	X					X	

	Country	Project Description	1	2	3	4	5	6	7	8	9
70.	Colombia	Regional Aquaculture Network			X						X
71.	Philippines	Aflatoxins in Maize									
72.	Chile	Fisheries Development	X	X				X			
73.	Sri Lanka	Marine Resource Information	X	X				X			
74.	Barbados	Flying Fish	X	X				X			
75.	Uganda	Nile Perch									X
76.	Sri Lanka	Fruit and Vegetable Processing									
77.	Thailand	Fish Nutrition									X
78.	Thailand	Fish Genetics									X
79.	Thailand	Fish Disease									X
80.	Thailand	Fish Deboner	X	X	X						
81.	Malaysia	Post Harvest Economics		X							

	Country	Project Description	1	2	3	4	5	6	7	8	9
82.	Peru	Scallops	X	X							
83.	India	Fish Genetics Network									X
84.	Indonesia	Grain Post-Harvest Systems									
85.	Nigeria	Meat / Fish Processing	X	X				X			
86.	Zimbabwe	Grain Storage									
87.	Asia Regional SEAFDEC	Fish Genetics									X
88.	Thailand	Aquatic Weeds									X
89.	Malawi	Fish Polyculture									X
90.	Uruguay	Aquifers General Water Contamination									
91.	Paraguay	Cassava Technology									
92.	Chile	Invertebrates / Seaweeds	X	X				X			
93.	Thailand	Groundnut Improvements									

	Country	Project Description	1	2	3	4	5	6	7	8	9
94.	Philippines	Seagrass Restoration	X	X				X			
95.	China	Training Integrated Fish Farming									X
96.	Asia Regional	Aquaculture									X
97.	Latin America	Training Course Fish Reproduction									X
98.	Bangladesh	Inland Fisheries Development									X
99.	Costa Rica	Maize Quality									
100.	Asia Regional	Seafarers in Asian Region		X	X	X			X		
101.	Kenya	Artisanal Fisheries	X	X	X			X			
102.	Chile	Training : Fisheries Economics	X	X	X			X			
103.	Thailand	Fish Poison									X
104.	Indonesia	Fish Processing	X	X				X			
105.	Thailand	Urban Geology			X						

	Country	Project Description	1	2	3	4	5	6	7	8	9
106.	Malaysia	Marine Fish Disease	X	X				X			
107.	Chile	Artisanal Fisheries	X					X			
108.	Philippines	Groundnut Industry Economics									
109.	India	Post Graduate Hydrology Educational Research	X	X							
110.	Belize	Conch Management	X	X				X			
111.	Panama	Mariculture	X	X				X			
112.	ICLARM	Information Coordinator	X	X				X			
113.	Chile	Artisanal Fisheries Video Tapes	X	X							
114.	Chile	Shellfish Products	X	X							
115.	Asia Regional SEAFDEC	Training Aquaculture									X
116.	Ivory coast	Information Exchange	X								
117.	Philippines	Process Improvements	X								

	Country	Project Description	1	2	3	4	5	6	7	8	9
118.	Sri Lanka	Finfish Nutrition									X
119.	Thailand	Rice Post-Harvest Technology									
120.	Indonesia	Fisheries Information Systems	X	X							
121.	Kenya	Dock Handling Accidents	X								
122.	Chile	Salmonids	X		X			X			
123.	Korea	Macroinvertebrate Survey	X	X				X			
124.	Sierra Leone	Upland Rice Storage									
125.	Malaysia	Karst Detection	X	X				X			
126.	Ecuador	Artisanal Fisheries									
127.	Thailand	Multi-Crop Dryers									
128.	Malaysia	Grad Fisheries Economics Program	X	X				X			
129.	China/ Canada	Marine Ecosystem Enclosed Experiment	X	X	X			X			

	Country	Project Description	1	2	3	4	5	6	7	8	9
130.	Colombia	Fisheries Development	X					X			
131.	Philippines	Fish Disease	X								X
132.	Philippines	Fish Seed Resources	X	X							X
133.	Senegal	Artisanal Fisheries	X					X			
134.	Asia Regional	Fish Genetics Research Fellowship									X
135.	Uruguay	Fisheries Development	X					X			
136.	Philippines	Tilapia Genetics									X
137.	Peru	Potato Processing System									
138.	Chile	Artisanal Fisheries	X				X				
139.	Pakistan	Snow and Ice in the Upper Indus Basin		X							
140.	SEAPOL	LOS Maritime Questions Pollution etc.	X	X	X			X			
141.	China	Training : Integrated Fish Farming									X

	Country	Project Description	1	2	3	4	5	6	7	8	9
142.	ICLARM	Selective Fisheries Information Service	X	X							
143.	Asia Regional SEAFDEC	Brackish Water Aquaculture Info System	X	X				X			
144.	SEAFDEC	SE Asian Fisheries Info System	X	X				X			
145.	Peru	Andean Crop Processing									
146.	Chile	Mariculture	X	X				X			
147.	Thailand	Oil Palm PPS Survey									
148.	Tanzania	Rice Production & Marketing									
149.	Canada	Fish Gametes									X
150.	Africa Regional SADCC	Post Production Systems									
151.	Thailand	Economics of Shellfish Processing	X	X				X			
152.	Peru-Andean Regional	Pracipa Network									

	Country	Project Description	1	2	3	4	5	6	7	8	9
153.	Ecuador	Chameculture									X
154.	Sierra Leone	Cowpea Storage									
155.	Sierra Leone	Palm Oil Processing									
156.	China	Induced Spawning									X
157.	India	Res Fellowship LOS	X	X				X			
158.	Singapore	Asean Shipping Conference	X	X				X			
159.	Malaysia	Paddy Grading									
160.	Sri Lanka	Dehydrated Fruits									
161.	IOC / UNESCO	Environmental Sciences	X	X				X	X		
162.	Nepal	Inland Fisheries									X
163.	Sri Lanka	Mollusc culture	X	X				X			
164.	Indonesia	Mollusc Culture	X	X				X			

	Country	Project Description	1	2	3	4	5	6	7	8	9
165.	Colombia	Artisanal Fisheries	X	X				X			
166.	Indonesia	Fish Parasites									X
167.	Malaysia	Fish Parasites									X
168.	Turkey	Aquaculture									X
169.	Philippines	Isabella Post-Harvest System									
170.	China	Marine Ecosystem Enclosed Experiment	X	X				X	X		
171.	Indonesia	Carp Genetics									X
172.	Asia Regional SEA PHARD	Post-Harvest Systems Research & Development	X	X				X			
173.	Somalia	Artisanal Fisheries	X	X				X			
174.	SEAFDEC	Fish Breeding									X
175.	ICLARM	Fisheries Social Science Network	X	X	X			X			
176.	India	Post-Harvest Technology									

	Country	Project Description	1	2	3	4	5	6	7	8	9
177.	Chile	Fish Processing	X	X				X			
178.	Canada	Fish Gametes Preservation									X
179.	Jamaica	Oysterculture	X	X				X			
180.	Dominican Republic	Cageculture									X
181.	Canada	Domestication of aquaculture Stocks									X
182.	Zambia	Katue Fisheries									X
183.	Costa Rica	Fisheries Policy	X	X				X			
184.	Malaysia	Fisheries Economic Research	X	X				X			
185.	Asia Regional SEAFDEC	Milkfish									X
186.	Sri Lanka	Cageculture									X
187.	St. Christopher Nevis	Mussel Culture	X	X				X			

	Country	Project Description	1	2	3	4	5	6	7	8	9
188.	Bangladesh	Solar Crop Dryers									
189.	SEAFDEC	Information & Extension materials	X	X				X			
190.	Thailand	Fish Deboner	X		X						
191.	Mauritania	Village Post-Harvest Centers									
192.	Sri Lanka	International Cargo Transport		X				X			
193.	Panama	Mariculture	X	X				X			
194.	Malaysia	Inland fisheries									X
195.	Thailand	Aquatic Weeds									X
196.	Thailand	Fish Genetics									X
197.	Malawi	Upper Shire River flood Risks									X
198.	Chile	Invertebrates / Seaweeds	X	X				X			
199.	Malaysia	Fish Processing	X	X							

	Country	Project Description	1	2	3	4	5	6	7	8	9
200.	Philippines	Fish Processing	X	X							
201.	Peru	Fish Processing	X	X							
202.	Korea	Post-Harvest Rice systems									
203.	Singapore	Fish Culture									X
204.	Dominican Republic	Cage culture									X
205.	Brazil	Aquaculture									X
206.	Philippines	Isabela Post-Harvest System									
207.	Cuba	Langosta	X	X	X			X			
208.	St. Lucia	Sea Moss	X	X	X			X			
209.	Asia Regional	Post-Harvest Systems Research & Development	X	X				X			
210.	Guyana	Flood - Fallow Aquaculture									X
211.	Malaysia	Fish Parasites									X

	Country	Project Description	1	2	3	4	5	6	7	8	9
212.	Indonesia	Fish Processing	X	X				X			
213.	Mali	Fish Processing								X	
214.	Indonesia	Inland Fisheries									X
215.	Belize	Conch Optimization	X	X				X			
216.	Togo	Pisciculture									X
217.	Thailand	Fish Processing	X	X				X			
218.	Philippines	Fish Parasites									X
219.	Israel	Pathogen Transfer									X
220.	Senegal	Post-Harvest Technology									
221.	Thailand	Waste Management									X
222.	Peru	Mariculture	X	X				X			
223.	India	Fish Processing	X	X				X			

	Country	Project Description	1	2	3	4	5	6	7	8	9
224.	Indonesia	Post-Harvest Rice Technology									
225.	Ecuador	Chameculture	X	X				X			
226.	Sri Lanka	Cage Culture									X
227.	Bangladesh	Socio-Economic Study Small Scale Fish Dev.	X	X				X			
228.	Peru	Agro-Economic Research on Potatoes									
229.	Thailand	Waste Reclamation									X
230.	Global	Wastewater Reclamation									X
231.	Philippines	Fish Processing	X	X				X			
232.	Canada	Oyster Culture Bibliography	X								X
233.	Egypt	Aquaculture									X
234.	Korea	Post-Harvest Rice System									
235.	Thailand	Food Processing									

	Country	Project Description	1	2	3	4	5	6	7	8	9
236.	Singapore	Mussel Culture	X					X			
237.	Guyana	Fish Products	X	X				X			
238.	Colombia	Mariculture	X	X				X			
239.	Kenya	Tilapia									X
240.	Sierra Leone	Oyster Culture	X	X				X			
241.	Malaysia	Carp									X
242.	Rwanda	Pisciculture									X
243.	Guyana	Fish Products	X	X				X			
244.	Turkey	Aquaculture									X
245.	Sudan	Aquaculture									X
246.	Jamaica	Oyster Culture	X	X				X			
247.	Egypt	Solar Dehydration									X

	Country	Project Description	1	2	3	4	5	6	7	8	9
248.	Peru	Stabilization Ponds									X
249.	Global	Osmotic Dehydration of Food									
250.	Ghana	Rural Fisheries	X	X				X			
251.	Colombia	Gonadotropin									X
252.	Sierra Leone	Oyster Culture	X	X				X			
253.	Malaysia	Carp									X
254.	India	Aquaculture									X
255.	India	Post-Harvest Technology									
256.	Indonesia	Post-Harvest Rice Technology									
257.	SEAFDEC	Milkfish									X
258.	Philippines	Post-Harvest Rice Technology									
259.	Canada	Fish Pituitary Extracts									X

	Country	Project Description	1	2	3	4	5	6	7	8	9
260.	Philippines	Fish Processing	X	X				X			
261.	Philippines	Post-Harvest Systems Research & Development	X	X				X			
262.	Indonesia	Fish Parasites									X
263.	Malaysia	Inland Fisheries									X
264.	Senegal	Post-Harvest Technology									
265.	Malaysia	Fish Nutrition									X
266.	Korea	Post-Harvest Rice System									
267.	Singapore	Fish Culture									X

Source : IDRC Computer Print-out of Project Thur January 12th 1989. IDRIS DATA BASE

Table : 13 International Center For Ocean Development
List Of Projects

Country	Project Description	1	2	3	4	5	6	7	8	9
1. South Pacific Regional	Regional Surveillance & Enforcement Advisory Service	X	X	X	-	X	X	-	-	-
2. Vanuatu	Artisanal Fisheries Extension Center	X	X	X	-	X	X	-	-	-
3. South Pacific Regional	Fisheries Research Needs Assessment	X	X	X	-	-	X	X	-	-
4. South Pacific Regional (CCOP/SOPAC)	Regional Marine Geology Program	X	X	X	-	-	X	-	X	-
5. Solomon Islands	Coast watcher Pilot Project	X	X	-	-	X	-	-	-	-
6. South Pacific Regional	Communications Study	X	X	X	-	X	X	-	-	-
7. Vanuatu	Vanuatu Village Fisheries Development Program	X	-	X	-	X	X	-	-	-

- | | |
|----------------------------------|------------------------------------|
| 1. Exclusive Economic Zone [EEZ] | 2. Human Resource Development |
| 3. Technical Assistance | 4. Infrastructure |
| 5. Equipment | 6. Institutional Building |
| 7. Marine Scientific Research | 8. Non-Living Resource Development |
| 9. Aquaculture / Pisciculture | |

	Country	Project Description	1	2	3	4	5	6	7	8	9
8.	Vanuatu	Vanuatu Fishermen Study/Training Tour	X	X	-	-	-	X	-	-	-
9.	Vanuatu	Fisheries Short Courses	X	X	X	-	-	X	-	-	-
10.	South Pacific USP/FFA	Research Institute Feasibility	X	X	X	-	-	X	X	-	-
11.	Kiribati	Kiribati Boundary	X	-	X	-	-	-	-	-	-
12.	South Pacific Regional	Research Coordination Unit	X	X	X	-	-	X	X	-	-
13.	South Pacific Regional	Surveillance Statistics	X	X	X	-	-	X	-	-	-
14.	South Pacific Regional	Traditional Inshore Fisheries Development	X	X	-	-	-	X	-	-	-
15.	Solomon Islands	Rural Fishing Groups -Solomon Islands	X	X	X	-	X	X	-	-	-
16.	Vanuatu	Vanuatu Fisheries Extension Advisor	X	X	X	-	X	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
17.	South Pacific Regional	Regional Fisheries Database Implementation Assistance	X	X	X	-	X	X	-	-	-
18.	Cooks Island	Cook Island Boundary Delimitation Assistance	X	-	X	-	-	-	-	-	-
19.	South Pacific Regional	South Pacific Prosecutions Procedures Study	X	X	X	-	-	X	-	-	-
20.	Western Samoa	Western Samoa Boundary & Legislations Assistance	X	-	X	-	-	-	-	-	-
21.	Vanuatu	Vanuatu Fisheries Extension Program Monitoring System	X	X	X	-	X	X	-	-	-
22.	South Pacific Regional/SPC	Support for Inshore Fishery Resource Workshop South Pacific	X	X	X	-	-	X	X	-	-
23.	South Pacific Regional/FFA	Legal Affairs Unit : Forum Fisheries Agency	X	X	X	-	-	X	-	-	-
24.	South Pacific Regional / FFA	Small Project Fund - FFA	X	X	-	-	X	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
25.	South Pacific Regional / FFA	Vessel Surveillance System Feasibility Study	X	-	X	-	-	-	-	-	-
26.	South Pacific Regional / FFA	Maritime Boundary Delimitation Workshop	X	X	X	-	-	-	-	-	-
27.	South Pacific Regional / FFA	Regional Fisheries Observer Program	X	X	-	-	-	-	X	-	-
28.	South Pacific FFA / SPC	Study of Informations Systems	X	-	X	-	-	-	-	-	-
29.	South Pacific FFA / SPC	REPS to Regional Information Meeting	X	X	-	-	-	-	-	-	-
30.	South Pacific FFA / SPC	Preparatory Study for the Establishment of the Pacific Island Info System	X	X	-	-	-	-	-	-	-
31.	South Pacific FFA / SPC	Development of the Regional Coordination Unit at the PIC for PIMRIS	X	X	X	-	-	X	X	X	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
32.	South Pacific FFA / SPC	Strengthening Technical Information Services in Marine Geology and Non-Living Res. of SP	X	X	X	-	-	X	X	X	-
33.	Kiribati	Pub : Management of Marine Resources in Kiribati	X	X	-	-	-	-	-	X	-
34.	South Pacific Reg : SPREP	Environmental Education Kit on Coastal Zone Protection	X	X	X	-	-	X	X	-	-
35.	South Pacific Regional : PIMRIS	Enhancement of Fisheries Information Handling Capabilities at FFA	X	X	-	-	X	X	-	-	-
36.	" SPC	Fisheries Training Videos on Fish Chilling	X	X	-	-	X	X	-	-	-
37.	" FFA	Marketing Studies of Marine Products	X	X	-	-	-	X	X	-	-
38.	South Pacific CCOP /SOPAC	CCOP/SOPAC Non-Fuel Marine Minerals Resources Management	X	X	X	-	-	X	X	X	-
39.	South Pacific SPC	SPC Fisheries Extension Skills Course	X	X	X	-	-	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
40.	FFA	Observer Training Course	X	X	X	-	-	X	X	-	-
41.	FFA	FFA Fisheries Enforcement Workshop	X	X	X	-	-	X	-	-	-
42.	Micronesia	Mariculture Training Micronesia	X	X	X	-	-	-	-	-	-
43.	PNG	University of Papua New Guinea (PNG) Law Faculty	X	X	X	-	-	X	-	-	-
44.	South Pacific SPC	SPC Workshop on Inshore Fisheries Res Expert Participants Sponsorship	X	X	X	-	-	X	X	-	-
45.	South Pacific SPC	Fisheries Extension Training Courses : Pacific Islands countries	X	X	X	-	-	X	-	-	-
46.	PNG	Papua Region Women's Training Course on Fish Processing and Marketing	X	X	-	-	-	X	-	-	-
47.	Regional South Pacific	Regional Women's Conference Participants Sponsorship	X	X	-	-	-	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
48.	South Pacific CCOP /SOPAC	Training Program in Computerized Geological Data Management Systems	X	X	X	-	-	X	X	X	-
49.	South Pacific Regional USP	Micro Computer Training and Systems Development : Pacific Island Fisheries Unit	X	X	-	-	-	X	-	-	-
50.	SPC	Fishing Skills Course	X	X	-	-	-	X	-	-	-
51.	Regional	Tropical Fisheries Diploma Scholarship	X	X	-	-	-	X	-	-	-
52.	CCOP / SOPAC	CCOP / SOPAC	X	X	-	-	-	X	-	-	-
53.	PNG	FFA Surveillance Fellowship	X	X	-	-	-	X	-	-	-
54.	Palau	Tropical Fisheries Diploma Scholarship	X	X	-	-	-	X	-	-	-
55.	Caribbean Reg.	OECS Fisheries Unit	X	X	X	-	-	X	-	-	-
56.	Costa Rica	Fish Marketing	X	X	X	-	-	X	-	-	-
57.	Dominican Republic	Fisherman's Assistance Program	X	X	X	-	-	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
58.	Barbados / St. Lucia	Fisheries Training	X	X	X	-	-	X	-	-	-
59.	East Caribbean	Sea Moss Cultivation Program	X	X	X	-	-	-	-	-	-
60.	Dominica	Dominica Licensing System	X	-	X	-	-	X	-	-	-
61.	Costa Rica	Economic Analysis & Economic Policy Development	X	X	X	-	-	X	-	-	-
62.	Caribbean Regional	Statistical Sampling Methods Workshop	X	X	X	-	-	X	-	-	-
63.	Caribbean Regional	Maritime Boundary Workshop	X	X	X	-	-	X	-	-	-
64.	Dominica	Fishery Management Operations	X	X	X	-	-	X	-	-	-
65.	Caribbean Regional	OECS : SEA POL Ocean Boundary Course	X	X	-	-	-	X	-	-	-
66.	Caribbean Reg.	OECS Workshop on Regional Fisheries Access	X	X	X	-	-	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
67.	Caribbean Reg.	OECS Fisheries Data Management	X	X	X	-	X	X	-	-	-
68.	Jamaica/Belize	Reef Fisheries Management Planning	X	X	X	-	-	X	-	-	-
69.	Caribbean Regional	Caribbean Marine Parks and Protected Area Management Program	X	X	X	-	-	X	-	-	-
70.	Nicaragua	Technical Support for Nicaragua's Industrial Fisheries	X	X	X	-	-	X	-	-	-
71.	Dominica/OECS	Advisory Support for Fisheries Development	X	X	X	-	-	X	-	-	-
72.	Caribbean Reg.	Fisheries Surveillance Eastern Caribbean	X	X	X	-	-	X	-	-	-
73.	Caribbean Reg.	Eastern Caribbean Fisheries Marketing Strategy	X	X	X	-	-	X	-	-	-
74.	Caribbean Reg.	OECS : Workshop on Fisheries Access Monitoring, Control & Surveillance	X	X	X	-	-	X	-	-	-
75.	Caribbean Reg.	OECS : Participation ICOD/FFA Boundary Delimitation Workshop	X	X	-	-	-	X	-	-	-
76.	Jamaica	Lobster Assessment Program	X	X	X	-	-	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
77.	Caribbean Reg.	Eastern Caribbean Fisheries Monitoring Control & Surveillance	X	X	X	-	-	X	-	-	-
78.	Caribbean Reg.	Seamoss Bibliography	X	X	-	-	-	-	-	-	-
79.	Caribbean Reg.	Technical Publications Support	X	X	-	-	-	-	-	-	-
80.	Caribbean Reg.	OECS : Fisheries Newsletter	X	X	-	-	-	-	-	-	-
81.	St. Lucia / Grenada Barbados	Caribbean Fisherman's Training	X	X	-	-	-	-	-	-	-
82.	Trinidad/Tobago	CFTDI : Institutional Enhancement	X	X	-	-	-	-	-	-	-
83.	Barbados	Course in Navigation and Seamanship	X	X	-	-	-	-	-	-	-
84.	Caribbean Reg.	OECS : Fisherman's Training Program	X	X	X	-	-	X	-	-	-
85.	Caribbean Reg.	Graduate Program in Marine Resource & Environmental Management UWI	X	X	X	-	-	X	-	-	-
86.	Caribbean Reg.	Short Term Academic Exchange	X	X	-	-	-	-	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
135.	Global	Regional University Scholarship	X	X	-	-	-	-	X	X	-
136.	Global	ICOD Marine Affairs Diploma Scholarships	X	X	-	-	-	-	X	X	-
137.	Global	ICOD Scholarship Program	X	X	-	-	-	-	X	X	-
138.	Global	CIDA /ICOD WMU Scholarship	X	X	-	-	-	-	X	X	-
139.	Canada UM	Seminaire Sur l'organization de la gestion des Cooperatives des Peche	X	X	-	-	-	-	-	-	-
140.	Global	CIDA World Maritime University Scholarships	X	X	-	-	-	-	-	-	-
141.	Global	IOI Scholarships Caribbean	X	X	-	-	-	-	-	-	-
142.	Global	Short Term Attachment Programs	X	X	-	-	-	-	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
87.	South & West Indian Ocean	Study for a Regional Surveillance System for South & West Indian Ocean Maritime Resource	X	-	X	-	-	X	-	-	-
88.	Maldives	Economically Important Reef Fish	X	-	X	-	-	X	-	-	-
89.	Seychelles	Indian Ocean -South Pacific Exchange	X	X	-	-	-	X	-	-	-
90.	Maldives	Marine Surveillance	X	-	X	-	-	X	-	-	-
91.	Mauritius	Coastal Sand & Coral Removal Effects on Lagoon and Environment & MarineLife	X	-	X	-	-	-	-	-	-
92.	Mauritius	Feasibility Study : National Marine Resource Management Study	X	-	X	-	-	X	-	-	-
93.	Seychelles	Establishment of Fish Quality Control and Inspection system	X	X	X	-	-	X	-	-	-
94.	Mauritius	Lagoonal Health Characteristics in Mauritius	-	-	X	-	-	-	-	-	-
95.	Maldives	Technical Training of Fisheries Instructors	X	X	X	-	-	X	-	-	-
96.	Mauritius	Production Workshop for Artemia Salina	X	X	-	-	-	X	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
97.	Mauritius	Production Assistance for Artemia Salina	X	-	X	-	-	-	-	-	-
98.	Seychelles	Fishing Vessel Evaluation	X	-	X	-	-	X	-	-	-
99.	Sri Lanka	Marine Information	X	X	-	-	X	X	-	-	-
100.	Indian Ocean Regional IMOAC	Indian Ocean Newsletter	X	X	-	-	-	-	-	-	-
101.	FAO / UNDP	Regional Compendium	X	X	-	-	-	-	-	-	-
102.	Seychelles	Seychelles Fish Poster	X	X	-	-	-	-	-	-	-
103.	West Africa CECAF	Assessment Training Course Observers to the CECAF Stock	X	X	-	-	-	X	-	-	-
104.	Indian Ocean Regional	IOI Scholarship	X	X	-	-	-	X	-	-	-
105.	Indian Ocean	IOI Scholarship	X	X	-	-	-	X	-	-	-
106.	Morocco	Marine Scientific Advisory Mission	X	-	X	-	-	-	X	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
107.	Morocco	Morocco Fisheries Investigation	X	-	X	-	-	-	X	-	-
108.	Morocco	Management of Inshore Fisheries Statistics	X	X	X	-	-	-	X	-	-
109.	West Africa Reg. CRODT	Information Brochure [CRODT]	X	-	-	-	-	X	X	-	-
110.	Mauritania	Documentation and Information	X	X	-	-	X	X	-	-	-
111.	West Africa Reg. CECAF	Stock Assessment Training	X	X	X	-	-	X	-	-	-
112.	West Africa Reg.	West Africa Offshore Non-Fuel Mineral Course	X	X	X	-	-	-	-	-	-
113.	Cameroon	Computer and Data Analysis Training Fisheries Research Station	X	X	X	-	-	X	-	-	-
114.	Global FAO / IOC	Research Vessel Operation	X	X	-	-	-	X	X	-	-
115.	Canada CHS	Boundary Delimitation [Computer Program]	X	X	-	-	-	X	X	X	-
116.	Canada CHS	Boundary Delimitation	X	X	-	-	-	X	X	X	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
117.	Canada DAL Law School	Marine Affairs Bibliography	X	X	-	-	-	-	X	X	-
118.	Canada CUC	Ocean Training Directory	X	X	-	-	-	-	X	X	-
119.	Canada UN	World Fisheries Map	X	X	-	-	-	-	-	-	-
120.	Canada Univ. of Rimouski & Dalhousie Univ. Global	Marine Affairs Diploma	X	X	-	-	-	-	-	-	-
121.	World Maritime University	WMU Marine Affairs Course	X	X	-	-	-	-	-	-	-
122.	WMU.	WMU Maritime Law Course	X	X	-	-	-	-	-	-	-
123.	Canada MAAG Global	Marine Affairs Materials	X	X	-	-	-	-	-	-	-
124.	WMU Canada	Sea-Use Planning & Management Training Module	X	X	-	-	-	-	-	-	-

	Country	Project Description	1	2	3	4	5	6	7	8	9
125.	Canada EMR	Non Fuel Mineral Course	X	X	-	-	-	-	-	X	-
126.	SEA POL	Ocean Boundary making	X	X	-	-	-	-	-	-	-
127.	University of Rimouski & Dalhousie Univ.	Marine Affairs Diploma	X	X	-	-	-	-	-	-	-
128.	Univ. of Rimonski & Dalhousie	Marine Affairs Diploma Advisory Group Material	X	X	-	-	-	-	-	-	-
129.	Univ. of Toronto	Maritime Boundary Delimitation	X	X	-	-	-	-	-	-	-
130.	Univ. of Toronto	Maritime Boundary Delimitation	X	X	-	-	-	-	-	-	-
131.	Global WMU	World Maritime University Training Modules	X	X	-	-	-	-	-	-	-
132.	Global	ICOD Scholarship Program (85-87)	X	X	-	-	-	-	X	X	-
133.	Global	ICOD Schloraships	X	X	-	-	-	-	X	X	-
134.	Global	ICOD World Maritime University Scholarship	X	X	-	-	-	-	X	X	-

Table 14 : Petro-Canada International Assistance Corporation
Project List

Countries	Project Description	1	2	3	4	5	6	7	8
1. Botswana	Seismic Assistance & Stratigraphic Assistance	-	X	X	-	-	-	-	X
2. Burma	Technical Assistance	-	X	X	-	-	-	-	X
3. China	Oil Industry & Management Seminar	X	X	X	-	-	X	-	X
4. Costa Rica	Drilling, Seismic & Technical Assistance	-	X	X	-	-	X	-	X
5. Colombia	Technical Assistance	-	X	X	-	-	X	-	X
6. Gambia	Offshore Seismic & Data Interpretation	X	X	X	-	-	X	-	X
7. Ghana	Offshore Drilling	X	X	X	-	-	-	-	X
8. Jamaica	Refinery	-	X	X	-	X	X	-	X
9. Jordan	Seismic and Technical Assistance	X	X	X	-	-	X	-	X
10. Kenya	Geothermal Assist.	-	X	X	-	-	X	-	X
11 Madagascar	Offshore Seismic Drilling & Data Interpretation	X	X	X	-	-	X	-	X

Countries	Project Description	1	2	3	4	5	6	7	8
12. Morocco	Offshore Drilling & Technical Assistance	X	X	X	-	-	X	-	X
13. Nepal	Seismic Assistance	-	X	X	-	-	-	-	X
14. Pakistan	Marine Seismic Survey	X	X	X	-	-	X	-	X
15. Philippines	Technical Assistance	-	X	X	-	-	X	-	X
16. Senegal	Offshore Seismic & Data Interpretation	X	X	X	-	-	X	-	X
17. South Pacific CCOP/SOPAL	Technical Assistance	X	X	X	-	-	-	-	X
18. Sub-Andean	Offshore Seismic & Data Interpretation	X	X	X	-	X	X	-	X
19. Tanzania	Seismic Assistance	X	X	X	-	-	-	-	X
20. Thailand	Technical Assistance	-	X	X	-	-	X	-	X
21. Uruguay	Offshore Seismic & Data Interpretation	X	X	X	-	-	X	-	X

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- ³⁴Personnel Trained: Marine Science, Law, Policy, Management.

- ³⁵ Individuals with working experience relating to the activities of the International Maritime Organization.
- ³⁶ Merchant Marine Training: Navigation, Safety at Sea, Ship Stability, Etc.
- ³⁷ Personal Knowledge, Trained in the Specific Discipline.
- ³⁸ Canada 32nd. Parliament, 1st Session, 1980-83. October 25, 1983 (Bill C-152, An Act Respecting the Organization of the Government of Canada and Matters Related or Incidental Thereto.
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⁶⁹Ibid.

⁷⁰Marine Affairs includes: Coastal and Marine Management and Policy (both public and private), Marine Resource Management, Fisheries, Oil and Gas and other mineral production. In short, it covers the management and policy effects related to the use of coastal and marine resources.