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THE UNEP REGIONAL SEAS PROGRAMME:

AN ANALYSIS OF STRUCTURE AND PROCESS

by

Maureen Jedynack - Copley

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ABSTRACT

The purpose of this research is to describe and analyze the structure and process of decision - making inherent in the United Nations' Regional Seas Programme (RSP). The RSP is an international marine management framework involving more than 120 coastal nations, within eleven regional programme areas. This programme applies a comprehensive management approach to marine and coastal areas, in formulating regional action plans which address a variety of coastal and water resource problems and issues. These action plans are formulated according to the needs of the region, as perceived by the governments concerned.

The RSP is examined using a Resource Management Assessment Model (RMAM) as a guide, which studies the programme according to five management elements. These elements include: rationale, conceptualization and motivation; actors, agencies and institutional arrangements; planning and analysis; implementation; and general guides and principles.

The methodology is set in the context of *primary* and *secondary* research planes. Each of the planes is further divided into a series of tasks. Within the *primary* research plane is the comprehensive description and analysis of the RSP. In order to understand the role of the RMAM elements in the RSP, a series of questions are formulated for each element. These questions are asked of regional programme managers and officials through direct personal correspondence, and are used as the basis for examination of United Nations documentation. These sources, along with other contemporary, applied and theoretical literature serve as the principle sources of information. The *secondary* research plane establishes the problem context in the realm of

oceans and coastal management. It reviews such themes as: Environmental Problem Overview, Theories and Principles, International Environmental Management Case Studies, and Arctic Management Progress.

The research product is a series of cogent observations and recommendations specifically related to the Regional Seas Programme and its structure and process. These pronouncements are related specifically to the elements of the Resource Management Assessment Model. Several conclusions were made for each element. For example, in the context of the first element, rationale, conceptualization and motivation, it was found that the fundamental reason for RSP establishment has been a concern for declining environmental quality and specifically *marine pollution*. In the context of actors, agencies and institutional arrangements, it has been found that complex macro-level (programme) and micro-level (project) management fabrics exist. In the context of planning and analysis, it has been revealed that programme activity has largely coalesced around *management condition projects* designed to improve regional environmental management. *Environment condition projects* have received less regional attention. In the context of programme implementation, regions have expended considerable energy establishing Regional Co-ordinating Units, Regional Programme Secretariats and Regional Trusts. In the context of general guides and principles, a *unified methodological approach* and *programme co-ordination* have been shown to be key prerequisites.

Finally, the thesis returns to its premiere motivation: a concern for Arctic management. It is suggested that elements of the Regional Seas Programme may be suitable for the Arctic management experience.

RESUME

Cette recherche a pour but de décrire et d'analyser la structure et les processus de décision du Programme Mers Régionales (PMR) des Nations Unies. Le PMR constitue un cadre de gestion internationale des mers. Il s'agit d'un programme auquel participent plus de cent-vingt nations côtières, au sein de onze territoires de programmes régionaux. Le Programme Mers Régionales applique une approche globale de gestion à des territoires marins et côtiers; il formule des actions concertées régionales visant divers problèmes et questions relatifs aux régions côtières et aux ressources en eau. La formulation de ces actions concertées se base sur les besoins de la région concernée, en fonction de la perception des gouvernements impliqués.

Le PMR est étudié à l'aide d'un modèle d'évaluation de gestion des ressources. Ce modèle examine le programme selon cinq éléments de gestion: 1. le raisonnement, la conceptualisation et la motivation; 2. les participants, les agences et les arrangements institutionnels; 3. la planification et l'analyse; 4. la mise en oeuvre; et 5. les directives et principes généraux.

La méthodologie est présentée dans un contexte de plans de recherche primaire et secondaire. Ces deux plans sont subdivisés en une série de tâches. Le plan de recherche primaire comprend une description et une analyse détaillée du PMR. Afin de comprendre le rôle des éléments du modèle d'évaluation de gestion des ressources dans le PMR, on formule une série de questions pour chaque élément. Ces questions ont été posées par correspondance personelle directe aux administrateurs des programmes régionaux et forment la base de l'étude des documents des Nations Unies. Ces sources, ainsi que d'autres publications récentes, théoriques et appliquées constitu-

ent les sources principales d'information. Le plan de recherche secondaire établit le contexte du problème dans le domaine de la gestion des océans et des régions côtières. On y discute de thèmes tels que: la vue d'ensemble des problèmes environnementaux, les principes et théories, les exemples de gestion environnementale internationale, et le progrès dans la gestion de l'Arctique.

Cette recherche aboutit à une série d'observations et de recommandations visant particulièrement la structure et les processus du Programme Mers Régionales. Ces remarques son spécifiquement reliées aux éléments du modèle d'évaluation de gestion des ressources. On a pu tirer plusieurs conclusions pour chaque élèment. En ce qui concerne le premier élément (raisonnement, conceptualisation et motivation), on a trouvé que la raison fondamentale pour établir le PMR était le souci de la dégradation de la qualité de l'environnement, et plus spécifiquement celle du milieu marin. En ce qui concerne les participants, les agences et les arrangements institutionnels, on a découvert qu'il existait une organisation complexe de gestion au niveau supérieur (programme) et au niveau inférieur (projets). Pour la planification et l'analyse, il est apparu que les activités au sein des programmes étaient concentrées sur les projets liés aux conditions de gestion, conçus pour améliorer la gestion régionale de l'environnement. Les projets reliés aux conditions de l'environnement ont reçu moins d'attention. Dans le contexte de la mise en oeuvre du programme, les régions ont investi beaucoup de temps à établir des Unités régionaux de coordination, des Secrétariats régionaux pour le programme et des Fonds régionaux. Enfin, au niveau des directives et des principes généraux, on a montré qu'une approche méthodologique unique et un programme de coordination étaient des éléments - clés de la réussite.

En conclusion, cette recherche retourne à son but initial: l'intérêt de la gestion de l'Arctique. On y suggère que des éléments du Programme Mers Régionales des Nations Unies pourait convenir à l'expérience de gestion de l'Arctique.

PREFACE

As a researcher in the domain of geography, the task of completing this thesis was complicated by a lack of information on antecedent research. It became clear, as the research progressed, that a comprehensive bibliography of the most relevant and contemporary sources related to oceans and coastal management and the UNEP Regional Seas Programme, would be an extremely useful resource for researchers that follow. The decision was made, therefore, to include a bibliography rather than a truncated reference list.

Finally, the author has been amazed by the reaction to a co-authored article in the *Canadian Water Resources Journal*. The positive response appears to reinforce the contention that a knowledge void is being filled.

ACKNOWLEDGEMENTS

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Numerous officials from the United Nations Environment Programme (UNEP), the Oceans and Coastal Areas Programme Activity Centre (OCA/PAC), and individual Regional Seas Programme Regions so generously provided documentation and assistance in this research. Their names appear in the Personal Communication list. Special thanks to Mr. Stjepan Keckes, Director, OCA/PAC, and Mr. Francesco Szekely, former Assistant Director. Representatives from DOE, DIAND, DFO, CARC and ITC also provided general assistance and information.

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Finally, I would like to thank Chris Copley, my husband and best friend, for loving me, believing in me, understanding me and encouraging me along the road to graduate achievement.

Maureen Jedynack - Copley

LIST OF ACRONYMS

- ALECSO - Arab League Educational, Cultural and Scientific Organization
- ASEAN - Association of South - East Nations
- BP / RAC - Regional Activity Centre for the Blue Plan (of the Mediterranean Action Plan)
- CARC - Canadian Arctic Resources Committee
- CARICOM - Caribbean Community Secretariat
- CC - Convertible Currency
- CCA - Caribbean Conservation Association
- CCREM - Canadian Council of Resource and Environment Ministers
- CEPAL - Comision Economica de las Naciones Unidas para América Latina y el Caribe (or ECLAC)
- CITES - Conference on International Trade in Endangered Species of Wild Flora and Fauna
- CMEA - Council for Mutual Economic Assistance
- COBSEA - Co-ordinating Body on the Seas of East-Asia
- CPPS - Permanent Commission of the South Pacific
- CSA - Co-operating Agencies and Supporting Organizations
- CZM - Coastal Zone Management
- DFO - Department of Fisheries and Oceans
- DIAND - Department of Indian Affairs and Northern Development
- DOE - Environment Canada
- DOT - Transport Canada

- ECE - Economic Commission for Europe (of the United Nations)
- ECLAC - Economic Commission for Latin America and the Caribbean (of the United Nations)
- ECP - Environment Condition Project
- EEC - European Economic Community
- EF - UNEP Environment Fund
- ELC - Environment Liaison Centre
- ENI - Exogenous National Institution
- ESCAP - Economic and Social Commission for Asia and the Pacific
- FAO - Food and Agriculture Organization of the United Nations
- GC - Governing Council (of UNEP)
- GESAMP - Joint Group of Experts on the Scientific Aspects of Marine Pollution IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP
- IAEA - International Atomic Energy Agency
- IAHS - International Association of Hydrological Sciences
- IASSA - International Arctic Social Sciences Association
- IATTC - Inter-American Tropical Tuna Commission
- ICC - Inuit Circumpolar Conference
- ITC - Inuit Tapirisat of Canada
- ICES - International Council for the Exploration of the Sea
- ICSU - International Council of Scientific Unions
- IDB - Inter-American Development Bank
- IIED - International Institute for Environment and Development
- IJC - International Joint Commission
- IJO - International Juridical Organization for Environment and Development

- IMCO - Inter-Governmental Maritime Consultative Organization (changed to IMO)
- IMO - International Maritime Organization (formerly IMCO)
- INGO - International Non-Governmental Organization
- IO - International Organization
- IOC - International Oceanographic Commission
- IOI - International Ocean Institute
- IPAC - The Institute of Public Administration of Canada
- IRPP - The Institute for Research on Public Policy
- IUCN - International Union for Conservation of Nature and Natural Resources
- IUCN-CEPLA - IUCN Commission on Environmental Policy, Law and Administration
- MCP - Management Condition Project
- MEDPOL - Co-ordinated Meditrerranean Pollution Monitoring and Research Programme (of the Mediterranean Action Plan)
- MEMAC-ROPME - Marine Emergency Mutual Aid Centre (of the Kuwait Action Plan) – Regional Organization for the Protection of the Marine Environment (in the Kuwait Action Plan Region)
- NCC - Non-Convertible Currency
- NFP - National Focal Point
- NGO - Non-Governmental Organization
- NI - National Institution
- NIO - National Institute of Oceanography of India
- NNGO - National Non-Governmental Organization
- NSE - National Scientific Experts
- OAS - Organization of American States
- OAU - Organization of African Unity

- OCA/PAC - Oceans and Coastal Areas Programme Activity Centre
- OECD - Organization for Economic Co-operation and Development
- PAHO - Pan-American Health Organization (of WHO)
- PAP/RAC - Regional Activity Centre for the Priority Actions Programme (of the Mediterranean Action Plan)
- RAC - Regional Activity Centre
- RAMSAR - Convention on Wetlands of International Importance Especially as Waterfowl Habitat
- RCU - Regional Co-ordinating Unit
- RI - Regional Institution
- RMAM - Resource Management Assessment Model
- RNGO - Regional Non-Governmental Organization
- ROCC - Regional Oil Combating Centre (of the Mediterranean Action Plan)
- ROPME - Regional Organization for the Protection of the Marine Environment (in the Kuwait Action Plan Region)
- RSE - Regional Scientific Experts
- RSP - Regional Seas Programme
- RTF - Regional Trust Fund
- SACEP - South Asia Cooperative Environment Programme
- SCOPE - Scientific Committee on Problems of the Environment, ICSU
- SPA/RAC - Regional Activity Centre for Specially Protected Areas (of the Mediterranean Action Plan)
- SPC - South Pacific Commission
- SPEC - South Pacific Bureau for Economic Co-operation
- SPREP - South Pacific Regional Environment Programme
- SRI - Sub-Regional Institution
- SSC - 1982 Governing Council Session of Special Character

- UAE - United Arab Emirates
- UN - United Nations
- UNA - United Nations Agencies
- UNCHS - United Nations Centre for Human Settlements
- UN/DIESA - United Nations Department of International Economic and Social Affairs
- UNDP - United Nations Development Programme
- UN-ECA - Economic Commission for Africa (of the United Nations)
- UNEP - United Nations Environment Programme
- UNESCO - United Nations Education, Scientific, and Cultural Organization
- UNFPA - United Nations Fund for Population Activities
- UNIDO - United Nations Industrial Development Organization
- U.S. - United States
- USSR - Union of Soviet Socialist Republics
- VLCC - Very Large Crude Carrier
- WCS - World Conservation Strategy (1980)
- WHO - World Health Organization
- WISA - West Indies Associated States Council Ministers
- WMO - World Meteorological Organization
- WTO - World Tourism Organization
- WWF - World Wildlife Fund

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Chapter I

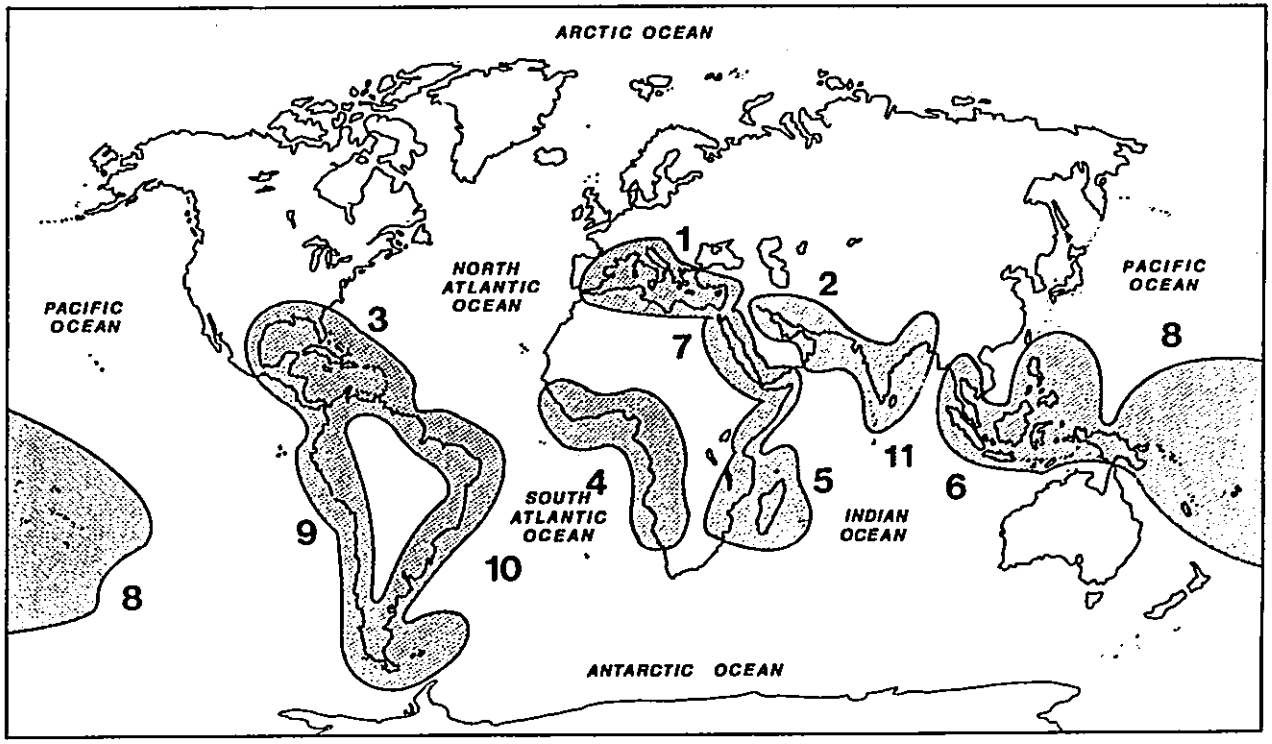
INTRODUCTION

1.1 PURPOSE

The purpose of this research is to both describe and analyze the structure and the process of decision - making inherent in the United Nations' Regional Seas Programme (RSP) (Figure 1.1). This Programme has been described by many to be the jewel in the United Nations Environment Programme (UNEP) crown. Yet, as the accompanying literature review indicates, so little is known about the programme's constituent parts, the mechanics of decision - making, and its strengths and weaknesses. This research, therefore, fills an obvious knowledge void.

But, there is also a more mercenary side to this research. There are major voids in marine environmental management at the regional level, and the Arctic is a case in point (Figures 1.1 and 1.2). As Page (1986, pp. 289-291) indicates, effective environmental management in this spatial context can only be achieved through international law, diplomacy and co-operation. Are there elements of the Regional Seas Programme that reveal new or innovative ways of dealing with associated issues or problems in the Arctic? Bickman (1987) has heavily promoted the value of comparative studies in order to broaden decision - making perspectives. This thesis addresses this call and probes the regional experiences of others in order to suggest improvements in management at home.

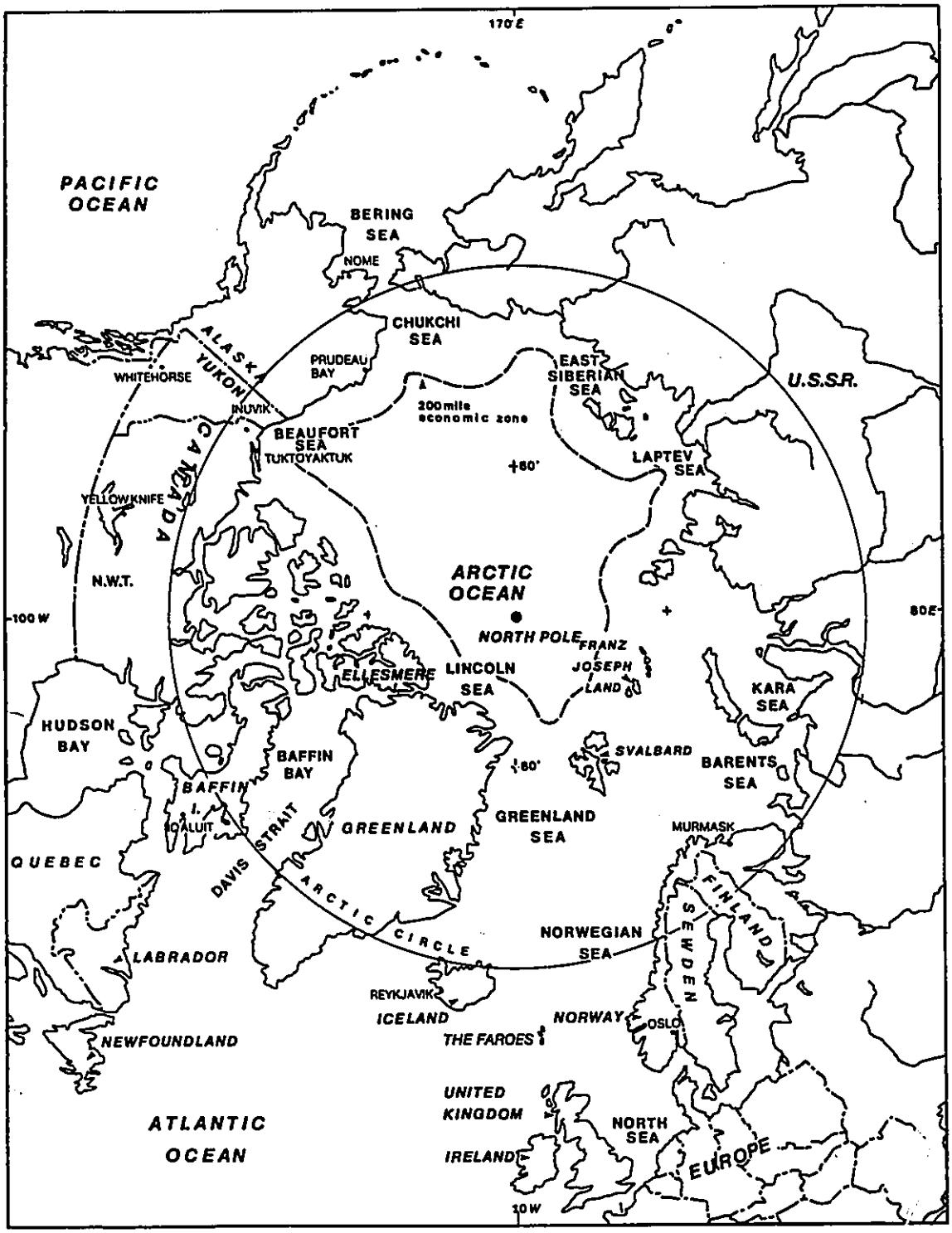
FIGURE 1.1 - Global Distribution of the UNEP Regional Seas Programme



1. Mediterranean Region
2. Kuwait Action Plan Region
3. Wider Caribbean Region
4. West & Central African Region
5. Eastern African Region
6. East Asian Seas Region
7. Red Sea & Gulf of Aden Region
8. South Pacific Region
9. South-East Pacific Region
10. South-West Atlantic Region
11. South Asian Seas Region

Source: Needham and Jedynack - Copley, 1989, p. 41

FIGURE 1.2 - The Arctic Ocean and Its Regional Shareholders



Source: Adapted with modifications from (Page, 1986, p. 290)

1.2 Central Position

The central position taken is that Canadian northern policy strategists can learn much about regional management structure and process from existing environmental regimes that have proven to be successful internationally. The Regional Seas Programme has been identified as the most successful component of the United Nations Environment Programme and the only example of global ocean and coastal management (Hulm, 1983b, pp. 2-5). In fact, the RSP has been touted as, "the jewel in UNEP's crown" (Hulm, 1983b, p. 5). Further, it has been documented that those nations participating in the RSP have experienced appreciable and measurable qualitative and quantitative improvements in both their environmental policy and law, and domestic environmental science. These advances have been the general rule particularly in those cases where natural resource management has been immature or at an early evolutionary stage. The Arctic, as a regional focus for Canadian environmental management, appears to offer similar youthful management characteristics. There is presently a window of opportunity to define a regime before resource development and sovereignty pressures restrict options (Whittington, 1985, p. 2).

1.3 Problem Context

In June 1972, Stockholm Sweden was the setting for the United Nations' Conference on the Human Environment (UNCHE). The objectives of this conference as stated in a 1968 U.N. Assembly Draft Resolution were:

> "to provide a framework for comprehensive consideration within the United Nations of the problems of the human environment in order to focus the attention of Governments and public opinion on the importance and urgency of this question and also to identify those aspects of it that can only, or at best be solved through international co-operation and agreement" (Caldwell, 1984, p. 44).

In other words, the Stockholm Conference (UNCHE) attempted to recognize the collective responsibility of all nations for the quality and protection of the earth as a whole.

The Stockholm Conference is seen as part of a larger social transition towards environmental awareness and co-operation. This change is from the view of an earth unlimited in abundance and created for man's exclusive use, to a concept of the earth as a domain of life or biosphere for which mankind is a temporary resident-custodian (Caldwell, 1984, p.19). While the older view saw the earth as a storehouse of resources to be freely developed for human use, the newer view sees it as a complete system of living species and interactive, regenerative, biogeochemical processes that may supply man's needs as long as he observes the rules of the system (Caldwell, 1984, p. 19).

The Stockholm Conference adopted the principle that the marine environment and all living organisms which it supports are of vital importance to humanity, and recognized that proper management is required and measures to prevent and control marine pollution must be regarded as an essential element in this management. The definition of *marine pollution* as set forth by the UNCHE, is:

> "the introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries) resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water, and reduction of amenities" (UNEP, 1983d, p. i).

This new emphasis on the concept of management indicates a shift from earlier opinions that the oceans had to be preserved unchanged. *Management implies use, rational use.* The application of environmentally sound management practices to marine and coastal areas and activities, is seen as the key to safeguarding the marine environment (UNEP, 1982a, p. ii). In this way, unplanned or poorly planned land use practices along with uncontrolled resource exploitation and resulting pollution may be reduced or even avoided. The Stockholm Conference further recommended that governments adopt effective national measures for the control of all significant sources of marine pollution, including land-based sources, and co-ordinate their actions regionally and where appropriate on a wider international basis (UNEP, 1982a, p. 2).

1.4 The UNEP Regional Seas Programme: An Overview

In light of the results of the Stockholm Conference, the UN General Assembly decided to establish the United Nations Environment Programme (UNEP), to serve as a focal point for environmental action and co-ordination within the United Nations System (General Assembly Resolution XXVII, 15 December 1972) (UNEP, 1983d, p. 7). The Governing Council of UNEP subsequently chose *oceans* as one of the priority areas in which it would focus its efforts (UNEP, 1982a, p. i). UNEP is said to assume and serve a catalytic and co-ordinating role by attempting to take full advantage of existing national and international management structures. It mobilizes them and *catalyzes* or initiates a sequence of events leading to the development of a comprehensive action plan for a particular region (Thacher and Meith, 1980, p. 156).

Subsequent meetings of UNEP's Governing Council repeatedly endorsed a regional approach to control marine pollution and requested the development of regional action plans for all oceanic areas where such plans did not exist. Consequently, in 1974, the UNEP *Regional Seas Programme* was initiated (UNEP, 1985d, p. i; Hulm, 1983b, p. 2). The RSP currently includes eleven regions, with more than 120 coastal states; in nine of these regions action plans have been adopted (Figure 1.1, Table 1.1 and Table 1.2) (Needham and Jedynack-Copley, 1989, pp. 37-58; UNEP, 1987e, pp. 1-23; Hulm, 1985, pp. 82-84; Nelson and Needham, 1985, p. 9; Thacher, 1983, pp. 452-453; UNEP, 1982a, p. i). The RSP is an action-oriented programme concerned not only with the consequences but also with the causes of environmental degradation. It applies a comprehensive management approach to marine and coastal areas in formulating a regional action plan according to the needs of the region, as perceived by the governments concerned (UNEP, 1982a, p. i). Unlike other regimes, that aim to manage specific resource problems, for example CITES – Convention on International Trade in Endangered Species of Wild Flora and Fauna, and RAMSAR – Convention of Wet-

TABLE 1.1 - Status of Eleven Regional Seas Programmes, July 1987

Regions	Action Plan	Convention	Protocols - Date of Adoption & Number Per Region
1. Mediterranean Region	Adopted 1975	Ratified 1976	1976(2), 1980(1), 1982(1)
2. Kuwait Action Plan Region	Adopted 1978	Ratified 1978	1978(1)
3. Wider Caribbean Region	Adopted 1981	Ratified 1983*	1983(1)*
4. West and Central African Region	Adopted 1981	Ratified 1981	1981(1)
5. Eastern African Region	Adopted 1985	Ratified 1985*	1985(2)*
6. East Asian Seas Region	Adopted 1981	--	--
7. Red Sea & Gulf of Aden Region	Adopted 1982	Ratified 1982	1982(1)
8. South Pacific Region	Adopted 1982	Ratified 1986*	1986(2)*
9. South - East Pacific Region	Adopted 1981	Ratified 1981	1981(1), 1983(2)
10. South - West Atlantic Region	Delayed	--	--
11. South Asian Seas Region	In Preparation	--	--

* Instrument adopted but not yet entered into force

Sources: (UNEP, 1987e; Keckes, 1986)

TABLE 1.2 - Participants in UNEP's Regional Seas Programme and Related Conventions

MEDITERRANEAN REGION

Participants	Action Plan Signed	Convention Ratified
Albania	–	–
Algeria	–	Yes
Cyprus	Yes	Yes
EEC	Yes	Yes
Egypt	Yes	Yes
France	Yes	Yes
Greece	Yes	Yes
Israel	Yes	Yes
Italy	Yes	Yes
Lebanon	Yes	Yes
Libya	Yes	Yes
Malta	Yes	Yes
Monaco	Yes	Yes
Morocco	Yes	Yes
Spain	Yes	Yes
Syria	–	Yes
Tunisia	Yes	Yes
Turkey	Yes	Yes
Yugoslavia	Yes	Yes

RED SEA AND GULF OF ADEN REGION

Democratic Yemen	Yes	–
Djibouti	–	–
Jordan	Yes	–
Palestine (PLO)	Yes	Yes
Saudi Arabia	Yes	Yes
Somalia	Yes	–
Sudan	Yes	Yes
Yemen	Yes	Yes

KUWAIT ACTION PLAN REGION

Participants	Action Plan Signed	Convention Ratified
Bahrain	Yes	Yes
Iran	Yes	Yes
Iraq	Yes	Yes
Kuwait	Yes	Yes
Oman	Yes	Yes
Qatar	Yes	Yes
Saudi Arabia	Yes	Yes
United Arab Emirates	Yes	Yes

SOUTH-EAST PACIFIC REGION

Chile	Yes	Yes
Colombia	Yes	Yes
Ecuador	Yes	Yes
Panama	Yes	Yes
Peru	Yes	–

EAST ASIAN SEAS REGION

Indonesia	Yes	No Regional Convention In support of Action Plan
Malaysia	Yes	
Philippines	Yes	
Singapore	Yes	
Thailand	Yes	

SOUTH-WEST ATLANTIC REGION

Argentina	Action Plan preparation delayed
Brazil	
Uruguay	

CARIBBEAN REGION

Participants	Action Plan Signed	Convention Ratified
Antigua and Barbuda	–	–
Bahamas	–	–
Barbados	Yes	Yes
Belize	–	–
Colombia	Yes	–
Costa Rica	–	–
Cuba	–	–
Dominica	–	–
Dominican Republic	–	–
EEC	Yes	–
France	Yes	Yes
Grenada	Yes	Yes
Guatemala	Yes	–
Guyana	–	–
Haiti	–	–
Honduras	Yes	–
Jamaica	Yes	–
Mexico	Yes	Yes
Netherlands	Yes	Yes
Nicaragua	Yes	–
Panama	Yes	–
St. Christopher and Nevis	–	–
St. Lucia	Yes	Yes
St. Vincent and Grenadines	–	–
Suriname	–	–
Trinidad and Tobago	–	Yes
United Kingdom	Yes	Yes
United States of America	Yes	Yes
Venezuela	Yes	–

WEST AND CENTRAL AFRICAN REGION

Participants	Action Plan Signed	Convention Ratified
Angola	–	–
Benin	Yes	–
Cape-Verde	–	–
Congo	Yes	–
Equatorial Guinea	–	–
Gabon	Yes	–
Gambia	Yes	Yes
Ghana	Yes	–
Guinea	Yes	Yes
Guinea-Bissau	–	–
Ivory Coast	Yes	Yes
Liberia	Yes	–
Mauritania	Yes	–
Namibia	–	–
Nigeria	Yes	Yes
Republic of Cameroon	–	Yes
Sao Tome and Principe	–	–
Senegal	Yes	Yes
Sierra Leone	–	–
Togo	Yes	Yes
Zaire	–	–

EASTERN AFRICAN REGION

Participants	Action Plan Signed	Convention Ratified
Comoros	–	–
EEC	Yes	–
France	Yes	–
Kenya	–	–
Madagascar	Yes	–
Mauritius	–	–
Mozambique	–	–
Seychelles	Yes	–
Somalia	Yes	–
United Republic of Tanzania	–	–

SOUTH ASIAN SEAS REGION

Bangladesh	Action Plan preparation initiated
India	
Maldives	
Pakistan	
Sri Lanka	

SOUTH PACIFIC REGION

Participants	Action Plan Signed	Convention Ratified
Australia	–	–
Cook Islands	Yes	–
Federated States of Micronesia	Yes	–
Fiji	–	–
France	Yes	–
Kiribati	–	–
Marshall Islands	Yes	Yes
Nauru	–	–
New Zealand	Yes	–
Niue	–	–
Palau	Yes	–
Papua New Guinea	–	–
Solomon Islands	–	–
Tonga	–	–
Tuvalu	–	–
United Kingdom	–	–
United States of America	Yes	–
Vanuatu	–	–
Western Samoa	Yes	–

Source: Adapted with modifications from (UNEP, 1987e, pp. 452-453; Thacher, 1983, pp. 452-453)

lands of International Importance (Lapointe, 1987, pp. 478-485; Navid, 1987, pp. 486-497), the *Regional Seas Programme is the first to promote comprehensive regional environmental management amongst nations.*

The overall strategy followed by the UNEP Regional Seas Programme includes four basic elements. These four elements are:

1. Promotion of international and regional conventions, guidelines and policies, for the control of marine pollution and for the protection and management of marine and coastal resources;
2. Assessment of the state of marine pollution, of the sources and trends of this pollution, and of the impact of the pollution on human health, marine ecosystems and amenities;
3. Co-ordination of efforts with regard to the environmental aspects of the protection, development and management of marine and coastal resources; and
4. Support for education and training efforts to make possible the full participation of all countries in the protection, development and management of marine and coastal resources (Thacher, 1983, pp. 450-451; UNEP, 1982a, p. 3).

In so far as being able to pull nations together on a common cause, for example, controlling pollution, the RSP has succeeded. Growing concern about increasing levels of pollution in coastal waters and its effects on fisheries, tourism and coastal development, as well as the realization of the transboundary nature of this pollution have served to make pollution a very vital issue upon which to build the initial coalition (Nelson and Needham, 1985, p. 10). In fact, the initiation of programmes in such regions as the Mediterranean, Caribbean, South Pacific, South-East Pacific, Kuwait, Red Sea and Gulf of Aden, West and Central Africa, Eastern Africa, East Asian Seas, South Asian Seas and South-West Atlantic Regions have pollution control as

their singular and unifying theme (Hulm, 1985, pp. 82-84; Thacher, 1983, pp. 450-463; Bliss-Guest and Keckes, 1982, pp. 43-49; Thacher and Meith, 1980, pp. 153-182).

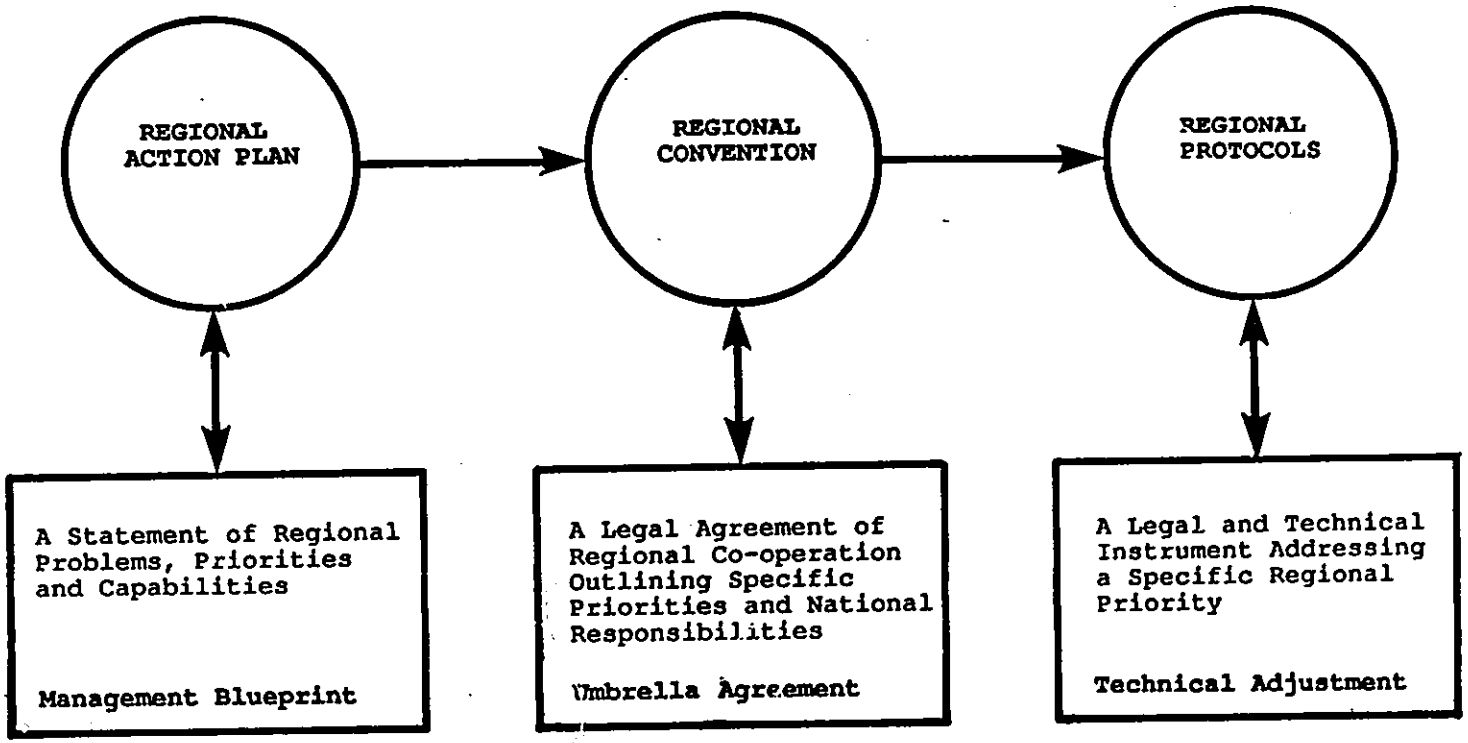
The substantive aspect of any regional programme is outlined in an *action plan*, which is formally adopted by an intergovernmental meeting of a region's Governments before the Programme enters the implementation phase (UNEP, 1982b, p. 2). Action plans are designed to link the assessment of the quality of the marine environment and the causes of its deterioration, with activities for the development and management of marine and coastal environments. The action plans promote the parallel development of regional legal agreements *(conventions* and *protocols)* and of action-oriented programme activities (projects) (Figure 1.3) (Bliss-Guest and Keckes, 1982, p. 44). More specifically, within the preparatory phase preceding action plan adoption, Governments are consulted through a series of meetings and missions about the scope and substance of an action plan. Interested regional, international and UN organizations collaborate with national Government agencies to prepare reviews on the specific regional, environmental problems including those issues of most urgent concern, along with the corresponding priorities to be assigned to action plan activities (UNEP, 1984d, p. 1).

All action plans are organized in a similar way, although individual activities for each region vary according to the needs and priorities of that region. Generally, an action plan includes the following five components:

1. *ENVIRONMENTAL ASSESSMENT*

   This concerns the assessment and evaluation of the causes of environmental problems, and their magnitude and impact on the region. An emphasis is placed on activities such as: baseline studies; research and monitoring of the sources, levels and effects of marine pollutants; ecosystem studies; studies of marine and coastal activities and social and economic factors that may influ-

FIGURE 1.3 - Regional Seas Programme Instruments



Source: (Jedynack and Needham, 1987)

ence, or may be influenced by, environmental degradation; and the survey of national environmental legislation (UNEP, 1984d, p. 1). Environmental assessment is undertaken to assist national policy makers to manage their natural resources in a more effective and sustainable manner and to provide information on the effectiveness of legal / administrative measures taken to improve environmental quality (UNEP, 1983b, p. 2).

2. *ENVIRONMENTAL MANAGEMENT*

All regional programmes include an assortment of environmental management activities. Examples of such activities are: co-operative regional projects on training in environmental impact assessment; management of coastal lagoons, estuaries and mangrove ecosystems; control of industrial, agricultural and domestic wastes; and formulation of contingency plans for dealing with pollution emergencies (UNEP, 1982b, p. 2).

3. *ENVIRONMENTAL LEGISLATION*

A legally binding convention, elaborated by specific technical protocols, provide the legal framework for co-operative national and regional action. This legal commitment of Governments clearly expresses their political will to individually and jointly manage their common environmental problems (UNEP, 1982b, p. 2).

4. *INSTITUTIONAL ARRANGEMENTS*

When adopting an action plan, governments select an organization to act as the permanent or interim Secretariat of the Action Plan. They are also expected to determine the schedule of intergovernmental meetings which are responsible for programme review, evaluation and decision - making. As the programme is implemented primarily through designated national institutions, training and assistance are provided as needed, to allow for full participation

of the institutions. Regional, international and U.N. organizations may also provide assistance, depending on the needs of the region (UNEP, 1984d, p. 2; UNEP, 1982b, p. 2).

5. *FINANCIAL ARRANGEMENTS*

UNEP along with selected U.N. and other organizations, provide the *seed money* or catalytic financing in the early stages of regional programmes. It is expected, however, that as a programme develops regional governments will gradually assume full financial responsibility for programme operation. Generally, government financing is channelled through a regional trust fund, to which governments make annual contributions. This fund is administered by the organization designated as the action plan secretariat. In addition, Governments may also contribute by supporting their national institutions participating in the programme or by financing specific project activities (UNEP, 1984d, p. 2).

It is essential to understand that all components of a regional programme are interdependent. Assessment activities identify the regional problems that require priority attention. Legal agreements are negotiated to strengthen co-operation among states in managing the identified problems. They also provide an important tool for national policy makers to implement national control measures (UNEP, 1982b, p. 3). Management activities, aimed at controlling existing environmental problems and preventing the development of new ones, are a means by which States fulfil their treaty obligations. Co-ordinated assessment activites then continue to assist governments by providing ongoing scientific information to evaluate whether legal agreements and management policies are effective (UNEP, 1983b, p. 3; UNEP, 1981b, p. 3). A more complete and thorough examination of the Regional Seas Programme is presented in Chapters 4 through 8. The reader is advised to consult these five chapters for an elaboration on this overview of the Regional Seas Programme.

1.5 Research Approach

Geographic models are designed to simplify the complexity of real world processes and systems and to facilitate their better understanding. More specifically, geographic models can be very useful if they fulfill any of several functions: 1) Help to identify potentially important features, elements, constituent parts and their relations; 2) Help to generate research questions; and 3) Help in understanding the complexity and interconnectiveness of a range of situations and problems (Mitchell, 1980a; Chorley and Haggett, 1967a, 1967b, 1967c).

In natural resource analysis and management, models serve as vehicles to improve understanding of basic variables and processes through which resources are allocated. In this context, five model types have been shown to regularly appear in the theoretical and applied literature: *biophysical, economic, cultural, integrative, and managerial (prescriptive and descriptive).*

Biophysical models are used in biogeography, ecology and geomorphology. Research and modelling in these areas is highly relevant to resource management if the impact of human intervention in natural ecosystems is to be anticipated (Mitchell, 1980a, p. 33). In this context, a few examples of biophysical models and research include Dansereau's ecosystem model (1973), along with other models by Cooke and Doornkamp (1974), Coates (1971) and Flawn (1970) in geomorphology; and Simmons (1974), Sochava (1971) and Watt (1968) in biogeography and ecology.

Economic models are created to understand the patterns and processes associated with the production, distribution and consumption of resource-based commodities, products and services (Mitchell, 1980a, pp. 36-39). In this context, a few examples of economic models include: Preston (1982, pp. 4-16), and Ullman (1957).

In natural resource analysis and management the cultural or social variable is usually important, because management decisions are often shaped by perceptions, atti-

tudes, values, preferences and motivations (Mitchell, 1980a, p. 39). In this context, examples of social or *cultural models* include: Hagerstrand's (1967, 1962) diffusion model, and Jones' (1954) unified field theory model.

Integrative models refer to those constructs that attempt to integrate or co-ordinate biophysical, economic and cultural considerations in resource analysis and management (Mitchell, 1980a, p. 42). Examples of models of this type include: Nelson's (1973) Human Ecological Model, along with Boyden (1979), Dunlap and Catton (1979), Hewitt and Hare (1973), and Stankey (1972).

Finally, a distinction has been made between *prescriptive* and *descriptive management models.* Whereas, the prescriptive model demonstrates how the management process should occur, the descriptive model indicates how the management process does occur. Both types of models may be used within a given geographic study; the prescriptive establishes an ideal situation to be sought, while the descriptive model indicates the nature of the existing process or situation (Mitchell, 1979, p. 314). Examples of prescriptive models include Sewell (1973); Hamill (1968), while examples of descriptive models include: White (1974, 1961), Lowi (1972), Lindblom (1968), and and Etzioni (1967).

Mitchell (1980a) in "Models of Resource Management" identifies and discusses model assessment criteria. Four such standards of model effectiveness are: clarity, simplicity, generality and accuracy (Bunge, 1962, pp. 2-3). Further, Mitchell (1980a, p. 50) indicates that the process of determining model clarity and accuracy is just beginning in geography. The main reason for this infancy is the *lack of comparative - evaluative research using the same models.* In other words, *there has been little concerted research effort related to the validation of existing models.* Potential application is usually identified and discussed by model developers, but few models have been tested rigorously by external investigators. The Resource Management Assessment Model

(RMAM) may be an exception (Table 1.3). Several authors have utilized this model in a variety of natural resource management contexts (Needham and Jedynack-Copley, 1989; Bastedo, Nelson and Theberge, 1984; Val and Nelson 1983; Nelson and Jessen, 1981). *The proposed research is an attempt to further validate the RMAM and meet the call for comparative - evaluative studies.*

Although there have been numerous attempts to model specific decision - making patterns and processes surrounding specific resource issues or problems (Wheaton, 1986; Dryzek, 1983; Freeman, 1981; Mitchell and Sewell, 1981; Dwivedi, 1980; Leiss, 1979; Krueger and Mitchell, 1977) and to model the discipline of resource management generally (O'Riordan, 1971), there has been but one known attempt to identify and model the *elements of resources management common to most situations.* The Resources Management Assessment Model (RMAM), although not a definitive statement, is a first attempt to present an element-inventory or checklist of management elements based upon 30-40 years of Canadian and European observation and experience (Nelson, 1982, p. 242). It is a conceptual management framework, consisting of five elements: rationale, conceptualization and motivation; actors, agencies and institutional arrangements; planning and analysis; implementation; and general guides and principles. Each of these elements can be further broken down to illustrate other subcomponents. The contention is that this assessment model represents an attempt at a description of the basic elements and processes which should be involved in management. In interpreting the model, it must be remembered that it does not suggest a management progression from left to right through columns or vice versa.

In the context of the foregoing, the first element, *rationale, conceptualization and motivation,* simply refers to the process of issue or problem definition in terms that are meaningful to managers and the public they serve. It also implies that some issues and problems eventually reach levels of relevance, pertinence and salience that result in

TABLE 1.3 - Resource Management Assessment Model (RMAM)

ACTORS AND AGENCIES	RATIONALE, CONCEPTUALIZATION, AND CONTEXT	PLANNING AND ANALYSIS	IMPLEMENTATION	GENERAL GOALS AND PRINCIPLES
GOVERNMENT, MANAGEMENT I.RVE. OR TYPE:	PROBLEM, ISSUE, CONDITION, CONFLICT, SCARCITY	STRATEGIC PLANNING	Negotiations, Public Hearings, Pre-Hearings, Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	Government Industry Public Intergroup Mass Media News Agency New Institution
BENEFICIARY	POLITICAL AGENDA	BIOPHYSICAL, SOCIO-ECONOMIC INVENTORY	APPROVAL	BASIC & APPLIED RESEARCH
PROPONENT	MANAGEMENT AGENDA	HUMAN USE SYSTEM CLASSIFICATION	Surveillance & Inspection Monitoring, Enforcement Modification	MANAGEMENT CO-ORDINATION
LEAD	SCIENTIFIC AGENDA	SIGNIFICANT AREAS IDENTIFICATION	CONSTRUCTION	INCENTIVES - ECONOMIC, SOCIAL, POLITICAL
PARTICIPANT		EVALUATION OF ALTERNATIVES	Surveillance & Inspection Monitoring, Enforcement Procedure Modification	SENSTIVITIES, VALUES
OBSERVER		GOAL ASSESSMENT	OPERATION	INFORMATION ACCESS
				PROCESS MONITORING
				MANAGEMENT CO-OPERATION
Federal Provincial (State) Regional International Municipal Committee Industry Commission Council, Authority, District Task Force Interest Group Mass Media Other		ABC Method		

Source: Adapted with considerable modification from (Nelson and Jessen, 1981)

their placement on social and political agendas (Needham, 1979, p. 20). For example, the federal government initiated an inquiry into federal and national water policy in 1984. The Pearse Commission Report attempts to define the realm of federal water management responsibility (Pearse et al, 1985). In addition, in December 1984, the Federal Task Force on Northern Conservation submitted its report to the Department of Indian Affairs and Northern Development, and the Ministries of Renewable Resources in the Yukon and Northwest Territories (Schwass et al., 1984). The basic intent was to define the dimensions of future northern land and water conservation. Similarly, the Science Council of Canada publicly released the work of its Task Force on Agricultural Soil Degradation in an effort to mobilize public and political opinion (Science Council of Canada, 1986).

The second management element, *actors, agencies and institutional arrangements* simply refers to individuals and institutions involved in decision - making at different management levels. In this context, some may be considered lead and/or participatory federal departments, regional groups or concerned citizens. For example, in the context of the Canadian North, the Department of Indian Affairs and Northern Development (DIAND) must be considered a lead actor for many federal government activities (Whittington, 1985; Keith and Wright, 1978; Peterson and Wright, 1978; Naysmith, 1977). Similarly, Environment Canada is a lead actor in establishing a comprehensive network of protected areas in the North (as well as the rest of Canada) to provide adequate protection and management of environmentally significant areas. Environment Canada's goal is to preserve Canada's natural or cultural heritage and provide opportunities for public enjoyment and appreciation of these features through the national park and related reserve system (Environment Canada, 1983, p. xvii).

The element, *planning and analysis*, simply refers to the task of establishing management goals and objectives based on sound resource analysis and option evaluation.

It includes, therefore, such activities as strategic planning, resources inventory, demand and supply forecasting, land use classification, project design and evaluation. For example, the MacKenzie Valley Pipeline and the Beaufort Sea Hydrocarbon Production Proposals were reviewed and assessed according to federal environmental impact assessment procedures (Berger, 1977; Tener, 1984).

The element, *implementation*, simply refers to the process of formalizing and instituting management options. It includes, therefore, such general activities as approval, construction and operation and such specific activities as programme and project surveillance and inspection. For example, in the context of the Canadian energy sector, the National Energy Board (NEB) has the following regulatory functions: granting certificates of public convenience and necessity for construction of interprovincial pipelines and international electrical transmission lines; issuing licences for the export of power, oil or natural gas or the importing of natural gas; and approving federally regulated tariffs and tolls for pipelines (Page, 1986, p. 125).

Finally the element, *general guides and principles*, simply refers to those continuous processes that are prerequisites to sound natural resource management, such as research co-ordination, information access, and system and process monitoring. For example, in the context of the Environmental Impact Assessment Process, recommendations have been made to all federal line agencies and departments to initiate post-audit analyses (CEARC, 1986).

The task at hand demands the application of evaluative criteria related to each of these major RMAM elements. Criteria are formulated in terms of questions related to each element (Table 1.4). These questions are then used to assess the Regional Seas Programme's structure and management process. It is hoped that this comprehensive analysis will provide important lessons that can be applied to the management of the Canadian Arctic.

TABLE 1.4 - Management Assessment Criteria Matrix and Questions

Element	Questions to be Answered		
Rationale and Motivations	1. What was the fundamental reason for the establishment of a RSP?	2. What was the natural resource problem or issue upon which the initial regional coalition was built?	3. What was the initial procedure followed to sponsor and to establish a RSP?
Actors, Agencies & Institutional Arrangements	1. What types of actors, agencies and institutional arrangements form the regional managment core?	2. What types of actors, agencies and institutional arrangements form the national management core, and how are they arranged?	3. What is the nature and form of co-ordination among national, regional and international actors, agencies and institutional arrangements participating in the RSP?
Planning and Analysis	1. What planning procedures are used to identify and define national and regional goals?	2. What planning and analysis projects are being undertaken to support regional environmental management?	3. What are the regional differences in the commitment to planning and analysis projects?
Implementation	1. What are the fundamental procedures used to legitimize the goals and objectives of regional action plan statements, and what means are used to implement these legal procedures?	2. What components of regional management are most mature in terms of implementation?	3. What national and regional procedures are in place to monitor programme implementation and its successes and failures?
General Guides and Principles	1. What preconditions are fundamental to regional seas management?	2. What major programme strengths have been identified by internal and external assessors?	3. What major programme weaknesses have been identified by internal and external assessors?

1.6 A Reflective Note

As a geographer, the author was particularly sensitive to the role and interest of geographers in international oceans and coastal management. The literature review to follow indicates a rather lean contribution. According to Smith (1985, p. 109), attention is long overdue in my discipline to the management of 71 percent of the Earth's surface. Harrison (1980, p. 112) supports this by saying that geography, in all its forms, has a major contribution to make to the processes of designing and applying ocean management frameworks. This thesis attempts to make a worthwhile contribution by studying the regionalization of oceans and coastal management.

1.7 Thesis Development

This thesis is organized according to nine major chapters. These chapters, though interrelated, reflect different purposes and objectives. Thesis development, therefore, evolves as follows:

- Chapter 2 - Literature Review in the Realm of Oceans and Coastal Management
- Chapter 3 - Research Methodology
- Chapter 4 - The Regional Seas Programme: Rationale, Conceptualization and Motivation
- Chapter 5 - The Regional Seas Programme: Actors, Agencies and Institutional Arrangements
- Chapter 6 - The Regional Seas Programme: Planning and Analysis
- Chapter 7 - The Regional Seas Programme: Implementation
- Chapter 8 - The Regional Seas Programme: General Guides and Principles
- Chapter 9 - Conclusions and Reflections

Chapter II

LITERATURE REVIEW IN THE REALM OF OCEANS AND COASTAL MANAGEMENT

2.1 PURPOSE

The purpose of this chapter is simple and straightforward. It attempts to provide an overview of key references that were most influential in establishing the direction and defining the substance of the research project at hand (Table 2.1). The literature review is purposefully organized into *four* major themes or information fields: Environmental Problem Overview, Theories and Principles, International Environmental Management Case Studies, and Arctic Management Progress. Attention is focussed on key concepts and issues addressed by academics, professional managers, scientists, politicians and others working in these areas. At the end of each theme review, synthesizing statements are presented which capture the essence of the knowledge state related to each theme. In addition, one or two unanswered questions are posed. The questions are the author's attempt to identify what is believed to be an omission or information void in the contemporary thinking of oceans and coastal management. They ultimately serve the purpose of helping to justify the research that is being undertaken in the context of this thesis. Concomitantly, the questions serve as major guides for the survey instruments used in the research methodology (Chapter 3).

TABLE 2.1 - Select References Serving as the Basis for Research Problem Definition

I - Marine Management

1. Alexander (1981, 1977)
2. Boczek (1986, 1983)
3. Borgese (1986)
4. Caldwell (1984)
5. Ditton, Seymour and Swanson (1977)
6. Friedheim (1979)
7. Johnston (1981)
8. Mitchell (1986)
9. Okidi (1977)
10. Richardson (1985)
11. Waldichuk (1973)
12. Wolf (1985)

II - Comparison, Evaluation and Assessment

1. American Institutes for Research (1970)
2. Bothe (1980)
3. Bowen, Hoole and Anderson (1980)
4. Centre for Ocean Management Studies, University of Rhode Island (1981)
5. Hoole (1979)
6. Lang (1986)
7. McIlroy (1990)
8. Mitchell (1982)
9. Sabatier and Mazmanian (1983)
10. Suchman (1970, 1967)
11. Treasury Board of Canada (1981a, 1981b)
12. Weiss (1972a, 1972b)

III - UNEP Regional Seas Programme

1. Anonymous (1985c, 1984, 1983, 1982a, 1982b, 1981, 1980)
2. Bliss - Guest and Keckes (1982)
3. Boxer (1982)
4. Hulm (1985, 1983a, 1983b)
5. IUCN/UNEP (1985a, 1985b, 1985c, 1985d, 1984)
6. Jeftic (1988b)
7. Juda (1979b)
8. Kuwabara (1984)
9. Nelson and Needham (1985)
10. Thacher (1983, 1982, 1980)
11. Thacher and Meith - Avcin (1980, 1978)
12. UNEP (1987e, 1987f, 1987g, 1987i, 1985d, 1985e, 1984d, 1982a)

IV - Canadian Perspective on Oceans, Shorelines and Coastal Management

1. CCREM (1978)
2. Harrison (1980)
3. Harrison and Parkes (1983)
4. Hildebrand (1989)
5. IPAC and IRPP (1986)
6. Johnston (1988, 1985, 1977, 1972/1973)
7. McNeil and Windsor (1990)
8. Mitchell (1975)
9. Mitchell and Gardner (1983)
10. Pearse, Bertrand and MacLaren (1985)
11. Saunders (1988)
12. Wells and Gratwick (1988)

V - The Arctic

1. Armstrong, Rogers and Rowley (1978)
2. Berger (1989)
3. CARC (1984a, 1984b)
4. French (1976)
5. MacLeod (1977)
6. Nelson, Needham and Norton (1987)
7. Page (1986)
8. Pharand (1984a, 1984b, 1973)
9. Stenbaek (1987)
10. Vanderzwaag and Lamson (1990, 1987, 1986)
11. Whittington (1985)
12. Working Group of the National Capital Branch of the Canadian Institute of International Affairs (1988)

2.2 ENVIRONMENTAL PROBLEM OVERVIEW

The Environmental Problem Overview literature contributes much information and insight along *three* planes: 1. the state of global and regional environmental health; 2. the global and regional environmental challenge; and 3. the global and regional scientific challenge.

2.2.1 The State of Global and Regional Environmental Health

Articles related to the state of environmental health provide a comprehensive review of the degradation in environmental quality of ocean and coastal areas adjacent to all the continents. The articles focus on such issues as: declining ecological diversity; declining water quality; the presence of indicators of environmental stress and distress; the pervasiveness of contaminants; the movement of contaminants and pollution agents within food chains, between species and in a spatial context (Hulm, 1983b; UNEP, 1983d; MacNeill, 1982; Corwin, 1979; Woodhouse, 1979; Thacher and Meith-Avcin, 1978; Douglas, 1971).

This literature strongly indicates that the agents of environmental stress and decay are pervasive and that humankind is ultimately threatened by the complexity, toxicity and distribution of waste residuals or contaminants. However, a significant message is presented which indicates that *it is in our oceans and coastal margins where a disproportionate amount of these waste residuals migrate and accumulate* (The World Commission on Environment and Development, 1987; MacNeill, 1984; Corwin, 1979; Dybern, 1974; Matthews, 1973; Wooster, 1973).

2.2.2 The Global and Regional Environmental Challenge

Several key authors define, in quite dramatic terms, the realities of the environmental challenge that are defined by the state of ecosystem or environmental health. Such notions as regionality, co-operation, problem complexity, integration and systems

approach are commonly used as focal points for the authors entry into the environmental challenge debate (Baker, 1985; Lie, 1985; Roll, 1985; Siebold, 1985; Alhéritière, 1982; Kimball, 1982; Corwin, 1979; Alexander, 1977; Okidi, 1977; Douglas, 1971). The relevant literature indicates that oceans and coastal management demands a regional, co-operative approach to planning and management (Alhéritière, 1982; Kimball, 1982; Alexander, 1977; Okidi, 1977). It is generally believed that it is impossible to unilaterally manage pollution in shared waterways as 'pollution knows not the significance of political boundaries' (Kesteven, 1985; Siebold, 1985; Matthews, 1973). An additional noteworthy point is the repeated suggestion that *the environmental challenge is not so much one of improving the sophistication of ecological science, but instead one of developing and supporting institutional arrangements that can effectively and efficiently respond to the evidence provided by scientific research* (Yuru, 1985; McRae, 1984; Anonymous, 1982b; Waldichuk, 1973; Wenk, 1973; Johnston, 1972/1973). In other words, the literature suggests that our scientific knowledge and understanding of environmental degradation are mature enough that key policy decisions can now be made.

2.2.3 The Global and Regional Scientific Challenge

At the same time, the literature suggests that key resistances to the adoption of policies and programmes are the barriers to the sharing of environmental and other scientific information (Norgaard, 1990; Regier, 1990; Gonçalves, 1985; Charnock, 1984; Lutz, 1975b; Wooster, 1973). Several authors discuss the unreliability and / or incompatibility of scientific procedures, methodologies and approaches used within the community of nations that prohibit the exchange of information originating in different places (Keckes, 1986; Kesteven, 1985; Charnock, 1984; Corwin, 1979; Johnson, 1976). This lack of harmonization in the methods, approaches and techniques that are used within the scientific community, is manifested on a regional basis, and is particularly evident

within the Third World (Roll, 1985; Lutz, 1975a, 1975b; Waldichuk, 1973). This author has found the 'lack of scientific harmony' difficult to comprehend, because of the belief perpetuated in the North American literature that information sharing in the scientific community was unrestricted and beyond or above the disputes that restrict dialogue and interaction in other socio-economic and political areas (Roll, 1985; Siebold, 1985; Barber, 1971).

According to the literature, the desired response to the state of environmental health and its attendant environmental challenges, is a management system that promotes integration, co-operation, and the regionalization of problem management (Baker, 1985; Roll, 1985; Siebold, 1985; Kimball, 1982; Alexander, 1977; Okidi, 1977; Douglas, 1971). It is forcefully indicated that the very complexity of the environmental problems in the ocean and coastal zones of the world, are beyond the capacity of single nations, and as a consequence, *new and innovative institutional arrangements are needed* (Alexander, 1981; Eckert, 1979; Wenk, 1973). Key authors also indicate that *comparative studies are needed* of the existing ways and means of achieving regional concensus on common environmental issues. Such institutional arrangements must reflect in their organization the transboundary nature of pollution and other regional environmental problems (Carroz, 1978; Waldichuk, 1973; Wenk, 1973). The reviewer is left wondering, at the end of this exploration, what type of environmental problem would best serve as the catalyst for regional co-operation in oceans and coastal management?

2.3 THEORIES AND PRINCIPLES

Literature associated with the Theories and Principles of oceans and coastal management, is most often drawn from journals and works originating in schools of international policy, natural resources law, and environmental management. This literature is

rich and varied in the legal interpretation of management and management structure; the legal interpretation of institutional arrangements; the progress of institutional evolution; and the content description of agreements, action plans, conventions and protocols used to formalize regional and international co-operation (Richardson, 1985; McRae, 1984; Boczek, 1983; Dobbert, 1980; Juda, 1979b; Fleischer, 1977). However, the most cogent messages coming out of the theories and principles literature relate to four concepts or ideas: regions and regionality; regimes and organizations; boundary delimitation; and institutionalization of international co-operation.

As a geographer, the author was delighted to see the plethora of articles that attempted to regionalize or provide a spatial perspective to coastal problems and their management (Alhéritière, 1982; Kimball, 1982; Alexander, 1977; Okidi, 1977). The literature also explored the concept of regime – the institutionalization and legalization of a regional strategy. The works of Boczek (1986), Keohane (1982), Stein (1982), Young (1982) and Haas (1975) are noteworthy in this context. These authors not only provide clear examples of the evolution of the regime concept, but also spend time identifying the facilitators and the resistances to concept evolution through time. *The evolution of regional programmes was said to be dependent upon sets of key decisions related to institutional sophistication, scientific expertise, financial resources and political support.* The important point is that these building blocks must be present in varying combinations as programmes mature from the preparatory through to the implementation and operational phases.

The process of regional boundary delimitation is described in the works of Johnston (1988), Pharand (1984a, 1984b, 1984c), Prescott (1985) and others. There is, perhaps, no other issue in international affairs that has produced so much disagreement among nations, than attempts to demarcate or delimit boundaries – boundaries that ultimately suggest a certain allocation or division of land and water resources and

define political sovereignty. The underlying point is that boundary delimitation has historically been complex and contentious, and has been at the root of many major twentieth century conflicts between nations. However, the suggestion is made that regional boundary delimitation in the context of environmental management, though complex and contentious, has been associated with greater measures of agreement and concensus than have other regional affairs.

Certainly this boundary delimitation theme is of considerable relevance to Canadians and Canadian experience. For example, the International Court of Justice in The Hague has presented, in the recent past, a judgement on the disputes involving Canada and the United States on the East Coast (Hildebrand, 1989; Prescott, 1985; International Court of Justice, 1984). In addition, literature related to the Arctic, the Law of the Sea and the delimitation of Exclusive Economic Zones (EEZ), and the seaward reach of continental shelves is rich in implication for Canada (Hildebrand, 1989; Johnston, 1988; McRae, 1986; Vanderzwaag and Lamson, 1986; McRae, 1984; Pharand, 1984a, 1984b, 1984c; Archer and Scrivener, 1983; Johnston, 1981; Law, 1980; Johnson and Zacher, 1977).

The cogent message contained within this literature is that the environmental challenge associated with oceans and coastal margins demands regional management programmes that evolve from the aspirations, goals and objectives of a region's people (Alexander, 1981; Anonymous, 1981). *We no longer live in a world where management models can or should be immediately transferred and applied to other regional experiences or cases.* As Caldwell (1984) suggests in his work on international environmental policy, institutional arrangements can no longer be drawn off a shelf and applied to distant situations; *institutional arrangements associated with regional management, must be customized to meet the peculiarities of a region's experience.*

Although the Theories and Principles literature is rich in definition, and rich in legal interpretation, it appears to be weak in two areas. In this context, *two* questions can be posed which reflect the nature of these knowledge voids: 1. What criteria should be used to compare and contrast different attempts to create regional institutions addressing regional problems? and 2. What common management denominators underlie international experience with regional management regimes? The literature is quite lean in attempts to compare and contrast regional experiences with differing theories and principles on regional management (UNEP, 1982a).

2.4 INTERNATIONAL ENVIRONMENTAL MANAGEMENT CASE STUDIES

The International Environmental Management Case Studies literature is a natural extension to the body of knowledge that was presented in the previous section on Theories and Principles. It introduces and describes examples of international co-operation and management in the realm of marine and coastal affairs, and identifies the actors and agencies involved in these management schemes along with the sometimes conflicting perceptions, attitudes, values and motivations of participating nations (Table 2.1) (Caldwell, 1984; Mensah, 1984; Carroz, 1978; Johnson, 1976; Waldichuk, 1973; Wenk, 1973).

The literature is dominated by progress reports on a variety of regimes, for example, the Antarctic Treaty System, the Great Lakes Water Quality Agreement, the Helsinki Convention (on the Baltic Sea), the Law of the Sea Convention, the Mediterranean Convention, and the North Sea Conference (Colborn et al, 1990; Ehlers, 1990; Riddell-Dixon, 1989; Anonymous, 1985b; Forster, 1985; Richardson, 1985; Voigt, 1985; The Helsinki Commission, 1984; Shusterich, 1984; Boczek, 1983; Boxer, 1982; Richardson, 1982; Johnston, 1981; Hagerhall, 1980; Juda, 1979; Carroz, 1978; Fleischer, 1977; Johnson, 1976; Waldichuk, 1973). Beneath these general overviews, the largest

proportion of comment is focussed on the implementation and the approvals process underlining associated agreements, action plans, treaties, conventions and protocols. Unfortunately, little of the literature is related to the operations, functioning or the mechanics of these institutional arrangements. The residual message is that *students of international environmental management have been slow to commit themselves to comprehensive programme analysis and comparative study*. More specifically, there have been: few comparisons and evaluations of international management experience; few evaluations and assessments which use the same criteria to assess the experience of different management regimes; and few attempts to identify the criteria that could be used to look at system mechanics, and the relations among actors and agencies, the regime context, the planning and analysis process, the implementation process, and the underlying managerial guidelines and principles (UNEP, 1982a; Friedheim, 1981; Hennessey, 1981). Further, the literature does not reveal an acceptable template or conceptual model upon which analysis and comparison can be built. This lack of progress remains even though the call for more analysis and comparative research has been repeated in the last dozen years (Jessen, Day and Nelson, 1983; UNEP, 1982a; Centre for Ocean Management Studies, University of Rhode Island, 1981; Bowen, Hoole and Anderson, 1980; Hoole, 1979).

The case studies literature provides the global story as far as international cooperation in environmental affairs is concerned. It suggests that marine environmental management is not a new or novel concern among nations (Thacher, 1983; Waldichuk, 1973). Perhaps the oldest intergovernmental organization involved in the study of the marine environment is the International Council for the Exploration of the Sea (ICES), which was established in 1902 as an international scientific advisory body. Much of ICES' work has concentrated in the North Atlantic and the Baltic Sea areas, and aims to provide sea fisheries with scientific data and advice on the basis of ongoing marine

research (UNEP, 1982a). Growing concern over the impacts of pollution lead to ICES' involvement in marine pollution studies (Thacher, 1983). In 1967, ICES initiated its first major co-operative investigation on marine pollution when it established a working group to assemble data on harmful or potentially harmful substances to fisheries, that were being discharged or were likely to be discharged in the North Sea and adjacent seas (UNEP, 1982a). Interestingly, much of the earlier work on the marine environment was primarily related to scientific investigation and research exercises. In addition, the literature reveals a strong bias towards international co-operation in Western Europe, North America, the Mediterranean Region generally, and the developed world, as a population of nations (Colborn et al, 1990; Roll, 1985; Johnson, 1976; Douglas, 1971).

The literature leaves the reader with the impression that *international co-operation in various forms of resource and environmental management has become a luxury of the developed world, for it appears that significant progress is primarily being made in those developed nations that can best afford it* (O'Brien and Helleiner, 1980; Strong, 1977). For example, when ICES was first established it represented a coherent body of member states all at the same stage of scientific and economic development, and all eight members were European industrialized countries (Roll, 1985). Even today, eighteen industrialized European and North American states belong to and financially support the Council. In fact, according to Roll (1985), one of the reasons attributed to ICES' success is that all its member states are equally developed in the marine science field.

A growing awareness of the need for a comprehensive worldwide approach to marine science to permit the participation of *all* nations interested in the ocean, and thus promote worldwide co-operation and co-ordination, led to the establishment of the Intergovernmental Oceanographic Commission (IOC) within UNESCO, in 1960 (Roll,

1985). The IOC is presently comprised of 110 member states, two-thirds of which are developing countries, and has succeeded in facilitating co-operative research exercises in the Indian Ocean, the tropical Atlantic Ocean, the western Pacific Ocean and the Caribbean Region. Representatives from developing nations, it is reported, often defend their right to expect levels of economic and social development that the developed countries have already experienced, and maintain that they are not ready to become a party to international management regimes that may delay or forestall their movement towards economic maturity (Bhagwati and Ruggie, 1984; Keckes, 1981; Juda, 1979a; Abrams, 1976). Further, these nations are quite concerned about being involved in institutional arrangements that would demand the allocation of scarce human and financial resources to environmental problems. The opportunity cost would be a declining investment in economic or social progress (Anonymous, 1983, 1982b, 1980; Thacher and Meith, 1980; Sanger, 1972/1973).

In addition to identifying strong regional predispositions to management co-operation, this literature also reveals that there are transitional areas in which the conditions of management and co-operation are in a state of flux, and also areas without much international co-operation at all. Included in the list of transitional areas is the Antarctic, where the existing international regime, namely the 1959 Antarctic Treaty System, is coming up for formal review and re-evaluation in 1991 (Shusterich, 1984; Boczek, 1983). The Arctic may also be considered transitional as several international, multi-lateral, bilateral and national environmental management strategies exist or are being formulated. However, there is not as of yet, an overall framework to co-ordinate these circumpolar efforts. The condition of the Arctic will be further elaborated upon in a subsequent section of this literature review.

An area without much international co-operation is the South Atlantic Ocean, particularly along the east coast of South America, encompassing Argentina, Brazil and

Uruguay. More specifically, in 1980, an attempt was made by the UNEP Governing Council to initiate action plan activity in the South-West Atlantic Region, under the auspices of the UNEP Regional Seas Programme. However, in 1983, a request was made by Brazil to discontinue further development of the Action Plan because final programme decisions could not be reached by the three countries concerned (Keckes, 1986, p. 33). Progress on this regional agreement has since been delayed. Further discussion on this RSP region and the other programme areas is presented in Chapters 4 - 8.

In summary, the international management literature is dominated by *three* themes. More specifically, articles appear to provide: descriptions of the programmes during their evolutionary period; descriptions of key management benchmarks, for example, the signing and ratification of action plans, conventions and protocols; and descriptions of the meetings of plenipotentiaries, nominated experts groups, and meetings of major committees studying region - specific problems. It can be said without hesitation that the management literature related to the Antarctic Treaty System, the Great Lakes Water Quality Agreement, the Helsinki Convention (on the Baltic Sea), the Law of the Sea Convention, the Mediterranean Convention, and the North Sea Conference, is quite thorough in addressing these three themes (Archibald, 1988; Anonymous, 1979). However, at the same time, this literature is also very weak or limited in: 1. the comparative analysis of programmes that are attempting to accomplish similar goals and objectives; 2. the comparative analysis of programmes that are different in goals and objectives, but possess institutional structures that could be of interest to other regional cases; 3. the description of details such as institutional or management linkage(s) between decision - making levels or jurisdictions; 4. the methods or approaches to conflict resolution between actors and agencies working in regional programmes; and 5. the methods or incentives being used to facilitate regional co-

operation and integration. These particular literature omissions make it difficult for researchers to identify common denominators of success and failure that are inherent in these experiences. It is often difficult for researchers to identify those concerns, issues and problems that challenge or impede the development of regional co-operation, or to identify those institutional and structural means that promote success within regional regimes.

2.4.1 Case Study of The Regional Seas Programme (RSP)

The literature related to the RSP has appeared in journals, books and other documents that could be considered representative of several scientific and professional domains. More specifically, the RSP has been studied by researchers in natural science, social science, political science, law and foreign policy. However, one is left with the residual impression that the RSP literature has perhaps only achieved *three* objectives: it provides a comprehensive description of the environmental maladies around which nations have joined forces and agreed to co-operate; it identifies the components of regional action plans that generally address these regional ills; and it provides periodic status reports on action plan implementation, convention ratification and protocol definition. The few comprehensive RSP review articles that recant progress in all UNEP RSP areas are unfortunately, quite superficial in their treatment of programme mechanics, and fail to address important and related questions (Table 2.1) (Hulm, 1983b; Thacher, 1983; Bliss-Guest and Keckes, 1982; Thacher and Meith, 1980; Thacher and Meith-Avcin, 1978). For example, How do the regional programmes actually function? What is the institutional structure that has been decided upon to promote this functioning? What is the pattern to decision - making as a programme moves from the preparatory to the implementation, and then to the operational stage? This final question is particularly important to those who are interested in the transferability of regional programme models or specific programme components. In the context of the

latter, insight into co-ordination, co-operation, strategic planning, revenue sharing, project priorization and financial resources would seem important. Finally, it can be said that evaluations and assessments of the UNEP Regional Seas Programme were largely undertaken by UN affiliated actors and agencies, and they were anything but detailed and comprehensive (UNEP, 1987f; Keckes, 1986; Bliss-Guest and Keckes, 1982; UNEP, 1982a; Thacher and Meith, 1980).

The literature review reveals that UNEP RSP analysis and evaluations have largely been done in-house, and rarely undertaken by independent assessors or evaluators outside of the UN network. It should also be indicated that the most comprehensive assessment done of the RSP by Keckes (1986), was not a public document or a document that was readily available to researchers. A copy was obtained for this research exercise only upon request to the RSP Director himself, and at the end of two major field seasons of an associate in Geneva, Switzerland. This lack of open disclosure on UN programme performance and the superficiality of UN programme evaluation, seems to be a recurring complaint in legal and management journals that contain editorializations of international law and management. In fact, several Governing Council delegations called for a strengthening of the role of evaluation of UNEP projects and activities, at annual Governing Council meetings (Anonymous, 1983, 1982a, 1982b). One is left wondering why the Regional Seas Programme remains largely an unexposed international environmental management case study.

The common occurrence of the term *evaluation* in scholarly and management publications is somewhat disconcerting to the author. The general North American literature suggests that evaluation has been primarily related to three fundamental tasks: the evaluation of programmes in the context of policy directions; the evaluation of project performance in the context of programme guidelines; and the evaluation of project performance in the context of project objectives (Rutman, 1984; Finsterbusch

and Motz, 1980; Franklin and Thrasher, 1976; Weiss, 1972; Johnson, 1970; Suchman, 1967). In other words, much of the evaluation literature describes attempts to determine congruency between decision-making inputs and outputs: policy to programme, programme to project, policy to project (Blalock and Blalock, 1982; Hoole, 1979; Weiss, 1972; Yan, 1969). Authors of much of the RSP literature incorrectly use the term evaluation because the programmes being discussed are still in the conceptual stage. What these authors are really presenting are critical progress reports on programme evolution and not evaluations.

2.5 ARCTIC MANAGEMENT PROGRESS

Literature related to natural resource management in the Arctic region has appeared in an assortment of books, government and industry documents, and journals representing several scientific and professional domains (Table 2.1). More specifically, the Arctic has been studied and analyzed by natural scientists, political scientists, social scientists, legal experts, and foreign policy authorities. These combined efforts reveal an active interest in, and intrigue with, the Arctic along with an attempt to understand and deal with its inherent environmental complexities. The Arctic has also received international attention, perhaps for the obvious reason that several circumpolar nations are superpowers or are major industrial powers and have vested interests in this area.

In this context, the literature identifies several international legal instruments (agreements, treaties, conventions and protocols) related to the Arctic. Some of these agreements and conventions relate to specific resource sectors, for example, the 1987 *International Porcupine Caribou Agreement* between Canada and the U.S., to conserve the porcupine caribou herd and its habitat; the 1976 *International Agreement on the Conservation of Polar Bears,* a multi-lateral agreement uniting Canada, Denmark / Greenland, Norway, USA and USSR, to protect polar bears; the 1975 *Convention on*

International Trade in Endangered Species of Wild Flora and Fauna (CITES); the 1975 *Convention on Wetlands of International Importance Especially as Waterfowl Habitat* (RAMSAR); the 1946 *International Whaling Convention;* the 1918 *Migratory Bird Treaty* (between Canada, Mexico and USA); and the 1911 *Treaty for Preservation and Protection of Fur Seals* (which was replaced by the interim *Convention for the Conservation of North Pacific Fur Seals)* (Slipchenko, 1989, pp. 97-102; Environment Canada, 1986). Other agreements place an emphasis on promoting scientific co-operation, for example, the 1984 *Protocol of Canadian - Soviet Consultations on the Development of a Program of Scientific and Technical Co-operation in the Arctic and the North,* (which was renegotiated on 26 February 1987 and became known as the *Canada - USSR Arctic Science Exchange Programme)* (Slipchenko, 1989, pp. 98-99). Still other agreements reflect co-operation between two nations, like the 1988 *Canada - US Agreement on Arctic Co-operation,* which generally facilitates navigation by icebreakers in Arctic waters, and provides for the sharing of research information in order to enhance the understanding of the marine environment; and the 1983 *Marine Environmental Co-operation Agreement* (MECA) between the Governments of Canada and Denmark, which covers ships and offshore pollution and under which research in other areas is possible (Brock, 1990, p. A10; Slipchenko, 1989, p. 98).

In addition, there is a host of international science and management organizations with an Arctic sensitivity. A partial listing would include: the Arctic Institute of North America; the Arctic Ocean Science Board (AOSB); the Comité Arctique International (CAI) or the International Arctic Committee (IAC); the International Arctic Social Sciences Association (IASSA); the International Glaciological Society (IGS); the International Commission on Snow and Ice (ICSI); the International Union for Quaternary Research (INQUA); the International Permafrost Association; and the International Union of Circumpolar Health, just to name a few (Müller-Wille, 1990,

Personal Communication; Adams et al, 1987, p. 14; Environment Canada, 1986). Their mandates include promoting and conducting scientific research, staging conferences, and facilitating communication and information exchange on the Arctic.

Interestingly, an international organization, known as the Scientific Committee on Antarctic Research (SCAR), was established in 1958 to co-ordinate all circumpolar south scientific activities (Slipchenko, 1989, p. 96; Shusterich, 1984, p. 811). Until recently, no such over-riding institutional arrangement existed for the Arctic. However, August 1990 meetings and discussions among representatives from the eight Arctic shareholders (Canada, Denmark / Greenland, Finland, Iceland, Norway, Sweden, USA and USSR), resulted in the signing of an agreement to establish an *International Arctic Science Committee* (IASC) (Bray, 1990, p. A15). The IASC will function as a non-governmental organization, with a focus on scientific activities of international interest. Its general objectives will be to facilitate and encourage international consultation and co-operation for arctic research and arctic scientific data (IASC, 1990, p. 5). The committee will not have operational responsibilities or manage field programmes. It will instead, provide a forum for the exchange of information and knowledge, and for joint investigations into scientific problems too complex for any one nation to deal with satisfactorily (Bray, 1990, p. A15; IASC, 1990, p. 5).

It is readily apparent from this short review that some real progress has been made at the *international* level to secure scientific co-operation in the Arctic. International agreements have been signed and organizations have been established. Despite these efforts, however, several important voids still exist. For example, administrative policy voids remain in such areas as: Arctic Ocean Policy, Arctic Marine Transportation, Multi-Lateral Obligations, Circumpolar Co-operation, and the Law of the Sea Convention (Table 2.2) (Berger, 1989; Stenbaek, 1987; McRae, 1986; Vanderzwaag and Lamson, 1986; CARC, 1984a).

TABLE 2.2 - Administrative Policy Voids in the Arctic According to CARC and other Key Northern Policy Critics

1. Arctic Ocean Policy -

There is no policy statement for the Arctic Ocean. Canada has not attempted to develop an integrated foreign policy for the Arctic, despite an urgent need to do so. Developing an Arctic Ocean Policy will require: the definition of policy principles; the establishment of priorities; the formation of links between policy - making bodies; and the development of a mechanism for implementing the policy.

2. Arctic Marine Transportation -

Marine transportation in the Arctic lacks a co-ordinating structure. Safe shipping in Arctic waters requires a sophisticated traffic management system. When offshore resource development in the Arctic proceeds, and year - round shipping becomes a necessity, such things as environmental protection, and protection of northern communities and cultural lifestyles will have to be given further attention.

3. Multi-Lateral Obligations -

There is no existing inter-national management regime that brings together all of the circumpolar nations -- Canada, Denmark, Finland, Greenland, Iceland, Norway, Sweden, US, and USSR. Although not yet entered into force, the Law of the Sea Convention applies to the ice - covered Arctic Ocean, by placing obligations on Canada (and other nations) with respect to: land - based sources of pollution; pollution from continental shelf activities; dumping; vessel - source pollution; monitoring; and environmental assessment (Article 194).

4. Circumpolar Co-operation -

There is no existing international convention that brings together all circumpolar nations. Scientific agreements under the Inuit Circumpolar Conference, and in the context of the prospective International Arctic Science Committee (IASC) may be exceptions. The need for international co-operation has never been so pressing; the need for international co-operation has never been so pressing; the need to learn and to develop international solutions to Arctic problems has never been so great. Sharing this region requires co-operation from all circumpolar nations, because each is affected by the policies and activities of others.

5. Law of the Sea (LOS) -

The Law of the Sea Convention has yet to enter into force. It has been signed by all Arctic states, including Canada, with the exception of the US. Upon entry into force, signatories of the Convention are expected to co-operate in the exploitation of living resources of the regional sea, in the preservation of the marine environment and also in the co-ordination of scientific research. There will also be major impacts on: marine transportation; EEZ definition; continental shelf definition and maritime boundary delimitation.

6. National Ocean Policy -

There is no national ocean policy. A central policy - making system is needed to provide a more comprehensive view of marine activities and resource use in the Arctic Ocean, so that management priorities can be determined. Presently, no single department is able to assume this role. Instead, five federal departments (DIAND, DFO, DOE, DOT, EMR) each pursue their own mandates and interests. Prompt action is particularly important because offshore development is now taking place, without the necessary management structure in place.

7. Native Land Claims -

Native land claims must be settled before natural resource management policies become meaningful. The Federal Government and the Native people must decide on how management in, and resources of the Arctic can be shared. Recent negotiations of aboriginal land claims remain incomplete, with agreements having been reached in Arctic Quebec and the Beaufort Sea region, but not in Eastern and Central Arctic.

8. Canadian Sovereignty -

Canada has made no official legal claim to sovereignty in the Arctic. Canada's claim to internal waters in the Northwest Passage and Arctic Islands should be made formally through national legislation recognized internationally. Our assertion of sovereignty is being applied to a region where change is occurring rapidly, where there are many different perspectives and interests at work, and where we often have limited influence over the sources of change.

9. Arctic Marine Science Policy -

Marine science policy is immature. There are serious gaps in baseline date; there is no systematic co-ordination of research; there is no effective means of disseminating information, and there is a chronic shortage of funds. Several important issues driving Canadian arctic science and research include: national security; the strengthening of Canadian sovereignty; social and economic pressures; arctic and global environmental quality; wildlife habitat changes; the movement towards self - government in the North; the concerns of non - northern public interest groups; and the need for scientific knowledge and understanding of polar regions to address national and global problems.

10. Administrative Structure -

Although territorial and federal government institutional structures are in place, concrete resource management policy is lacking. The regulatory structure for the Arctic Ocean is far removed from the area and the resources is administers. There are six federal departments with overlapping mandates and legislative responsibilities for co-ordination of policies and programmes. Too many departments are involved in Northern affairs which dilutes the available expertise. DIAND has a dual and rather conflicting role in the North, by promoting development and protecting the environment and native culture. Some overall administrative body is required to co-ordinate the policies and activities of these various departments working in the North.

11. Land Use Planning -

There is no comprehensive land use planning policy for the North. Land use planning is very clearly not a policy. At best, it is a programme proposal aimed at meeting certain departmental objectives, an as such can be compared with programmes and objectives formulated by other departments. The first requirement is for an overall federal government policy statement concerning the government's objectives as manager of federal lands and resources in the North. That first requirement is yet to be fulfilled.

12. Military and Strategic Uses -

There is considerable concern about Canada's military role in the North. The strategic significance of the entire region has dramatically risen over the last 20 years. Canada must improve its detection and surveillance capabilities in its Arctic waters -- the US and USSR presently dominate in these activities. Canada has no winter ice - breaking capabilities for its Arctic waters. Enhanced ice - breaking capabilities (to Class 8 or 10 ice - breakers) could play an important role in establishing Canadian sovereignty in Arctic waters.

13. Resource Development -

There is no policy or planning framework for offshore resource development. The necessity for policy and planning initiatives to guide offshore exploration, development and production activities has been evident for some time.

14. Arctic Coastal Zone Management (CZM) -

There are no comprehensive CZM planning and policy frameworks for the Arctic. CZM recognizes the interaction between onshore and offshore uses and ecosystems, and applies planning and management techniques that treat the coastal zone as a single unit. CZM planning frameworks could assist in co-ordinating Arctic policies and programmes. This could be an opportune time to introduce CZM planning and practice to the Arctic.

15. Conservation Policy -

There is presently no comprehensive northern conservation policy. Instead, resource conservation is slowly evolving and maturing in the context of: environmentally significant areas; national parks and park reserves; migratory bird and wildlife sanctuaries; land use planning, etc. As yet, there has been minimal attention to marine conservation. The DFO's Arctic Marine Conservation Strategy may be a very important step forward.

16. Provincial Status -

The movement towards northern self - government and political independence is slowly evolving for Canada's Yukon and Northwest Territories. Further progress will continue to be dependent upon the resolution of native land claims, development pressures and other issues.

Sources: Adapted with modifications from (Vanderzwaag and Lamson, 1990, 1986; Berger, 1989; DFO, 1987; Stenbaek, 1987; CARC, 1984a; Robertson, 1985; Task Force to Review Comprehensive Claims Policy, 1985; CARC, 1984a) and others.

At the *national* level, recent literature has described several new national initiatives at protecting and managing Canada's northern resources. Many of these initiatives are in response to the 1987 Brundtland Commission on Environment and Development and its antecedent, the 1980 World Conservation Strategy. The 1990 *Green Plan*, a five-year environmental strategy or action plan for environmental protection and sustainable development in Canada (Government of Canada, 1990); the *Arctic Environmental Strategy* (AES), which will work within the framework of the Green Plan, and attempt to provide a comprehensive approach to environmental protection and sustainable development in the Arctic (DIAND, 1990, p. 1); the *Arctic Marine Conservation Strategy* which will provide a framework for the conservation and management of Arctic marine ecosystems, both to preserve the quality of the marine environment, and to conserve the renewable resources which are an integral component of it (DFO, 1987, p. 2); the 1985 *Inquiry on Federal Water Policy*, which attempted to establish principles and propose recommendations on which federal policy and programs for freshwater resources could be based (Pearse et al, 1985, pp. 7-9); the 1984 *Task Force on Northern Conservation,* which attempted to develop a framework for the creation and implementation of a comprehensive conservation policy for the Yukon Territory and the Northwest Territories, that would help to ensure the wise use of all land, water and other natural resources (Task Force on Northern Conservation, 1984, p. 5); and the *Lancaster Sound Planning Exercise,* which has been considered a model of good and bad experience as far as the planning process in the North is concerned (Mills, 1984, pp. 511-515), are representative.

Despite considerable progress, several national administrative policy voids have been identified. They include: National Ocean Policy, Native Land Claims, Canadian Sovereignty, Arctic Marine Science Policy; Administrative Structure, Land Use Planning, Military and Strategic Uses, Resource Development, Arctic Coastal Zone Man-

agement (CZM), Conservation Policy, and Provincial Status (Table 2.2) (Berger, 1989; Adams et al, 1987; Stenback, 1987; CARC, 1984a).

Finally, at the *regional / territorial* level, recent literature has described new initiatives in managing and protecting the Canadian Arctic and its resources. These initiatives are, in essence, components of Canada's response to the recommendations contained within the 1987 Brundtland Commission on Environment and Development. They include: the *Yukon Conservation Strategy*, which has a purpose to promote and sustain the economic well-being of the Yukon and its residents through the wise use and management of its natural resources and the protection of the natural environment (Public Working Group on the Yukon Conservation Strategy and the Department of Renewable Resources, Government of Yukon; 1986, pp. 1, 4); the *Northwest Territories Conservation Strategy*, which has similar goals and objectives for natural resource and environmental protection in the Northwest Territories (Bastedo, 1989, Personal Communication); and the *Inuit Regional Conservation Strategy* (IRCS), which would be the first conservation strategy prepared by and for indigenous people. The suggested focus of the IRCS is the conservation and sustainable development of the harvested resources, ecological processes and biological diversity of the Inuit homeland (Inuit Circumpolar Conference, 1986, pp. v, 7).

In reflection, the following residual impressions of environmental management in the Arctic remain. *First*, there appears to be some definite progress made to establish international co-operative agreements and institutional arrangements which promote scientific research and information sharing (Environment Canada, 1986). *Second*, there does not seem to be any unifying structure or umbrella arrangement in place to administer or co-ordinate international, national, regional and territorial scientific and natural resource management efforts (Harrison and Parkes, 1983, p. 5). There is no official plan or general policy statement to guide federal and territorial managers and

decision - makers representing different government departments. They have no frame of reference in order to determine where their contribution fits into an overall management plan or that allows them to see what the final picture will be for the North. An analogy would be a city growing haphazardly without the benefit of an official plan and an official plan review. Major Canadian departments continue to promote their own visions of comprehensive plans for the Arctic, but these are comprehensive only in terms of DFO, DIAND or Environment Canada goals or mandates. *Third*, there appears to be little or no work at completing a State of Management Assessment. Canadians do not publicly know where our efforts have been directed, and there has been no accounting of where progress has been made. The general impression is that efforts are occurring in an unorganized and ad hoc way. The argument could be made that we are eventually heading in the direction of a Canadian Arctic Strategy or Policy, and this is very well indeed. However, one may wonder if movement towards a National Arctic Strategy or Policy would not best be promoted by more systematic and organized thinking about what is needed, and how to formulate a strategy to pose some fundamental questions based on an inventory of our "strengths" and "weaknesses" or our "haves" and "have - nots". *Fourth*, there appears to be no concrete way to assess or evaluate the progress towards the goal of co-operating in, and managing resources in Canada generally, and more specifically in the Arctic. For example, in a recent article (October 1990) the Auditor General was quoted as saying in his 1990 Audit Report that,

> "... Environment Canada has no clue if most of its programs are working ... Less than 10 per cent of the department's activities were evaluated from 1984 to 1989 and only one of those assessments was adequate ..." (McIlroy, 1990, p. A6).

He continued to say,

> "... If the department isn't bothering to check whether pollution - control programs are accomplishing anything, it can't know if it is 'doing the right thing or doing things right' ..." (McIlroy, 1990, p. A6).

Interestingly, the Auditor General also noted that,

> "... there is no mechanism to co-ordinate the federal government's approach to environmental issues and to make the government accountable to an intensely concerned public ... Two dozen departments have responsibilities relating to more than 50 laws with environmental implications. The result is that Environment Canada can't act without the co-operation of the other departments ..." (McIlroy, 1990, p. A6).

One of the primary goals of this research, therefore, is to study the UNEP Regional Seas Programme to determine if elements of this programme model could help provide some of the co-ordinating structure needed for management of Arctic natural resources.

In sum, this research exercise appears to be filling several knowledge voids. Not only will it be making a contribution to comparative studies in international resource management and co-operation, but it will also attempt to address several specific questions that are important to Arctic management. For example: questions related to the conceptualization of international programmes and what foci serve as the agents for co-operation; questions related to agencies, actors and stakeholders and their involvement in regional co-operation; questions related to the planning and analysis process and the institutional structures for planning and analysis; questions related to programme implementation, and particularly approval and conflict resolution procedures; and, finally, questions related to the general guides and principles underlining programmes that have the participation of nations different politically, economically, culturally and in many other ways.

The next chapter presents the research methodology for this thesis (Chapter 3).

Chapter III

RESEARCH METHODOLOGY

3.1 PURPOSE

The purpose of this chapter is to briefly describe the research methodology. This description is set in the context of *primary* and *secondary* research planes (Figure 3.1). Each of these planes is further broken down into a series of research tasks. The *secondary* research plane has been comprehensively described in the literature review in Chapter 2. This literature assessment has fundamentally provided the background to the research problem and its justification. This chapter focusses attention on the *primary* research plane, and presents the methodology for the description and analysis of Regional Seas Programme structure and process components.

3.2 Concept of Evaluative Research

Blalock and Blalock (1982), Finsterbusch and Motz (1980), and Weiss (1972, p. 4), have suggested that the general purpose of evaluative research is to measure the efficiency and effectiveness of programmes against the goals they set out to accomplish. This exercise is done as a means of contributing to subsequent decision - making about programmes and improving future programming. Struening (1975) and Suchman (1967, p. 7-8) further explain this process by suggesting that evaluative research utilizes scientific research methods and techniques for the purpose of making an evaluation. The term, evaluative research, refers to the procedure of collecting and analyzing data which increase the possibility of *proving* (through empirical social research techniques) rather than *asserting* the worth of some programme (Suchman, 1967, p. 8).

FIGURE 3.1 - Primary and Secondary Research Planes

PRIMARY RESEARCH PLANE - Identification and Analysis of Regional Seas Programme Structure and Process Components

Major Tasks:

- Criteria Identification and Question - Matrix Preparation
- Criteria and Question - Matrix Application
- Criteria and Question - Matrix with Answers; Interpretation

SECONDARY RESEARCH PLANE - Establishment of Problem Context in the Realm of Oceans and Coastal Management

Major Tasks:

- Environmental Problem Overview
- Theories and Principles
- International Environmental Management Case Studies
- Arctic Management Progress

CONCLUSIONS AND RECOMMENDATIONS

I - Specifically related to the Structure and and Process of the UNEP Regional Seas Programme

II - Secondarily related to potential transfer of RSP components to Arctic management experience

Advocates of evaluative research methods, including Adams and Schvaneveldt (1985), Finsterbusch and Motz (1980), Freeman (1977), Weiss (1972), Freeman and Sherwood (1970), and Suchman (1967) explain that government and social science institutions and practices have been, and will continue to be, under heavy public evaluation and assessment, and must provide *proof* of their legitimacy and effectiveness to justify continued public support. The call for such accountability and growing commitment to orderly policy development and implementation has been accelerated by recent economic conditions (Adams and Schvanveldt, 1985, p. 317; Freeman, 1977, p. 22; Franklin and Thrasher, 1976, p. 23). These demands also hold true for management policies, programmes and projects. An excellent example of this is the 1986 Neilsen Ministerial Task Force on Program Review, whose mandate was to produce an inventory of government programmes with special concern for identifying duplication, waste and inefficiencies (Task Force on Program Review, 1986, p. i). The priority here was for greater efficiency and improved service to the public.

Suchman (1970), has pointed out that one important reason for the need for evaluation today is that innovation and change often proceed without adequate theoretical basis, or without careful planning. The resulting trial and error operation can only be rationalized through evaluation. Often the pressure for innovation is so great, that change is introduced for its own sake rather than for the sake of improving a programme, policy or practice. Empirical validation (based on experiments or experience) through evaluation thus becomes increasingly important under these circumstances (Freeman, 1970; Johnson, 1970, p.2).

Evaluation research is not a benign social science activity, it has become a political decision-making tool (Freeman, 1977, p. 22). Its application is likely going to continue to increase as evaluation research is accepted as a suitable process to determine the extent to which current programmes are meeting the challenges of a rapidly changing society (Suchman, 1970, p. 2).

3.3 CONCEPT OF COMPARATIVE - EVALUATIVE RESEARCH

Comparative - evaluative research has been described by Franklin and Thrasher (1976), Galthung (1979) and Weiss (1972) as a process used by decision - makers to obtain information on the comparative benefits of different programmes. Thus, comparative - evaluative research is designed to compare the effectiveness and structure of several programmes that have similar objectives, but differ in content and focus (Galthung, 1979, pp. 46-47; Franklin and Thrasher, 1976, p. 61; Weiss, 1972, p. 78). It has been encouraged because of the likelihood of finding solutions to commonly shared or similar problems. In fact, Framheim and Mills (1979, p. 124) explain that comparative - evaluative studies make possible the search for regularities in human conduct and the analysis of alternative strategies used in different countries and socio-economic systems.

In other words, comparative - evaluative research is an attempt to look beyond the immediate and local problem reference, to the extra-local or extra-territorial situation in an effort to find insight and guidance. It is an exercise designed to determine how other jurisdictions best deal with similar problems (Galthung, 1979, pp. 46-47; Franklin and Thrasher, 1976, p. 61; Weiss, 1972, p. 78).

Different programmes have local variations in perceptions, attitudes, values, strategies and procedures. The study of a number of programmes that have common objectives can reveal important findings such as different kinds of state and federal law, regulatory policy, institutional organization and programme efficiency measures (Weiss, 1972, p. 78). Cross-national and cross-regional studies alert managers to alternative means and increase the applied value of evaluation (Franklin and Thrasher, 1976, pp. 61-62; Weiss, 1972, p. 78). Weiss (1972, p. 79) continues his argument by stating, "The single programme is the prisoner of its setting". Evaluation is confined to observing effects in one time and place. On the other hand, the comparative study allows the

researcher to identify the key or important characteristics and attributes of many programmes and programme contexts (Weiss, 1972, p. 79). Framheim and Mills (1979, p. 124) stress that social scientists must promote such studies as there are numerous theoretical and methodological benefits to be gained.

3.4 COMPARATIVE - EVALUATIVE RESEARCH AND THE REGIONAL SEAS PROGRAMME

The value of comparative - evaluative research, therefore, rests with the lessons learned about alternative management structures and applications (Center for Ocean Management Studies, University of Rhode Island, 1981). This need for comparative - evaluative research is a recognized goal of the UNEP Regional Seas Programme (UNEP, 1982a, p. 38). In fact, the UNEP report on the *Achievements and Planned Developments of UNEP's Regional Seas Programme and Comparable Programmes Sponsored by Other Bodies*, explained that UNEP has made no attempt to develop regional activities in areas with similar active ongoing programmes, such as those that exist in the North Atlantic or Baltic Sea areas (UNEP, 1982a, p. 38). That is, UNEP has made no attempt to extend or initiate the RSP in areas where alternative programmes already exist. The experience gained in these programmes is, however, highly relevant to the UNEP Regional Seas Programme. Although some discussion has occurred between these organizations and UNEP, further exchanges of ideas and experience with bodies such as The International Council for the Exploration of the Sea (ICES), the Oslo and Paris Commissions and the Helsinki Commission, would be of benefit to the RSP since the programmes are, in many ways, comparable to the UNEP Regional Seas Programme (UNEP, 1982a, p. 38). In addition, several authors have indicated that even within the RSP regions, there is less than an adequate amount of cross-programme linkage and communication (Keckes, 1986, p. 3; UNEP, 1982a, p. 38).

3.5 RESEARCH APPROACH AND METHOD

The comparative - evaluative strategy employed in this research is organized according to several tasks (Figure 3.1). *First*, a task that identifies the key structural elements of a management model and formulates specific questions to understand the interrelations between these elements. The questions attempt to provide insight into both the structure and process of the management programme. *Second*, a task that applies these management model elements and questions to a case study in oceans and coastal management, that is the UNEP Regional Seas Programme. *Third*, a task that attempts to synthesize the responses from eleven different regional applications, in an effort to derive a general understanding of programme structure and process. A *final* task is to apply the lessons learned or knowledge gained from these regional examples, to new or alternative regional contexts.

3.6 PRIMARY RESEARCH PLANE - IDENTIFICATION AND ANALYSIS OF REGIONAL SEAS PROGRAMME STRUCTURE AND PROCESS COMPONENTS

3.6.1 Criteria Identification and Question - Matrix Preparation

The Resources Management Model Assessment Model (Table 1.3) serves as the foundation for the identification of programme structural elements and their interrelations. The model's major components -- Rationale, Conceptualization and Motivation, Actors, Agencies and Institutional Arrangements, Planning and Analysis, Implementation, and General Guides and Principles -- are criteria from which fundamental questions related to structure and process have been developed (Table 1.4). For example, in the context of the actors, agencies and institutional arrangements element, the questions are: *First*, what types of actors, agencies and institutional arrangements form the regional management core, and how are they arranged? *Second*, what types of actors,

agencies and institutional arrangements form the national management core, and how are they arranged? *Third*, what is the nature and form of co-ordination among national, regional and international actors, agencies and institutional arrangements participating in the RSP?

In the context of the element general guides and principles, the questions are: *First*, what preconditions are fundamental to regional seas management? *Second*, what major programme *strengths* have been identified by internal and external assessors? *Third*, what major programme *weaknesses* have been identified by internal and external assessors?

In sum, the application of the criteria and associated question set is the basis for a comparative - evaluative study, as data and information are provided which can ultimately lead to a greater understanding of the Regional Seas Programme.

3.6.2 Criteria and Question - Matrix Application

The task of applying the criteria and question matrix to individual regional programmes is accomplished in two ways (Table 3.1).

First, the criteria and question matrix serves as a questionnaire that is distributed to both RSP Programme Officers in Nairobi, Kenya and Regional Programme Co-ordinators on location in each of the relevant regional programmes. The former are Regional Seas Programme employees at UNEP headquarters that serve a liaison function between UNEP and regional governments and other institutions (Figure 3.2). In effect, each programme has a RSP officer within the Oceans and Coastal Areas Programme Activity Centre (OCA/PAC) of UNEP. The latter are on-site officials of the regional programmes that are responsible for its administration and implementation. At the time of writing, only six regional programmes were sufficiently mature to warrant regional co-ordinators on location. They include the: Mediterranean, Caribbean, South Pacific, South-East Pacific, Kuwait, and the Red Sea and Gulf of Aden Regions.

TABLE 3.1 - Criteria and Question - Matrix Application to the Regional Seas Programme

Elements / Criteria \ RSP Regions	Mediterranean	Caribbean	South Pacific	South - East Pacific	Kuwait	Red Sea & Gulf of Aden	West and Central Africa	East Africa	East Asian Seas	South Asian Seas	South - West Atlantic	Composite Response
RATIONALE and MOTIVATIONS: 1. What was the fundamental reason for the establishment of a RSP? 2. What was the natural resource problem or issue upon which the initial regional coalition was built? 3. What was the initial procedure followed to sponsor and to establish a RSP?												
ACTORS, AGENCIES and INSTITUTIONAL ARRANGEMENTS: 1. What types of actors, agencies and institutional arrangements form the regional management core? 2. What types of actors, agencies and institutional arrangements form the national management core, and how are they arranged? 3. What is the nature and form of co-ordination among national, regional and international actors, agencies and institutional arrangements participating in the RSP?		SYNTHESIS ACROSS REGIME EXPERIENCE										
PLANNING and ANALYSIS: 1. What planning procedures are used to identify and define national and regional goals? 2. What planning and analysis projects are being undertaken to support regional environmental management? 3. What are the regional differences in the commitment to planning and analysis projects?												
IMPLEMENTATION: 1. What are the fundamental procedures used to legitimize the goals and objectives of regional action plan statements, and what means are used to implement these legal procedures? 2. What components of regional management are most mature in terms of implementation? 3. What national and regional procedures are in place to monitor programme implementation and its successes and failures?												
GENERAL GUIDES and PRINCIPLES: 1. What preconditions are fundamental to regional seas management? 2. What major programme strengths have been identified by internal and external assessors? 3. What major programme weaknesses have been identified by internal and external assessors?												

FIGURE 3.2 - Respondents to Regional Seas Programme Questionnaire * and Survey

I - Regional Co-ordinators and Managers On - Site

Mr. L. Jeftic
Senior Marine Scientist
Co-ordinating Unit for the
Mediterranean Action Plan
UNEP
P.O. Box 18019
Vas. Konstantinou 49
116 10 Athens
Greece

Mr. Salvano Briceno
Co-ordinator
Regional Co-ordinating Unit
Caribbean Action Plan (CAR/RCU)
UNEP
Government Conference Centre
14 - 20 Port Royal Street
Kingston, Jamaica

Mr. Iosefatu Reti
Co-ordinator
South Pacific Regional Environment
Programme (SPREP)
South Pacific Commission
P.O. Box D5
Noumea Cedex
New Caledonia

Mr. Joaquin Fonseca Truque
Secretary General
Comision Permanente del
Pacifico Sur (CPPS)
Calle 76, No. 9 - 88
Apartado Aéreo No. 92292
Bogota, Colombia

Mr. Jairo Escobar
Programme Officer
Comision Permanente del
Pacifico Sur (CPPS)
Calle 76, No. 9 - 88
Apartado Aéreo No. 92292
Bogota, Colombia

Dr. Badria Al - Awadhi
Co-ordinator (Technical and
Administrative)
Regional Organization for the
Protection of the Marine
Environment (ROPME)
P.O. Box 26388
13124 Safat
Kuwait

II - OCA PAC Programme Officers and Directors, Geneva, Switzerland and Nairobi, Kenya:

Mr. Stjepan Keckes
Director
Oceans and Coastal Areas Programme
Activity Centre (OCA/PAC)
United Nations Environment Programme
P.O. Box 30552
Nairobi, Kenya

Mr. Jean Claude Sainlos
Programme Officer
Oceans and Coastal Areas Programme
Activity Centre (OCA/PAC)
United Nations Environment Programme
P.O. Box 30552
Nairobi, Kenya

Mr. Bent H. Nielsen
Programme Officer
Oceans and Coastal Areas Programme
Activity Centre (OCA/PAC)
United Nations Environment Programme
P.O. Box 30552
Nairobi, Kenya

Mr. M.R. Amini
Programme Officer
Oceans and Coastal Areas Programme
Activity Centre (OCA/PAC)
United Nations Environment Programme
P.O. Box 30552
Nairobi, Kenya

* Respondents not only participated in questionnaire application, but also served in many instances as questionnaire critics.

The remaining four regional programmes are co-ordinated directly from the OCA/PAC office. This cross - checking of macro- and micro-level perceptions and questionnaire responses should serve as an adequate control against the dominance of any one management level voice. Much care was taken in formulating the questionnaire, in testing its reliability in a pilot study, and in iterating with respondents to make sure questionnaire interpretation and inference were accurate (Sheskin, 1985; Babbie, 1973; Moser and Kalton, 1971).

Second, the criteria and question matrix serves as a template for the review and interpretation of key UNEP documentation and literature emanating from other sources, such as the academic community and its specialized journals and periodicals. The goal is to derive the base or common denominators for each element and take note of unique differences when they have relevance to programme understanding.

3.6.3 Criteria and Question - Matrix with Answers; Interpretation

Responses to management structure and process questions are tablulated and organized by regional regime (Table 3.1). In addition, responses are analyzed across regional programmes in order to obtain composite answers. Content analysis methodology and its associated guidelines and validation procedures are to be followed (Carney, 1972; Holsti, 1969; Budd, Thorp and Donohew, 1967).

3.7 CONCLUSIONS AND RECOMMENDATIONS

The final task is a synthesis of all results. The conclusions and recommendations are developed from the Primary and Secondary Research Planes and are organized according to the major components of the Resources Management Assessment Model. They are organized according to two main categories: conclusions and recommendations specifically related to the structure and process of the UNEP Regional Seas Programme; and conclusions and recommendations secondarily related to the potential transfer of RSP components to Arctic management experience.

The thesis now moves to a description and analysis of the UNEP Regional Seas Programme. Chapters 4 - 8 provide an indepth study of the programme according to each of the Resource Management Assessment Model elements. The next chapter, focusses attention on the Rationale, Conceptualization and Motivation arguments associated with RSP participation (Chapter 4).

Chapter IV

THE REGIONAL SEAS PROGRAMME: RATIONALE, CONCEPTUALIZATION AND MOTIVATION

4.1 PURPOSE

The purpose of this chapter is to describe and to analyze the rationale, conceptualization and motivation arguments associated with Regional Seas Programme participation. The intent is to gain some understanding of the basic rationale and motivation of coastal nations to participate in the eleven regimes within the RSP. These considerations are to be discussed in the context of three fundamental question and answer sets related to elements of a Resource Management Assessment Model (Table 4.1 and Table 1.4). The questions are repeated here for the sake of convenience. *First*, what was the fundamental reason for the establishment of a RSP? *Second*, what was the natural resource problem or issue upon which the initial regional coalition was built? *Third*, what was the initial procedure followed to sponsor and to establish a RSP?

The raw data and information used to develop answers to these questions were derived by several means. A formal questionnaire was sent to select RSP officials in the Mediterranean, Caribbean, South Pacific, South-East Pacific, Kuwait, Red Sea and Gulf of Aden, West and Central Africa, Eastern Africa, East Asian Seas and South Asian Seas Regions (Appendix A). There was almost 90 percent success in obtaining responses – only the Red Sea and Gulf of Aden Region did not answer any of the correspondence sent to them. However, language difficulties and incomplete questionnaires demanded several iterations before information packages were com-

TABLE 4.1 - Resource Management Assessment Model: Rationale and Motivations

ACTORS AND AGENCIES	RATIONALE, CONCEPTUALIZATION, AND CONTEXT	PLANNING AND ANALYSIS	IMPLEMENTATION	GENERAL GUIDES AND PRINCIPLES
GOVERNMENT, MANAGEMENT LEVEL OR TYPE:	PROBLEM, ISSUE, CONDITION, CONFLICT, SCARCITY	STRATEGIC PLANNING	Negotiations, Public Hearings, Pre-Hearings, Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	BASIC & APPLIED RESEARCH
BENEFICIARY	POLITICAL AGENDA	BIOPHYSICAL, SOCIO-ECONOMIC INVENTORY	Surveillance & Inspection Monitoring, Enforcement Modification	MANAGEMENT CO-ORDINATION
PROPONENT	MANAGEMENT AGENDA	HUMAN USE SYSTEM CLASSIFICATION	CONSTRUCTION	INCENTIVES - ECONOMIC, SOCIAL, POLITICAL
LEAD	SCIENTIFIC AGENDA	SIGNIFICANT AREAS IDENTIFICATION	OPERATION	SENSITIVITIES, VALUES
PARTICIPANT		EVALUATION OF ALTERNATIVES		INFORMATION ACCESS
OBSERVER		GOAL ASSESSMENT		PROCESS MONITORING
				MANAGEMENT CO-OPERATION
Federal Provincial (State) Regional International Municipal Committee Industry Commission Council, Authority, District Task Force Interest Group Mass Media Other		ABC Method B/C Analysis, EIA, SIA, TIA, Input-Output Analysis	Surveillance & Inspection Monitoring, Enforcement Modification Procedure Modification	Government Industry Public Intergroup Mass Media News Agency New Institution

Source: Adapted with considerable modification from (Nelson and Jessen, 1981)

plete. This is the same survey instrument previously identified in Chapter 1 (Table 1.4). Once trust and a formal communication link were established, an additional survey was sent to officials from each region, requesting that they rank order the environmental problems listed for their respective regions, and if necessary, add any environmental problems missing from the survey listing (Table 4.2, Table 4.3 and Appendix B). A series of follow-up letters was also sent to key contacts for more specific statistical and other information. These key contacts were leads identified by the initial questionnaire respondents. Finally, two research expeditions to Geneva, Switzerland in 1985 along with the acquisition of key technical, financial and other UN documents have provided hard evidence for subsequent analysis. This documentation was invaluable as a cross-reference for regional information contributions, and vice versa.

It must be remembered that although the UNEP Regional Seas Model and its inherent structure and process components are transferred to these eleven regional cases, the application of this model is likely to be distinct for each case. This regional sensitivity is a result of unique environmental, managerial and social conditions. Each action plan, therefore, reflects a region's particular priorities, needs and abilities to cope with its coastal resource problems (Hulm, 1983b, p. 4).

TABLE 4.2 - Ranking of Regional Environmental Problems: Examples of Surveys sent to the Regions

RANKING OF REGIONAL ENVIRONMENTAL PROBLEMS

CARIBBEAN REGION

4 - domestic waste and associated pollution
5 - industrial wastes and other effluents
5 - agricultural wastes (inorganic fertilizers, pesticides, liquid effluent containing high organic loads, high silt content run-off)
3 - river discharges containing land-based pollution
6 - marine oil and gas exploration / exploitation and associated pollution
2 - marine oil spills and associated pollution
2 - marine oil transportation and associated pollution
1 - rapidity of coastal zone development
1 - state of coastal zone management
- other(s) ? Please list: 2 - Toxic wastes disposal
1 - Lack of environmental, training and
____ - awareness

GUIDE: Please rank order these environmental problems from most important (1) to least important (for example, 8, 9, 10, etc.)

RESPONDENT: SALVANO BRICENO
AFFILIATION: CO-ORDINATOR, CAR/RCU, UNITED NATIONS ENVIRONMENT PROGRAMME
DATE: 22 JULY 1988

* brackets after problem indicate region specific concerns

RANKING OF REGIONAL ENVIRONMENTAL PROBLEMS

MEDITERRANEAN REGION

1 - domestic waste and associated pollution
3 - industrial wastes and other effluents (organic matter, suspended solids, phenols, heavy metals, mineral oils)
5 - agricultural wastes (fertilizers and pesticides)
2 - river discharges containing land-based pollution
8 - radioactive discharges
6 - marine oil transportation and associated pollution
7 - marine oil spills and associated pollution
4 - the state of coastal zone management
- other(s) ? Please list: ____ - ____
____ - ____
____ - ____

GUIDE: Please rank order these environmental problems from most important (1) to least important (for example, 8, 9, 10, etc.)

RESPONDENT: L. JEFTIC
AFFILIATION: UNEP, MEDITERRANEAN COORDINATING UNIT
DATE: 20 July 1988

* brackets after problem indicate region specific concerns

TABLE 4.3 - Ranking of Regional Environmental Problems According to Regional Respondents *

Region \ Environmental Problems	Domestic Waste & Associated Pollution	Industrial Waste & Other Effluents	Agricultural Wastes (fertilizers, pesticides)	River Discharges Containing Land-Based Pollution	Radioactive Discharges / Wastes	Toxic Waste Disposal	Marine Oil & Gas Exploration / Exploitation & Associated Pollution	Marine Oil Spills & Associated Pollution	Marine Oil Transportation & Associated Pollution	Rapidity of Coastal Zone Development	State of Coastal Zone Management	State of Forest Resource Management	State of Freshwater Management	Impacts of Coastal Engineering Projects on Coral Reefs, Beaches, Mangroves, Marshes	Over - Exploitation of Selected Marine Species	Deep - Sea Mining & Associated Pollution	Felling of Mangrove Areas	Coastal Erosion	Lack of Environmental Training & Awareness	Sedimentation / Siltation
Mediterranean	1	3	5	2	8			7	6		4									
Caribbean	4	5	5	3		2	6	2	2	1	1								1	
South Pacific	1	6	2		7					3	5	4								
South - East Pacific	1	2	3				7	6	5		4						1			
Kuwait	1	2					10	4	9	5	6		8	7	3					
Red Sea & Gulf of Aden	**	**					**	**	**	**	**			**	**	**			**	
West & Central Africa	**	**	**					**	**	**	**			**				**		
East Africa	3	3	3				5	4	4	2	1			5	2			6	**	
East Asian Seas	2	3					4	4	4		**			1	5			7		6
South Asian Seas	**	**	**					**	**	**	**			**	**			**		**
South - West Atlantic	Regional Environmental Problems Not Yet Defined																			

* - Rank ordering from most important (1) to least important (9, 10)

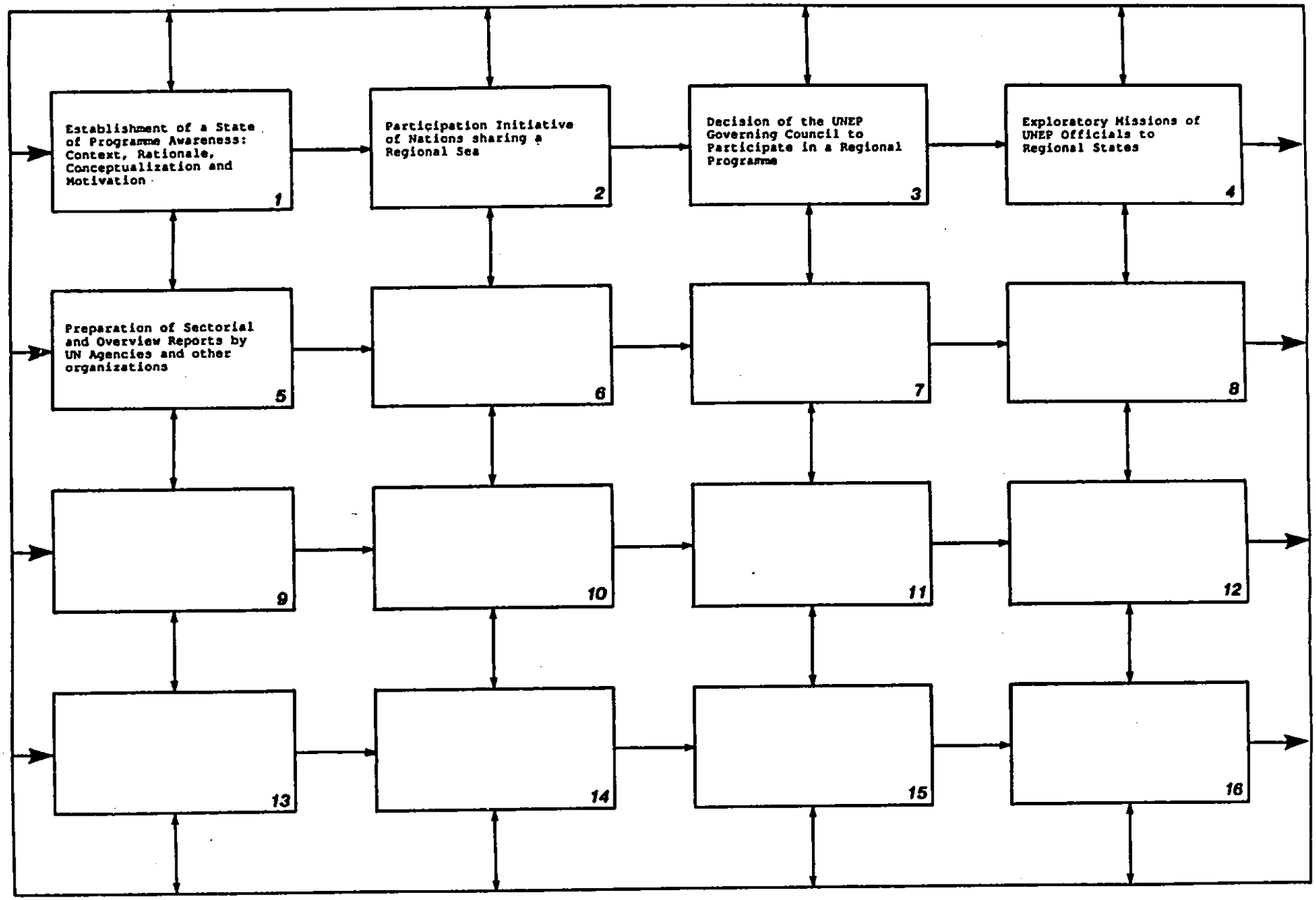
** - Region has identified as a priority concern, however, has not provided a ranking

4.2 FUNDAMENTAL REASONS FOR RSP FARTICIPATION

Generally, *a RSP is established because one or more states have formally expressed concerns about coastal environmental quality and management to both other states and the United Nations* (Figure 4.1 - Step 1). In effect, a region's nations have reached a point where they have achieved a critical level of environmental awareness and have developed a strong concern for existing or potential problems. They have also realized that *the most effective way to deal with shared problems is to employ a regional approach* (Figure 4.1 - Step 2). This condition is found to be fairly consistent across the regional experiences analyzed. For example, in the context of the Mediterranean, the RSP was established to protect the Mediterranean Sea against pollution by assisting national policy makers to manage their natural resources in a more effective and sustainable manner (Jeftic, 1987, Personal Communication). Similarly, in the case of Kuwait, a concern for the deteriorating state of the marine environment in the Persian Gulf, the Gulf of Oman and the Arabian Sea is cited as the reason for RSP establishment (Al-Awadhi, 1987, Personal Communication). The South Pacific Regional Environment Programme (SPREP) was established in response to a growing concern for environmental protection and conservation of marine natural resources of the South Pacific (Reti, 1987, Personal Communication). Interestingly, in the Red Sea and Gulf of Aden Region, managers are concerned about *future* pollution problems related to oil exploration, exploitation and oil transportation; urban and industrial growth; and coastal development projects (Hulm, 1983a, p. 12).

It is evident that while some regional programmes, like the Mediterranean and Kuwait, have developed regional programmes *in response to existing pollution problems,* other regions like the Red Sea and the South Pacific are *attempting to avoid these problems by promoting sustainable* development through sound contemporary environmental management of their marine and coastal resources (Reti, 1987, Personal Communication; Hulm, 1983b, pp. 6, 11).

FIGURE 4.1 - Regional Seas Programme Development Steps (1-5)



Source: (Needham and Jedynack - Copley, 1989)

4.3 NATURAL RESOURCE PROBLEM

In this context of the second question posed, the regional respondents are again consistent in their response that marine and coastal pollution are the environmental problems upon which to build the initial management coalition (Table 4.3). More specifically, each region experiences various types and sources of land-based and marine-based pollution. In addition, each region possesses a collection of other environmental issues and problems endemic to their coastal zone that demand management attention. The following brief overviews set the pollution problem into their appropriate regional contexts.

4.3.1 Mediterranean Region

In the Mediterranean Region, the permanent coastal area population is estimated to be approximately 44 million inhabitants (Kuwabara, 1984, p. 5; UNEP et al, 1984, p. 16). However, a seasonal tourist population of another 100 million people inflates this number substantially (Yeroulanos, 1985, p. 2; Thacher and Meith-Avcin, 1978, p. 319). This population, distributed in some 120 coastal cities, generates municipal sewage that is often intentionally discharged into Mediterranean waters. In fact, eighty (80%) to ninety (90%) percent of this sewage is either untreated or inadequately treated (Yeroulanos, 1985 p. 2; Kuwabara, 1984, p. 5). In addition to the domestic sewage, the Mediterranean Sea is also plagued with other land-based sources of pollution including: industrial waste from leather tanning and finishing, iron and steel industries, petroleum refineries and oil terminals, chemical production, textile manufacturing, food processing and canning industries, and pulp and paper factories; agricultural run-off associated with fertilizer and pesticide application; river discharges; and radioactive discharges from nuclear installations as well as radioactive contaminants found in other discharged materials like phosphates, and fall-out material from earlier weapon tests (Table 4.3) (Kuwabara, 1984, pp. 5-10; UNEP et al, 1984, pp. 16-18; Thacher and

Meith, 1980, p. 159). These varied sources of land-based pollution, with already visible impacts on the marine and coastal area, resulted in a fear that the Mediterranean Sea was near an irreversible state of degradation (Yeroulanos, 1985, p. 2). This provided the motivation to build the initial regional coalition, the Mediterranean Action Plan and MEDPOL Phases I and II (FAO et al, 1983, pp. 4-11).

4.3.2 Caribbean Region

In the Caribbean region, the initial coalition evolved from the strong interest in preserving and conserving tropical and sub-tropical environments while promoting economic growth (Thacher and Meith, 1982, p. 223, 230). This duality of purpose matured in a region which can be generally characterized as underdeveloped and poverty-stricken (Thacher and Meith, 1980, p. 171). In fact, per capita income ranges from as low as $700.00 (1986) in El Salvador to $13,451.00 (1985) in the U.S.A. (Hoffman, 1989, pp. 672, 731). More specifically, this region is faced with domestic wastes from coastal cities and tourist centres; chemical pollution from industry and modern agricultural practices (especially fertilizers and pesticides); silt from dredge and fill operations, as well as poor land management often resulting in erosion (Table 4.3) (UNEP/ECLAC, 1984, pp. 18, 22; Hulm, 1983b, p. 8; UNEP/CEPAL, 1982, p. 12). Perhaps the most serious marine pollution problem in the Caribbean is contamination by petroleum hydrocarbons (UNEP/ECLAC, 1984, p. 24). An expanding oil industry brings with it the inherent risks of increased pollution because of oil spills, intensive tanker traffic, and the general operation of the industry, including loading, unloading and tanker cleaning procedures (Thacher and Meith, 1982, pp. 232, 233). In fact, estimates of oily discharges from tanker washings alone within the Wider Caribbean region could be as high as 7 million barrels per year (UNEP/ECLAC, 1984, pp. 24, 27; Hulm, 1983b, p. 9). Add to this the spills resulting from pipeline accidents, blowouts, platform fires, overflows, malfunctions and other occurrences, and the num-

bers escalate to over 76 million barrels, according to 1978 figures (Thacher and Meith, 1982, p. 232).

4.3.3 South Pacific

South Pacific culture has traditionally emphasized wise natural resource husbandry, however, industrialization, urbanization and population growth have presented new environmental stresses (Dahl and Baumgart, 1983, pp. 4, 10; Hulm, 1983b, p. 11). Generally, the major environmental problems include the management of natural resources, both terrestrial and marine, and the avoidance of undesirable environmental impacts from development projects. Within the 21 states and territories of the South Pacific, Reti (1987, Personal Communication) states:

> "Coastal zones are one of the most environmentally sensitive areas in all countries ... and are subject to significant conflicts in use with development. A considerable number of countries are now facing coastal zone management problems associated with the reclamation of coastal areas and coastal erosion ... Like many regions ... human activities and major cities in the South Pacific are concentrated in the coastal zone ... All except the largest islands in the Pacific consist entirely of coastal zones ... A major problem facing governments in managing the coastal zone, is in co-ordinating the many different government departments and ministries that have some jurisdiction there".

More specifically, domestic, agricultural, industrial and radioactive waste, along with the rapidity of coastal zone development, the state and sophistication of coastal zone management and forest resource management are identified as environmental problems and conditions of primary regional concern (Table 4.3) (Reti, 1988, Personal Communication; Dahl and Baumgart, 1983, pp. 5-15).

4.3.4 South-East Pacific Region

The five-member countries along the South American west coast (including Colombia, Chile, Ecuador, Panama and Peru) have long had close ties to the sea, primarily because their 200-mile limit encloses one of the world's richest fishing grounds (Hulm, 1983b, p. 10). However, the South-East Pacific Region is plagued with serious envi-

ronmental pollution problems including domestic, agricultural, industrial and mining wastes (Table 4.3). In addition, oil pollution is singled out as a major problem particularly in the northern part of the region, because of the operation of the very large Panamanian oil tanker fleet (Hulm, 1983b, p. 10; Thacher and Meith, 1980, pp. 180-181). Two other areas of concern in this region include the destruction of mangroves and the immature state of coastal zone management (Escobar, 1988, Personal Communication).

4.3.5 Kuwait Region

The small, shallow and almost landlocked Persian Gulf within the Kuwait Region is one of the world's most fragile environments. It measures only about 1200 kilometres in length, ranges from 75 to 350 kilometres in width, and has an average depth of about 35 metres (IUCN/UNEP, 1985b, p. 1; Hulm, 1983b, p. 7). Located between the arid land masses of Iran and Arabia, the semi-enclosed Persian Gulf is exposed to generally high temperatures, high evaporation, strong winds, limited rainfall and minimal freshwater input (IUCN/UNEP, 1985b, pp. 1-2). The combination of these factors results in very high levels of salinity (IUCN/UNEP, 1985b, p. 2). Concomitantly, clustered along the shores of the Persian Gulf and the Gulf of Oman, and along the coast of the Arabian Sea, are eight of the fastest growing countries in the world including Iran, Iraq, Kuwait, Saudi Arabia, Bahrain, Qatar, United Arab Emirates (UAE), and the Sultanate of Oman. The wealth generated by the development of the oil industry has brought rapid changes and modernization to this region (Table 4.3) (IUCN/UNEP, 1985b, p. 1). Unfortunately, this rapid urban growth has also outstripped sewage and garbage disposal facilities. In many countries, large migrant inflow has doubled city populations in as little as four years with nearly all of these people living along the coast. In Kuwait and Qatar new sewage systems are scheduled for operation in the near future, however, other countries are not anticipating system completion before the

year 2000. Current estimates indicate that at some sites, 75 percent of the sewage is dumped, untreated into coastal waters (Hulm, 1983b, p. 7).

A more serious threat stems from the Gulf's booming industries. Investment along the entire coastline is estimated to be between $20 and $40 million per kilometre, including twenty major industrial centres under development (Thacher and Meith, 1980, p. 170). Although some single industries have established standards to control pollution emissions, there are no integrated pollution control programmes established in any states (Hulm, 1983b, p. 7). One type of industry, water desalinization, is said to contribute huge brine outputs in the process of creating more freshwater (Thacher and Meith-Avcin, 1978, p. 332).

Another area of concern is the environmental impacts of coastal engineering activities on coastal habitats like coral reefs, mangroves and sea grasses. Such activities include coastal infilling, sedimentation from dredging, and mining (IUCN/UNEP, 1985b, pp. 13-20). In addition to stesses from these activities, several species of fish and shellfish are also threatened by further development of the fishing industry (IUCN/UNEP, 1985b, pp. 27-37).

Perhaps the largest single source of marine pollution is the giant oil tanker fleet that frequents the Kuwait Region. In fact, about 60 percent of all oil carried by ships throughout the world – in the order of one billion metric tons a year – is exported from this region (Thacher and Meith, 1980, p. 170). It has been estimated that petroleum tankers from Gulf terminals dump over 988,000 metric tons of oil into the sea every year, through discharges of ballast water from tanks containing petroleum residues. In fact, the region has been assessed as having 47 times the average amount of oil pollution for a marine environment of its size, the results of which are seen on beaches contaminated with tar (Hulm, 1983b, pp. 7-8). This is the case on the beautiful beaches of Oman, on the Arabian Sea, once thought of as a potentially prime tourist attraction (IUCN/UNEP, 1985b, p. 14; Hulm, 1983b, p. 8)

4.3.6 Red Sea and Gulf of Aden Region

The Red Sea and Gulf of Aden holds unique interest for biologists and geologists. In comparison with other oceans and seas in the world, the Red Sea is relatively young with a 70 million year history, and thus considered to be in the first stages of formation (IUCN/UNEP, 1985c, p. 1). Here are found some of the world's most northerly coral reefs, high salinity levels and very high water temperatures (UNEP, 1982a, p. 17; Thacher and Meith-Avein, 1978, p. 335). Much of the animal and plant life restricted to the Red Sea shows a relatively low diversity when compared with Indian Ocean flora and fauna (Hulm, 1983b, p. 6; Thacher and Meith-Avein, 1978, p. 335). Unlike most other Regional Seas Programme areas, the Red Sea and Gulf of Aden Region remains relatively unpolluted and unaffected by population pressures. This, however, may be short-lived, particularly in light of recent urban and industrial growth rates (IUCN/UNEP, 1985c, p. 59). Rapid expansion in oil exploitation, production and shipping, with resulting employment opportunities, have drawn immigrants to the region. Because of the extensive coral growth in the Seas' southern zone, navigation of oil tankers through narrow channels is especially hazardous. Metal deposits with potentially greater value than regional petroleum reserves, have also been identified on the sea bed (IUCN/UNEP, 1985c, p. 2; Hulm, 1983b, p. 6).

It is estimated that oil pollution from land-based sources, offshore exploration and exploitation, and oil transport; coastal development construction and dredging operations; port activities; and the scheduled development of huge industrial complexes are likely to pose serious long-term threats to Red Sea and Gulf of Aden coastal and marine ecosystems. In light of the region's predicted development trends, resource managers are focussing more attention on the conservation of the marine and coastal environment (IUCN/UNEP, 1985c, p. 59; Hulm, 1983b, p. 7; UNEP, 1982a, p. 17). Table 4.3 identifies the priority concerns of the region as defined in the literature.

Unfortunately, a ranking of these concerns was not provided by programme managers contacted during survey and questionnaire application.

4.3.7 West and Central African Region

The 20 member-countries of the West and Central African region are faced with several marine pollution problems including: untreated or inadequately treated domestic sewage; chemical residues from industries; agricultural run-off including fertilizers and pesticides; and oil pollution mainly from tankers transporting crude in the offshore corridor between the Indian Ocean and Europe (UNEP, 1984c, pp. 73-74; Hulm, 1983b, p. 9; UNIDO/UNEP, 1982, p. 9; Thacher and Meith, 1980, p. 174). Coastal engineering projects, including harbours, piers and large-scale land reclamation, which cause widespread coastal erosion along with irreparable destruction of beaches, marshes and lagoons are also of primary concern (Hulm, 1983b, p. 9; Thacher and Meith-Avein, 1978, p. 334). Table 4.3 identifies the priority regional concerns as defined in the literature. Unfortunately, additions to the listing and a ranking of these environmental problems has not been produced by regional programme officials.

4.3.8 East African Region

The nine countries of the East African Region are faced with an assortment of environmental problems (Table 4.3). Oil pollution is a major problem, particularly because of the heavy tanker traffic known to the region. Each year, an estimated 475 million metric tons of oil are transported through the region (Hulm, 1983b, p, 12). On any given day, it has been estimated that there are as many as 224 tankers in regional sea lanes, with at least 48 of these of the Very Large Crude Carrier (VLCC) classification (Hulm, 1983b, p. 12). Inevitably, the marine environment becomes the dumping site for oily ballast and tank washings, and occasional oil spills from vessels and refinery operations (UNEP, 1982c, pp. 28, 30).

Large-scale erosion in the East African Region is also a serious problem. Upland cultivation practices, livestock pasturage and deforestation have brought on an alarming loss of soil and vegetative cover, with resulting impacts on the flow and sediment transport rates of major rivers and downstream impacts in the coastal zone (UNEP, 1982c, p. 22). There is also evidence of agricultural run-off chemicals from fertilizers and pesticides, being traced in marine organisms (UNEP, 1982c, p. 37). Interestingly, the East African Region considers domestic sewage discharges as more of a major regional public health problem than as a major contributor to marine pollution (UNEP, 1982c, p. 37).

Bordering the narrow continental shelf along the East African coast are coral reefs and inter-reef areas which provide important fishing grounds for trawlers (Hulm, 1983b, p. 12). However, some coral reefs have been destroyed because of fishing practices using dynamite and poison; reefs are also hammered down to make souvenir trinkets for tourists, or to make lime for use in building homes (Hulm, 1983b, p. 12; UNEP, 1982c, pp. 40, 45). Extensive mangrove swamps provide the region with many commercial species such as mangrove crab, oysters and mullet, and serve as a nursery ground for penaed shrimp. Unfortunately, mangroves are also destroyed for use as firewood and building materials (Hulm, 1983b, p. 12; UNEP, 1982c, p. 40). Marshes have been considered so worthless by the local people, that no one hesitates to destroy them (Hulm, 1983b, p. 12). Human activities are similarly threatening several precious marine animals including the dugong or manatee, and marine turtles. Dugongs are often caught in fishing nets and drowned, while turtles continue to decrease in numbers as their eggs are poached and the adults are killed for their meat and decorative shells (Hulm, 1983a, p. 18; UNEP, 1982c, p. 45).

4.3.9 East Asian Seas Region

Like many regions, the East Asian Seas region has experienced rapid increases in population, placing added pressures on coastal and marine ecosystems. Natural resource exploitation has increased, both on land and in the sea, resulting in direct and indirect destruction of coastal and marine habitats and their associated plant and animal species (IUCN/UNEP, 1985a, p. 69). More specifically, the most pressing regional environmental problems include: domestic wastes, industrial wastes including heavy metals and other chemical contaminants; oil pollution from onshore and offshore activities and from tanker traffic; destruction of coral reefs from blast fishing, and because of sedimentation and erosion; mangrove swamp destruction because of logging, and reclamation and development projects; and over-exploitation of several species of fish and other endangered and vulnerable species including turtles, giant clams and other molluscs (Table 4.3) (UNEP, 1987d, p. 7; IUCN/UNEP, 1985a, pp. 28, 69; Hulm, 1983b, p. 10).

4.3.10 South Asian Seas Region

All the nations of this region can be classified as developing countries, which concentrate on agriculture, industry and some mining activity as the major sources of revenue. Pollution effects have generally been confined to coastal areas where most economic activities take place, but there is a growing realization that these problems can have widespread impacts (UNEP, 1987b, p. 3). Although the South Asian Seas has not committed itself to a regional Action Plan, it has however, completed several studies to identify the priority areas of regional environmental concern (Table 4.3). A priority ranking of these problems has yet to be assigned by the region.

More specifically, marine environmental problems consist of domestic sewage; industrial waste (including thermal waste); agricultural wastes; over-exploitation of selected marine species; coastal erosion and sedimentation (UNEP, 1987b, pp. 26-27;

IUCN/UNEP, 1985d, pp. 46-48). Coral reefs are threatened by collection for the lime processing industry, and by pressures for tourist souvenirs. In addition, they are damaged by haphazard anchoring of boats and the periodic use of dynamite in fishing (UNEP, 1987b, p. 27). Another serious problem in this region is the destruction of mangroves for use as firewood and animal fodder, or to allow for alternative coastal activities. Not only is the mangrove habitat itself harmed or lost, but also a valuable ecosystem and breeding ground for numerous marine species including prawns, shrimp and some fry (UNEP, 1987b, p. 27; IUCN/UNEP, 1985d, p. 46). Although much of the industrial and domestic effluents are carried to coastal waters by rivers, there is also some direct dumping into coastal waters, where major urban centres and industrial sites are often situated (UNEP, 1987b, p. 27).

Oil pollution is also a prime concern for all countries in this region because the main oil transportation routes from the Middle East to the Far East, cross through the southern half of the Northern Indian Ocean. Not only is there the risk of a maior spill occurring, but also the probability of ongoing contamination from tanker washings, refineries and harbour activities (UNEP, 1987b, p. 27). These problems may initially be localized, but continually moving tides and currents can significantly spread the impacts.

4.3.11 South-West Atlantic Region

The development of a South-West Atlantic Action Plan was initiated by a Governing Council decision in 1980, which was to include the coastal zones of Argentina, Brazil and Uruguay. Although some preliminary discussion of the regional marine pollution problems took place at a 1980 marine pollution workshop organized by the IOC of UNESCO, the region has yet to officially define these problems. As of 1983, any further development of the regional action plan have been delayed for a variety of political and national interest reasons (Keckes, 1986, p. 33).

4.4 PROGRAMME SPONSORSHIP

The initial procedure followed to sponsor a RSP is similar for all regional programmes. One or more states, who are members of the UNEP Governing Council and are from the candidate region, make a formal request to the Governing Council. The request is for a UNEP commitment to initiate preliminary programme planning (Figure 4.1 - Step 3). Governing Council authorization is a prerequisite and a necessity because UNEP must allocate human and financial resources to preparatory tasks, such as exploratory missions and consultations. Once Governing Council approval is given, UNEP exploratory missions are scheduled to visit each state in the region (Figure 4.1 - Step 4). More specifically, the five objectives of the exploratory missions are:

1. to assess state interest in a regional programme;
2. to consult with governments with a view to identifying activities that may be part of an action plan;
3. to make preliminary assessment of regional environmental problems;
4. to collect available scientific data and information pertaining to development and implementation of a regional action plan; and
5. to identify national institutions that may participate in implementing an action plan once it is adopted (UNEP, 1982c, p. i).

While UNEP staff members usually assume the responsibilities of mission leaders, these fact-finding missions also involve other specialized organizations, both within and outside of the UN system including: FAO, ICES, IMO, IOC, IUCN, UNDP, UNESCO, UNIDO, WHO, and WMO, among others (UNEP, 1984d, p. 4; UNEP, 1982a, p. 12; Thacher and Meith, 1980, p. 156). The themes addressed by these exploratory missions can include such foci as: coastal land-use management, conservation of coastal and marine resources and ecosystems, industrial pollution affects on human health and marine environments, marine pollution, and pollution by hydrocar-

bons, just to name a few (UNEP, 1984d, p. 4; UNEP, 1982c, p. ii). The findings of these missions are presented in sectorial reports (Figure 4.1 - Step 5). These sectorial reports will be used by the regional secretariat to prepare regional overview reports. Eventually, the sectorial reports and overview reports are submitted to the Meetings of Scientific Experts (UNEP, 1982c, p. ii).

4.5 SUMMARY

Several common denominators related to programme participation are revealed by responses from regional officials to the formal survey questionnaire. The three questions posed at the outset of this chapter are repeated here, and are followed immediately by their answers.

First, what was the fundamental reason for the establishment of a RSP? In response to this question, the fundamental reason for RSP establishment has been *concern for declining environmental quality* and *the status of marine and coastal management*. Regional co-operation *and* management are deemed necessary prerequisites of any programme designed to address these conditions.

Second, what was the natural resource problem or issue upon which the initial regional coalition was built? The regional co-operation and management needed has been initially focussed on a dominant and complex problem – *marine pollution* (Szekely, 1985a, 1985b, Personal Communication). Keckes (1985, Personal Communication) has stated that this focus is politically attractive and provides the framework that can eventually lead to the consideration of other environmental issues at a later time.

Third, what was the initial procedure followed to sponsor and to establish a RSP? The *sponsorship of a regional programme must come from the nations of the region.* This initiative is then supported by an UNEP Governing Council vote and approval for financial and human resource assistance.

The implications of these findings are briefly explored in the concluding section of this thesis (Chapter 9). The next chapter focusses attention on the actors, agencies and institutional arrangements participating in the Regional Seas Programme (Chapter 5).

Chapter V

THE REGIONAL SEAS PROGRAMME: ACTORS, AGENCIES AND INSTITUTIONAL ARRANGEMENTS

5.1 PURPOSE

The purpose of this chapter is to identify, describe and analyze the *generic types* of core and supporting actors, agencies and other institutional arrangements participating in the UNEP Regional Seas Programme (RSP). Identification and description are focussed on two levels of management -- the *macro* or programme level, and the *micro* or project level (Figures 5.1 - 5.3). As a consequence, a rich menu of national, regional and international actors, agencies and institutional arrangements are presented in terms of their RSP roles. It is hoped, that in conclusion, three fundamental questions associated with the Resources Management Assessment Model can be answered (Table 5.1 and Table 1.4). The questions are repeated here for the sake of convenience. *First*, what types of actors, agencies and institutional arrangements form the regional management core, and how are they arranged? *Second*, what types of actors, agencies and institutional arrangements form the national management core, and how are they arranged? *Third*, what is the nature and form of co-ordination among national, regional and international actors, agencies and institutional arrangements participating in the RSP?

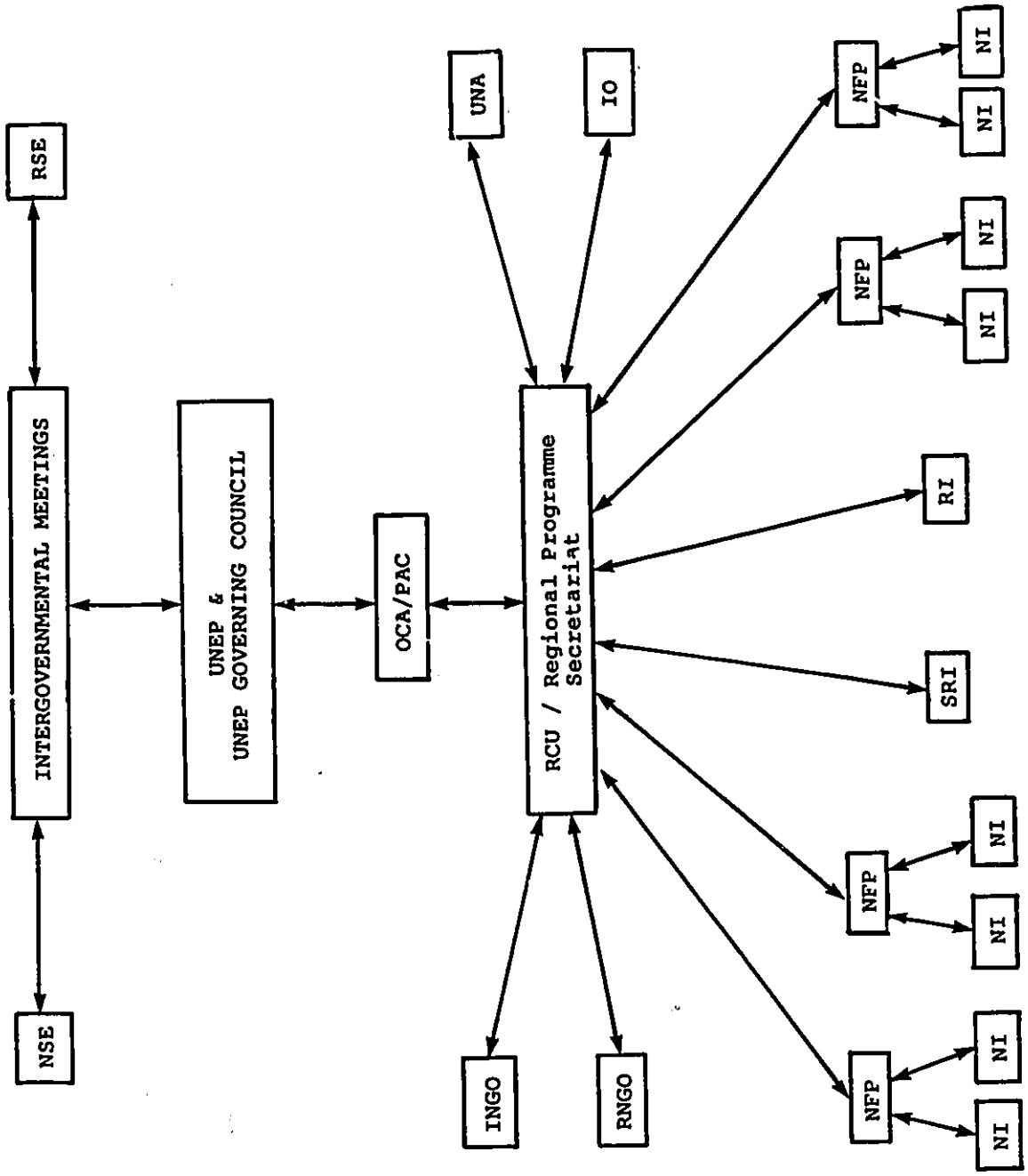
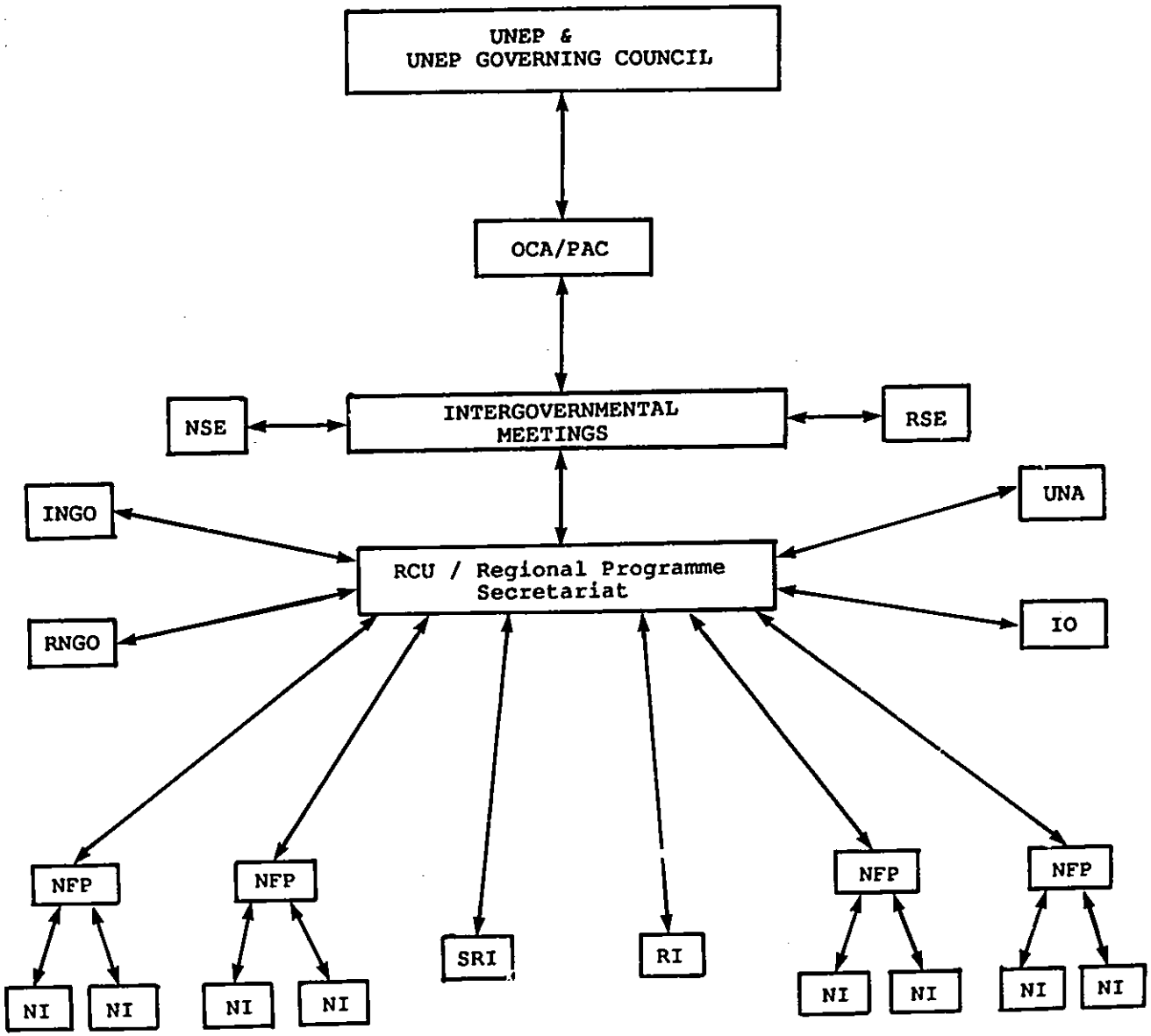


FIGURE 5.1 - Macro - Co-ordination of the RSP: Planning and Analysis Phase

FIGURE 5.2 - Macro - Co-ordination of the RSP: Implementation Phase



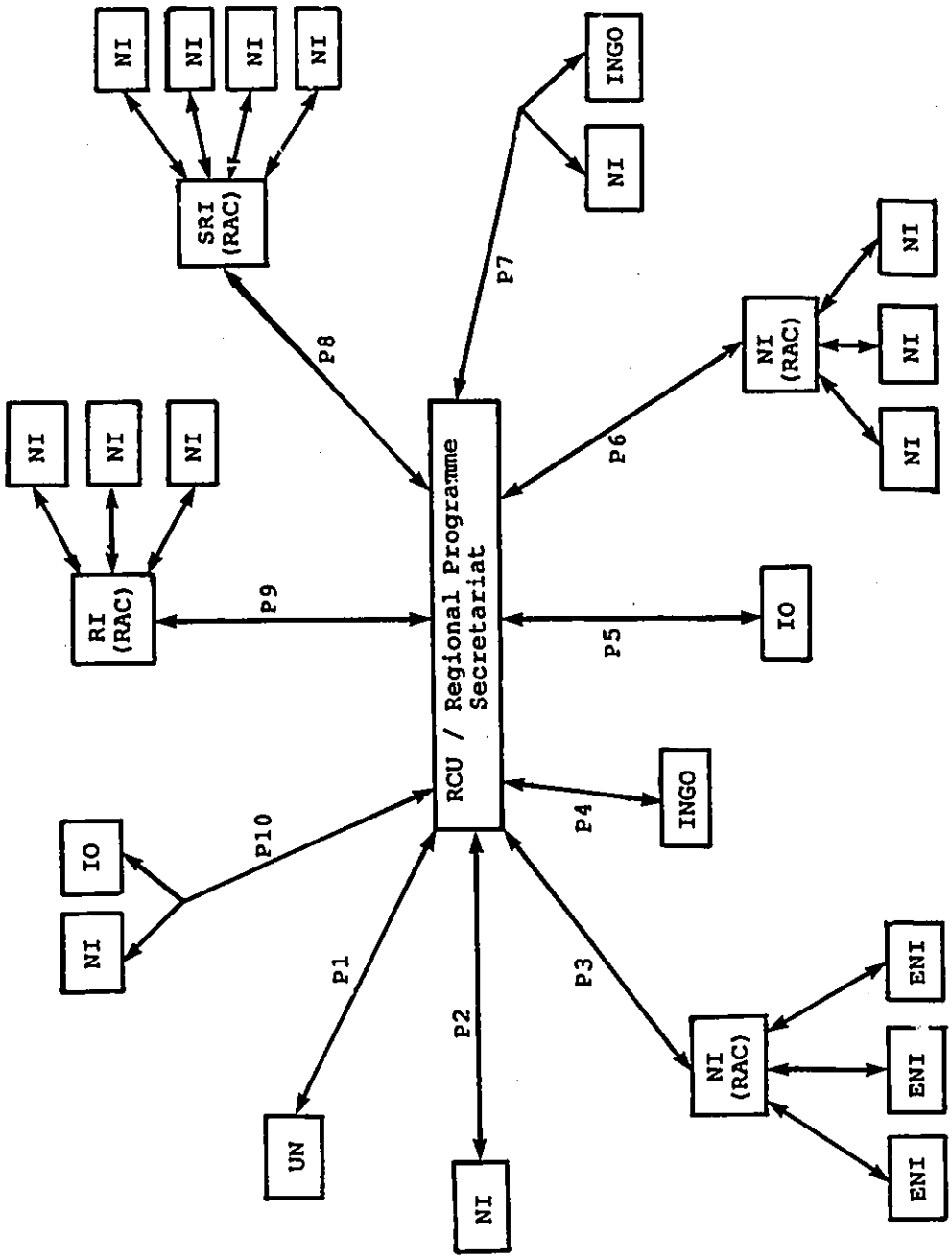


FIGURE 5.3 - Micro - Co-ordination of Regional Priority Projects

TABLE 5.1 - Resource Management Assessment Model: Actors, Agencies and Institutional Arrangements

ACTORS AND AGENCIES	RATIONALE, CONCEPTUALIZATION, AND CONTEXT	PLANNING AND ANALYSIS		IMPLEMENTATION	GENERAL GUIDES AND PRINCIPLES
GOVERNMENT, MANAGEMENT LEVEL OR TYPE:	PROBLEM, ISSUE, CONDITION, CONFLICT, SCARCITY	STRATEGIC PLANNING	Negotiations, Public Hearings, Pre-Hearings, Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	APPROVAL	BASIC & APPLIED RESEARCH
BENEFICIARY	POLITICAL AGENDA	BIOPHYSICAL, SOCIO-ECONOMIC INVENTORY	ABC Method	Surveillance & Inspection Monitoring, Enforcement Modification	MANAGEMENT CO-ORDINATION
PROPONENT	MANAGEMENT AGENDA	HUMAN USE SYSTEM CLASSIFICATION		CONSTRUCTION	INCENTIVES - ECONOMIC, SOCIAL, POLITICAL
LEAD	SCIENTIFIC AGENDA	SIGNIFICANT AREAS IDENTIFICATION	B/C Analysis, EIA, SIA, TIA, Input-Output Analysis	Surveillance & Inspection Monitoring, Enforcement Modification Procedure Modification	SENSITIVITIES, VALUES
PARTICIPANT		EVALUATION OF ALTERNATIVES		OPERATION	INFORMATION ACCESS
OBSERVER		GOAL ASSESSMENT			PROCESS MONITORING
					MANAGEMENT CO-OPERATION
Federal Provincial (State) Regional International Municipal Committee Industry Commission Council, Authority, District Task Force Interest Group Mass Media Other			Government Industry Public Intergroup Mass Media News Agency New Institution		

Source: Adapted with considerable modification from (Nelson and Jessen, 1981)

5.2 ACTORS, AGENCIES AND INSTITUTIONAL ARRANGEMENTS: A QUALIFICATION

The RSP is characterized by actor, agency and institutional arrangement complexity and variety. One important goal of the RSP is to utilize existing institutional structures and *not* to create new national or regional bureaucracies (Thacher and Meith, 1980, p. 156). Instead, UNEP officials encourage regions to extend their reach to several types of actors, agencies and institutional arrangements for information, guidance and support. Each of these types is discussed in this chapter. However, it is beyond the scope of this exercise to provide a complete inventory of *all* the co-operating and supporting institutions involved in the RSP. The goal instead, is to present a representative sample of the variety of organizations and identify a few key examples for each type (Table 5.2). The reader is asked to consult the list of acronyms in the preface of the thesis for the complete titles of agencies identified in this chapter. It is important to note that this descriptive analysis is largely focussed on the early implementation phase of programme development. As a consequence, it is impossible to generalize from the experiences of mature programmes. The generic types of actors, agencies and institutional arrangements, therefore, reflect the decision-making fabric at a specific programme moment. A re-evaluation of this fabric some years hence, would be a necessary research topic, and would likely present different results. However, the early implementation orientation should be of more utility to would-be managers and others interested in the earlier stages of programme development.

TABLE 5.2 - Representative Sample of Co-operating and Supporting Institutions and Organizations Participating in the UNEP Regional Seas Programme **

1. Non - Governmental Organizations, International (INGO)

INGO
- IIED
- IUCN
- SCOPE
- Sierra Club
- WWF

2. International Organizations within the UN System (IOUN)

- ECE
- FAO
- IAEA
- IMCO (was IMO)
- IOC (of UNESCO)
- UN/DIESA
- UNDP
- UNESCO
- UNIDO
- WHO
- WMO

Regional Commissions
- ECLAC
- ESCAP

3. International and Intergovernmental Organizations (IO)

International
- IAHS
- ICES
- ICSU
- IOI
- IATTC

Intergovernmental
- OAS

4. Regional and Sub - Regional Institutions (RI and SRI)

- ALECSO
- CARICOM
- CCA
- CPPS
- SPC
- SPEC

5. National Institutions (NI)

- James Cook University (JCU), Australia
- National Institute of Oceanography of India (NIO)
- US Agency for International Development

6. Exogenous National Institutions (ENI)

- University of Guelph, Canada

7. Regional Activity Centres (RAC)

Mediterranean Region
- Regional Oil Combating Centre, Manoel Island, Malta (ROCC - IMO/UNEP)
- Regional Activity Centre for Priority Actions Programme, Split, Yugoslavia (PAP/RAC)
- Regional Activity Centre for the Blue Plan, Sophia Antipolis (BP/RAC)
- Regional Activity Centre for Specially Protected Areas, Tunis, Tunisia (SPA/RAC)

** Some institutions and organizations would be appropriate in more than one category, because of spatial orientation or composition.

5.3 A) MACRO - CO-ORDINATION OF RSP

Macro - co-ordination refers to overall administrative guidance. It is hierarchical in nature, with actors, agencies and institutional arrangements classified as either *core* or *supporting* in function (Figures 5.1 and 5.2). The term *core* actors, agencies and institutional arrangements, refers to those institutions that are actively involved in RSP affairs, and are central to programme planning and implementation. The term *supporting* actors and agencies refers to those institutions that *may* contribute their expertise and experience intermittently, based on their interest in a region or a regional project, and as required by a region's governments. This discussion will move systematically through the diagram elements presented in Figures 5.1 and 5.2. The *core* actors, agencies and institutional arrangements to be discussed include: Intergovernmental Meetings; the United Nations Environment Programme (UNEP) and the UNEP Governing Council; the Oceans and Coastal Areas Programme Activity Centre (OCA/PAC); Regional Programme Secretariats and Regional Co-ordinating Units (RCU); National Focal Points (NFP); National Institutions (NI); Regional Institutions (RI) and Sub-Regional Institutions (SRI). The *supporting* actors, agencies and institutional arrangements to be discussed include: National Scientific Experts (NSE) and Regional Scientific Experts (RSE); National (NNGO), Regional (RNGO), and International (INGO) Non-Governmental Organizations; United Nations Agencies (UNA); and other International and Intergovernmental Organizations (IO).

5.3.1 Core Actors and Agencies

5.3.1.1 Intergovernmental Meetings

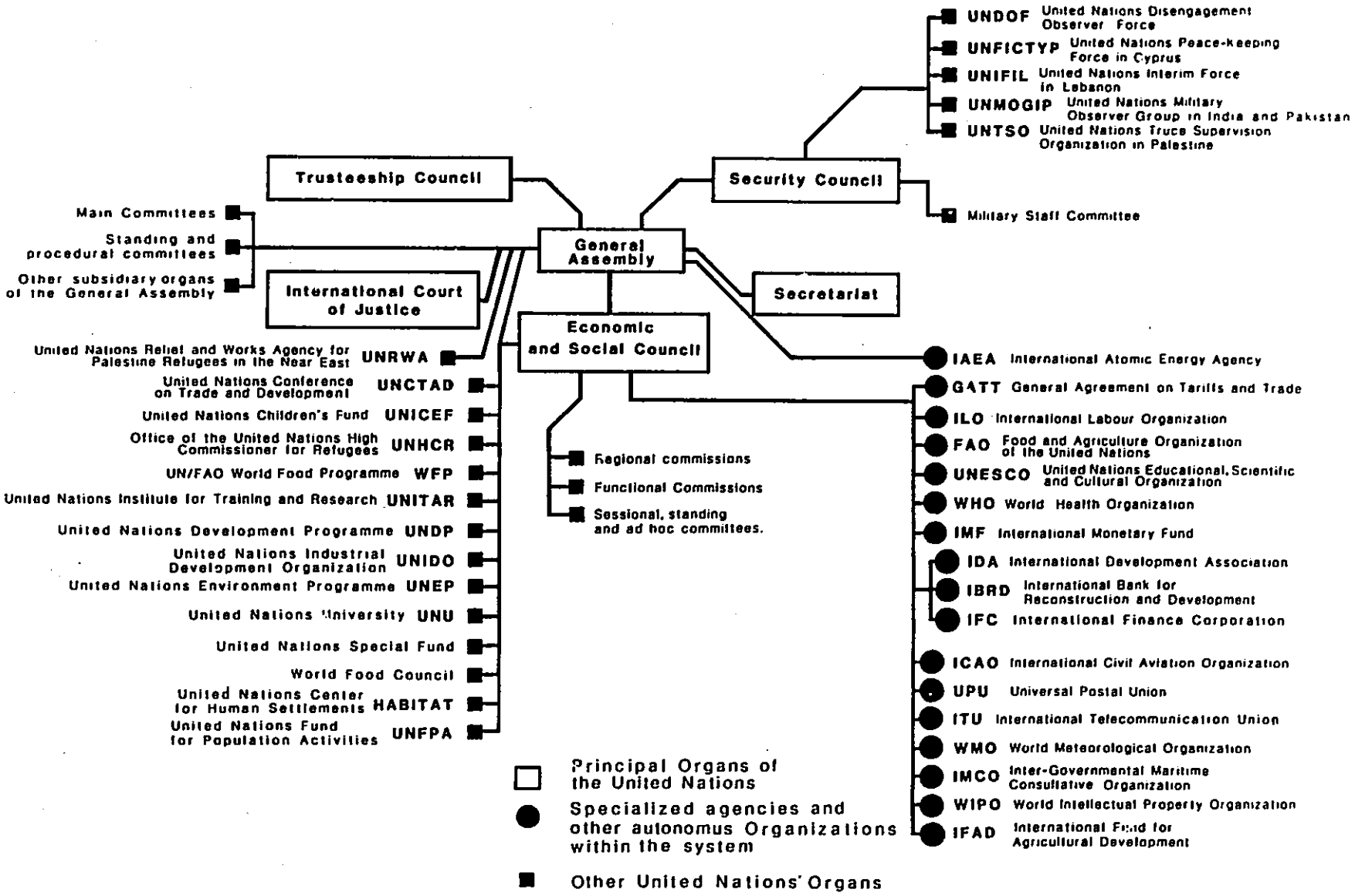
Intergovernmental Meetings are the fora of nations within a RSP area (Figures 5.1 and 5.2). The central purpose of these gatherings is to facilitate information exchange and discussion related to the planning and implementation of a regional programme. These

meetings serve as the *overall authority* to determine regional programme components, to review progress made in programme development and implementation, and to approve the implementation workplan, including the financial arrangements (UNEP, 1986, p. 3; CPPS/UNEP, 1983, p. 11; UNEP, 1982c, p. 60). Contracting Parties, through intergovernmental meetings, are responsible for policy decisions on all substantive and financial matters related to an Action Plan, its Convention and Protocols. The list of participants at these meetings is composed of government-appointed representatives including heads of government ministries, representatives of lead agencies involved in regional programme activities, and representatives of other programme sensitive agencies. Delegates from specialized UN agencies, international and regional organizations also attend as observers. Ordinary intergovernmental meetings are convened biennially, with extraordinary meetings scheduled anytime in between as required. Further explanation of intergovernmental meetings and their role in the planning phase is presented in Chapter 6.

5.3.1.2 UNEP and the UNEP Governing Council

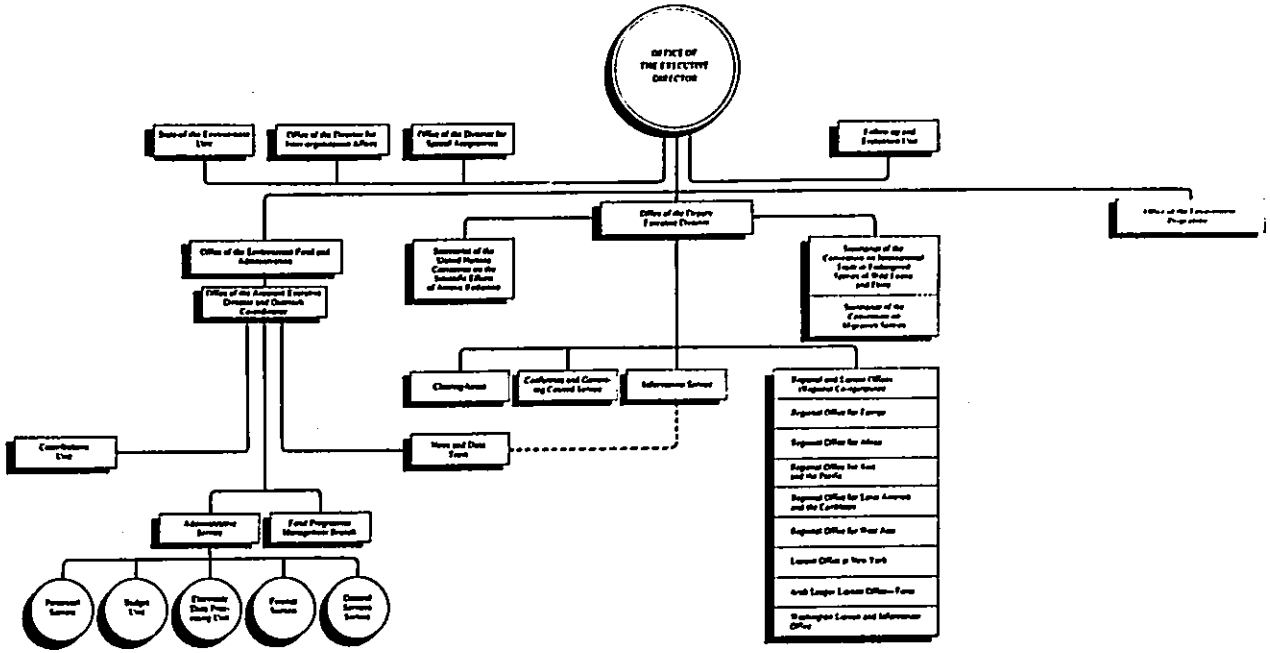
The United Nations Environment Programme (UNEP) was established in 1972, to serve as a focal point for environmental action and co-ordination within the UN system (Figures 5.4 - 5.6). The role of UNEP within the UN System is unique. Although it is neither an executing agency nor a financial institution, it sometimes acts in one or both of these capacities. Its basic task is to catalyze, co-ordinate and stimulate integrated environmental action within the UN System. In 1986, the resources available to the UNEP Environment Fund totalled $54.7 million, including $41.62 million in convertible currency (CC) and $13.08 million in non-convertible (NCC) currency (UNEP, 1987h, p. 1). Further elaboration on UNEP's Environment Fund is provided in Chapters 7 and 8.

FIGURE 5.4 - Institutional Components of the United Nations System, 1987



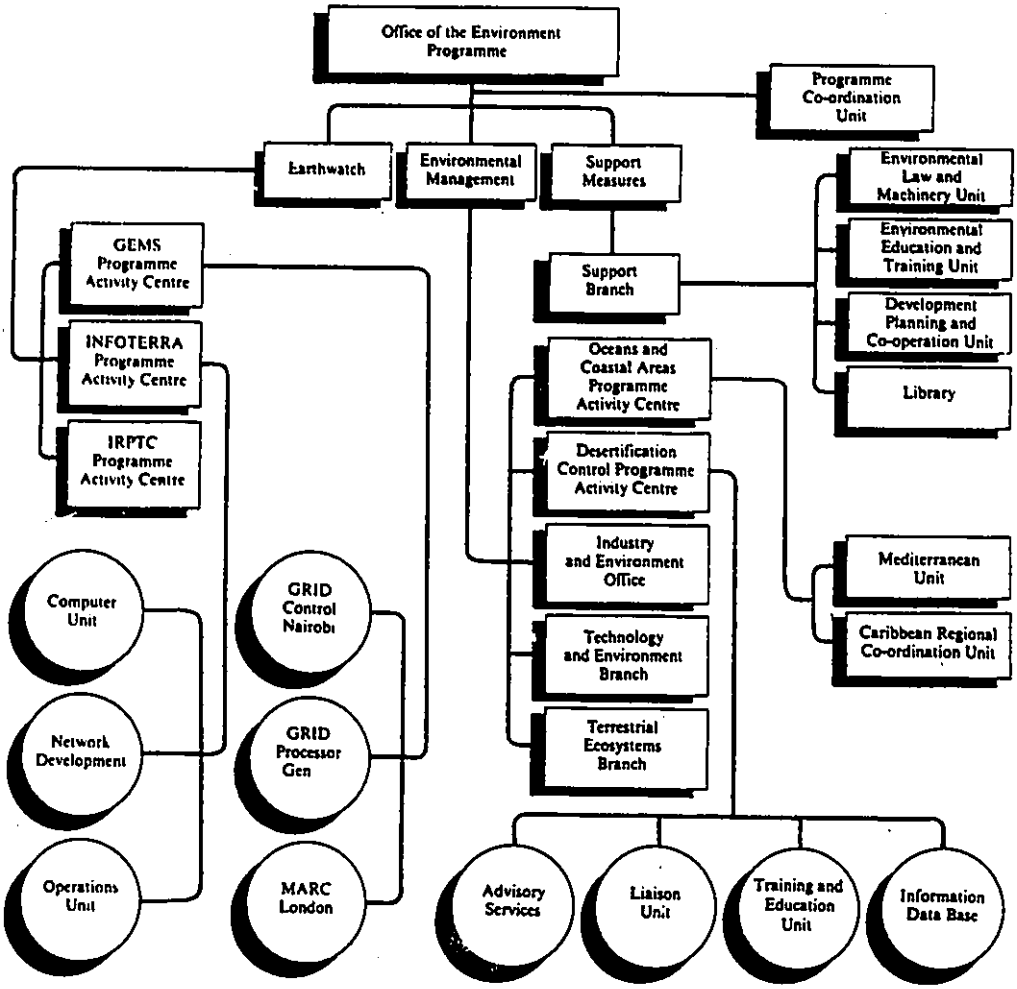
Source: (UNEP, 1987g)

FIGURE 5.5 - Secretariat of the United Nations Environment Programme (UNEP), 1987



Source: (UNEP, 1987g)

FIGURE 5.6 - UNEP and its Internal Structure, 1987



Source: (UNEP, 1987g)

UNEP, along with other UN bodies, provide a region's nations with a forum in which they can meet, negotiate and co-operate in order to protect their common resources (Yeroulanos, 1985, p. 4). More specifically, in the context of the RSP, UNEP acts as overall co-ordinator for the development and implementation of regional action plans (Figures 5.1 and 5.2). In some cases, this role is limited to the initial or planning phase of activities (UNEP, 1982a, p. 3). UNEP also has the mandate to reach outside the system "to secure the effective co-operation of, and contribution from, relevant scientific and other professional communities in all parts of the world" (General Assembly Resolution 2997 (XXVII) of 15 December 1972, sect. II, para. 2(d)) (UNEP, 1987g, p. 15). Thus, UNEP's partners range from the family of UN specialized agencies to international organizations, and to international non-governmental organizations (INGO's).

The *central, intergovernmental and legislative body* of UNEP is its Governing Council (GC). It is composed of fifty-eight members elected by the UN General Assembly for three-year terms (Table 5.3). More specifically, the regional equation includes: sixteen seats for African States; thirteen seats for Asian States; six seats for Eastern European States; ten seats for Latin American States; and thirteen seats for Western European and other States (UNEP, 1985d, p. 33). It is interesting to note the distribution of the UNEP Governing Council membership. Over two-thirds (approximately 67%) of the Council's seats are occupied by developing nations. This global representation gives developing nations a clear majority, and results in a concern for the environment being moderated by concerns for economic growth and development (Bennett, 1984, p. 298; Bhagwati and Ruggie, 1984, pp. 89-90; Caldwell, 1984, p. 63). Further discussion on the implications of this regional representation equation is presented in Chapter 8.

The main functions and responsibilities of UNEP's Governing Council are:

TABLE 5.3 - Member States of the UNEP Governing Council, 1987

Argentina
Australia
Barbados
Botswana
Brazil
Bulgaria
Burundi
Canada
Chile
China
Colombia
Congo
Czechoslovakia
Denmark
Dominican Republic
France
Gabon
Germany, Federal Republic of
Ghana
Greece
India
Indonesia
Iran (Islamic Republic of)
Iraq
Jamaica
Japan
Jordan
Kenya
Lybyan Arab Jamahiriya
Malta
Mauritania
Mexico
Netherlands
Niger
Nigeria
Oman
Panama
Papua New Guinea
Poland
Republic of Korea
Senegal
Sri Lanka
Swaziland
Sweden
Switzerland
Syrian Arab Republic
Thailand
Tunisia
Turkey
Uganda
Ukrainian SSR
USSR
United Kingdom
United States
Venezuela
Yugoslavia
Zaire
Zambia

Source: (UNEP, 1987g, p.116)

1. To promote international environmental co-operation and recommend necessary policies;
2. To provide general policy guidance for the direction and co-ordination of environmental programmes within the UN system;
3. To receive and review the periodic reports of the UNEP Executive Director, on the implementation of environmental programmes within the UN system;
4. To monitor the world environmental situation in order to ensure that emerging environmental problems of international significance receive appropriate and adequate consideration by Governments;
5. To encourage relevant international, scientific and other professional communities to participate in the acquisition, assessment and exchange of environmental information and knowledge, and in the technical aspects of formulating and implementing environmental programmes within the UN system;
6. To monitor and review the impact of national and international environmental policies and measures on developing countries, along with the problem of additional costs that may be incurred by developing countries in implementing environmental programmes and projects. Governing Council will also ensure that these activities are compatible with the development plans and priorities of those countries; and
7. To annually review and approve the allocation schedule of Environment Fund resources (UNEP, 1985d, p. 33).

5.3.1.3 Oceans and Coastal Areas Programme Activity Centre (OCA/PAC)

Direct RSP administration and co-ordination is orchestrated by a UNEP subdivision -- the Oceans and Coastal Areas Programme Activity Centre (OCA/PAC) (Figure 5.6). The basic function of OCA/PAC is to provide the overall co-ordination of UNEP's "Oceans" Programme, which consists of three closely linked sub-programmes: the

Global Marine Environment, Living Marine Resources and the Regional Seas (RSP). In the context of the RSP, the largest proportion of OCA/PAC activity is related to its central and catalytic role of concensus building and the bringing together of nations with different cultural, economic, political and religious traditions. OCA/PAC also serves as a liaison between the oceans programme and other components of UNEP (Figures 5.1 and 5.2). Established in 1977 as the Regional Seas Programme Activity Centre of UNEP in Geneva, Switzerland, it was renamed the Oceans and Coastal Areas Programme Activity Centre (OCA/PAC) in 1985 and was relocated to Nairobi, Kenya, on September 1st, 1985.

In the context of the RSP, the role of OCA/PAC changes as the programme develops within individual regional contexts. Basically, OCA/PAC progresses from the role of promotion and product sales to programme co-ordination, from co-ordination to programme consultation, and from consultation to programme counselling. This progression of responsibilities gradually becomes less demanding as regional programmes become more mature and self-managing. Although OCA/PAC is accountable to the UNEP Executive Director and ultimately to the UNEP Governing Council, it has its own Director and Assistant Director. They are at liberty to establish daily, monthly and yearly administrative priorities. OCA/PAC staff officials are drawn from several nations and emit a regional personality. The Director has hand-picked an interdisciplinary group of ten scientists and supporting professionals for the programme team. Their academic backgrounds include: administration, chemical engineering, economics, environmental planning and management, law, marine biology and marine chemistry. The programme team has been together for several years giving them the opportunity to explore all programme potentials, limitations and procedures (Szekely, Personal Communication, 1985a, 1985b).

5.3.1.4 Regional Programme Secretariats and Regional Co-ordinating Units (RCU)

The concept of a regional Secretariat is very complex and has an inherent duality (Figures 5.1, 5.2 and 5.3). *First*, as the *Secretariat of the Action Plan*, a designated actor, agency or institutional arrangement is responsible for the administration of policies and procedures, along with counselling and liaison duties related to the preparation and development of a Regional Action Plan and its associated Convention and Protocol(s). More specifically, the Secretariat in this context is the legal and administrative institutional arrangement attached to an Action Plan, particularly responsible for *agreement administration*. *Second*, as the *Secretariat of a Regional Programme*, a designated actor, agency or institutional arrangement is the regional co-ordinating unit for implementation of an action plan and its regional projects. In this context, the Secretariat assumes the specific duties related to *programme implementation and operation*.

Several regional examples reveal the complexity and duality of the secretariat function. In the Red Sea and Gulf of Aden Region, the Arab League Educational, Cultural and Scientific Organization (ALECSO) is designated as the interim *Secretariat of the Action Plan*, pending entry into force of the Convention. Its task is one of administration alone. Upon entry into force of the Convention, the Regional Organization for the Conservation of the Red Sea and Gulf of Aden Environment, is to be established to assume implementation responsibilities as the *Secretariat of the Regional Programmme* (UNEP, 1983e, pp. 3-4). Its task is both administrative and directive. Further elaboration on the entry into force of regional conventions is provided in Chapter 7.

Unlike the Secretariat of a Regional Programme, a *Regional Co-ordinating Unit* (RCU), is the *on-site* institution established to assume responsibility for the overall co-ordination, continuous supervision and review of the implementation of the Action

Plan, Convention and Protocols (UNEP, 1986, p. 5; UNEP, 1982d, p. 11). It is responsible for the *day-to-day activities* related to the Action Plan, including the implementation of regional projects and liaison with a region's governments. Although the number of associated project tasks may be large, it has been a RSP goal that the RCU be kept to a minimal size in order to ensure that the maximum amount of available funds is used to achieve goals established in the action plan, and not be absorbed and lost in a cumbersome bureaucracy.

Generally, RCU's are manned with scientific, professional and clerical staff from participating nations. However, UNEP has at times assigned some of its staff to RCU's, and relevant United Nations agencies and other international organizations have been requested to outpost experts and advisors to assist in overall programme co-ordination. For example, in the context of the Mediterranean Region, the outposting of FAO and WHO professionals involved in the Action Plan to the Athens Co-ordinating Unit, proved to be one of the most effective ways of interagency co-operation, and contributed considerably to the Unit's ability to provide efficient, overall co-ordination (Keckes, 1986, p. 19).

Finally, a RCU is not expected to conduct regional research itself. It is expected to serve as a referral centre providing information, identifying experts and institutions to aid participating states in solving specific environmental problems, and facilitating information exchange and co-operation among those experts and institutions (UNEP/CEPAL, 1982, p. 27). A RCU is established by: 1) selecting an existing regional organization as the secretariat; or 2) establishing a new regional organization to carry out the secretariat responsibilities; or 3) calling upon an existing international organization to assume the co-ordination responsibilities (UNEP, 1986, p. 5). Further elaboration on the establishment and the status of Regional Programme Secretariats and Regional Co-ordinating Units is provided in Chapter 7.

5.3.1.5 National Focal Points (NFP)

In order to ensure co-ordination and co-operation at both the national and regional levels, National Focal Points (NFP) are identified (Figures 5.1 and 5.2). A region's nations designate existing government departments or other private institutions to perform these management tasks (UNEP, 1982c, p. 61; UNEP/CEPAL, 1982, p. 27).

More specifically, the main roles of the NFP are:

1. to act as the official channel of communication between the regional programme secretariat or RCU and their respective government; and also between international organizations and national institutions participating in specific projects;
2. to co-ordinate the participation of national agencies and institutions in the programme; and
3. to consult with all relevant actors and agencies in their national government, on programme activities and progress achieved in implementing the action plan (UNEP, 1986, p. 4; UNEP, 1982c, pp. 61-63).

In the context of the East Asian Seas Region, for example, the following NFP's have been designated:

- Indonesia: The First Assistant Minister, Ministry of State for Development, Supervision and Environment;
- Malaysia: Director-General of the Environment, Environment Division, Ministry of Science, Technology and the Environment;
- Philippines: Executive Director, National Environmental Protection Council, Ministry of Human Settlements;
- Singapore: Permanent Secretary, Ministry of the Environment; and
- Thailand: Secretary-General, National Environment Board, Ministry of Science, Technology and Energy (UNEP, 1983a, p. 10).

5.3.1.6 National Institutions (NI)

National Institutions (NI) are those research centres, laboratories, government departments, academic centres and universities, that are nominated by national governments, to provide the institutional base for technical work associated with a regional programme (Figures 5.1 and 5.2) (UNEP, 1982c, p. 62). As each regional programme is aimed at benefiting the States of the region, national governments and various national institutions are involved from the very beginning, first in environmental assessment (planning and analysis) and then in environmental management (implementation) activities (UNEP, 1983b, p. 2). RSP experience has shown that much knowledge and experience is gained by both programme administrators and the regional population, if national organizations and experts are employed in the preparation of reports, studies and projects, from the earliest possibile stages (UNEP, 1984d, p. 6). After adoption of the regional action plan, its implementation is carried out by NI's who serve as the executing agencies for specific work under the action plan (Bliss-Guest and Keckes, 1982, p. 44; UNEP/CEPAL, 1982, p. 30). In order to facilitate complete and effective participation in programme activities, technical assistance, equipment and training are supposedly provided through the action plan to strengthen the capabilities of NI's participating in the programme (UNEP, 1986, p. 4; UNEP, 1983a, p. 10). Although the literature indicates the active involvement of NI's in RSP activities, only a few are specifically identified by name in the more general UNEP literature and documentation. For example, between June 1986 and December 1987, James Cook University of Australia implemented *A Study of Dugong Movements using VHF and Satellite Telemetry* (Project FP/5103-86-01 (2642)), in the South Pacific Region (UNEP, 1987i; p. 27). In another example, the National Institute of Oceanography of India (NIO) implemented the *Marine Environmental Monitoring and Marine Living Resources Assessment Programme for the Indian Ocean Region; Phase I: Survey of Institutional Capabilities*

(Project FP/1301-75-01 (512)), from June 1975 to November 1978 (UNEP, 1987i, p. 12). Interestingly, although this project was conducted by a NI within the South Asian Seas Region, it also had direct relevance for two other neighbouring regions, namely the East African and East Asian Seas Regions.

5.3.1.7 Regional Institutions (RI) and Sub-Regional Institutions (SRI)

Regional Institutions (RI) and Sub-Regional Institutions (SRI) are used as much as possible for the implementation of an action plan (Figures 5.1 and 5.2). In some regions, a national institution is proposed by a State to assume a regional or sub-regional co-ordinating role, and provide services in support of the action plan, such as intercalibration exercises or data collection and dissemination (UNEP, 1986, p. 6; UNEP, 1982c, p. 62). Technical and managerial assistance is provided through the action plan to participating regional and sub-regional institutions (UNEP/CEPAL, 1982, p. 30). The list of RI's and SRI's that are involved in the RSP include: ALECSO, CARICOM, CCA, CPPS, SPC and SPEC (UNEP, 1987i, pp. 58-62).

5.3.2 Supporting Actors and Agencies

5.3.2.1 National and Regional Scientific Experts (NSE and RSE)

National and regional scientific experts (NSE and RSE) include scientists from academic, government and private research institutions, who are nominated by national governments to serve as advisors and consultants on programme activities (Figures 5.1 and 5.2). These experts convene at specific scientific workshops and also at intergovernmental meetings. For example, in December 1986 a meeting of experts on the South Asian Seas regional programme was convened in Bangkok. The purpose of this meeting was to review and revise regional documentation including: 1) country reports, 2) a draft overview report based on the country reports, 3) a report addressing the essential legislative aspects relevant to the action plan, and 4) a draft regional action

plan. Experts from Bangladesh, India, Maldives, Pakistan and Sri Lanka attended the meeting along with observers from ESCAP, FAO, IMO, IOC, IUCN, SACEP, UNCHS, UNEP, UNESCO, WHO, WMO, WTO and the Asian Disaster Preparedness Centre (UNEP, 1987c, Annex 1 pp. 1-8). Further elaboration on the role of NSE and RSE in the planning phase of programme development is presented in Chapter 6.

It must be mentioned that the availabiility of national and regional scientific expertise in many nations is a severe problem. It has been stated on several occasions that the well of scientific expertise and technology available to regional nations very much remains in the developed world (Keckes, 1986, pp. 15-44). Such regional programmes as the Caribbean, South Pacific, South-East Pacific, Kuwait, Red Sea and Gulf of Aden, West and Central Africa, Eastern Africa, East Asian Seas, South Asian Seas and South-West Atlantic continue to depend on the scientific community of North America and Western Europe. Education and training of scientists and the sharing and implementation of regionally and globally compatible scientific methods are considered major resistances to RSP planning and analysis.

5.3.2.2 National, Regional and International Non-Governmental Organizations (NNGO, RNGO and INGO)

National (NNGO), Regional (RNGO) and International Non-Governmental Organizations (INGO) also have a significant contribution to make to the RSP (Curtis, 1985, p. 91; Anonymous, 1982b, p. 10). These agencies play distinctive and pivotal roles as both promoters of environmental awareness and environmental education in the general public, and as technical advisors or consultants to regional programme officials (Figures 5.1 and 5.2) (Anonymous, 1982a, p. 30; Anonymous, 1980, p. 67). They may be involved in both the planning phase and the implementation phase of programme development. Overlapping interests and limited resources have encouraged UNEP and NNGO's, RNGO's and INGO's to combine their efforts in several programme activi-

ties within the RSP. This working relationship demands interdependence and openness in information exchange, research and administration. The result is a division of labor for common ends, rather than a segregation of efforts and duplication of results (Bennett, 1984, pp. 231, 419). UNEP attaches great importance to co-operation with NGO's for it is through these actors that environmental concerns and activities reach down to the grass roots level. Since 1976, the Environment Liaison Centre (ELC) in Nairobi, has served as the main channel of communication between UNEP and the network of national, regional and international NGO's (UNEP, 1987g, p. 22; UNEP, 1985f, p. 22, 39).

A few key INGO's involved in the RSP include: the International Institute for Environment and Development (IIED); the International Union for Conservation of Nature and Natural Resources (IUCN); the Scientific Committee on Problems of the Environment (SCOPE) and the World Wildlife Fund (WWF) (UNEP, 1987g, p. 15). The IUCN has proven to be a particularly valuable consultant in the realm of coastal and marine resources conservation (Curtis, 1985, p. 91; UNEP, 1984d, pp. 6, 9). In at least one programme area, the East African Region, the IUCN has been invited to participate in UNEP's exploratory mission to exercise its expertise in the area of conservation of coastal and marine resources and ecosystems (UNEP, 1984d, p. 4). It is interesting to note that although UNEP and RSP literature indicates the involvement of national and regional NGO's in programme activities, specific representative organizations are not identified (Curtis, 1985, p.91; UNEP, 1987g, p. 22). It is somewhat disconcerting to the author that both UNEP and RSP documentation is often weak in the context of hard evidence.

5.3.2.3 United Nations Agencies (UNA)

The participation of UN Agencies (UNA) greatly assists RSP planning and implementation (Figure 5.4). More specifically, UN organizations are relied upon to provide technical advice, managerial support and educational training to programme regions (UNEP, 1986, p. 7; UNEP/CEPAL, 1982, p. 31). Much of this support appears in the form of comprehensive sectoral reports that reflect the individual interests of UN agencies on a regional basis. In addition, international organizations within the UN System have also been actively involved in specific regional projects (UNEP, 1987i, pp. 55-58). The list of UN agencies involved in the RSP include: UNDP and UNIDO, as well as specialized agencies and other autonomous organizations within the system including FAO, IAEA, IMO, UNESCO, WHO and WMO (Bennett, 1984, p. 56).

5.3.2.4 Other International and Intergovernmental Organizations (IO)

International and Intergovernmental Organizations (IO) include those actors and agencies *outside* of the UN System, that are actively involved in regional programmes and projects as consultants and advisors (Figures 5.1 and 5.2). More specifically, these organizations provide assistance and support to national experts, help strengthen national infrastructures, and collaborate with states in promoting regional co-operation (UNEP, 1984d, p. 9). Generally, the Regional Programme Secretariat or RCU assumes the responsibility for co-ordinating such support (UNEP, 1986, p. 7; CPPS/UNEP, 1983, p. 13). Specific contact between IO's and individual national institutions is then channelled through national lead agencies. The list of international organizations involved in the RSP includes: IAHS, IATTC, ICES, ICSU, and IOI. The OAS, for example, is an intergovernmental organization identified in the literature as a RSP participant.

5.3.3 B) MICRO - CO-ORDINATION OF RSP PROJECTS

Micro - co-ordination refers to the implementation of national and regional projects associated with the goals and priorities identified in Action Plans (Figure 5.3). Many of the above-described actors, agencies and institutional arrangements involved at the macro-level of programme co-ordination are also active at the micro-level of project implementation. Two remaining agencies and institutional arrangements, not yet identified in this chapter, are specifically involved in the implementation phase of regional projects: Regional Activity Centres (RAC's) and Exogenous National Institutions (ENI's).

5.3.3.1 Regional Activity Centre (RAC)

The Regional Activity Centre (RAC) is an institutional arrangement designated as the overall co-ordinator for a given regional project (Figure 5.3). It may be selected from the population of existing national institutions or it may be a new creation. The selection is based on special expertise, experience or facilities in the particular project area (Boxer, 1982, p. 343; UNEP, 1982c, p. 62). The NI's, RI's and SRI's working on the same project are linked in a regional project network. Within this network, one member institution is selected as the RAC to assume the responsibility of co-ordinating that activity (UNEP, 1986, p. 4). For example, four RAC's have been established in the context of the Mediterranean regional programme:

1. the Regional Oil Combating Centre (ROCC - IMO/UNEP) was initiated on Manoel Island, Malta (1976) as a joint IMO/UNEP project;
2. the RAC for the Blue Plan (BP/RAC) was first established in Cannes, France (1979), and then transferred to Sophia Antipolis, France (1984);
3. the RAC for the Priority Actions Programme (PAP/RAC) in Split, Yugoslavia (1980); and

4. the RAC for Specially Protected Areas (SPA/RAC) in Tunis, Tunisia (1986) (UNEP, 1987a, pp. 9-12; Keckes, 1986, pp. 16-19; Bliss-Guest and Keckes, 1982, p. 46).

In the Kuwait Action Plan Region, the Marine Emergency Mutual Aid Centre (MEMAC - ROPME) was established in 1982, as a RAC or an organizational unit of the Regional Organization for the Protection of the Marine Environment (ROPME) (UNEP, 1987a, p. 23; Keckes, 1986, p. 22).

5.3.3.2 Exogenous National Institutions (ENI)

Exogenous National Institutions (ENI) include national agencies that are involved in a RSP *outside* of their programme region, or they are national agencies from countries not involved in a RSP, that are specifically asked to participate in a regional programme on an advisory or consultative level (Figure 5.3). One example of an ENI working in the Mediterranean RSP involved the University of Guelph, of Guelph, Canada, along with the Government of Greece and the IUCN, participating in the 1978 *First International Conference on the Mediterranean Monk Seal* (Project FP/0502-78-01 (1431)) (UNEP, 1987i, p. 5). In this project, the University of Guelph (an ENI), the Government of Greece (a NI), and the IUCN (an INGO) combined their efforts and resources in this conference on the monk seal.

5.3.3.3 Institutional Linkages and Project Configurations

A reflective look at the macro-co-ordination of the RSP, reveals a pattern of *institutional complexity and variety,* which is organized in a hierarchical way (Figures 5.1 and 5.2). This hierarchical pattern of accountability changes only slightly from the planning and analysis to the implementation phase in the roles played by UNEP and OCA/PAC. At the micro - co-ordination level of RSP Projects, the dominant pattern is less hierarchical in nature, and instead characterized by *institutional linkage and institutional spread or outreach* (Figure 5.3).

More specifically, RSP projects are characterized by the *institutional linkages* that pull together national, regional and international agencies because of mutual interest, concern and / or expertise in a given project theme. In keeping with the RSP objective that costly new bureaucracies not be created, the intention is that these new institutional linkages enable existing agencies to function more efficiently within their own national or regional contexts. Central to programme implementation is the Regional Programme Secretariat or Regional Co-ordinating Unit (RCU), which assumes a dominant role as *liaison* between UNEP and OCA/PAC, and those agencies involved in regional project implementation. Individual projects can involve a single agency or can involve several organizations of different type and scale. A graphic display of possible project configurations is presented in Figure 5.3. UNEP project funding ledgers provide several examples of both single agency project involvement and multiple agency project involvement.

Projects involving only a single agency are represented by P1, P2, P4 and P5 in Figure 5.3. For example, a P1 type of project is found in the East Asian Seas Region, where in a 1979 - 1981 project, UNESCO (a UNA) implemented a project on *River Inputs to South-East Asian Seas* (Project FP/0503-79-08 (2099)) (UNEP, 1987i, p. 8). A second example of the same type of project is found in the West and Central African Region. In this case, a *Survey of Marine Pollutants from Industrial Sources in the West African Region* was implemented by UNIDO (a UNA) from 1979 - 1982 (FP/0503-79-18 (2113)) (UNEP, 1987i, p. 9).

An example of a P2 type of project is found in the Kuwait Region where the Department of the Environment of the Government of Iran (a NI), conducted *Research on the Behaviour of Marine Pollutants in Warm Waters* from 1974 - 1976 (FP/0501-74-01 (365)) (UNEP, 1987i, p. 2). In the Caribbean Region, another P2 project example involved Mexico's Secretariat of Urban Development and Ecology (a

NI), in the *Development of Specific Methodologies for the Preparation of Environmental Impact Assessment in the Wider Caribbean Region* in 1987 (Project CR/5102-85-01 (2557)) (UNEP, 1987i, p. 24).

UNEP funding ledgers also provide examples of projects involving multiple organizations in different project configurations (Figure 5.3, Projects P3, P6, P7, P8, P9 and P10). For example, a P6 type of project is found in the Mediterranean Region. From 1980 - 1984, the Regional Activity Centre for the Blue Plan (BP/RAC) in Sophia Antipolis, France, (one of the specialized regional activity centres within the Mediterranean Co-ordinating Unit), worked on *The Mediterranean Programme Activity: Blue Plan First Phase* (ME/5102-80-01 (2011)) (UNEP, 1987i, p. 20). This NI and Regional Activity Centre (RAC) in France, operated as a co-ordination unit for NI's within the region.

Finally, an example of a P7 type of regional project is found in the Caribbean Region. In this 1982 - 1983 project, Venezuela's Ministry of Environment and Renewable Resources (a NI), and the Sierra Club (an INGO) joined forces to work on *Conservation and Management of Coastal Mangroves: Venezuela and Trinidad and Tobago* (FP/1105-81-01 (2038)) (UNEP, 1987i, p. 18).

Regional priority projects are also characterized by *institutional spread or outreach*. More specifically, RSP participants are encouraged to reach out to regional and international organizations of all types for information, guidance and support. UNEP funding ledgers are filled with examples of regional projects involving several combinations of regional, sub-regional and international organizations at both the governmental and non-governmental levels (UNEP, 1987i, pp. 1-29). The goal of regional institutional spread and outreach is to prevent nations and regions from being restricted in their programme implementation efforts, by internal limits in knowledge, technology, equipment or other resources.

5.4 SUMMARY

In order to facilitate this summary of Actor and Agency involvement in the RSP, the set of questions posed at the outset of this chapter are repeated. The answers to these questions follow.

First, what types of actors, agencies and institutional arrangements form the regional management core, and how are they arranged? Generally, the regional management core is comprised of a designated Regional Programme Secretariat or Regional Co-ordinating Unit (RCU), which oversees and co-ordinates the activities of Regional Institutions, Sub-Regional Institutions, National Institutions and Regional Activity Centres, along with other International and Intergovernmental Organizations, Non-Governmental Organizations and UN Agencies which may be involved in the regional programme. At the centre of the regional management core is the Regional Programme Secretariat / Regional Co-ordinating Unit (RCU). Within the complex hierarchy of participating actors and agencies, the Programme Secretariat or RCU serves not only lower order participants at the sub-regional and national levels, but is also the principle contact to agencies and institutional arrangements higher up in the hierarchy, ie. UNEP and UNEP Governing Council, OCA/PAC, and Intergovernmental Meetings.

Second, what types of actors, agencies and institutional arrangements form the national management core, and how are they arranged? Generally, the national management core is comprised of the National Focal Point (NFP), and all national agencies and institutions involved in regional programme activities. In terms of their arrangement, NFP's are found at the centre of the national management core. They serve as the *contact* or *official channel of communication* between the Regional Programme Secretariat / Regional Co-ordinating Unit (RCU), and their respective government; and also as a contact between international organizations, and national institutions involved in specific regional projects.

Third, what is the nature and form of co-ordination among national, regional and international actors, agencies and institutional arrangements participating in the RSP? The co-ordination of actor and agency involvement in the RSP is presented according to the macro-level (programme level) and micro-level (project level) of management. In the context of the former, participation is structured in terms of a complex hierarchy of core and supporting actors and agencies. The arrangement of these organizations is transformed or manipulated as a regional programme evolves from the planning to the implementation phase (Figures 5.1 and 5.2).

In the context of the latter, the co-ordination of regional project participants within the implementation phase is somewhat different. More specifically, actors and agencies are presented in a somewhat less hierarchical arrangement, and instead characterized by institutional spread and outreach (Figure 5.3). Central to the implementation process is the Programme Secretariat or RCU, which continues to serve as liaison and co-ordinator of activities.

The implications of these findings are briefly explored in the concluding section of this thesis (Chapter 9). The next chapter focusses attention on select Planning and Analysis components of the Regional Seas Programme (Chapter 6).

Chapter VI

THE REGIONAL SEAS PROGRAMME: PLANNING AND ANALYSIS

6.1 PURPOSE

The purpose of this chapter is to describe and to analyze select *planning* and *analysis* components of the Regional Seas Programme (RSP). This description is purposefully normative as a detailed examination of the idiosyncrasies of all eleven programmes is beyond research scope. Discussion is guided and organized in terms of the Resources Management Assessment Model (Table 6.1). The intent is to gain an understanding of the national and regional planning and resource analysis procedures generally used within regional programmes. This element is to be discussed in the context of three fundamental question and answer sets. The questions as outlined in Table 1.4 are repeated here for the sake of convenience. *First*, what planning procedures are used to identify and define *national* and *regional* goals? *Second*, what planning and analysis projects are being undertaken to support regional environmental management? *Third*, what are the regional differences in the committment to planning and analysis projects?

It is important to note that the tabular presentation to follow is the product of rigorous data analysis and interpretation by the author. Regional Seas Programme data is raw and unaggregrated in terms of the variables under investigation. The section devoted to Environment Condition Projects and Management Condition Projects, for example, was based on the identification of key statistics, their categorization in terms of orientation, the computation of proportions, and analysis and interpretation of patterns and trends. The United Nations document which contained this raw data did

TABLE 6.1 - Resource Management Assessment Model: Planning and Analysis

ACTORS AND AGENCIES	RATIONALE, CONCEPTUALIZATION, AND CONTEXT	PLANNING AND ANALYSIS	IMPLEMENTATION	GENERAL GUIDES AND PRINCIPLES
GOVERNMENT, MANAGEMENT LEVEL, OR TYPE:	PROBLEM, ISSUE, CONDITION, CONFLICT, SCARCITY	STRATEGIC PLANNING	Negotiations, Public Hearings, Pre-Hearings, Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	BASIC & APPLIED RESEARCH
BENEFICIARY	POLITICAL AGENDA	BIOPHYSICAL, SOCIO-ECONOMIC INVENTORY	APPROVAL	MANAGEMENT CO-ORDINATION
PROPONENT	MANAGEMENT AGENDA	HUMAN USE SYSTEM CLASSIFICATION	Surveillance & Inspection Monitoring, Enforcement Modification	INCENTIVES - ECONOMIC, SOCIAL, POLITICAL
LEAD	SCIENTIFIC AGENDA	SIGNIFICANT AREAS IDENTIFICATION	CONSTRUCTION	SENSTIVITIES, VALUES
PARTICIPANT		EVALUATION OF ALTERNATIVES	Surveillance & Inspection Monitoring, Enforcement Modification Procedure Modification	INFORMATION ACCESS
OBSERVER		GOAL ASSESSMENT	OPERATION	PROCESS MONITORING
				MANAGEMENT CO-OPERATION

Federal Provincial (State) Regional International Municipal Committee Industry Commission Council, Authority, District Task Force Interest Group Mass Media Other	ABC Method	B/C Analysis, EIA, SIA, TIA, Input-Output Analysis

Source: Adapted with considerable modification from (Nelson and Jessen, 1981)

none of this (UNEP, 1987i). It was very much a case of "no one ever has asked these questions before" (Szekely, 1985a, 1985b, Personal Communication). This "data situation" suggests that few administrators and researchers have come before and asked hard questions about programme performance and mechanics. The analysis task was extremely time consuming in terms of human resources, both for the researcher and the key RSP administrator. The latter was invaluable in corroborating interpretations and tracking computations.

6.2 PLANNING PROCEDURES AND REGIONAL GOALS

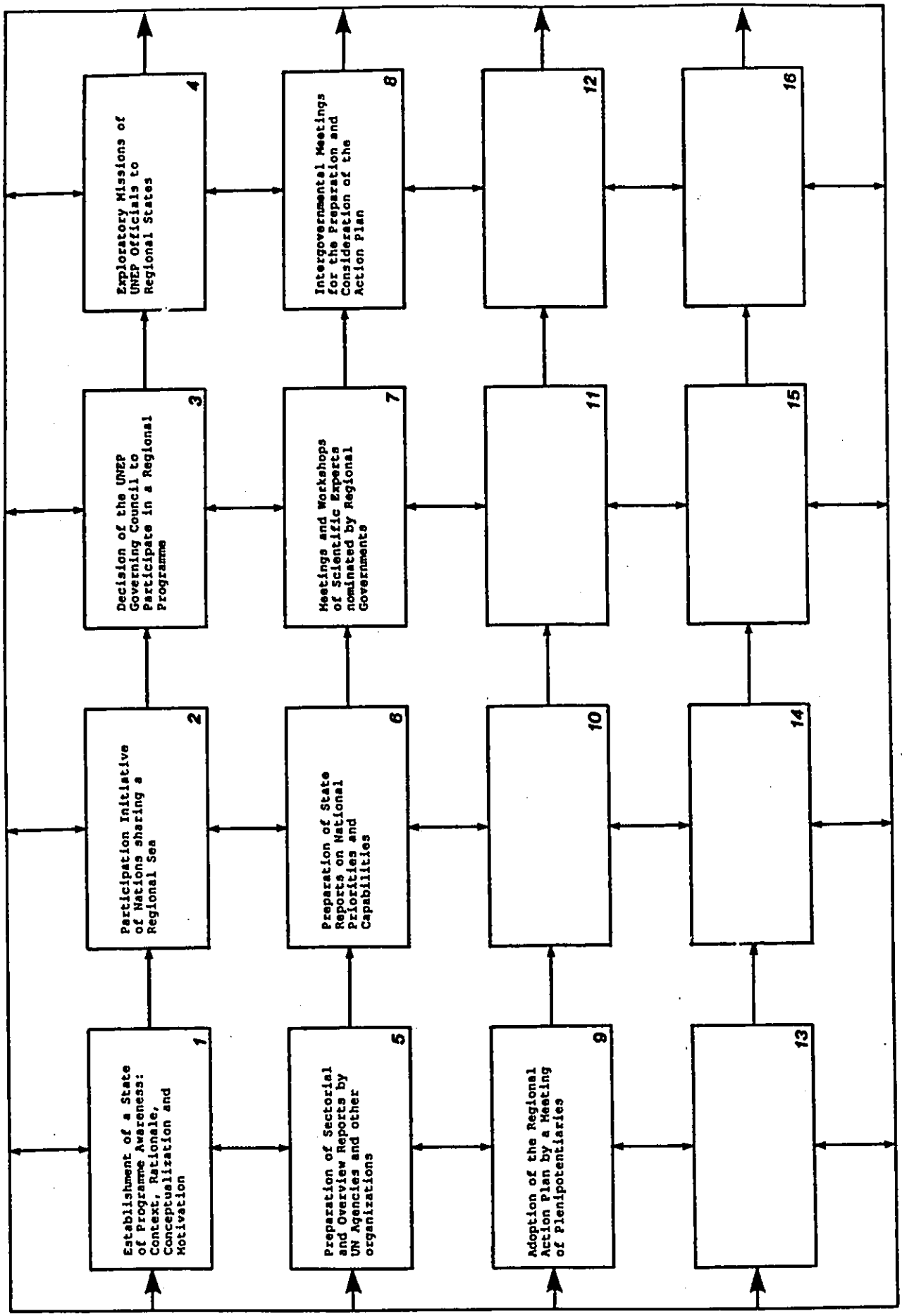
6.2.1 National Reports

The establishment of regional goals and objectives is an intricate consultation process involving a plethora of agencies and actors. It is also a process that produces different planning products from each of these participants. In this context, national goals and objectives are officially identified within *national reports* prepared by each nation or state. These reports are developed by selected departments within national governments, along with the assistance of UNEP and other interested international, regional and national organizations (Figure 6.1 - Step 6).

More specifically, within these national reports nations are asked to:

1. Identify and define national environmental problems and rank them according to regional priority;
2. Identify and define action plan activities to resolve or mitigate these problems;
3. Identify and define national institutions and human resources to deal with these problems; and
4. Identify and define improvements needed in national institutions and human resources in order to improve their capabilities (UNEP, 1986, p. 2; UNEP, 1985c, p. ii).

FIGURE 6.1 - Regional Seas Programme Development Steps (6-9)



Source: (Needham and Jedynack - Copley, 1989)

In the context of the South Asian Seas Region, for example, the national report on environmental problems in India was prepared under the auspices of the Director, Department of Ocean Development, New Delhi, the designated national focal point (NFP) for India (UNEP, 1984b, Annex 1 p.1). This is a notable example because the report's themes express the potential comprehensiveness of such overviews. The following information fields were discussed in this document: definition of the area, hydrographic features, nature of environmental problems, research and monitoring activities, ecosystem distribution, input studies, assessment of possible impacts of pollutants on the marine environment, actions in progress in India in terms of education and research and development, legislative measures and actions needed regionally (UNEP, 1985c, pp. 1-28). A synthesis of the message contained in these information fields summarizes the national predicament in terms of institutional infrastructure, education, and research and development voids and conditions.

6.2.2 Meetings of Scientific Experts

After the national objectives, priorities and capabilities have been formally documented in national reports, these documents and the earlier mission or sectorial reports and regional overview reports are collected for review and discussion at *workshops and meetings of national and regional scientific experts* (NSE and RSE) (Figure 6.1 - Step 7). These meetings are convened to achieve the following goals:

1. The scientific review of regional environmental problems and an adjustment to their ranking if necessary;
2. The formulation of a programme for priority activities to be developed within the framework of a draft action plan;
3. The endorsement of draft action plan components, including a draft convention and technical protocols if possible; and

4. The formal recommendation that the draft action plan be submitted to a conference of plenipotentiaries for adoption (IUCN/UNEP, 1984, p.ii).

These scientific experts' meetings and workshops can be either ad hoc or continuous venues. As many meetings as necessary can be called, and they can be assembled for any reason upon request of the Regional Programme Secretariat or Regional Co-ordinating Unit (RCU), the UNEP Executive Director and / or the advice of a region's governments. In addition, their format can be either plenary or problem-expert specific. An attempt is made to hold the number of participating experts constant. Each nation, within a regional programme, can nominate one expert or a group of experts with cause. However, other national experts, with permission from UNEP, can attend all meetings and workshops as observers. This participation equation compels a nation's scientists to speak with a single voice – one that is supported by a host of non-participating scientists or advisors. As there may be several workshops underway at any moment, each nation may have several nominated scientific experts involved in resource planning and analysis activities.

In order to facilitate active programme participation of regional scientific experts, the Mediterranean (UNEP/FAO, 1985c), Caribbean (UNEP/FAO, 1985a), South Pacific (SPREP/UNEP/FAO, 1985), South-East Pacific (UNEP/CPPS, 1981), Kuwait (IAEA/UNEP, 1981) and East Asian Seas (UNEP/FAO, 1984) Regions have prepared specialized directories of marine environmental research centres in their regions. Three other directories have also been prepared on marine research centres in Africa (UNEP/UN - ECA/UNESCO, 1982), the Indian Ocean (National Institute of Oceanography (India)/UNEP, 1978), and the Indian Ocean and Antarctic Region (UNEP/FAO, 1985b). These directories aim to provide complete and up-to-date information on marine research institutions, outlining their programme objectives, main fields of activities, areas of specialty, institutional structure, staff structure, information

facilities and equipment inventories. The ultimate goal is to define the regional population of scientific expertise. For example, within the Directory of Marine Environmental Centres in the Mediterranean (1985), 147 institutions, including international, governmental, academic -- university / institute, and private -- commercial and non-profit organizations, have been identified within the seventeen participating nations. These organizations employ over 3500 professional, scientific personnel from many different areas of expertise including aquaculture, bacteriology, biochemistry, biology, coastal dynamics, ecology, fisheries technology, genetics, geophysics, hydrography, marine biology, marine chemistry, microbiology, oceanography and physiology, just to name a few (UNEP/FAO, 1985c).

6.2.3 Intergovernmental Meetings

A draft action plan is further refined at the *intergovernmental meetings of government representatives* and legal experts (Figure 6.1 - Step 8). In addition, if progress has been made on the legal and technical components of the action plan, that is, the conventions and technical protocols, they may also be considered in these fora. The history of RSP evolution has shown that at this management stage, five regions have had these instruments ready: the South - East Pacific, Kuwait, Red Sea and Gulf of Aden, West and Central African and East African Regions (UNEP, 1987e, pp. 1-23; Keckes, 1986, pp. 15-45).

Intergovernmental meetings are called as many times as necessary to achieve action plan adoption and convention ratification. For example, in the context of the Caribbean Regional Seas Programme, *nine* formal, intergovernmental meetings were needed of all contracting parties before the Action Plan was accepted (Keckes, 1986, p. 25; Gagraj, 1985a, Personal Communication). One of these meetings, occurred in 1981, when Jamaica was host to the Intergovernmental Meeting on the Action Plan for the Caribbean Programme, in which 22 nations were represented. The list of partici-

pants included: the Minister of Education and Health (Dominica); the Minister of Health and Housing (Grenada); the Minister of Environment and Water Supply (Guyana); the Advisor to the Secretary of State (Haiti); the Minister of State, for the Ministry of Mining and Energy (Jamaica); the Minister of Public Health (Netherlands); the Permanent Secretary for the Ministry of Health (St. Lucia); the High Commissioner to Jamaica (Trinidad and Tobago); the Deputy Assistant to the Secretary of State for Environment, Health and Natural Resources (USA), along with Ambassadors to Jamaica from Colombia and France, just to name a few (UNEP/CEPAL, 1981, pp. 5-12). In addition, representatives from UN bodies, specialized agencies, international, intergovernmental and regional ogranizations attended as observers. The list of these organizations included: UNIDO; UNDP; UNFPA; FAO; UNESCO; WHO/PAHO; WMO; IMCO; CARICOM; EEC; the Cousteau Foundation; Inter-American Development Bank (IDB); Latin American Economic System; Tortola, British Virgin Islands; University of West Indies and the West Indies Associated States (WISA) (UNEP/CEPAL, 1981, pp. 12-15). After the regional action plan is adopted it is compulsory that such meetings be formally held every two years to monitor and judge programme success and to alter the regional, environmental priorities list.

More specifically, the intergovernmental meetings of the planning stage are devoted primarily to eight tasks:

1. The review of all documentation from UNEP and other agencies and actors (National Reports, Sectorial Reports, Regional Overview Reports, Scientific Experts' Reports, Meeting and Workshop Reports);
2. The preparation of the final draft of the Action Plan;
3. The development of the terms of reference for the Management of a Regional Trust Fund;

4. The development of the terms of reference for regional programme co-ordination, for example, a Regional Co-ordinating Unit (RCU);
5. The development of rules for disbursement of the Regional Programme Budget;
6. The establishment of a Monetary - Screening Committee for the Regional Programme;
7. The designation of a Regional Seas Programme Secretariat or Regional Co-ordinating Unit (RCU); and
8. The establishment of a Regional Activity Centre (RAC) or Regional Headquarters.

6.2.4 Meeting of Plenipotentiaries

The formalization of regional environmental co-operation is realized at a *meeting of plenipotentiaries* for the adoption of the regional action plan (Figure 6.1 - Step 9). These officials are designated by their respective governments, and they have full signing authority to commit nations to regional and international environmental co-operation. Generally, these representatives are senior government officials at the level of a Minister or Secretary of State, from such departments as external or foreign affairs, the environment, education or health (Treaty Registrar, 1989, Personal Communication; UNEP, 1981a, pp. 43-48). In addition, National Ambassadors may also act as plenipotentiaries. The official signatures of national plenipotentiaries transforms the regional Action Plan into a *political statement* committing Governments to environmental action.

For example, the Conference of Plenipotentiaries on Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, was convened in Abidjan from the 16 to 23 March 1981. Plenipotentiaries from Angola, Benin, Congo, Equatorial Guinea, Gabon, Gambia, Ghana,

Guinea, Ivory Coast, Liberia, Mauritania, Nigeria, Senegal, Toga, United Republic of Cameroon and Zaire participated in the conference. In addition, observers from Mali and Upper Volta, from UN bodies (United Nations Economic Commission for Africa, UNDP), other specialized agencies (FAO, IMCO), and other intergovernmental bodies (Ministerial Conference of West and Central African States on Maritime Transport) also attended the conference. The Meeting of Plenipotentiaries adopted the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region (UNEP, 1981a, p. 4). At this management stage, national and regional goals are identified and defined in a formal document. However, political statements (action plans) must be supported by decision-making instruments (conventions and protocols) that legitimize and place in law national responsibilities. This transformation from *paper agreement* to *regional policy* is addressed in Chapter 7.

6.3 RESOURCE ANALYSIS AND REGIONAL MANAGEMENT

By definition, resource analysis is described as the process of *understanding the characteristics of natural resources* and *the processes through which they are allocated* (Mitchell, 1979, p. 3). In order to understand the nature of resource analysis within the context of the RSP, a comprehensive examination of all RSP projects commissioned between 1974 and May 1987 was undertaken. The intent was to determine the types of planning projects being promoted and the magnitude of funding for various project types. This task, therefore, fulfills the ambition of the second question posed in the introduction of this chapter: What planning and analysis projects are being undertaken to support national and regional environmental management?

A comprehensive analysis of completed and ongoing RSP projects suggests two project types. The *first* type is directly related to a better understanding of natural

resource characteristics (biochemical, biological, biophysical) and natural resource problems. It includes, therefore, all *Environment Condition Projects (ECP's)*. The *second* project type is related to understanding the processes and institutional arrangements through which resources are allocated. It ultimately involves the inventory of institutional, scientific and technological capabilities and infrastructure, in order to determine the capacity of the management system to respond to environmental problems. This type includes, therefore, all *Management Condition Projects (MCP's)*.

In an *ideal regional programme*, one may expect that these two types of resource analysis projects would be conducted simultaneously. As a result, regional managers would have at their disposal not only a command of environmental problems and their magnitudes, but also the institutional infrastructure (managerial and scientific) needed to process this information and formulate courses of action. A hypothetical cost curve for the ideal regional programme is presented in Figure 6.2. Note that in the ideal situation, ECP's and MCP's would be conducted simultaneously. As a regional programme develops, the assumption is that nations will assume responsibility for operational costs and UNEP resources will no longer be required. This research, however, is not dealing with the ideal case, but rather a management regime that is evolving in a host of regional settings.

In this context, an examination of regional projects in terms of the Environment Condition / Management Condition dichotomy, accentuates the difference between an ideal and a real management case. Table 6.2 presents a statistical account of ECP's and MCP's within the UNEP Oceans Programme (including the RSP) as of May 1987. The inventory of projects is examined according to Table 6.2 - A: *Total Number of Projects*, and Table 6.2 - B: *Total Expenditures on Projects*. Within these EC and MC classifications, projects are further divided into completed (closed), ongoing (active) and projects being negotiated. Both of these classifications attempt to provide some order to the large number and regional distribution of projects.

FIGURE 6.2 - RSP Maturity Expressed in terms of ECP's and MCP's:
Hypothetical Cost Curves for an Ideal Regional Programme

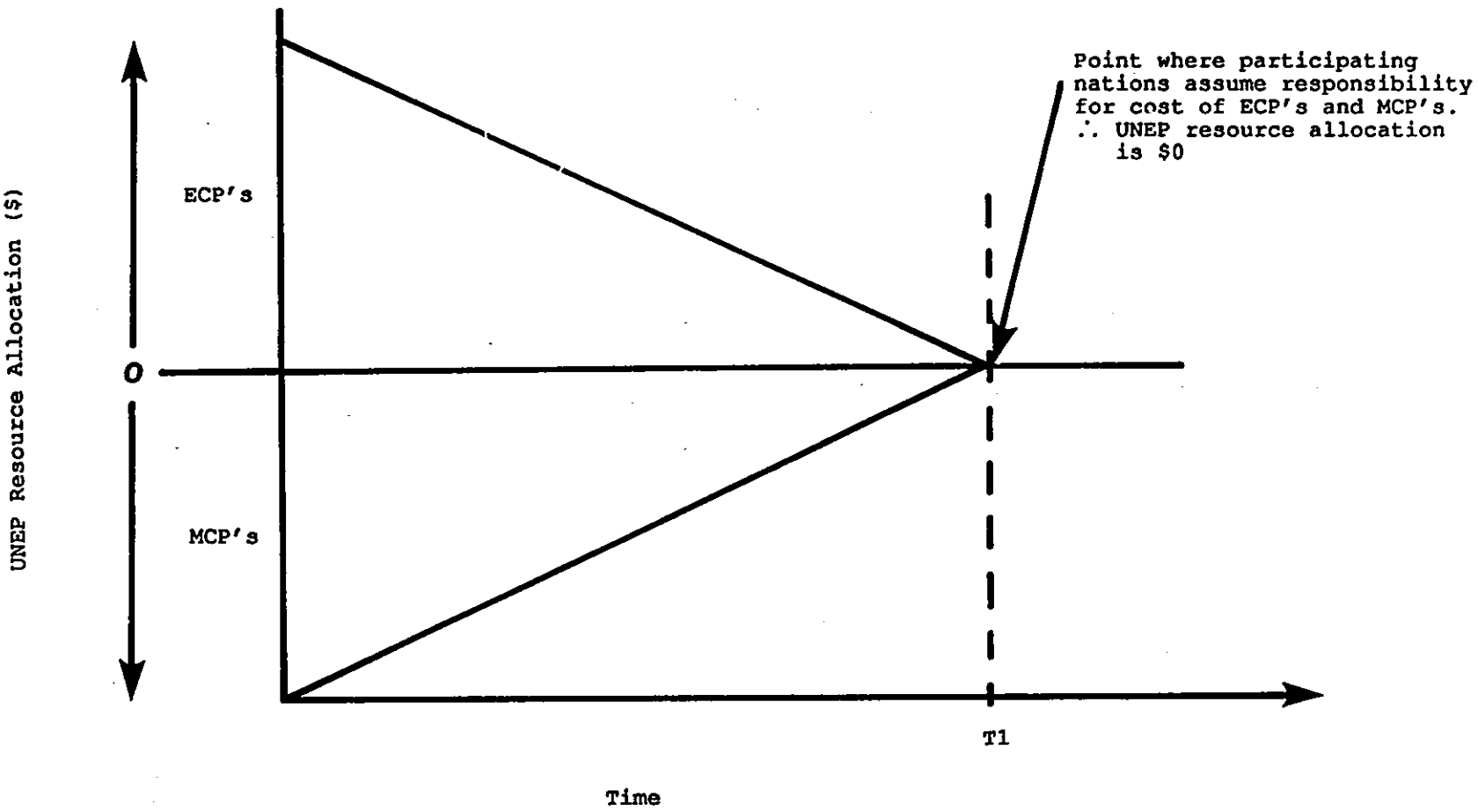


TABLE 6.2 - UNEP Oceans Programme Projects (as of 31 May 1987)

A - Total Number of Projects

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
ECP's	30	22	2	54 / 28%
MCP's	71	63	4	138 / 72%
TOTAL	101	85	6	192

B - Total Expenditures on Projects **
(Funds Derived from all sources; Converted to March 1988 US dollars)
(X x 1.03)

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
ECP's	$8,229,239	$5,107,458	$562,380	$13,899,077 / 14%
MCP's	$15,014,424	$69,117,858	$527,772	$84,660,054 / 86%
TOTAL	$23,243,663	$74,225,316	$1,090,152	$98,559,131

** The percentage discrepancy between Table 6.2 - B statistics and Table 7.4 statistics is due to conversion difficulties.
Source: Adapted with modifications from (UNEP, 1987i, pp. 1-29)

NOTE: ECP's - Environment Condition Projects
MCP's - Management Condition Projects

It is interesting to note that Management Condition Projects are more common than Environment Condition Projects within the thirteen year study period. In fact, there is almost a 3:1 ratio of MCP's (138 or 72%) to ECP's (54 or 28%) (Table 6.2 - A). The addition of total financial expenditures strengthens a visible bias. The total expenditures on MCP's is $84,660,054 (86% of total), while only $13,899,076 (14% of total) is associated with ECP's (Table 6.2 - B).

In sum, project evidence from the 1974 to 1987 study period convincingly indicates that there have been more national and regional projects aimed at understanding and adjusting management conditions and problems, than at understanding and adjusting to actual environmental conditions and problems. These statistics support the literature along with UNEP sources' accounts of where efforts have been focussed (Keckes, 1986, pp. 15-46; Gagraj, 1985a, 1985b, Personal Communication; Keckes, 1985, Personal Communication; Szekely, 1985a, 1985b, Personal Communication). Most of the human and capital investment has been related to increasing national and regional capabilities to *eventually address marine pollution problems.* In other words, nations and regions are working toward such things as: defining a network of experts; developing scientific research labs; establishing technical training programmes along with the organizational structure for education and information exchange; and arranging for funding of specific research in universities and other research centres. Establishment of this institutional infrastructure is seen as a necessary prerequisite and precondition to effectively and efficiently addressing the existing marine environmental problems and conditions in all regions (Keckes, 1985, Personal Communication; Szekely, 1985a, 1985b, Personal Communication).

In this *empirical case,* individual regions have initially concentrated on the management conditions or institutional infrastructure. This is because of the realization that regional managerial sophistication lags behind scientific research on their environ-

ment. There is, as well, the fact that so much of the scientific and technical expertise can be transferred from one region to another. This encourages outside involvement of regions and other specialized non - governmental organizations such as the IIED, IUCN, SCOPE and WWF. Whereas, scientific data collection methods can often be immediately applied to a new region and can be carried out on a long-term basis, it can take much longer to develop and refine the management framework of a region. Third World Countries, are generally quite receptive to outside scientific information and expertise. However, because these nations desire to manage for themselves, they tend to be much less receptive to advice on management goals, objectives and means. *They want to develop and retain the ability to make their own decisions on management*, based on scientific knowledge. Many regional nations are eager to share in the exchange of information and scientific technique *but* refuse to share the responsibility for decision-making, built upon results of scientific inquiry.

6.4 PLANNING AND ANALYSIS PROGRESS AND REGIONAL MANAGEMENT

An examination of the regional differences in the commitment to planning and analysis projects yields both anticipated and curious results. These results help to clarify the validity of investigating planning progress in terms of an ideal case / empirical case dichotomy.

As a general rule, the literature indicates that progress related to the achievement of environmental goals is considerably less than progress related to institutional development (ie. ECP's < MCP's). In order to test this hypothesis, an analysis of regional project experience must be conducted. If the hypothesis holds true, a pattern of lower numbers of ECP's than MCP's should become apparent. The reality of the situation is dramatically revealed by an examination of ECP's and MCP's on a regional programme basis, including statistics on the formal expenditures and frequency of these

project types (Table 6.3 and Appendix C). More specifically, in the Mediterranean Region, the oldest and perhaps most advanced of all programme regions, expenditures total $31,720,281 for 28 MCP's, and $4,872,793 for 11 ECP's. In the Caribbean Region, a less mature programme than the Mediterranean, $12,284,643 has been spent on 24 MCP's with only $1,257,537 being spent on five ECP's. Finally, in one of the newest and least mature of the regional programmes, the East African Region has spent $1,380,175 on five MCP's and $72,409 on one ECP (UNEP, 1987i, pp. 1-29). Statistics for other regional programmes are tabulated and presented in Appendix C.

On face value, it seems that this hypothesis is correct. In other words, the statistics seem to support that regional effort and expenditures are first being directed toward management condition concerns before environment condition concerns. A closer look at one regional programme's activities, for example the Mediterranean, reveals some discrepancies.

Within the context of the Mediterranean Action Plan, the *Co-ordinated Programme for Research and Monitoring of Pollution in the Mediterranean* (MED POL - Phase I) was carried out between 1975 and 1980, by more than 200 scientific groups from 84 institutions from around the Mediterranean. The *primary goal* of the pilot phase of MED POL – apart from the acquisition of necessary technical information, training and equipment – was *to assist national centres in the development of their legislative and administrative capabilities,* with a view to their fuller participation in long-term programmes (Yeroulanos, 1985, p. 5). The programme was originally funded and coordinated by UNEP, in cooperation with the experience and expertise of other specialized UN agencies including FAO, IAEA, IOC, UNESCO, WHO and WMO. MED POL - Phase I consisted of seven pilot projects directed toward co-ordination of research, monitoring, exchange of information and assessment of the state of pollution and protection measures. Six other projects were later defined to broaden programme scope (FAO et al, 1983, pp.2-4).

TABLE 6.3 - Planning and Analysis Projects: Types dominant in the Mediterranean, Caribbean and East African Regions (as of 31 May 1987)

1. Mediterranean Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	7	4	--	11 / 28%
Expenditures on ECP's	$3,839,450	$1,033,343	--	$4,872,793 / 13%
Number of MCP's	16	12	--	28 / 72%
Expenditures on MCP's	$1,556,781	$30,163,500	--	$31,720,281 / 87%
Total Number / Total Expenditures	23 / $5,396,231	16 / $31,196,843	--	39 / $36,593,074

2. Caribbean Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	5	--	5 / 17%
Expenditures on ECP's	--	$1,257,537	--	$1,257,537 / 9%
Number of MCP's	8	12	4	24 / 83%
Expenditures on MCP's	$1,720,115	$10,036,756	$527,772	$12,284,643 / 91%
Total Number / Total Expenditures	8 / $1,720,115	17 / $11,294,293	4 / $527,772	29 / $13,542,180

3. East African Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	1	--	1 / 17%
Expenditures on ECP's	--	$72,409	--	$72,409 / 5%
Number of MCP's	2	3	--	5 / 83%
Expenditures on MCP's	$183,556	$1,196,619	--	$1,380,175 / 95%
Total Number / Total Expenditures	2 / $183,556	4 / $1,269,028	--	6 / $1,452,584

Source: Adapted with modifications from (UNEP, 1987i, pp. 1-29)

NOTE:

ECP's - Environment Condition Projects
MCP's - Management Condition Projects

More specifically, MED POL - Phase I provided considerable data and information on various aspects of pollution in the Mediterranean Sea, including baseline studies and monitoring of oil (MED POL I), of metals (MED POL II), of DDT, PCB's, etc. (MED POL III); Research on the effects of pollutants on marine organisms (MED POL IV), and on ecosystems (MED POL V); Problems of coastal transport of pollutants (MED POL VI), and Coastal water quality control (MED POL VII) (Yeroulanos, 1985, p. 5). Using the ECP and MCP system of project classification, it would appear that under MED POL Phase I, all efforts were clearly directed toward ECP's and related concerns, and *not* MCP's and concerns as UNEP literature seems to suggest. *Why such a discrepancy between the tabulated statistics and other evidence related to human and financial resource expenditures on the MED POL Programme?* Surely one would expect ECP statistics to be larger in Table 6.3 if MED POL figures were included.

Regional Seas Programme literature and staff interviews indicate that UNEP is quite prepared to invest in MCP's that support long-term RSP goals. On the other hand, the expectation is that ECP's are to become self-sufficient, that is, supported by regional environmental trusts and not by UNEP (Keckes, 1985, Personal Communication; UNEP, 1982d, p. 11). It appears that most of the costs associated with MED POL - Phase I and its ECP's, *have been absorbed by individual nations in the Mediterranean Region* (Yeroulanos, 1985, p. 10). In other words, project costs have been largely internalized, and they are not documented within UNEP ledgers. Table 6.3 and Appendix C capture just those projects that UNEP sees as its priority. UNEP statistics alone may hide the maturity of the Mediterranean Programme in terms of environmental problem solving. However, the statistics do not hide UNEP's contribution to the RSP goal of developing self - sustaining regional programmes.

Even with all this said, there remains the question of whether or not nations participating in more mature regional programmes, such as the Mediterranean, are actually investing in ECP's? This research has not investigated this question, although future research must if a valid assessment of regional environmental management is to be conducted.

6.5 SUMMARY

Planning and analysis components of the RSP, are explored in the set of questions posed at the outset of this chapter. These queries are repeated here for the convenience of the reader. The answers and residual messages from this exploration are also provided.

First, what planning procedures are used to identify and define national and regional goals? In response to this, it was found that the establishment of regional goals and objectives follows an extensive process involving a plethora of actors and agencies. Goals are first established within each nation and presented in national reports. Then, through meetings and workshops of National and Regional Scientific Experts (NSE and RSE), these national reports along with mission study sectorial reports and overview reports are reviewed and a regional consensus and ranking of goals, objectives and capabilities is reached. Action plans, along with draft conventions and protocols are drafted and they are refined at Intergovernmental Meetings of government representatives and legal experts. Draft action plans are given final consideration and are adopted at a Meetings of Plenipotentiaries. The adopted action plans formally present the regional statements on environmental problems, priorities and capabilities.

Second, what planning and analysis projects are being undertaken to support regional environmental management? It was found that regional institutions have par-

ticipated in a host of *management condition projects (MCP's)* and *environment condition projects (ECP's)* related to resource planning and analysis. Most of the human and capital investment has been in the direction of improving national and regional managerial and scientific capabilities. Much less expenditure is noted for projects related to improving the state of the environment or mitigating declining environmental quality.

Third, what are the regional differences in the commitment to planning and analysis projects? It was noted that real progress is being made to meet national and regional environmental management goals. However, this progress is unique to each region's experience. In other words, each regional programme defines the Environment Condition / Management Condition dichotomy in its own terms, and goals' achievement must be examined on a case by case basis, as the programmes are all at different stages of management maturity.

The implications of these findings are briefly explored in the concluding section of this thesis (Chapter 9). The next chapter, focusses attention on the process of programme implementation within the Regional Seas Programme (Chapter 7).

Chapter VII

THE REGIONAL SEAS PROGRAMME: IMPLEMENTATION

7.1 PURPOSE

The purpose of this chapter is to describe and to analyze the process of *implementation* within the UNEP Regional Seas Programme (RSP). The ultimate intent is to identify those implementation elements that are fundamental to programme understanding, in particular regional Conventions, Protocols and Secretariats along with Regional Coordinating Units (RCU) and Regional Trusts. Academic and public management literature is void of documentation either at the regional or the national level on such key constituents. As a consequence, the raw data and information used to develop answers to these questions were derived from a formal questionnaire which was sent to select RSP officials.

Discussion is guided and organized in terms of the Resources Management Assessment Model (Table 7.1) and associated question and answer sets (Table 1.4). The questions are repeated here for the sake of convenience. *First*, what are the fundamental procedures used to legitimize the goals and objectives of regional action plan statements, and what means are used to implement these legal procedures? *Second*, what components of regional management are most mature in terms of implementation? *Third*, what national and regional procedures are in place to monitor programme implementation and its successes and failures?

TABLE 7.1 - Resource Management Assessment Model: Implementation

ACTORS AND AGENCIES	RATIONALE, CONCEPTUALIZATION, AND CONTEXT	PLANNING AND ANALYSIS	IMPLEMENTATION	GENERAL GUIDES AND PRINCIPLES
GOVERNMENT, MANAGEMENT LEVEL OR TYPE:	PROBLEM, ISSUE, CONDITION, CONFLICT, SCARCITY	STRATEGIC PLANNING	Negotiations, Public Hearings, Pre-Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	BASIC & APPLIED RESEARCH
BENEFICIARY	POLITICAL AGENDA	BIOPHYSICAL, SOCIO-ECONOMIC INVENTORY	ABC Method	MANAGEMENT CO-ORDINATION
PROPONENT	MANAGEMENT AGENDA	HUMAN USE SYSTEM CLASSIFICATION		INCENTIVES - ECONOMIC, SOCIAL, POLITICAL
LEAD	SCIENTIFIC AGENDA	SIGNIFICANT AREAS IDENTIFICATION		SENSITIVITIES, VALUES
PARTICIPANT		EVALUATION OF ALTERNATIVES	B/C Analysis, EIA, SIA, TIA, Input-Output Analysis	INFORMATION ACCESS
OBSERVER		GOAL ASSESSMENT		PROCESS MONITORING
				MANAGEMENT CO-OPERATION
Federal Provincial (State) Regional International Municipal Committee Industry Commission Council, Authority, District Task Force Interest Group Mass Media Other			Government Industry Public Intergroup Mass Media News Agency New Institution	Surveillance & Inspection Monitoring, Enforcement Modification Surveillance & Inspection Monitoring, Enforcement Procedure Modification
				CONSTRUCTION
				OPERATION

Source: Adapted with considerable modification from (Nelson and Jessen, 1981)

7.2 PROCEDURES USED TO LEGITIMIZE ACTION PLAN GOALS AND OBJECTIVES

Legally binding regional conventions, elaborated by specific technical protocols are drafted to provide the legal framework for co-operative national and regional action (UNEP, 1983c, p. 2). The formal approval of regional conventions and protocols by participating governments, *transforms action plan status from that of a political agreement to that of a legal commitment.* This legal commitment of nations is intended to clearly demonstrate their resolve to co-operate in the management of common marine and environmental problems (UNEP, 1983b, p. 2; UNEP, 1983c, p. 2).

7.2.1 Regional Conventions

A regional convention is a formal and legal agreement between three or more parties. In the context of the RSP, it can be considered an *umbrella agreement* because it provides for a general obligation to protect and manage marine and coastal areas within a defined regional sea (Figure 1.3)(UNEP, 1985b, p. 4; UNEP, 1981b, p. 4).

Identified within the articles of each convention are the specific sources of regional pollution which require control. For example, in the context of the *Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution*, these sources include: pollution from ships (Article IV); pollution caused by dumping from ships and aircraft (Article V); pollution from land - based sources (Article VI); pollution resulting from exploration and exploitation of the territorial sea-bed, its subsoil and the continental shelf (Article VII); and pollution from other human activities (Article VIII) (UNEP, 1983c, pp. 7-8). The Kuwait Convention also outlines environmental management issues for which co-operative efforts are to be made including: combating pollution in cases of emergency (Article IX), scientific and technological co-operation (Article X), and Environmental Impact Assessment (Article XI). Finally, the Kuwait Region also stipulates articles on technical assistance (Article XII),

and liability and compensation for damages resulting from pollution (Article XIII) (UNEP, 1983c, pp. 8-10). Other regional conventions generally possess a similar article ledger, but exhibit regional variations in priorities and concerns.

Conventions for the protection and management of the marine and coastal environment have also been adopted by seven other regions including: the Mediterranean (UNEP, 1982b, p. 3), Caribbean (UNEP, 1983b, p. 3), South Pacific (UNEP, 1987e, p. 21), South-East Pacific (UNEP, 1984a, p. 3), Red Sea and Gulf of Aden (UNEP, 1983c, p. 3), West and Central African (UNEP, 1981b, p. 3), and East African Regions (UNEP, 1985b, p. 3). Regional conventions have yet to be formulated and adopted in the East Asian Seas, South Asian Seas and South-West Atlantic Regions (Keekes, 1986, pp. 33-45).

7.2.2 Technical Protocols

A technical protocol is an ancillary instrument to a convention (Saunders, 1969, p. 210). It performs *definition* and *interpretative* functions specific to a particular marine resource problem (Figure 1.3). It also identifies the specific responsibilities of individual nations to redress or adjust to a resource problem. In other words, the technical protocol provides the same service as does the Regulation associated with each Provincial or Federal Act in Canadian environmental law.

Technical protocols evolve from the management priorities defined in both the action plan and the convention. Although each regional action plan is associated with a single convention, neither the number of protocols nor the foci of protocols related to a convention are fixed. One or more protocols may be attached to the convention at the time of its ratification, as was the case with the Barcelona (Mediterranean), Cartagena de Indias (Caribbean), Noumea (South Pacific), Lima (South-East Pacific), Kuwait, Jeddah (Red Sea and Gulf of Aden), Abidjan (West and Central Africa), and Nairobi (East African) Conventions (UNEP, 1987e, pp. 1-23).

Because there is no established timetable, additional protocols may be proposed by any Contracting State at any time. These proposals are discussed and voted upon at an ordinary or extraordinary Meeting of Plenipotentiaries, before being adopted under the existing convention(s). Several regions have exercised this right to propose additional protocols to their existing conventions. This was the case, for example, with the Barcelona Convention and the adoption of the 1980 *Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources* and the 1982 *Protocol concerning Mediterranean Specially Protected Areas* (UNEP, 1987e, pp. 1-5). Additional protocols were also added to the Lima Convention with the adoption of the 1983 *Supplementary Protocol to the Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons or Other Harmful Substances*, and the 1983 *Protocol for the Protection of the South-East Pacific against Pollution from Land-Based Sources* (UNEP, 1987e, pp. 10-13).

Several nations participating in the RSP have stipulated that no state can become a contracting party to a regional convention, unless it also becomes a contracting member to at least one of the technical protocols (UNEP, 1983c, p. 4; UNEP, 1982b, p. 4). This condition was deemed necessary to cement together differing national responsibilities and specific obligations to form a coherent and immediate blueprint.

Table 7.2 presents a complete inventory of the regional conventions and protocols associated with each RSP action plan. The reader will notice that all regional conventions are related to protection and management of the marine and coastal environment, and all protocols are generally related to marine and coastal pollution. In this context, five of the eight regions with established conventions, have specifically defined protocols related to oil and hydrocarbon pollution.

TABLE 7.2 - The Regional Seas Programme: Status of Management Plans and Legal Instruments

REGION	ACTION PLAN	CONVENTION	PROTOCOLS
Mediterranean	- Action Plan for the Protection of the Mediterranean Adopted: February 1975 Barcelona, Spain	- Convention for the Protection of the Mediterranean Sea against Pollution Adopted: 16 February 1976 Barcelona, Spain Entered into force: 12 February 1978 Secretariat: UNEP	1. 1976 - Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft Entered into force: February 1978 Secretariat: UNEP 2. 1976 - Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency Entered into force: February 1978 Secretariat: UNEP 3. 1980 - Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources Entered into force: June 1983 Secretariat: UNEP 4. 1982 - Protocol Concerning Mediterranean Specially Protected Areas Entered into force: March 1986 Secretariat: UNEP
Caribbean	- Action Plan for the Caribbean Environment Programme Adopted: 8 April 1981 Montego Bay, Jamaica	- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region Adopted: 24 March 1983 Cartagena de Indias Entered into force: not as of July 1987 Secretariat: UNEP	1. 1983 - Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region Entered into force: not as of July 1987 Secretariat: UNEP
South Pacific	- Action Plan for Managing the Natural Resources and Environment of the South Pacific Region Adopted: 11 March 1982 Rarotonga	- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region Adopted: 25 November 1986 Noumea, New Caledonia Entered into force: not as of July 1987 Secretariat: South Pacific Commission (SPC)	1. 1986 - Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region Entered into force: not as of July 1987 Secretariat: South Pacific Commission (SPC) 2. 1986 - Protocol for the Prevention of Pollution of the South Pacific Region by Dumping Entered into force: not as of July 1987 Secretariat: South Pacific Commission (SPC)
South-East Pacific	- Action Plan for the Protection of the Marine Environment and Coastal Area of the South-East Pacific Adopted: 12 November 1981 Lima, Peru	- Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific Adopted: 12 November 1981 Lima, Peru Entered into force: 19 May 1986 Secretariat: Permanent Commission of the South Pacific (CPPS)	1. 1981 - Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons or Other Harmful Substances in Cases of Emergency Entered into force: 14 July 1986 Secretariat: Permanent Commission of the South Pacific (CPPS) 2. 1981 - Protocol for the Protection of the South-East Pacific Against Pollution from Land-Based Sources Entered into force: 23 September 1986 Secretariat: Permanent Commission of the South Pacific (CPPS) 3. 1983 - Supplementary Protocol to the Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons or Other Harmful Substances Entered into force: 20 May 1987 Secretariat: Permanent Commission of the South Pacific (CPPS)

TABLE 7.2 - cont'd

Kuwait	- Action Plan for the Protection and Development of the Marine Environment and the Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates Adopted: 23 April 1978 Kuwait	- Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution Adopted: 23 April 1978 Kuwait Entered into force: 30 June 1979 Secretariat: Regional Organization for the Protection of the Marine Environment (ROPME)	1. 1978 - Protocol Concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency Entered into force: 30 June 1979 Secretariat: Regional Organization for the Protection of the Marine Environment (ROPME)
Red Sea & Gulf of Aden	- Action Plan for the Conservation of the Marine Environment and Coastal Areas in the Red Sea and Gulf of Aden Adopted: 14 February 1982 Jeddah, Saudi Arabia	- Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment Adopted: 14 February 1982 Jeddah, Saudi Arabia Entered into force: 20 August 1985 Secretariat: Arab League Educational, Cultural and Scientific Organization (ALECSO)	1. 1982 - Protocol Concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency Entered into force: 20 August 1985 Secretariat: Arab League Educational, Cultural and Scientific Organization (ALECSO)
West & Central Africa	- Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region Adopted: 23 March 1981 Abidjan, Ivory Coast	- Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region Adopted: 23 March 1981 Abidjan, Ivory Coast Entered into force: 5 August 1984 Secretariat: UNEP	1. 1981 - Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency in West and Central African Region Entered into force: 5 August 1984 Secretariat: UNEP
East Africa	- Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region Adopted: 21 June 1985 Nairobi, Kenya	- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region Adopted: 21 June 1985 Nairobi, Kenya Entered into force: not as of July 1987 Secretariat: UNEP	1. 1985 - Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region Entered into force: not as of July 1987 Secretariat: UNEP 2. 1985 - Protocol Concerning Co-operation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region Entered into force: not as of July 1987 Secretariat: UNEP
East Asian Seas	- Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas Region Adopted: 29 April 1981 Manila, Philippines	- No Regional Convention in support of Action Plan	—
South Asian Seas	- Action Plan preparation initiated	—	—
South-West Atlantic	- Action Plan preparation delayed	—	—

Sources: Adapted with modifications from (UNEP, 1987a, 1987b, 1987e, 1986, 1985b, 1985e, 1984a, 1983b, 1983c, 1983e, 1981; Keckes, 1986; Hulm, 1985; Bliss - Guest and Keckes, 1982).

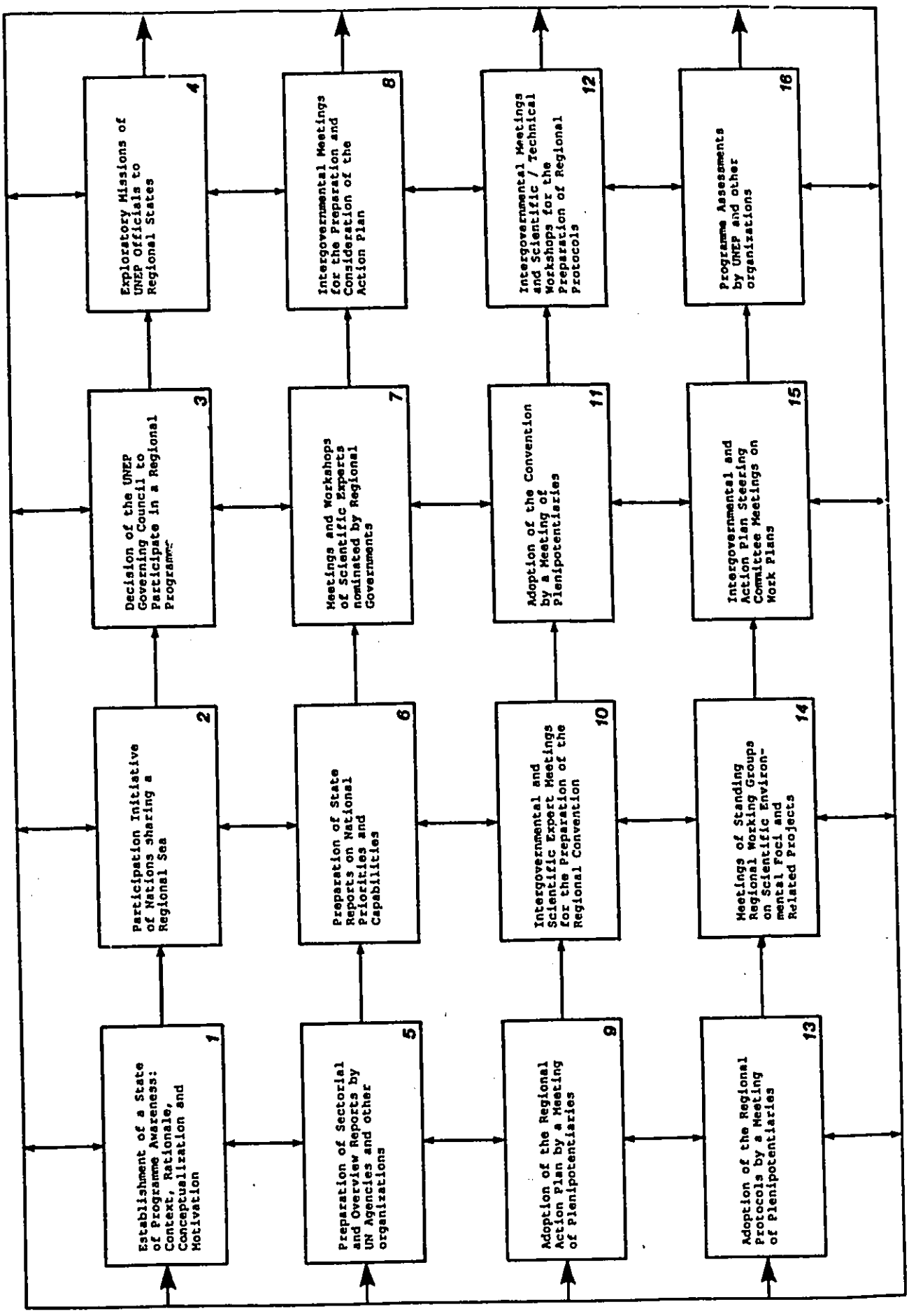
7.3 IMPLEMENTATION OF CONVENTIONS AND PROTOCOLS

Conventions and protocols, similar to action plans, are initially prepared within meetings and workshops of national and regional scientific experts (Chapter 6). These draft conventions and protocols are further discussed and refined at intergovernmental meetings of representatives and legal experts from the region in question (Figure 7.1 - Steps 10 and 12). However, unlike Action Plans, their implementation is one of legal procedure.

7.3.1 Signature, Ratification, Acceptance and Approval

Regional conventions and protocols are given formal approval and adoption through signature at a Meeting of Plenipotentiaries (Figure 7.1 - Steps 11 and 13). Once signed by official representatives, these agreements must still be subject to ratification, acceptance or approval by the states of a region. These three terms refer to the same approval stage, but suggest different methods of approval, for example, the United States system versus that of Canada or the United Kingdom. *Ratification, acceptance* or *approval*, simply refers to the act whereby a state, through its governing institutions, establishes its formal consent to be bound by the tenets of these agreements (Blix and Emerson, 1973, p. 331). This formal consent is achieved before the expiry of the convention signing period. In ratifying, accepting or approving these instruments, States assume more specific responsibility to control pollution from particular sources or to co-operate in specific aspects of environmental management (UNEP, 1982b, p. 4).

FIGURE 7.1 - Regional Seas Programme Development Steps (10-16)



Source: (Needham and Jedynack - Copley, 1989) p. 40

7.3.2 Accession

A state wishing to become a party to a convention and protocol *after* the initial Meeting of Plenipotentiaries and after the closure period for Convention signing, may do so through *accession*. Simply put, accession refers to the act whereby a state accepts the offer to become a party to a treaty instrument that has already been negotiated and signed by other states (Sinclair, 1984, p. 42). For example, the *Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft* was opened to signature by any state invited as a participant in the Barcelona Conference of Plenipotentiaries in February, 1976. Of the nineteen nations identified within the region, two regions (Algeria and Syria) did not sign the protocol agreement within the specified one year time period. However, each region later became a contracting party to the protocol by accession, on 26 December 1978 (Syria) and 16 March 1981 (Algeria), respectively (UNEP, 1987e, p. 2).

7.3.3 Entry Into Force

Conventions and protocols *enter into force* within a specified time period as determined by the contracting parties of different RSP areas. For example, the 1978 *Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution*, and associated *Protocol concerning Regional Co-operation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency*, were to enter into force on the ninetieth (90th) day following the deposit of at least five instruments of ratification, acceptance or approval of, or accession to, these Agreements (UNEP, 1983c, p. 16). These conditions were met and both the convention and protocol entered into force on 30 June 1979 (UNEP, 1987e, pp. 6-7). In the Caribbean Region, the 1983 *Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region* and associated *Protocol concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region* were to enter into

force on the thirtieth (30th) day following the deposit of the ninth instrument of ratification, acceptance or approval of, or accession to, those Agreements (UNEP, 1983b, p. 15). As of July 1987, these conditions were *not* met and thus the convention and protocol have yet to be entered into force (UNEP, 1987e, pp. 16-17).

7.3.4 Depositary

Each regional programme must designate a *Depositary* nation which will act as official holder or receiver of the original convention and protocol agreements, along with instruments of ratification, acceptance, approval or accession, annexes and amendments, and notifications of withdrawal. As soon as a convention and its protocol(s) enter into force, it is the responsibility of the Depositary to transmit a certified copy of the instrument(s) concerned, to the Secretary - General of the United Nations. This is to fulfill registration and publication requirements, in accordance with Article 102 of the Charter of the United Nations (UNEP, 1985b, p. 16; UNEP, 1983b, p. 16). It is also the Depositary's responsibility to inform all signatories and contracting parties of any change related to the status of conventions and protocols including: receipt of instruments of ratification, acceptance, approval or accession; date of entry into force; amendments; annexes and notifications of withdrawal. The following organizations have assumed the functions of regional depositary for those RSP with conventions and protocols: Government of Spain (Mediterranean), Government of the Republic of Colombia (Caribbean), Director of the South Pacific Bureau for Economic Co-operation – SPEC (South Pacific), General Secretariat of the Permanent Commission of the South Pacific – CPPS (South - East Pacific), Government of the State of Kuwait (Kuwait), Government of the Kingdom of Saudi Arabia (Red Sea and Gulf of Aden), Government of the Republic of Ivory Coast (West and Central Africa), and Government of the Republic of Kenya (Eastern Africa) (UNEP, 1987e, pp. 1-23).

7.3.5 Amendments

Nations, in addition to being able to propose additional (supplementary) protocols to existing conventions, are also entitled to propose *amendments* to conventions, their protocols and annexes. Such amendments are to be voted upon and adopted by a Meeting of Plenipotentiaries. Individual regions vary on the majority vote required for amendment acceptance. For example in the Kuwait Region, amendments to the convention, its protocols and annexes must be adopted by a unanimous vote of the Contracting States present and voting (UNEP, 1983c, pp. 13-14). In contrast, the Caribbean and Eastern African Regions require a three-fourths and two-thirds majority vote, respectively, for adoption of proposed amendments (UNEP, 1985b. pp. 11-13; UNEP, 1983b, pp. 11-12).

7.3.6 Withdrawal

Contracting parties to any regional conventions and protocols are entitled to *withdraw* their involvement from these agreements, upon written notification of withdrawal to the Depositary (UNEP, 1983c, pp. 16-17; UNEP, 1982b, pp. 17-18). Individual regions stipulate a time restriction after which a contracting party may withdraw if desired, along with the necessary waiting period before the withdrawal will officially take effect. For example, in the Red Sea and Gulf of Aden, any time after five years from the date of entry into force of the convention, a contracting party may withdraw, with the withdrawal to officially take effect twelve months after the date on which the notification of withdrawal is received by the Depositary (UNEP, 1983e, p. 17). In another region, the South-East Pacific, any time after two years from the date of entry into force of the convention, a contracting party may withdraw its involvement. The corresponding waiting period before denunciation shall take effect is one hundred and eighty (180) days after the date of notification (UNEP, 1984a, p. 24).

7.4 STATUS OF REGIONAL PROGRAMME COMPONENTS

The second research question attempts to identify those programme components that are most mature in terms of implementation. On the basis of earlier discussion (Chapter 6), the expectation is that much of the implementation progress is also related to the development of programme infrastructure. That is to say, that much of the effort and energy has been expended on establishing Regional Co-ordinating Units (RCU), Programme Secretariats, and Regional Trusts (RTF); networks of experts; education and training programmes for national and regional experts; marine environmental research centres; regional networks for monitoring and research; and contingency plans for marine pollution emergencies (Keckes, 1986, pp. 15-45). The following discussion focusses attention on Secretariats, Regional Co-ordinating Units (RCU's) and Regional Trusts.

7.4.1 Progress Related to the Establishment of Programme Secretariats, Regional Co-ordinating Units (RCU) and Regional Trusts (RTF)

Progress related to the establishment of institutional arrangements such as Programme Secretariats, Regional Co-ordinating Units (RCU), and Regional Trust Funds (RTF) is an important measure of the status of programme implementation, for without their presence, action plan goals are difficult if not impossible to achieve. These institutional arrangements co-ordinate, direct and help finance programme planning and implementation.

7.4.2 Secretariats

It may be recalled from Chapter 5, that the concept of a regional Secretariat is very complex and has a dual function. *First,* the *Secretariat of the Action Plan,* is a designated actor, agency or institutional arrangement responsible for policy and procedure administration, along with counselling and liaison duties related to the preparation and

development of the Regional Action Plan, Convention and Protocol(s) (Figure 5.1). In this context, the Secretariat serves as the legal and administrative institutional arrangement responsible for *agreement administration*. *Second*, as the *Secretariat of a Regional Programme*, a designated actor, agency or institutional arrangement is the regional co-ordinating unit for the implementation of the Action Plan and its regional projects. In this context, the Secretariat assumes the specific duties related to *programme implementation and operation* (Figures 5.1, 5.2 and 5.3).

In Chapter 5, the Red Sea and Gulf of Aden Region is presented as a regional example supporting this complexity and duality in the secretariat function. More specifically, the Arab League Educational, Cultural and Scientific Organization (ALECSO) is designated as the interim *Secretariat of the Action Plan*, pending entry into force of the Convention. It is exclusively responsible for programme administration. Once the convention has entered into force, the Regional Organization for the Conservation of the Red Sea and Gulf of Aden Environment is to be established to assume implementation responsibilities as the *Secretariat of the Regional Programme* (UNEP, 1983e, pp. 3-4). Its task is both administrative and directive.

In another region, the South Pacific Regional Environment Programme (SPREP), the situation is quite different. In this context, the South Pacific Commission (SPC) is the Regional Programme Secretariat, and is responsible for the co-ordination of programme implementation (Reti, Personal Communication, 1987). The South Pacific Region is, therefore, particularly unique in its regional co-ordination (Figure 7.2 and Figure 7.3). The SPC as Secretariat, assumes the policy implementation and co-ordination functions that a Regional Co-ordinating Unit (RCU) would generally assume under a normative RSP model. In addition, UNEP plays a less influential role at all levels of programme implementation. Although the South Pacific Region is willing to have UNEP's assistance in the development of SPREP, the existing institutional fabric

FIGURE 7.2 - Regional Co-ordination of the Regional Seas Programme: Normative Model

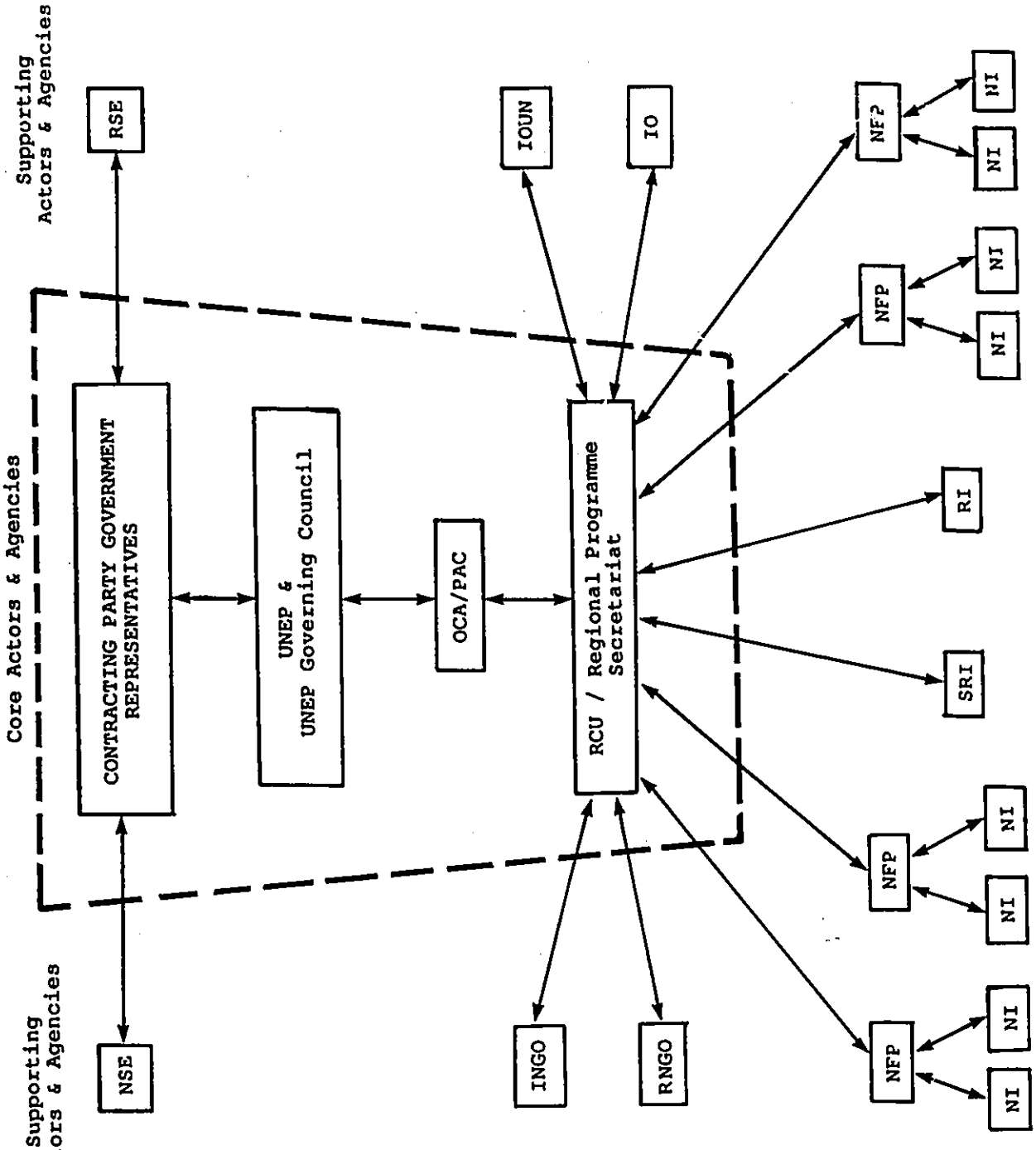
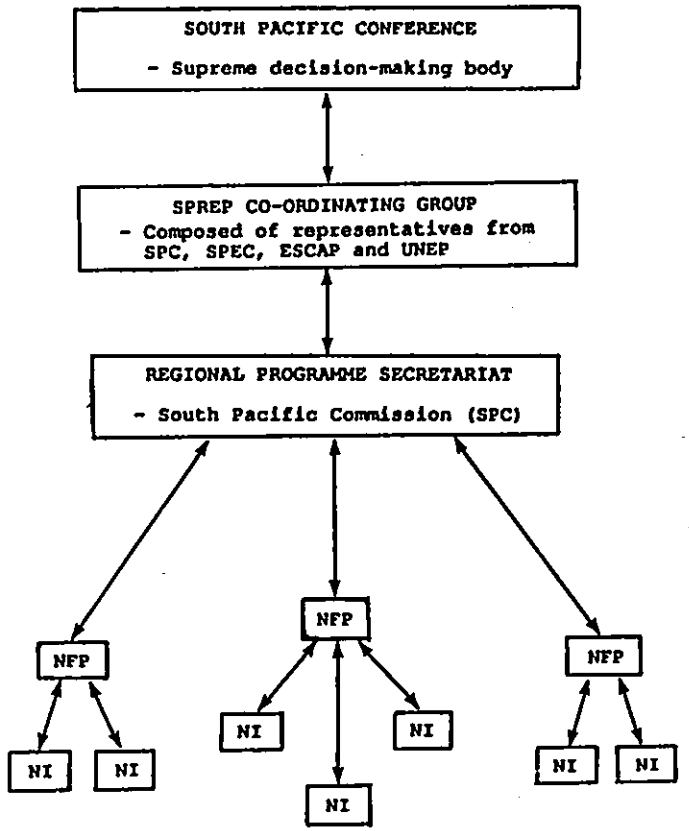


FIGURE 7.3 - Regional Co-ordination of the Regional Seas Programme: Distinctive, Empirical Model -- The South Pacific Regional Environment Programme (SPREP)

- Biannual meeting of Governments establish work programme

- Provides policy guidance to Secretariat between biannual South Pacific Conference Meetings



- Policy Development and Review

- Policy Guidance

- Policy Implementation and Co-ordination

NFP

1. Official channel of communication between SPREP Co-ordinating Group and national / territorial administrations;
2. Co-ordinates the participation of national agencies and institutions in the programme;
3. Consults with all relevant national government organizations on Action Plan activities and progress in Action Plan implementation

NI

- Environmental authorities within regional nations; responsible for natural resource and environmental management in their respective countries

Source: Adapted with modifications from (Reti, 1987, Personal Communication)

within the region is very strong and there is less need for direct and concerted UNEP involvement. The institutional autonomy expressed in the SPREP model may have some utility in the Arctic. This point is to be addressed in the concluding chapter of this thesis.

7.4.3 Regional Co-ordinating Units (RCU)

In contrast to the Secretariat of a Regional Programme, a *Regional Co-ordinating Unit* (RCU), is the *on-site* institution established to assume responsibility for the overall co-ordination, continuous supervision and review of the implementation of the Action Plan, Convention and Protocols (Figures 5.2 and 5.3) (UNEP, 1986, p. 5; UNEP, 1982d, p. 11). This unit is responsible for the *day-to-day activities* related to the Action Plan, including regional project implementation and liaison with regional governments. A more elaborate description of the RCU is also provided in Chapter 5.

In sum, every region develops its own institutional fabric and infrastructure to support individual RSP needs and situations. All regions, however, eventually pass on much of the administrative routine and responsibility to a Regional Co-ordinating Unit (RCU) or Regional Programme Secretariat. A total of six RCU and Regional Programme Secretariats have been established in the following regions including: Mediterranean (Athens, Greece), Caribbean (Kingston, Jamaica), South Pacific (Noumea, New Caledonia), South-East Pacific (Bogota, Colombia), Kuwait (Kuwait), Red Sea and Gulf of Aden Regions (Jeddah, Saudi Arabia) (Keckes, 1986, pp. 15-45; Bliss - Guest and Keckes, 1982, pp. 43-49). Table 7.3 presents a complete listing of established Regional Programme Secretariats and Regional Co-ordinating Units within the RSP, including their official title, location and date of establishment. All other regions have assigned Secretariat responsibilities to UNEP and thus are centrally co-ordinated from the OCA / PAC office (Keckes, 1987, Personal Communication).

TABLE 7.3 - Established Regional Co-ordinating Units (RCU) and Programme Secretariats within the Regional Seas Programme

Programme Region	RCU / Regional Programme Secretariat	Location	Date of Establishment
1. Mediterranean Action Plan Region	- Regional Co-ordinating Unit for the Mediterranean Action Plan (RCU)	Athens, Greece	1982
2. Caribbean Action Plan Region	- Regional Co-ordinating Unit for the Caribbean Action Plan (RCU)	Kingston, Jamaica	1986
3. South Pacific Regional Environment Programme (SPREP)	- South Pacific Commission (SPC) (Secretariat)	Noumea, New Caledonia	1985
4. South - East Pacific Action Plan Region	- Permanent Commission for the South Pacific (CPPS) (Secretariat)	Bogota, Colombia	1981
5. Kuwait Action Plan Region	- Regional Organization for the Protection of the Marine Environment (ROPME) (Secretariat)	Kuwait	1982
6. Red Sea and Gulf of Aden Environment Programme (PERSGA)	- Arab League Educational, Cultural and Scientific Organization (ALECSO) (interim Secretariat of the Action Plan) - Regional Organization for the Conservation of the Red Sea and Gulf of Aden Environment (Secretariat of Regional Programme)	Jeddah, Saudi Arabia	1982

Sources: Adapted with modifications from (UNEP, 1987a, 1986, 1985e, 1984a, 1983a; Keckes, 1986)

7.4.4 Regional Trusts

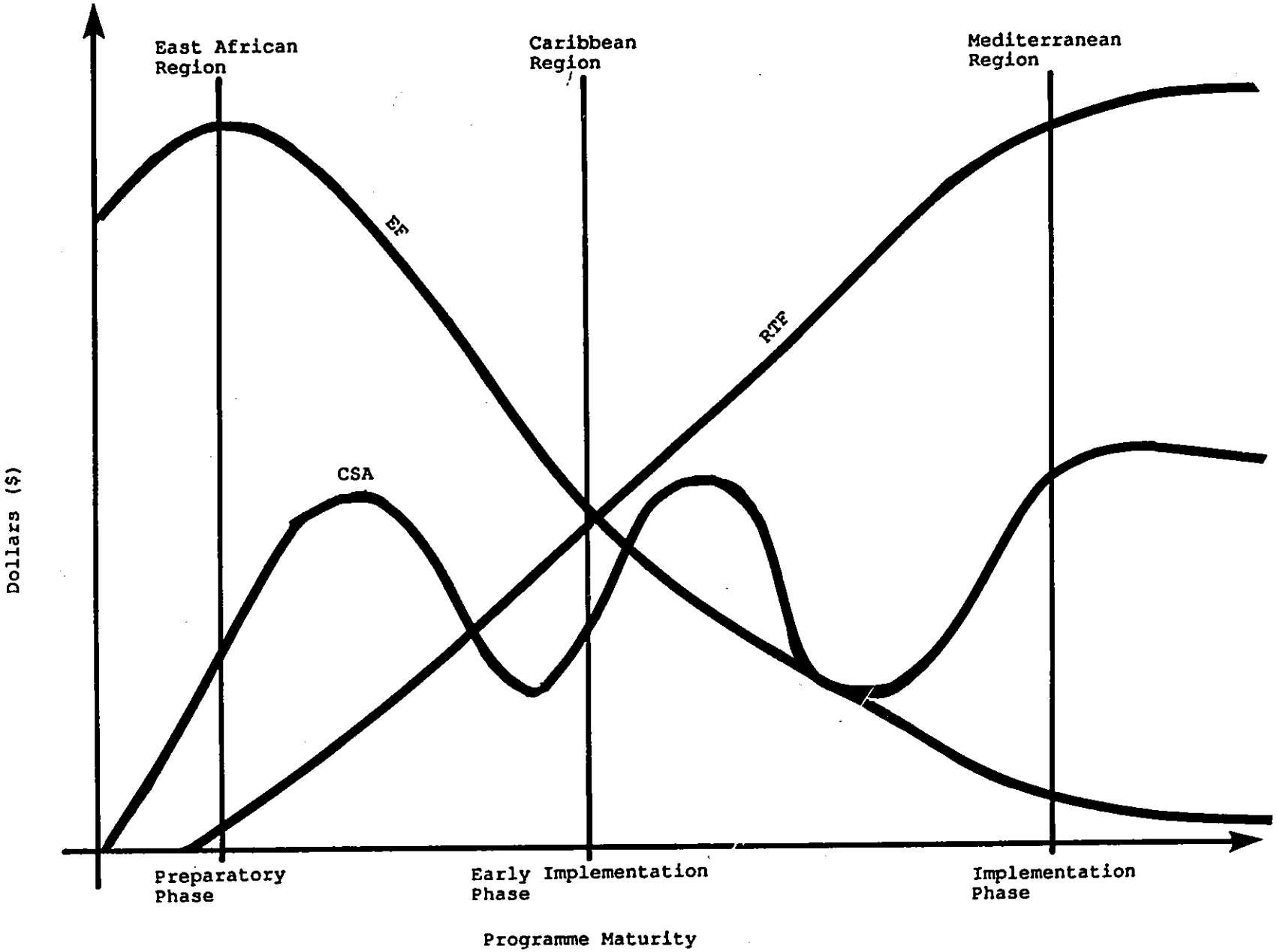
A mandatory infrastructural component of the RSP is the Regional Trust or Regional Trust Fund (RTF). In theory, a Regional Trust is a regionally supported fund that is continuously maintained in order to finance the regional programme. Although some meaningful progress has been made to establish this institution in each region, there have been problems in RSP history related to regional trust establishment, funding sources and trust maintenance. These programme features are surrogate measures of programme maturity, and they vary considerably among regions.

7.4.5 Hypothetical Case

Hypothetical funding patterns that evolve during the course of regional programme development are presented in Figure 7.4. The three major funding sources of all programmes are identified by this figure: the UNEP Environment Fund (EF), the Regional Trust Funds (RTF) and Contributions made by Co-operating Agencies and Supporting Organizations (CSA). More specifically, EF contributions are viewed as the *seed money* available to all RSP regions by UNEP, in the initial or preparatory phase of programme development. The assumption is that as a programme matures and moves toward the implementation phase, it will establish its own sources of funding and become financially self-sufficient (UNEP, 1982d, p. 11). A RTF is established by Contracting Parties and administered by the Regional Coordinating Unit (RCU) or Regional Programme Secretariat. Generally, governments make annual contributions to their RTF to cover programme operational costs and support Action Plan implementation (UNEP, 1983e, p. 3). Governments are made fully aware in the initial phases of the programme, of the need for financial commitments on their part to eventually maintain their own regional programme. The basic assumption is that as a programme becomes operationally self-sufficient through the establishment of its RTF, the need for UNEP Environment Fund contributions is reduced accordingly. Finally, contributions from

co-operating and supporting agencies (CSA) fluctuate from region to region, and through different stages of programme maturity, because of participation in specific international, regional and national projects. The list of these agencies may include: UN organizations like UNDP, UNIDO and UN/DIESA; other specialized agencies within the UN system including FAO, IAEA, IOC, IMO, UNESCO, WHO and WMO; supporting organizations outside the UN such as ALECSO, CARICOM, IAHS, ICES, ICSU, IJO, IOI, OAS, CPPS, PAP/RAC, SPA/RAC, BP/RAC, SPEC, and SPC; and non-governmental organizations including IUCN and the Sierra Club (UNEP, 1987i, pp. 55-62).

FIGURE 7.4 - Hypothetical Patterns from Regional Seas Programme Funding Sources



Sources: Developed from discussions and correspondence with (Keckes, Personal Communication, 1985, 1987; Keckes, 1986; Szekely, Personal Communication, 1985a, 1985b; and respondents from individual regions)

7.4.6 Empirical Case

The sources of regional revenue identified above are presented in Table 7.4. Data are related to *total* project expenditures by region.

The first two columns across the top refer to the UNEP Environment Fund allocations in convertible (EF(CC)) and non-convertible (EF(NCC)) currencies. Unlike convertible currencies, non-convertible currencies pose a particular problem for UNEP because many cannot be easily converted into U.S. dollars, the base currency in which UNEP operates its Environment Fund. As a result these dollars are somewhat restricted from being freely allocated at UNEP's discretion. Further elaboration on EF(CC) and EF(NCC) is provided in Chapter 8. The fourth column refers to the Regional Trust Fund (RTF). As previously described in this chapter, a RTF is established by contracting nations to support programme implementation. As of May 1987, five of the eleven RSP's (Mediterranean, Caribbean, Kuwait, West and Central African and East Asian Seas Regions) had established regional trusts, with financial commitments ranging from $364,442 in the East Asian Seas, to $19,038,026 in the Mediterranean (UNEP, 1987i, p. 40). Like the East African Region, the South-East Pacific has established a RTF, but has not yet received any contributions from contracting nations (Keckes, 1986, pp. 34-43; UNEP, 1987i, p. 40). The sixth column refers to those counterpart Contributions made by Co-operating Agencies and Supporting Organizations (CSA) as listed above. Finally, the seventh column provides a total of expenditures and commitments from all sources, for each regional programme. All calculations have been converted to March 1988 U.S. dollars.

An examination of the most mature regional programme, the Mediterranean, seems to support the assumption related to increasing degrees of self-sufficiency. This region has received substantial contributions from the UNEP Environment Fund (EF) ($8,339,344 or 23%) as well as substantial contributions from Co-operating Agencies

TABLE 7.4 - Total Regional Project Expenditures and Commitments (as of May 1987) (converted to March 1988 US dollars -- X x 1.03)

Region	EF(CC)	EF(NCC)	EF Sub-Total	RTF	UNEP Sub-Total	CSA	TOTAL
Mediterranean	8,235,781	103,562	8,339,344	19,038,026	27,377,369	9,558,297	36,935,666
Kuwait	1,003,423	--	1,003,423	5,634,713	6,638,136	1,908,968	8,547,104
Caribbean	4,813,695	310,481	5,124,446	1,514,681	6,639,127	8,388,952	15,028,079
West & Central Africa	3,397,578	97,636	3,495,213	412,209	3,907,402	610,043	4,517,466
East Africa	1,653,430	--	1,653,430	--	1,653,430	286,420	1,939,850
East Asian Seas	1,727,904	92,112	1,820,016	364,442	2,184,458	1,348,806	3,533,264
Red Sea & Gulf of Aden	341,104	--	341,104	--	341,104	677,941	1,019,045
South Pacific	2,221,958	89,304	2,311,262	--	2,311,262	4,862,053	7,173,316
South-East Pacific	1,572,182	89,304	1,661,486	--	1,661,486	3,522,379	5,183,864
South-West Atlantic	55,756	--	55,756	--	55,756	14,296	70,052
South Asian Seas	418,118	5,150	423,268	--	423,268	134,137	557,405
TOTAL Regional Seas Programme	25,441,199	787,549	26,228,748	26,964,071	53,192,818	31,312,292	84,505,111
Total Oceans Programme	35,713,161	1,258,059	36,971,221	27,315,919	64,287,139	35,625,391	99,912,532

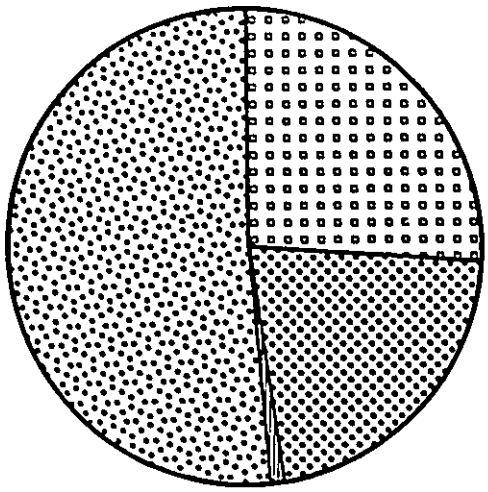
NOTE: EF(CC) - UNEP Environment Fund Convertible Currency
EF(NCC) - UNEP Environment Fund Non-Convertible Currency
RTF - Regional Trust Fund
CSA - Contributions from Co-operating Agencies and Supporting Organizations

Source: Adapted with modifications from (UNEP, 1987i, p.40)

** The percentage discrepancy between Table 7.4 and Table 6.2 - B statistics is due to conversion difficulties

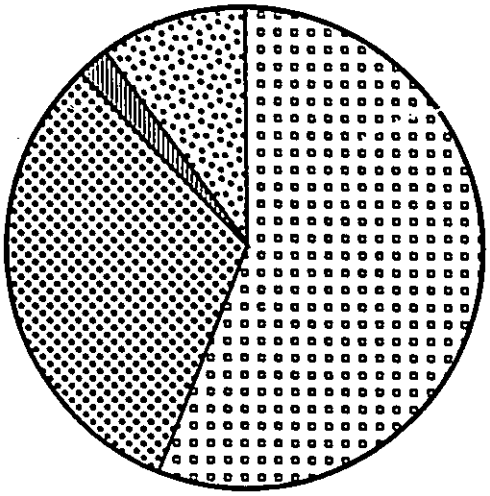
and Supporting Organizations (CSA) ($9,558,297 or 26%) (Table 7.4 and Figure 7.5). However, it has successfully established its own Regional Trust Fund (RTF) and nations have contributed over $19 million or 51 percent of total programme costs to date (UNEP, 1987i, p. 43). In contrast, the Caribbean situation is somewhat different. Here, the expenditure allocations are $5,124,446 (34%) from the Environment Fund, $8,388,952 (56%) from the CSA Fund, and only $1,514,681 (10%) contributed to the Regional Trust Fund by supporting nations (UNEP, 1987i, p. 45). In a third region, the East African Region, the financial situation is again very different and linked to programme immaturity. The UNEP Environment Fund (EF) has allocated $1,653,430 (85%), and the Co-operating Agencies Fund (CSA) has allocated $286,420 (15%). The East African Region, as mentioned earlier, has established a Regional Trust Fund (RTF), but no contributions had been received from contracting nations, as of May 1987 (UNEP, 1987i, p. 47).

FIGURE 7.5 - Sources of RSP Funding (converted to March 1988 US dollars (X x 1.03))



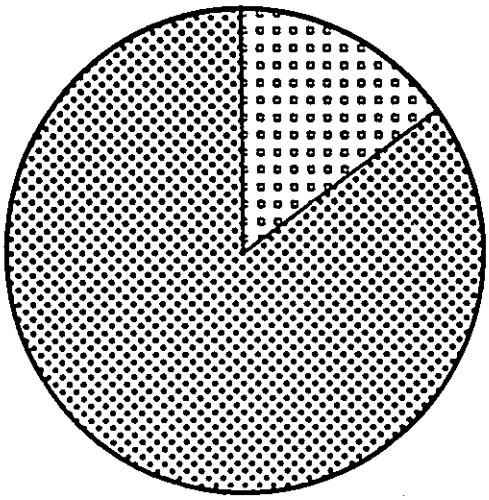
Mediterranean Region
Expenditures and Commitments (1974 - 1987)
Total Commitment: $36,935,666
IMPLEMENTATION PHASE

EF(CC) $8,235,781 (22%)
EF(NCC) $103,562 (0.5%)
RTF $19,038,025 (51.5%)
CSA $9,558,297 (26%)



Caribbean Region
Expenditures and Commitments (1974 - 1988)
Total Commitment: $15,028,079
EARLY IMPLEMENTATION PHASE

EF(CC) $4,813,965 (32%)
EF(NCC) $310,481 (2%)
RTF $1,514,681 (10%)
CSA $8,388,952 (56%)



East African Region
Expenditures and Commitments (1975 - 1987)
Total Commitment: $1,939,851
PREPARATORY PHASE

EF(CC) $1,653,430 (85%)
CSA $286,420 (15%)

Source: Adapted with modifications from (UNEP, 1987i, pp. 43, 45, 47)

Funding Sources —

EF(CC) - UNEP Environment Fund Convertible Currency
EF(NCC) - UNEP Environment Fund Non - Convertible Currency
RTF - Regional Trust Fund
CSA - Contributions from Co-operating Agencies and Supporting Organizations

7.4.7 Funding Problems and Predicaments

As previously suggested, RSP history is dotted with problems and predicaments related to regional trusts and funding maintenance. The reality is that some nations are much slower than others in making their trust fund contributions. This is particularly true in the case of the South-East Pacific, where a delay between RTF establishment and contracting party contributions is found (Keckes, 1986, pp. 42-44). More specifically, at the 1981 Lima Conference of Plenipotentiaries, along with adopting the Action Plan, Convention and associated Agreement, the proposal was made to establish a regional trust fund, to support the Action Plan. The Permanent Commission of the South Pacific (CPPS) was entrusted with the management of this trust fund. By 1985, contributions to the RTF were still well below national pledges, and the Action Plan appeared to be surviving only on UNEP's considerable support (Keckes, 1986, p. 43).

The West and Central African Region also appears to be experiencing a significant lag between national pledges and actual contributions. However, UNEP pressure on contracting parties has improved the financial situation considerably (Keckes, 1986, p. 30). Similar problems in RTF contributions are also quite prevalent in the Caribbean Region (Chapter 8) (Keckes, 1986, p. 27). The East Asian Seas Region, the smallest of the RSP's in terms of numbers of participating states and financial resources, does not appear to have the same problems with contributions lagging behind national pledges. However, this programme is restricted by the size of the RTF and the matching funds provided by UNEP, in that total funds are said to be far below Action Plan needs (Table 7.4) (Keckes, 1986, p. 39).

Finally, in the Mediterranean Region, RTF establishment was initiated in 1979. By 1984, the Mediterranean was financially self-sufficient, with practically all expenses being covered by the Mediterranean Trust Fund, and by co-operating agencies and supporting organizations' contributions (Keckes, 1986, p. 19). The Mediterranean Region,

however, experienced a rather *long and painful process to financial self-sufficiency.* Keckes (1986, p. 20) explains that this process provided,

> "... useful lessons demonstrating that UNEP's fund can be used to catalyze a large scale programme which continues and bears fruits long after UNEP's financial support is withdrawn".

He continues by saying that,

> "The experience with the financial arrangements supporting the Action Plan was, and is used as a model for similar arrangements propagated in other regions covered by the RSP" (UNEP, 1986, p. 20).

7.5 MONITORING PROGRAMME IMPLEMENTATION

Ongoing evaluation and review of RSP implementation is fundamental to programme effectiveness and efficiency (Anonymous, 1983, p. 18). An examination of RSP literature reveals several procedures in place at both the UNEP / OCA/PAC level and at the regional programme level, to monitor programme implementation and development. These procedures are further classified according to their short, medium or long-term monitoring and evaluation ambitions (Table 7.5).

7.5.1 Short-Term Monitoring and Evaluation

A review of the literature and UNEP documentation reveals a few key actors and agencies involved in the monitoring of programme implementation on a short-term or day-to-day basis. At the *UNEP / OCA/PAC level,* regularly scheduled administrative meetings of OCA/PAC staff, including the Programme Director and Programme Officers (and support staff) are convened monthly to review and discuss RSP activities. Intermittent meetings may also be called as required.

At the *regional programme level,* actors and agencies involved in monitoring of programme implementation include National Focal Points (NFP), Scientific Expert Groups, along with Regional Programme Secretariats or Regional Co-ordinating Units (RCU). In the context of NFP, these institutional arrangements serve as the official

TABLE 7.5 - Instruments of Programme Implementation Monitoring

	UNEP / OCA/PAC Contribution	Regional Programme Contribution
SHORT TERM (Daily - Annually)	- Regularly scheduled administrative meetings of OCA/PAC staff and Executives and Assistant Executive Director (monthly + as needed)	- NFP Meetings - Scientific Expert Group Meetings / Seminar / Workshops - RCU / Regional Programme Secretariat Meetings
MEDIUM TERM (every 1 - 5 years)	- OCA/PAC - Annual Report of RSP Director - UNEP Specially Commissioned Evaluations (eg. Portman Report) - UNEP Governing Council Meetings (yearly - up to 1985; bi-yearly - since 1985) - UNEP - Annual Report of the Executive Director	- Intergovernmental Meetings (Ordinary Meetings - bi-yearly; Extraordinary Meetings - as needed)
LONG TERM (every 5 - 10 years)	- OCA/PAC - Assessments of individual regional programmes (eg. The East Asian Seas Action Plan, Evaluation of its Development and Achievements (UNEP, 1987f)) - OCA/PAC - Comprehensive Review of Oceans Programme, 1974-1985 (Keckes, 1986)	- Regional Programmes not mature enough to conduct long - term evaluations; institutional means not yet established

channel of communication between their Departments and Governments and the Regional Programme Secretariat. More specifically, a NFP is expected to consult with all relevant organizations in its national government on the progress achieved in action plan implementation (UNEP, 1986, p. 4). At a more technical level, workshops, seminars and group meetings of scientific experts are convened to evaluate results obtained during the implementation phase, before they are submitted to the periodic intergovernmental meetings. As previously mentioned in Chapter 6, these technical workshops and meetings may be called at any time, according to regional needs (Figure 7.1 - Step 14). Finally, Regional Programme Secretariats or Regional Co-ordinating Units (RCU), as described earlier in this chapter and in Chapter 5, are established to assume responsibility for the overall co-ordination, continuous monitoring and supervision of action plan implementation.

7.5.2 Medium-Term Monitoring and Evaluation

A different group of actors and agencies is involved in monitoring and evaluation on a medium-term basis. At the *UNEP / OCA/PAC level*, the OCA/PAC Director, as overall administrator of the UNEP Oceans Programme, prepares Annual Reports that review programme activities and evaluate achievements and difficulties. An examination of these reports since 1976 reveals an extremely critical and comprehensive appraisal (Needham and Jedynack-Copley, 1989, pp. 37-58). However, one wonders about the merits of internal assessment dependency, and the insight foregone because third party assessments are not regularly conducted.

UNEP has only initiated one RSP assessment that has compared its programme with other international initiatives. In 1980, UNEP's Governing Council requested that a meeting of government experts be held to review and discuss knowledge accumulated on the protection and development of regional marine areas. As a result, the 1982 *Meeting of Government Experts on Regional Marine Programmes* was convened by

UNEP's Executive Director in co-operation with relevant international and intergovernmental organizations (UNEP, 1982a, p. ii). Recognizing that regional programmes like the RSP are an effective way to protect and develop the marine and coastal environment, and to provide a sound basis for global action, the meeting adopted a series of recommendations supporting the continued development of UNEP's Regional Seas Programme (UNEP, 1982a, pp. ii-iii). This meeting and the subsequent Portman Report entitled *Achievements and Planned Development of UNEP's Regional Seas Programme and Comparable Programmes Sponsored by Other Bodies* (UNEP Regional Seas Reports and Studies Number 1), provided an initial evaluation of progress made in RSP development and implementation, along with the progress made and lessons learned in other regional and international agreements (UNEP, 1982a). However, seven years have passed since this 1982 document, and much has been learned about RSP development and implementation. Yet the lessons learned are difficult to share with interested managers and researchers when formal assessment and associated documentation is not available.

Another form of internal monitoring and assessment promoted by UNEP is the regularly scheduled sessions of UNEP's Governing Council. Until 1985, Governing Council Sessions were held annually. Since 1985, these sessions are held biennially. Although less sensitive to the experience of individual regional programmes, Governing Council meetings review UNEP activities since the last session. More specifically, the RSP has been discussed in the context of: 1) the status of and achievements in RSP development and implementation; 2) restrictions placed on RSP areas because of delayed and inadequate regional trust contributions; and 3) general commentary by delegate nations on RSP success and failures (Anonymous, 1982a; 1982b; 1981; 1980).

Medium-term monitoring and assessment can also be found at the *regional programme level.* For example, Ordinary Meetings of Contracting Parties or Intergovern-

mental Meetings are held every two years in all RSP areas. They are designed to review the progress achieved in action plan implementation since the previous meeting. Programme progress is evaluated, and Contracting Parties decide on the termination, continuation or redirection of certain activities (UNEP, 1982d, p. 11). Contracting Parties subsequently adopt a workplan for the following 2-year period (Figure 7.1 - Step 15). Extraordinary meetings of Contracting Parties may also be convened at any time deemed necessary, upon the request of the RCU / Regional Programme Secretariat or at the request of Contracting Parties.

7.5.3 Long-Term Monitoring and Evaluation

Finally, two forms of *UNEP / OCA/PAC monitoring and assessment* are related to long - term programme implementation – individual, regional programmes reviews and overall programme reviews. Both of these instruments are produced irregularly and are internally generated. For example, a UNEP / OCA/PAC assessment of an individual regional programme has been prepared for the East Asian Seas Region (UNEP, 1987f). More specifically, the report entitled *"The East Asian Seas Action Plan: Evaluation of its Development and Achievements"* (UNEP Regional Seas Reports and Studies Number 86), presents an evaluation of the Action Plan describing the preparatory and implementation phase(s) activities (UNEP, 1987f). This evaluation reviews: the major steps in action plan development, achievements, encountered difficulties, training and technical assistance, institutional and financial arrangements, along with an analysis of the activities carried out in the framework of the action plan, identified national focal points, meetings convened in the framework of the action plan, national and international institutions involved in programme development and implementation, and training and technical assistance provided through the action plan (UNEP, 1987f, pp. 1-70). The result is a review of the East Asian Seas Regional Programme in terms of strengths and weaknesses, and programme development status (Figure 7.1 - Step 16).

UNEP and OCA/PAC are also actively involved in evaluating regional progress in overall programme implementation. For example, the 1986 *Assessment of UNEP's Achievement in "Oceans" Programme Element -- 1974 - 1985*, was prepared by the Regional Seas Programme Director. The report includes a detailed review of the RSP, its development process, regional players, achievements, problems, lessons learned, and future plans (Keckes, 1986, pp. 1-46) (Figure 7.1 - Step 16).

At the *regional programme level*, the literature reveals a definite void in long-term monitoring and evaluation. This condition is largely due to the immaturity of existing regional programmes and the lack of institutional structures needed to conduct long-term evaluation.

In sum, therefore, it is important to note that the monitoring of programme implementation is hierarchical, with national, regional and international procedures in place to conduct programme monitoring and evaluation in the short, medium and long term contexts. Individual regional programmes are subject to *frequent and comprehensive* assessments and review by actors and agencies internal to the regional programmes (NFP, RCU, Programme Secretariats, Scientific Experts and Intergovernmental Meetings); are subject to *less frequent and rather incomplete* assessment and review by UNEP and OCA/PAC; and *not subject* to external and independent assessment and review whatsoever. The RSP has been criticized on this final point in that even with short, medium and long-term monitoring and evaluation strategies in place, the overall process of evaluation has been *too meagre and too inclined to internal review* (Anonymous, 1989b; 1989c; 1982a, p. 36).

7.6 SUMMARY

The process of programme implementation is described in the context of answers to three interrelated questions. They are repeated here along with the relevant responses to the survey research.

First, what are the fundamental procedures used to legitimize the goals and objectives of regional action plan statements, and what means are used to implement these legal procedures? In response, it was found that regional conventions and protocols are the fundamental procedures used to legitimize action plan goals and objectives. These legal instruments are subject to a rather extensive process of approval and adoption. To begin with, proposed conventions and protocols are conceptualized, discussed and refined at the meetings and workshops of national and regional scientific experts and intergovernmental meetings. Next, formal approval and adoption through signature is given at a Meeting of Plenipotentiaries or Contracting States. Once signed, these agreements are still subject to ratification, acceptance of approval by regional states. Nations may also become a contracting party to the convention and / or protocol(s) through accession, after the initial signing by plenipotentiaries. Conventions and protocols enter into force within a specified period of time as agreed to by regional contracting parties. Upon entry into force, these agreements may be subject to accession by new nations (parties), withdrawal by contracting parties, and amended as recommended by any contracting state.

Second, what components of regional management are most mature in terms of implementation? The most mature regional management components are related to the development of programme infrastructure. More specifically, regions have spent considerable effort and energy on establishing Regional Co-ordinating Units, Regional Programme Secretariats and Regional Trusts.

Third, what national and regional procedures are in place to monitor programme implementation? It was found that monitoring and evaluation of RSP implementation occur in the short, medium and long-term by UNEP / OCA/PAC and regional programme contributors. The schedule and degree of assessment varies from frequent and comprehensive review(s) conducted by internal regional players; to less frequent and rather incomplete assessment by UNEP and OCA/PAC; to a complete void of assessment by external and independent reviewers.

The implications of these findings are briefly explored in the concluding section of this thesis (Chapter 9). The next chapter focusses attention on the general guides and principles fundamental to the Regional Seas Programme (Chapter 8).

Chapter VIII

THE REGIONAL SEAS PROGRAMME: GENERAL GUIDES AND PRINCIPLES

8.1 PURPOSE

The purpose of this chapter is to describe and to analyze the *general guides and principles* fundamental to the UNEP Regional Seas Programme (RSP). Central to this purpose is a discussion of major programme strengths and weaknesses identified by resource managers, independent assessors and others working in the realm of international water resources management (Sanger, 1987, pp. 206-207, Borgese, 1986, pp. 88-91). Description and analysis are organized in terms of the Resources Management Assessment Model and associated question and answer sets (Table 8.1 and Table 1.4). The questions are: *First*, what preconditions are fundamental to regional seas management? *Second*, what major programme *strengths* have been identified by internal and external assessors? *Third*, what major programme *weaknesses* have been identified by internal and external assessors? It is shown shortly that the answers to these questions aggregate naturally into a typology of positive and negative programme characteristics. The typology itself is organized into types of programme facilitators and programme resistances that are endemic to the management regime within and outside of the United Nations Environment Programme (Table 8.2).

TABLE 8.1 - Resource Management Assessment Model: General Guides and Principles

ACTORS AND AGENCIES		RATIONALE, CONCEPTUALIZATION, AND CONTEXT		PLANNING AND ANALYSIS						IMPLEMENTATION			GENERAL GUIDES AND PRINCIPLES
GOVERNMENT, MANAGEMENT I.JRFI, OR TYPE:	Federal Provincial (State) Regional International Municipal Committee Industry Commission Council, Authority, District Task Force Interest Group Mass Media Other	PROBLEM, ISSUE, CONDITION, CONFLICT, SCARCITY	Government Industry Public Intergroup Mass Media News Agency New Institution	STRATEGIC PLANNING						Negotiations, Public Hearings, Pre-Hearings, Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	APPROVAL		BASIC & APPLIED RESEARCH
BENEFICIARY		POLITICAL AGENDA		BIOPHYSICAL, SOCIO-ECONOMIC INVENTORY	ABC Method					Surveillance & Inspection Monitoring, Enforcement Modification	CONSTRUCTION		MANAGEMENT CO-ORDINATION
PROPONENT		MANAGEMENT AGENDA		HUMAN USE SYSTEM CLASSIFICATION						Surveillance & Inspection Monitoring, Enforcement Modification	OPERATION		INCENTIVES - ECONOMIC, SOCIAL, POLITICAL
LEAD		SCIENTIFIC AGENDA		SIGNIFICANT AREAS IDENTIFICATION						Negotiations, Public Hearings, Pre-Hearings, Hearings, Formal Case Records, Permit Orders, Appeals, Final Decisions	APPROVAL		SENSITIVITIES, VALUES
PARTICIPANT				EVALUATION OF ALTERNATIVES	B/C Analysis, EIA, SIA, TIA, Input-Output Analysis					Surveillance & Inspection Monitoring, Enforcement Modification	CONSTRUCTION		INFORMATION ACCESS
OBSERVER				COAL ASSESSMENT						Procedure Modification	OPERATION		PROCESS MONITORING
													MANAGEMENT CO-OPERATION

Source: Adapted with considerable modification from (Nelson and Jessen, 1981)

TABLE 8.2 - Typology of Regional Seas Programme (RSP)
Facilitators and Resistances

SITUATION INTERNAL TO UNEP

DOMINANT
PROGRAMME FACILITATORS:

1. Unified Methodological Approach; Structural Symmetry of all programme procedures and action plan components
2. Central Programme Co-ordination, UNEP and OCA/PAC
3. Interaction and Co-operation among United Nations' bodies: FAO, UNCHS, UNEP, UNESCO, UNIDO, UN DIESA, WHO, WMO

DOMINANT
PROGRAMME RESISTANCES:

1. United Nations' Agencies strict adherence to budget protection
2. Narrowness of UNEP's Perception; neglect of private sector contributions to management
3. Competition between Developing and Developed Nations
4. Over - Extension of UNEP resources as a result of low priority project involvement
5. Restricted Spatial and Project Dimensions of Non - Convertible Currencies
6. Scarcity of Financial Resources:
   a) UNEP dependency upon Contributions of Governing Council Nations
   b) Inequitable Contributions to UNEP Environment Fund
   c) Irregular and late Contributions to Regional Trusts
   d) Inequitable Contributions to Regional Trusts
7. Scarcity of Human Resources:
   a) Rapid UNEP Administrative Staff turnover
   b) Rapid UNEP Support Staff turnover

SITUATION EXTERNAL TO UNEP

DOMINANT
PROGRAMME FACILITATORS:

1. Interaction and Co-operation between UNEP and international organizations and commissions not in the UN System
2. Interaction and Co-operation between UNEP and Non - Governmental Organizations (NGO's)
3. International acceptance of the RSP; UNEP's perceived non - partisan viewpoint

DOMINANT
PROGRAMME RESISTANCES:

1. Scarcity of Information on (regional and national levels):
   a) Sources of pollution; volumes, levels, timing
   b) Major / minor environmental problems and their parameters
   c) Active regional programmes (eg. Baltic)
   d) Periodic reports on the status of the marine environment and its management
   e) Common environmental management problems and their solutions
2. Scarcity of Mature, Existing Institutional Arrangements:
   a) Absence of national institutions with a regional sensitivity or mandate
   b) Absence of co-ordinated programmes among national, international and inter - regional agencies and institutions
   c) Absence of an established set of contact points among national, international, and inter - regional agencies and institutions
   d) Absence of regional experts and support facilities in designated action plan areas
3. National interest promotion at expense of regional environmental management

8.2 SITUATION INTERNAL TO UNEP

8.2.1 Programme Facilitators

There are definite advantages to RSP placement within the UNEP institutional framework. Three specific programme facilitators are a result of this relation.

First, the RSP is built on a *unified methodological approach* (Table 8.2). The maintenance of this approach through time and situation has been a primary guiding principle. Each RSP is organized in the same way, with the same structural components as earlier programmes. For example, each region's Action Plan statement must contain five sections: 1) environmental assessment, 2) environmental management, 3) environmental legislation, 4) institutional arrangements, and 5) financial arrangements (UNEP, 1984d, pp. 1-2). Further, each Action Plan is supported by Conventions and Technical Protocols. In addition, guidelines and manuals have been prepared for every planning and implementation stage so that subsequent regional programmes can draw upon antecedents. What makes each regional experience unique is the application of a unified methodological approach to the specific environmental problems endemic to the regional case (Bliss-Guest and Keckes, 1982, p. 44).

It is interesting to note that the West and Central African Region, which covers twenty-one coastal states from Mauritania to Namibia, was the first programme in which UNEP tried to apply the regional seas approach to a region which neither represented a semi-enclosed sea, nor had common ecological and oceanographic characteristics. The implementation of an action plan here appears to validate UNEP's belief that a *regional seas approach* is also applicable to regions which, strictly speaking, do not share the same water resource (Keckes, 1986, p. 29). Future evaluations of the action plan should be considered against this important point.

The East African Region has been identified by RSP managers as the example which best reveals the benefits of a unified methodological approach. As the national

institutional infrastructure in this region is weak, the programme experiences of other regions and UNEP were utilized to avoid wasted activities and serious setbacks (Keckes, 1986, p. 36).

Second, the RSP benefits from the *central programme co-ordination* provided by UNEP and OCA / PAC in Nairobi, Kenya (Table 8.2). As previously described in Chapter 5, the basic task of UNEP is to catalyze, co-ordinate and stimulate environmental action within the UN system (UNEP, 1987g, p. 15; Zalob, 1976, pp. 56, 58). Within OCA/PAC, this central and catalytic role is taken a step further, and involves the encouragement of concensus - building among regional nations. UNEP through OCA / PAC, acts as the overall co-ordinator for the development and implementation of regional action plans (Thacher and Meith, 1980, p. 156-157). This lead role is eventually and purposefully reduced to that of a consultant and / or counsellor, once a regional programme is adequately established in both administrative and financial terms (Bliss-Guest and Keckes, 1982, p. 44; Thacher, 1983, pp. 451, 454; UNEP, 1982d, p. 11).

It is important to note that this central programme co-ordination is supported by the *administrative and operational independence* of the RSP. Although the Programme is accountable to the UNEP Executive Director, and ultimately to the Governing Council, it has its own Director and Assistant Director. They are at liberty to establish daily, monthly and yearly priorities. This semi-autonomous state does much to eliminate the contagious bureaucratic inertia endemic to the United Nations system. OCA / PAC officers, therefore, communicate and correspond directly and immediately with national focal points and nominated scientific experts without all the heavy protocol (Szekely, 1985a, 1985b, Personal Communication).

Concomitantly, this administrative independence has facilitated the growth of a cohesive unit. The RSP Director has had the authority to hand-pick an interdiscipli-

nary and multi-national group of managers, scientists and supporting professionals. In June 1985, the academic backgrounds of the senior RSP officers included: business administration, chemical engineering, economics, environmental planning and management, environmental law, marine biology and marine chemistry (Gagraj, 1985a, 1985b, Personal Communication). Szekely (1985a, 1985b, Personal Communication) has stated:

> "...the most visible RSP officers -- the staff at the OCA / PAC office -- are drawn from several nations and themselves exude a regional personality ... this characteristic does much to give the Regional Seas Programme an appearance of non-alignedness or political neutrality ... this team, by its inherent nature, has its own communication and linkage mechanisms that produce a cognizance of north-south, east-west, and other regional sensitivities and capabilities ..."

Third, the RSP benefits from the *interaction and co-operation among United Nations and affiliated bodies* (Table 8.2 and Figure 5.4). Many specialized agencies including: Food and Agricultural Organization (FAO); International Atomic Energy Agency (IAEA); International Maritime Organization (IMO); Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO); Joint Group of Experts on Scientific Aspects of Marine Pollution (GESAMP); United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO); United Nations Industrial Development Organization (UNIDO); World Health Organization (WHO); and the World Meteorological Organization (WMO) are actively involved in regional programmes. These agencies are called upon for their technical and scientific expertise as well as for other programme support measures such as training and education (Caldwell, 1984, pp. 130-131; UNEP, 1984d, p. 4; Thacher, 1983, p. 454; Thacher and Meith, 1980, p. 154). More specifically, these close and increasingly collaborative relations have done much to improve and develop scientific methodologies and capabilities in the various regions (Keckes, 1986, pp. 3, 14; UNEP, 1984d, pp. 4-9).

8.2.2 Programme Resistances

There are also definite disadvantages to RSP placement within the UNEP portfolio. Seven resistances have been identified.

First, the RSP is said to be restrained by strict adherence to budget protection by UN agencies (Table 8.2). In other words, each UN agency has its own mission statement and international priorities. As financial austerity continues to be a fact of life within the UN, its agencies simultaneously become less willing to internalize expenditures of human and capital resources on projects that are not specifically related to their mandates (UNEP, 1984d, p. 8). As a result, UNEP has been increasingly forced to pay the costs of projects and project components that would have at an earlier time been paid for by other UN agencies. This predicament has also been said to touch the major institutional divisions of the UN Environment Programme itself (Figures 5.5 and 5.6). It has been stated that such protectionism has limited Oceans Programme (including Regional Seas) interaction with other activity centres and branches (Keekes, 1986, p. 3).

Second, the RSP has been negatively affected by the *narrowness of UNEP's perception* (Table 8.2). UNEP is said to be dominated by advice of environmentalists, conservationists and academics. It has traditionally neglected to give full consideration to the potential contribution of the private sector, particularly the expertise and experience of business, industry and commerce (Anonymous, 1983, p. 7; Anonymous, 1982b, p. 23). This neglect is said to limit the options and the resources necessary to achieve regional environmental goals and objectives. As will be stated later in the thesis, this omission could be critical in the Arctic where much of the technical and scientific expertise is controlled by industry (French, 1987, pp. 154-161; VanderZwaag and Lamson, 1987, pp. 425-443; Page, 1986, pp. 75-88, 155-178; Nelson and Needham, 1985, p. 8; Whittington, 1985, p. 117-119; CARC, 1984a, pp. 281, 285; Kimball, 1982, p. 171).

Third, the RSP has had to respond to *competition between developing and developed nations* and the resulting strains on UNEP management (Table 8.2). It has been said that the result of this competition has been a less than effective programme. Developing nations and particularly those of the UNEP Governing Council have historically been suspicious and untrusting of developed nations (Table 5.3). This is particularly true when advice is given on the dangers of various development strategies, for fear that advice was given so as to inhibit economic growth for selfish reasons (Bhagwati and Ruggie, 1984, p. 89; Kimball, 1982, p. 157-197; O'Brien and Helleiner, 1980, p. 445-447; Juda, 1979a, pp. 90-95; Juda, 1979b, pp. 138-139). In rebuttal, it has been said that the interests of developing states are *protected* in two aspects of UNEP institutional arrangements (Bennett, 1984, p. 298). First, as described in Chapter 5, developing nations have a majority of the seats on the Governing Council (Table 5.3). Second, the selection of Nairobi, Kenya as the site for the UNEP Secretariat, seems clearly a concession to pressures from the less-developed states (Bennett, 1984, p. 298). These two institutional realities are said to ensure a balance between environmental and development concerns in developed and developing nations (Bennett, 1984, p. 298; Caldwell, 1984, p. 63).

It is interesting to note the examples of competition between developing and developed nations found in the minutes of Governing Council Sessions. For example, at the 1982 Session of Special Character (SSC), which marked the tenth anniversary of the UN Conference on the Human Environment at Stockholm (1972), the delegate from India brought up the concern that developing countries have long felt neglected by UNEP in its actions to help developing countries (Anonymous, 1982b, p. 19). At an earlier meeting of the Eighth Governing Council (1980), the point was raised of how important it was to involve the developing countries in the formulation and implementation of environmental legislation (Anonymous, 1980, p. 66). The concern here was

to avoid a situation where developed countries would pass conventions or treaties which did not necessarily take into account the particular situation in regional areas and individual developing countries (Thacher and Meith, 1980, p. 154). At this same meeting, there was also suggestion that the secretariat should seek to employ representatives from less developed countries to report on the problems affecting those countries, so as to ensure a more balanced and useful account of the real situation (Anonymous, 1980, p. 66). UNEP management officials must be sensitive to this competition and ensure that its programme goals reflect the needs and concerns of both developed and developing countries (Anonymous, 1980, p. 51).

The 1982 Session of a Special Character also gave further attention to the concern by several delegations of the crucial need for the establishment of new international economic order (Anonymous, 1982b, pp. 3, 26). The feeling was that without this new order, "the continued inequalities and distortions inherent in the current system of international economic relations would hamper the capacity of developing countries to manage and develop their resource base in a sustainable way" (Anonymous, 1982b, p. 26). In his concluding remarks at the Tenth Governing Council Session (1982), UNEP Executive Director Mostafa Tolba acknowledged that much credit should be given to the developing countries for their efforts and commitment to UNEP, despite their own difficult domestic situations. He reassured all members that he intended to keep the programme balanced, reflecting as far as financial and other contributions allowed, the views of all (Anonymous, 1982a, p. 38).

Fourth, the RSP has been negatively affected by UNEP participation in numerous projects associated with institutional components of its Environment Programme (Table 8.2, Figures 5.4, 5.5 and 5.6). A review of the *1986 UNEP Annual Report and Budget, and an associated Compendium of Projects,* identifies ten major budget lines within which the Environment Fund is allocated: Environment and Development (6), Envi-

ronmental Awareness (4), Earthwatch (4), Oceans (3), Water (1), Terrestrial Ecosystems (7), Desertification (1), Health and Human Settlements (4), The Arms Race and the Environment (1), and Regional and Technical Co-operation (1). The companion numbers indicate how the major budget lines are further divided into budget sublines (32 in total) (UNEP, 1987g, pp. 31-105). Interestingly, between 1973 and 1986, the UNEP Environment Fund contributed $30,387,858 to 158 completed and ongoing projects associated with the Oceans budget line, including the RSP (Keckes, 1986, p. 1).

The result of poor project priorization, poor strategic planning and poor administration has been an *over-extension of human and financial resources* across all UNEP endeavours. The UNEP assumption that nations will be encouraged to participate and contribute financially to regional projects when they see positive results and benefits generally has not been experienced (UNEP, 1984d, p. 8; Myers and Myers, 1983, p. 23; Anonymous, 1982b, p. 17). Several resource managers have suggested that UNEP must reduce its involvement in international environmental issues and problems and focus attention on a few of the most important (Anonymous, 1985c, p. 93; Anonymous, 1983, pp. 16-18; Anonymous, 1981, p. 114; Zalob, 1976, pp. 50, 56, 57). This reduction, it is thought, would increase the probability of real, measured success and would free scarce UNEP funds for other programmes, such as the RSP (Anonymous, 1983, pp. 21, 22; Zalob, 1976, p. 56).

Fifth, the RSP has been affected by the *restricted spatial and project dimensions of non-convertible currencies* (Table 8.2). Countries contributing to the UNEP Environment Fund do so in their national currencies. The problem rests with the inability of UNEP to easily convert many of these currencies (for example, Bulgarian leva, Byelorussian SSR roubles, Chinese yuan, Cuban pesos, Czechoslovak korunas, German Democratic Republic marks, Hungarian forints, Polish zlotys, Romanian lei, Ukrainian

SSR roubles, USSR roubles, Yugoslav dinars) into U.S. dollars, the standard or base currency in which the UNEP Environment Fund operates (UNEP, 1987h, p. 12). As a consequence, these non-convertible currencies (NCC's) are often used solely or mainly within the territories of the respective donors and cannot be exchanged and paid into UNEP bank accounts (UNEP, 1987h, p. 27). As of December 1986, NCC's accounted for $13.08 million (23.91%) of the total $54.70 million Environment Fund (UNEP, 1987h, p. 1). Conversely, it has been stated that this situation is one way an aligned nation can ensure that the money it contributed to the Environment Fund is retained, as it must be spent on its national projects. Unfortunately, the projects may or may not be the most important from a regional management perspective (Anonymous, 1982a, p. 34; Anonymous, 1980, p. 68).

Sixth, the RSP like other UN programmes, is affected by a *scarcity of financial resources* (Table 8.2). The reality of UNEP's dependency upon the voluntary contributions of Governing Council Nations, particularly those of the United States, the inequitable contributions to the UNEP Environment Trust Fund, the irregular and late contributions to regional trusts and the inequitable contributions to regional trusts by participating nations, provides UNEP and the RSP with a definite barrier to smooth and uncomplicated programme administration (Keckes, 1986, p. 27; Anonymous, 1984, p. 3; Anonymous, 1983, pp. 16, 22; Anonymous, 1982b, p. 3; Anonymous 1981, pp. 102, 103, 105).

The cumulative effect of these conditions is most visible in the Caribbean Action Plan Region. In spite of the early agreement (April 1981) among the twenty-eight participating nations to establish a Regional Trust Fund, national contributions remained almost symbolic until 1983 (Keckes, 1986, p. 27). Since that time, contributions to the Trust Fund are still far behind pledges. In addition, the refusal of the United States to contribute to the Regional Trust Fund further aggravates the financial situation. As a

consequence, UNEP has decided to reduce its financial commitment to action plan implementation until resources of the Trust Fund match its allocations. It is reported that a similar situation is also evolving in the South-East Pacific Action Plan Region (Keckes, 1986, p. 43).

Seventh, the RSP has experienced *a long history of rapid UNEP staff turnover* associated with the non-career nature of UN employment (Table 8.2) (Anonymous, 1981, p. 113; Anonymous, 1980, p. 51). This has affected the continuity of programmes. The most recent experience of the OCA / PAC Office in Geneva, Switzerland and its forced move to Nairobi, Kenya is a case in point (Anonymous, 1985c, pp. 94, 96; Bennett, 1984, p. 298). In this context, the RSP lost its Assistant Executive Director, Francesco Szekely, along with seven regional and legal affairs co-ordinators in 1985-86. Many of these senior administrators had been with the programme since its inception in 1974 (Keckes, 1985, Personal Communication). In addition, the turnover of qualified support staff appears to mirror the movement of senior managers, all to the detriment of programme continuity and efficiency (Anonymous, 1985c, pp. 94, 96).

Finally, there has been a long and costly transition period required to educate and train skilled administrative and technical staff in Kenya. Some assessors have questioned the wisdom of UNEP centralization in Nairobi and the attendent extra costs of administering an Environment Programme from a developing nation distanced from the major diplomatic and decision-making centres of Geneva, New York and Paris (Keckes, 1985, Personal Communication; Szekely, 1985a, 1985b, Personal Communication).

8.3 SITUATION EXTERNAL TO UNEP

8.3.1 Programme Facilitators

Regional Seas Programme existence within UNEP has both facilitated its acceptance and caused resistance to its implementation in the management milieu outside the United Nations network.

In this context, the RSP has been facilitated by the *interaction and co-operation among UNEP and international organizations and commissions not in the UN system* (Table 8.2). Organizations such as the Association of South-East Asian Nations (ASEAN), Council for Mutual Economic Assistance (CMEA), Economic Commission for Europe (ECE), International Maritime Organization (IMO), the League of Arab States, Organization of American States (OAS), Organization of African Unity (OAU), and Organization for Economic Cooperation and Development (OECD), and others are called upon for their scientific and technical expertise as well as for other support measures (UNEP, 1987g, p. 15; UNEP, 1983a, pp. 2-3).

The RSP is also facilitated by *interaction and co-operation between UNEP and Non-Governmental Organizations* (NGO's) with interests in the environmental realm. Such NGO's as the International Union for the Conservation of Nature and Natural Resources (IUCN), International Institute for Environment and Development (IIED), Scientific Community on Problems of the Environment (SCOPE) and World Wildlife Fund (WWF) have performed the tasks of consultants, advisors and critics on many RSP exercises (UNEP, 1987g, p. 15; Caldwell, 1984, p. 130; UNEP, 1984d, p. 9). Minutes of Governing Council Sessions are dotted with praise of NGO's for their distinctive and pivotal role in promoting environmental awareness and environmental education among the general public, as well as acting as a source of scientific and technical expertise (Anonymous, 1982a, p. 30; Anonymous, 1981, pp. 105, 115; Anonymous, 1980, p. 67).

Finally, the RSP is facilitated by the *international acceptance of the programme because of UNEP's perceived non-partisan or politically neutral viewpoint* (Table 8.2). In the Mediterranean Region, for example, Keckes (1986) described UNEP as an "untainted newcomer" to the Mediterranean scene, which put UNEP in a very unique and indispensable position to mobilize seventeen states of the Basin (excluding Albania) around the most complex programme ever jointly undertaken by them (Keckes, 1986, p. 21).

8.3.2 Programme Resistances

Several regional management conditions have been shown to hinder RSP development. The following discussion describes three such programme resistances.

First, there is a general *scarcity of quality comparative, scientific and technical information* (Table 8.2). This void exists at both the regional and national levels and has been described as a contagion, endemic to all eleven RSP's (Keckes, 1986, pp. 15-44; Charnock, 1984, p. 122; Kimball, 1982, pp. 165-167; Johnson, 1976, p. 55-65; Lutz, 1975b, pp. 162-164). More specifically, information voids exist in such areas as: sources of pollution (volume levels, timing); major / minor environmental problems and their parameters; other active regional programmes (such as the Baltic and the North Atlantic); periodic reports on the status of the marine environment and its management; and common environmental management problems and their solutions. As a consequence of these information voids, the largest proportion of human and capital investment has been in the direction of baseline studies, initial assessments and the formulation of methodological guidelines and reference methods, with much less investment being allocated to date, in resolving the environmental problems themselves (Keckes, 1986, pp. 15-44).

In order to provide a global framework for regional monitoring of pollutants, UNEP and specialized UN bodies have invested heavily in the intercalibration and har-

monization of scientific sampling and analytical methods. The use of these reference methods is supposed to be mandatory for all national institutions participating in UNEP sponsored marine pollut on research and monitoring programmes. This condition was deemed necessary so that generated data could be compared regionally and globally.

However, UNEP has experienced considerable difficulty in the Kuwait Action Plan Region in this regard. In spite of repeated appeals to the Secretariat of the Kuwait Regional Organization for the Protection of the Marine Environment (ROPME), UNEP has achieved little. As a consequence, scientific research and monitoring carried out in this region, has produced results that are almost worthless for any global or inter- regional comparisons (Keckes, 1986, p. 23).

Second, there is a general *scarcity of mature, existing institutional arrangements dealing with environmental management in those nations participating in the RSP* (Table 8.2). This condition has the following symptoms: the absence of national institutions with a regional sensitivity or mandate; the absence of co-ordinated programmes among national, international and interregional governmental agencies; the absence of an established set of contact points among national, international and interregional governmental agencies and other institutions; and the absence of regional experts and support facilities in designated action plan areas; for example scientific laboratories and monitoring centres (Keckes, 1986, pp. 15-44; Anonymous, 1983, p. 24).

It should be pointed out that the lack of institutional maturity is also a problem in developed countries, such as Canada. The lack of maturity in these cases, results in an inability of senior government departments to co-ordinate and unify positions on a variety of natural resource and other problems. Inter-departmental rivalries and jealousies have been cited as being particularly severe in the context of Canadian water resource management and northern development (Page, 1986, pp. 313, 315; Mactavish,

1985, pp. 61, 63, 68, 84, 88, 94; Pearse et al, 1985, pp. 63, 67, 147, 151, 169, 172; Whittington, 1985, pp. 119, 136-139). One can only speculate about the effect of this disorder on Canada's ability to coherently speak to UNEP and other international bodies.

In this context, the point was made at the 1982 Session of Special Character, an assembly to mark the 10th Anniversary of the UN Conference on the Human Environment, that even eight years after the creation of the RSP and despite the efforts made to implement several regional action plans, environmental deterioration was still on the rise (Anonymous, 1982b, p. 19). This is a contentious point because the history of RSP investment is one which has emphasized baseline study and research and institutional development rather than the real service of protecting the environment (Anonymous, 1982b, p. 22). In rebuttal, it is said that the marine and coastal environment is cleaner than it would have been without UNEP's Ocean and Regional Seas Programmes (Keckes, 1986, p. 3). Szekely (1985a, 1985b, Personal Communication) has stated:

> "much preparatory work and investment was needed in each region to establish *the ability* and *the capacity to manage*. Without an institutional framework in place, the management system would remain reactive and short-term and be imported from outside ... There would be no planning. Scientific, baseline research is on-going and will remain continuous. When the institutional arrangements are in place, the decision makers will have good scientific and technical information upon which to build a response to changing environmental parameters..."

Keckes (1985, Personal Communication) has stated:

> "...it must be remembered that trade-offs are required to foster participation in regional programmes of this sort. On the one hand, there are those nations who are concerned about environmental quality -- the developed nations. On the other hand, there are those nations who are concerned about economic and resource development -- the developing nations. In the context of the latter, their participation was only assured once they were convinced that the proposed management regime would facilitate their ability to address a variety of ills -- economic and social, as well as environmental... They sought institutional development and the possibility of more decision-making independence in the future..."

Third, the RSP has been negatively affected by *the continued promotion of national interests at the expense of regional environmental management* (Table 8.2). This condition has the effect of delaying the implementation of action plans and the development of conventions and protocols. For example, the Third Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme (Cancun, April 24-26, 1985) approved the implementation of twenty-two projects (Keckes, 1986, p. 27). These projects are said to be "country projects" with limited significance to the overall goals of the action plan. It has been stated that in spite of the UNEP Secretariat's efforts, Caribbean governments lately pay less attention to the inter-connectedness of projects and their potential contribution to action plan objectives than to desperate, almost egoistic interests of individual states or their representatives (Keckes, 1986, p. 26).

In the South-West Atlantic Action Plan Region (including Argentina, Brazil and Uruguay), a related condition exists. Although the UNEP Governing Council initiated action plan activity in August, 1980, Brazil requested in 1983 that action plan development "... should not be considered as an ongoing activity ... as no final decision has been reached among the three countries concerned" (Keckes, 1986, pp. 33). This failure demonstrates the importance of *shared political interest at the highest level, as one of the* basic preconditions of environmental management requiring joint action.

8.4 SUMMARY

This chapter has focussed attention on the major strengths and weaknesses of the Regional Seas Programme, and its guides and principles. The information needed to describe these programme characteristics are gathered as responses to three research questions. They are repeated here for the sake of convenience.

First, what preconditions are fundamental to regional sea management? A general synthesis of the facilitators and resistances dicussion suggests that two elements are fundamental to the RSP: *co-operation* and *co-ordination*. In the context of the former, UNEP sources have repeatedly emphasized the necessity of *co-operation* among Governments of the regions (UNEP, 1982b, pp. 1-2; UNEP, 1981b, pp. 1-2). Because regional programmes are specifically aimed at benefiting the States of a given region, Governments are invited to participate from the very beginning in the formulation, acceptance and policy development of the programme. Each programme is based on a regional action plan formally adopted by the Governments of the region, and is predominantly carried out by the national institutions of those Governments. Regular intergovernmental meetings are convened to review the progress made in implementing the agreed programme workplan and to introduce any necessary adjustments to meet the goals and objectives of the Governments.

In the context of the latter, *co-ordination* of the technical work through the United Nations' System and other competent international and regional, intergovernmental organizations, is also considered a fundamental element to the RSP (UNEP, 1982b, pp. 1-2; UNEP, 1981b, pp. 1-2). Although each regional programme is implemented predominantly by Government-nominated institutions, a large number of specialized organizations are called upon to provide assistance to these national institutions. UNEP acts as the overall co-ordinator of a regional programme, although this role is often limited to the initial phase of the activities. Therefore, the experience and support of the whole United Nations' System contributes to a regional programme.

Second, what major programme *strengths* have been identified by internal and external assessors? The programme strengths are presented within a typology of programme facilitators and resistances. Six facilitators or programme strengths are identified as influences internal and external to UNEP. The list of internal programme facil-

itators includes: a unified methodological approach; central programme co-ordination; and interaction and co-operation among UN bodies. The list of programme facilitators external to UNEP includes: interaction and co-operation between UNEP and international organizations outside of the UN System; interaction and co-operation between UNEP and Non-Governmental Organizations; and international acceptance of the RSP because of UNEP's perceived non-partisan viewpoint.

Third, what major programme *weaknesses* have been identified by internal and external assessors? The programme weaknesses are also presented within the typology of programme facilitators and resistances. Ten (Twenty-one) resistances or programme weaknesses are identified as influences internal and external to UNEP. The list of internal programme resistances includes: UN Agencies strict adherence to budget protection; competition between developed and developing nations; over-extension of UNEP resources; and scarcity of human and financial resources. The list of programme resistances external to UNEP includes: promotion of national interests at the expense of regional environmental management interests; a scarcity of information; and a scarcity of established institutional arrangements.

The implications of these findings and others from previous chapters are briefly explored in the concluding chapter of this thesis (Chapter 9).

Chapter IX

CONCLUSIONS AND REFLECTIONS

9.1 PURPOSE

The purpose of this final chapter is one of reflection and resolution. Analysis, synthesis and interpretation have already provided considerable insight into the structure and mechanics of the Regional Seas Programme. The associated evidence and information have been organized according to a five element, Resources Management Assessment Model(RMAM). The Model served as a template for a questions' set related to Programme Rationale, Institutional Arrangements, Planning and Analysis processes, Implementation procedures, and General Guides and Principles (Chapters 4-8). In all cases, relevant questions were answered and important findings were highlighted. However, in total, what do these findings really mean? Are there as many new questions as there are old? Is the Regional Seas Programme worth further research consideration, particularly in the context of the Arctic? Finally, what was the true utility of the Resource Management Assessment Model in this research context? This final chapter briefly addresses these questions.

9.2 RATIONALE, CONCEPTUALIZATION AND MOTIVATION

There appears to be very clear evidence that the establishment of Regional Seas Programmes was based on the secure foundation of *a common regional concern for marine pollution*. However, this fundamental conclusion must be examined more closely in order to justify faith in its message.

Most of the evidence and argument related to this theme was gleaned from managers' responses to a survey questionnaire and to a lesser extent, from key United Nations' documents, including the formal minutes of working groups, and scientific and technical experts. As a consequence, this conclusion is based primarily on the *managerial perception of programme performance*. There remains the outstanding question of congruency between the perceptions of programme managers associated with OCA/PAC and the Regional Co-ordinating Units, and the scientific and other communities of interest or regional stakeholders. It seems clear that future research must address this congruency concern. Would the regional scientific community reflect a similar priorization of environmental issues, in answers to the survey questions? Would they assign the RSP the same measures of success and failure?

9.3 ACTORS, AGENCIES AND INSTITUTIONAL ARRANGEMENTS

The research has revealed *a complex, hierarchical structure within the pattern of actor and agency participation in each Regional Seas Programme*. In addition, it is revealed that elaborate institutional partnerships and associations continue to evolve at national and regional levels as programmes mature through to the implementation phase. This metamorphosis is particularly true during the period of OCA/PAC withdrawal from administrative responsibility and the entry into force of purely regional administrative, financial and project units.

One is left to wonder whether or not this apparent level of institutional sophistication at the national and regional levels has not had an unintended cost. Has the development of national and regional management capability been at the expense of (or instead of) local infrastructure? This question would seem to be particularly important in developing countries – countries which are the primary players within the RSP. Its importance is largely due to the fact that there is a vital need to promote and facilitate

the maturing of local decision-making support systems within such nations. This research has not attempted to examine the structure and process of micro- or local level environmental decision-making in support of the RSP. It now seems a priority task and one worthy of comprehensive study.

9.4 PLANNING AND ANALYSIS

The Planning and Analysis discussion was concerned with three central themes: planning procedures used to establish programme goals; progress in the undertaking of planning and analysis projects; and national differences in commitment to regional environmental management. In essence, the investigation lead to the conclusion that *the enhancement of the ability to plan and to manage environmental problems was the predominant early programme objective of participating nations.* In other words, most of the human and capital investment has been directed towards improving national and regional management and scientific capabilities so that proper planning decisions can be made. The regional and national support for management condition projects (MCP's) rather than environment condition projects (ECP's) is clear evidence of this preoccupation.

It is important to declare that several additional planning and analysis concerns have surfaced as a result of this inquiry. They relate intrinsically to *goals assessment.* The author, for example, is still in quandary about the assessment stage. Have criteria been established to denote an acceptable level of institutional sophistication or ability to manage? What are these criteria? There will remain a lingering doubt that this investment in management is just a convenient means of participating in the RSP unless additional evidence is obtained to the contrary.

Finally, there remains the outstanding question of congruency between programme goals and objectives at the regional, national and local levels. Are there procedures in

place that can judge success or failure at or among these spatial scales? Are the planning and analysis processes mature at both the macro and the micro levels in terms of scientific information, legislative authority, and decision-making sophistication. Further research needs to address these important questions.

9.5 IMPLEMENTATION

The discussion on the process of Regional Seas Programme implementation was informative on three fronts. It provided a concise description of the *formal means of programme legitimization* -- the regional acceptance of action plans, conventions and protocols. It provided a concise description of the *development of institutional infrastructure* in support of implementation -- the Regional Co-ordinating Units, Regional Programme Secretariats, and Regional Trusts. Finally, it provided a critical analysis of the *state of programme monitoring and evaluation* within the Regional Seas Programme.

In the context of the above, several outstanding questions need future attention, and the most pressing of these relate to *programme evaluation*. Is the Regional Seas Programme typical or atypical of other United Nations' programmes in terms of the paucity of evaluation? The author is not an United Nations' expert, but has been exposed to the litany of criticism levelled at United Nations' agencies, such as UNESCO, and the apparent lack of accountability. What are the fundamental reasons for this condition? More specifically, Does this lack of programme evaluation carry-over to the national level? If the answer is yes, then one would question the reliability of claims of programme success and failure because without evaluation, there would be no basis for either of these conclusions. The relevant academic literature and UNEP documentation is quite lean in this area. There is certainly the need to compare and contrast regional and national programme accomplishments. The Caribbean Region,

as previously discussed in this thesis, offers a combination of characteristics worth investigation in a case study. The most important of which may be the blend of developed and developing nations participating, and the existing level of institutional maturity in the realm of marine and coastal management.

9.6 GENERAL GUIDES AND PRINCIPLES

The General Guides and Principles discussion is focussed on such programme requirements as: institutional partnerships; regional and national concensus building; management and infrastructure development; political will; scientific, political and managerial co-operation; unified methodological approach; and contemporary programme development on antecedent programme experience. In addition, the identification of key RSP strengths and weaknesses has been accomplished through a typology of programme facilitators and resistances endemic to the RSP management system. Although this section is obviously rich in insight, it has also exposed several other knowledge voids that were not initially considered in the research plan.

First, in a programme so dependent upon co-operation and co-ordination in order to succeed, the question of *conflict resolution remains outstanding*. What are the institutional means to resolve disputes among nominated scientific experts from a region; among national focal points; among non-governmental organizations and governmental agencies and actors? *Second,* in a programme so dependent upon concensus building among nations, the question of *public participation* remains outstanding. There is a scarcity of information in the relevant literature and within letters of correspondence, on the form and substance of public participation. One is left to wonder about its potential to be sacrificed or to be considered a resistance to the attainment of regional concensus. *Third,* in a programme so dependent upon success in the area of marine pollution and its management, the question of integrated natural resources manage-

ment remains outstanding. More research attention must be given to the spill-over effects of greater management sophistication in the area of marine pollution. Has progress been realized in the context of other environmental issues because of this enhanced ability to manage? *Fourth*, and finally, in a programme so dependent upon global reach and international participation, the question of *Regional Seas Programme contribution to a global marine strategy* remains outstanding. The Regional Seas Programme has goals and objectives adjacent to many other international accords, for example, the Baltic Convention and the Law of the Sea. What are the major and minor pieces of the global marine management puzzle and what are their ambitions? What pieces of the management jigsaw are still missing, that is, what issues have yet to be addressed? Is the Regional Seas Programme central to the completion of this larger composite?

9.7 THE ARCTIC

Thought must be given to the relevancy of the UNEP Regional Seas Programme to the Arctic case. However, it is necessary to recall and reflect upon the unique character of the world's ocean lying above the Arctic Circle.

The Arctic Region and the Arctic Ocean have several unique characteristics. These characteristics ultimately differentiate it from any other region that has been examined in this thesis. One of the dominant features in the Arctic is the extent of the continental shelves around the basin. These continental shelves occupy slightly more that half of the ocean area, a significantly larger portion than in any other ocean. Closely associated with the continental shelves, is a trove of natural resources. These natural resources are vital to solving problems related to North American energy and mineral supply. There are the major carbon fuels like oil, natural gas and coal. In this context it has been estimated that between 100 and 200 billion barrels of recovera-

ble oil exist in the Arctic Region; natural gas deposits of about 2000 trillion cubic feet also exist; and Northern Alaska's coal reserves may total 4 trillion tonnes -- roughly equivalent to all the coal reserves in the 48 contiguous United States, or in Canada. At the same time it is suggested that in the Soviet Arctic (Siberia), 7 trillion tonnes of coal may exist (Larson, 1989, pp. 167-191).

Historically, the Arctic has been very important to the U.S. for energy. In 1985 alone, Prudhoe Bay and the Kuparuk oil fields accounted for approximately 19% of all the U.S. oil production. Thus, the economic importance and strategic significance of oil, natural gas and coal reserves in Alaska alone, just for the U.S. are extremely important. In addition, there are also considerable deposits of iron, zinc, nickel, tin, gold and copper. The Soviet Union and Canada have developed many of these mineral resources.

Although often overlooked, the fisheries of the Arctic Ocean are among the richest in the world, because of the high oxygen content of the water, ocean currents, nutrients and plentiful plankton. Further, marine mammals are also important, especially the whales -- including the bowhead, grey, humpback and blue whale. Dependent upon these marine mammals are some twenty different ethnic groups around the Arctic rim. A list of these groups includes Eskimos, Inuits, Lapps, Greenlanders, Yakuty, Komi and others (Nelson and Needham, 1985, pp. 7-15). These native peoples have rallied to form several unique associations including the Inuit Circumpolar Conference.

Superimposed upon the natural richness of the Arctic are the significant problems related to the development, exploration, extraction, and transportation of natural resources out of the region. Environmental protection, largely because of offshore ice pack conditions, onshore permafrost conditions, and difficult weather conditions, make the management task that much more complicated. Finally, it goes without saying that the Arctic has become strategically more important, even in this era of declining ten-

sions between the Superpowers. The Arctic remains a strategic deployment area for the militaries of the U.S. and the USSR (Honderich, 1987; Westermeyer and Shusterich, 1984).

In its 1990 Green Plan, the Federal Government of Canada, has devoted an entire section (Section 4), to the theme. Canada's Unique Stewardship -- The Arctic. This section of the Green Plan is a formal recognition of the importance of the Arctic to Canada. It ultimately indicates that the Canadian government is becoming increasingly aware that we cannot take the North for granted. Evidence has been accumulating that the Arctic environment is showing disturbing evidence of toxic contaminants, including PCB's, dioxins, pesticides and heavy metals. Like other regions that have been examined in the context of the RSP, many of these chemicals are not regionally or locally produced. They are instead the waste residuals and products of agricultural, industrial and commercial activities in other parts of the world. As reported in the literature review and elsewhere, one of the major concerns is that these contaminants have a tendency to accumulate in food chains and have severe ramifications for all living things at strategic points in the food chain. The Green Plan also notes that there are many unintended by-products of the exploration and development activities in Canada's North. There have already been significant environmental costs associated with the development of major petroleum and mineral resources in our North. The Green Plan indicates that there are over 800 sites across the Canadian North containing hazardous or abandoned materials that are potentially dangerous to humans, wildlife and the environment (Government of Canada, 1990, pp. 91-96). Further, with continued growth of industry in northern watersheds, and with the growing impacts of pulp and paper industries, oil sands developments, and hydro-electric developments, additional impacts are likely to be observed. The Green Plan has specifically identified *an Arctic Environmental Strategy* or a plan to achieve sustainable development in the Canadian

Arctic. It is reported to be a five-year initiative that is being developed in partnership with northern governments. The first ledger of projects related to this Arctic Strategy was released to the public on April 29, 1991. The Federal Government announced that as part of a $100 million Arctic environmental programme, toxic waste sites would be cleaned up. More than half of the money is to go towards studying and monitoring toxic chemicals that have contaminated the northern food chain. A network of monitoring stations is to be established to keep track of water pollution, and a fund is to be created for environment-related programmes at the local level. There are many critics of this initial step by the federal government, including the Canadian Arctic Resources Committee, and the Canadian Environmental Law Association. Much of the criticism relates to the fact that this Green Plan initiative is largely dealing with symptoms in a reactive way, and that the Strategy is too loose in terms of linkage between national and international co-operation.

In addition, although the Arctic Strategy has the appearance of offering a substantial contribution to the definition of issues and problems in the Arctic, it is singularly lacking in any focus on Law of the Sea implications. Unless evidence is quickly brought forward, the Arctic Strategy will continue to downplay the significance of the fact that two-thirds of the region is covered by the Arctic Ocean, and that many of the lingering environmental and political issues of concern to Arctic stakeholders involve the Law of the Sea. Specifically, these include: boundary dispute resolution; innocent transit, archipelagic sailing and passage through the Northwest Passage; fisheries; economic zone issues; resource exploration on the continental shelf; migratory marine mammals and arctic pollution. This thesis has shown that most of these concerns have already been well documented by the Canadian Arctic Resources Committee (CARC, 1984a, 1984b), and other non-governmental organizations.

Students of the Arctic experience appreciate that Canada has made great strides in Arctic management. The Arctic Waters Pollution Prevention Act, and the Territorial Sea and Fishery Zone Act of Canada, for example, have been successful in providing Canada with a strong foothold in regional management. The bottom line, however, is that each of the major Arctic stakeholders, including Canada, appears to have a separate ledger of national interests.

The U.S ledger, for example, would include: national security, oil and gas development, scientific research, freedom of navigation, and preservation of the environment. In some respects the U.S. has made considerably more progress than Canada in identifying its fundamental goals and objectives. Over a decade ago the U.S. President established an Inter-Agency Arctic Policy Group (IAPG), under the Chairmanship of the Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs. Two of the fundamental questions being addressed on an on-going basis by the IAPG are: 1. How should U.S. activities in the Arctic Region be structured to best serve U.S. Arctic intersts, and increase co-operation with bordering nations? and 2. What U.S. Federal Government services will be necessary in the Arctic Region over the next decade, and what are their relative priorities (Larson, 1989, pp. 171-178)? In addition, in 1984 the Arctic Research and Policy Act was passed in the U.S. to establish national policy priorities and goals and to provide a federal program plan for basic and applied scientific research with respect to the Arctic (Larson, 1989, pp. 171-173). This particular act ultimately led to the creation of a five member Arctic research commission, and a twelve member inter-agency Arctic research policy committee (IARPC). In July, 1987, the IARPC produced the U.S. Arctic Research Plan, which provided a general blueprint of the issues, problems and priorities of Arctic research. The residual message from this discussion is that it would be naïve to think that other Arctic states are not making similar progress in developing national priorities for their Arctic regions (Westermeyer and Shusterich, 1984).

The major problem in the Arctic region, therefore, is the absence of a generally accepted legal regime for all the Arctic shakeholders. The United Nations Law of the Sea (UNCLOS) does provide a partial legal framework for the Arctic Ocean, but it is really not sufficient or adequate due to the unique geophysical characteristics of the Arctic ice pack, the indigenous arctic people, the fragile environment, the abundant natural resources, and the increasing strategic importance of the region. Thus, there is obviously a legal/political vacuum. The secondary purpose of this thesis was to consider whether or not the UNEP Regional Seas Programme could help in filling this vacuum by offering management elements or components that might be transferred to the Arctic. At one level of abstraction, it would seem that certain RSP components can be transferred. The RSP offers a structure to bring nations together into an organization of Arctic regional states that could jointly produce an action plan, a convention and protocol set. Such an organization could do much to develop a regional consortium for the exploration and exploitation of natural resources. It could do much to integrate and remove the redundancy built into Arctic scientific, technical and meteorological research and information sharing. It could do much to give value and weight to the perceptions, attitudes and values of Arctic peoples. It could do much to integrate all stakeholders into special legal regimes or sub-regimes dealing with the conservation and protection of Arctic animal life. Finally, the RSP could do much to produce an environmental management blueprint to control and protect elements of this fragile arctic environment. In sum, the UNEP Regional Seas Programme model and its form and structure, has fundamental relevancy to the Arctic for several reasons.

1. The Arctic region is a unique ecosystem, biosystem, geophysical system, and social system not replicated elsewhere in the world. As such it requires not the exact duplicate of the RSP model, but a special regime to deal with these special circumstances on a regional basis, as distinct from local, national or international efforts.

2. Most of the incremental change in regional co-operation within a national context, and international co-operation within a regional context has come from below. The pressure for change has been necessarily slow, and in many respects, it has progressed without an umbrella blueprint or without a vision or official plan. An integrative, regional approach from the top down seems necessary to meet the rapidly developing changes and dynamics of the Arctic region.

3. It goes without saying that Canada has moved in a substantive way at the national and territorial level to create conservation and environmental strategies. That is definitely worth noting. However, these strategies have to be recognized for what they are, that is, national and territorial strategies of specific purpose. So many of the issues previously discussed, ie. oil exploration, sovereignty, environmental protection and environmental contamination, cannot be solved by national or local approaches alone. These would prove to be insufficient and inadequate to meet such challenges. A regional programme based on regional co-operation and co-ordination could serve to pool human and financial resources; enhance the exchange of information; promote better planning, programming and budgeting; and likely increase the probability of managerial success in the Arctic.

4. The Arctic has a special environmental personality. The implications of crisis or catastrophe associated with resource exploration and exploitation in the Arctic are considerably more severe than they are likely to be in Southern contexts. The recent reports of the federal task force on the ability of Canada to respond to oil pollution and oil spill emergencies, have indicated a lack of ability to respond quickly and efficiently enough to combat oil pollution. In fact, in an Arctic environment, oil pollution is almost indefinite and the dispo-

lation of the tundra and permafrost would be virtually permanent. The Arctic is a unique case. Like the other Regional Seas Programme regions, this one issue alone should be sufficient to drive the Arctic stakeholders to a spatially broad management regime.

5. A special Arctic RSP would appear necessary because the Arctic Ocean is semi-enclosed; largely ice-covered; difficult to navigate and explore for natural resources; difficult to chart; and virtually impossible to police and enforce national legal regulations. For some of these reasons, the UN Law of the Sea Convention is generally inapplicable. Because of the strategic importance of the area, there is greater potential for national conflict and contention in offshore areas. The UNEP RSP through its institutional fabric of Regional Secretariats, National Focal Points, and National Institutions promotes the voluntary compliance with regional goals and objectives.

6. The public policy and management literature seems to indicate that for several of the Arctic stakeholders, the Arctic region still remains a relatively low priority in relation to national policy, budget allocations, operational programmes, and especially the Law of the Sea. This inattention is particularly applicable to the U.S. Even though the U.S. has made progress with its Arctic Research and Policy Act (1984) and the United States Arctic Research Plan (1987), and even though she has gone through the Exxon Valdez catastrophe (1989), the Arctic region still remains a relatively low priority in relation to U.S. national policy. There is *now* an opportunity for Canada to explore the benefits and costs of a Regional Seas Programme from her perspective. A RSP goal should motivate Canada to make more sophisticated her goals, objectives and management means for the Arctic. And, from a mercenary perspective, Canada should have a comparative advantage in its

dealings with other Arctic stakeholders. Her level of preparation, in anticipation of sessions related to regional management and co-operation, will be more advanced. It is very much like a debating contest in which the best debaters are usually the best prepared to address pro and the con arguments.

Certainly more research needs to be done. The number and kind of additional questions attest to this fact. This thesis has examined but the structure, process and the mechanics of decision-making related to the UNEP Regional Seas Programme. But it has been an appreciable step in the right direction.

9.8 RESOURCE MANAGEMENT ASSESSMENT MODEL (RMAM)

The Assessment Model has been presented previously as a first attempt to identify and present in a checklist construct, elements considered fundamental to the resources management process. It was also indicated earlier that there is a real need for model validation in terms of universality and utility. This thesis has attempted to meet the call through comparative - evaluative research.

In this context, the RMAM has been found to be extremely useful in two respects. *First*, it served as a strong conceptual framework from which evaluation and assessment criteria could be extracted and presented in terms of research questions. In essence, the Model provided a framework in which management elements were displayed as interconnected, interrelated and mutually dependent. Decision-making had to be considered a systematic and sequential process, rather than an ad hoc happening. This orientation, I expect, was not intended by the Model's developers. *Second*, it served as a strong research reference for the programme managers and other respondents to the survey questionnaire and letters of inquiry. The Model, therefore, served as a bridging mechanism between researcher and research subject as it facilitated the understanding of each respondent's contribution to the overall research exercise. In

addition, because respondents could visualize research direction, much extra commentary was volunteered on the structure and process of Regional Seas Programme management.

As a final point, it appears that when the RMAM was initially presented by Nelson and Jessen (1981), no attention was given to the *rationale, conceptualization and motivation* element. It is suggested that this management element is perhaps the most important of the five elements discussed. Recent work related to sustainable development and the Brundtland challenge has indicated that the *rationale, conceptualization, and motivations* element is central and ultimately dictates the structure and process of management. This researcher would recommend a reordering of the RMAM elements to subtly suggest some priority of importance: 1. rationale, conceptualization and motivations; 2. general guides and principles; 3. actors, agencies and institutional arrangements; 4. planning and analysis; and 5. implementation.

9.9 CONCLUDING REMARKS

The UNEP Regional Seas Programme is a rational approach to marine and coastal resource management and the control of marine pollution at the source. This strategy combines legal, scientific and management approaches to encourage national commitment to regional environmental protection. UNEP's attempt to provide a general framework for the co-ordination of a number of regional programmes, is a firm foundation upon which to build and broaden this programme in order to encompass other regions like the Arctic. Presently, this region is not affiliated with this, nor any other comprehensive international framework. This programme should be further developed in areas which share enclosed and semi - enclosed waters, to provide a basis for managing the development and protection of such regions from pollution. This management strategy has proven to be effective in at least ten and possibly eleven regions

globally, and could perhaps provide a model for management in the Arctic (Thacher, 1983, pp. 450-461) The question may be asked: Why establish or implement an institutional framework like the RSP in the Arctic? A response to this query would indicate that in the long term, environmental protection and resource conservation are generally better organized on a preventative basis, rather than in response to an environmental crisis or emergency. This proactive and perhaps more organized regional approach to planning and management would serve the Arctic region very well, and possibly avoid or minimize future environmental catastrophes in this very sensitive and valuable ecosystem.

Lynton Keith Caldwell (1984, pp. 142-143) has made the following observations about the Regional Seas Programme and other international regimes:

> "... international regional agreements illustrate the practical necessity of finding cooperative arrangements most appropriate to coping with particular environmental problems in particular geographical areas. Institutional arrangements to be workable must correspond to the physical, ecological, economic social, and political configurations of participating nations. No set of uniform governmental or intergovernmental structures can accommodate the diversities of nature and culture around the world. There are circumstances and relationships sufficiently localized in particular areas to make regional cooperation the logical way to deal with many environmental problems. Yet the problems are not wholly dissimilar (notably in the tropical seas), and certain patterns of cooperation have evolved. It is too early to estimate the extent to which these regional environmental arrangements will be effective. Will a unifying effect of working together on common environmental problems be sufficient to offset political antagonisms and short-term economic self-interest? Early indications are encouraging ..."

APPENDICES

UNIVERSITÉ D'OTTAWA
UNIVERSITY OF OTTAWA

FACULTÉ DES ARTS
FACULTY OF ARTS

12 May 1987

Regional Seas Programme Co-ordinator
South-East Pacific Region

Dear Madam / Sir:

I am involved in a research project in the Department of Geography, University of Ottawa. The project is being co-ordinated by Dr. Roger Needham, and it relates to the theme: The Arctic as a Regional Sea. Preliminary work has already been completed on this topic and a major paper and an international symposium held on related issues (items attached).

In this context, I am approaching you to obtain insight and comment related to the UNEP Regional Seas Programme. A questionnaire has been prepared which probes for fundamental information on programme establishment and status. It is hoped that you, as regional administrator, can provide the detailed information necessary. Its assessment will eventually help in the determination of the transferability of the Regional Seas Programme model to the Arctic.

It is possible to contact me directly by telephone or mail correspondence if you have any concerns about any matter. I do very much appreciate your efforts in this exercise. The potential rewards of a comprehensive assessment will be mutually beneficial.

I remain,

Yours sincerely,

Maureen Jedynack

Maureen Jedynack

Encl. 3

GÉOGRAPHIE/GEOGRAPHY
165 WALLER, OTTAWA, ONTARIO, CANADA K1N 6N5
(613) 564-2395

APPENDIX B: Letter of Explanation sent with Ranking of Regional Environmental Problems Survey: An Example

UNIVERSITÉ D'OTTAWA
UNIVERSITY OF OTTAWA

FACULTÉ DES ARTS
FACULTY OF ARTS

23 June 1988

Mr. Bent Henning Neilsen
Programme Officer
Oceans and Coastal Areas Programme
Activity Centre (OCA/PAC)
United Nations Environment Programme
P.O. Box 30552
Nairobi, Kenya

Dear Mr. Neilsen:

Thank you for your letter dated 17 September 1987. Your comments along with the literature you sent have been very informative.

In conducting my research, I have attempted to identify the environmental problems in each Regional Seas Programme area. The goal of this letter is to ensure that my interpretation of the East African Region programme documentation is accurate.

As a Programme Officer with OCA/PAC, could you rank order the environmental problems listed for the East African Region (see attached), from the most important to the least important, and add any problem areas that may have been omitted. Please use the number one (1) to identify the most important environmental problem. Use subsequent numbers to reflect decreasing importance, for example: 2, 3, 4, 5, 6, etc.

Your co-operation and input would be most appreciated. Thank you for your assistance.

Yours sincerely,

Maureen Jedynack

Maureen Jedynack

Encl.

GÉOGRAPHIE/GEOGRAPHY
165 WALLER, OTTAWA, ONTARIO, CANADA K1N 6N5
(613) 564-2395

Appendix C - Planning and Analysis Projects: Types Dominant within the Global Framework (as of 31 May 1987)

South Pacific Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	1	--	1 / 33%
Expenditures on ECP's	--	$66,744	--	$66,744 / 1%
Number of MCP's	1	1	--	2 / 67%
Expenditures on MCP's	$446,180	$5,413,838	--	$5,860,018 / 99%
Total Number / Total Expenditures	1 / $446,180	2 / $5,480,582	--	3 / $5,926,762

South - East Pacific Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	--	--	--
Expenditures on ECP's	--	--	--	--
Number of MCP's	--	3	--	3 / 100%
Expenditures on MCP's	--	$3,975,656	--	$3,975,656 / 100%
Total Number / Total Expenditures	--	3 / $3,975,656	--	3 / $3,975,656

Kuwait Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	1	--	--	1 / 9%
Expenditures on ECP's	$1,695,058	--	--	$1,695,058 / 21%
Number of MCP's	5	5	--	10 / 91%
Expenditures on MCP's	$3,989,995	$2,233,261	--	$6,223,256 / 79%
Total Number / Total Expenditures	6 / $5,685,053	5 / $2,233,261	--	11 / $7,918,314

Red Sea and Gulf of Aden Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	--	--	--
Expenditures on ECP's	--	--	--	--
Number of MCP's	2	--	--	2 / 100%
Expenditures on MCP's	$896,427	--	--	$896,427 / 100%
Total Number / Total Expenditures	23 / $896,427	--	--	2 / $896,427

APPENDIX C - cont'd

West and Central African Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	3	1	--	4 / 31%
Expenditures on ECP's	$324,871	$1,232,335	--	$1,557,206 / 47%
Number of MCP's	6	3	--	9 / 69%
Expenditures on MCP's	$810,028	$924,384	--	$1,734,412 / 53%
Total Number / Total Expenditures	9 / $1,134,899	4 / $2,156,719	--	13 / $3,291,618

East Asian Seas Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	6	4	--	10 / 45%
Expenditures on ECP's	$288,238	$613,643	--	$901,881 / 46%
Number of MCP's	8	4	--	12 / 55%
Expenditures on MCP's	$473,575	$586,328	--	$1,059,903 / 54%
Total Number / Total Expenditures	14 / $761,813	8 / $1,199,971	--	22 / $1,961,784

South Asian Seas Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	--	--	--
Expenditures on ECP's	--	--	--	--
Number of MCP's	1	1	--	2 / 100%
Expenditures on MCP's	$150,073	$175,523	--	$325,596 / 100%
Total Number / Total Expenditures	1 / $150,073	1 / $175,523	--	2 / $325,596

South - West Atlantic Region

Status of Projects / Project Type	Completed (Closed) Projects	Ongoing (Active) Projects	Projects being Negotiated	TOTAL / Percentage of Total
Number of ECP's	--	--	--	--
Expenditures on ECP's	--	--	--	--
Number of MCP's	1	--	--	1 / 100%
Expenditures on MCP's	$10,237	--	--	$10,237 / 100%
Total Number / Total Expenditures	1 / $10,237	--	--	1 / $10,237

NOTE: ECP's - Environment Condition Projects / MCP's - Management Condition Projects

Source: Adapted with modifications from (UNEP, 1987i, pp. 1-29)

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