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The Arctic Environmental Protection Strategy: A Comparison with the Approach of the UNEP Regional Seas Programme

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THE ARCTIC ENVIRONMENTAL PROTECTION STRATEGY: A COMPARISON WITH THE APPROACH OF THE UNEP REGIONAL SEAS PROGRAMME

by

Vinton Valentine

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Approved

Professor Lawrence Juda

The University of Rhode Island
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THE ARCTIC ENVIRONMENTAL PROTECTION STRATEGY: 
A COMPARISON WITH THE APPROACH OF 
THE UNEP REGIONAL SEAS PROGRAMME

Introduction

In the past two decades, there has been a rise in the number of multilateral regional agreements for marine environmental protection. A large proportion of these regional agreements are the result of the United Nations Environment Programme's (UNEP) Regional Seas Programme. While there are thirteen regional seas under the Programme, the Arctic Ocean is not, and never was, one of them.

In describing concerns regarding the Arctic environment and approaches to handle them, a number of commentators have proposed the application of UNEP Regional Seas Programme approach to the Arctic region. However, despite an attempt from the Inuit Circumpolar Conference and the Canadian government in 1988, an Arctic action plan developed under the guidance of UNEP still does not exist. This fact does not mean that the regional approach to environmental protection for the Arctic has been abandoned.

On 14 June 1991, the eight Arctic states adopted the Declaration On the Protection of the Arctic Environment and the Arctic Environmental Protection Strategy. These two documents and the processes surrounding them embody the approach selected by these nations to provide environmental protection for a frontier region of the world.

The primary purpose of this paper is to compare the Arctic Environmental Protection Strategy to the UNEP Regional Seas Programme,
the predominant approach to regional marine environmental protection and management. What are the similarities and differences? What relationship exists between these two approaches? The secondary purpose of the paper is to present an assessment and validation of the Regional Seas Programme approach. Studies of the Programme restrict their analyses to internal comparisons. No study attempts to validate the UNEP Programme approach by comparing it to an independently-developed approach taken outside the United Nations system. A tertiary purpose is to determine what lessons the AEPS teaches for the Regional Seas Programme, in particular, and for ocean management, in general.

After setting the regional background, the paper introduces the UNEP Regional Seas Programme and describes the approach used in the Programme. The paper proceeds with a description of the process and the approach by which the Arctic nations created the Arctic Environmental Protection Strategy. Comparing the Arctic approach to the Regional Seas approach, the paper highlights the similarities and the differences to reveal any relationships or insights. The paper concludes with comments on the role of the Arctic approach in the application and evolution of regional seas and ocean management.

The Arctic Region

The Arctic Ocean is the smallest of the four oceans with an area of over 14 million square kilometers (sq. km.). It is more than five and a half times larger than the Mediterranean Sea, the largest sea, which has an area of 2.5 million sq. km. It is the only body of water on earth covered with ice year-round. The adjacent seas of the basin, abutting the coasts of the surrounding
land masses, are covered with ice for more than nine months of the year. Often described as “landlocked,” the Arctic Ocean has three openings: the Greenland, Iceland, United Kingdom (GIUK) Gap in the east, the Bering Strait in the west, and the Canadian Archipelago in the middle (Refer to Figure 1).

The ice, along with the generally cold climate, places this ocean in a unique category for environmental protection and management. The so-called “Southern Ocean,” the ocean waters surrounding Antarctica, lacks ice cover. On the Arctic waters, surface ship navigation is difficult and often times impossible even with icebreaker support. The cold climate slows biological and chemical processes during most of the year. Plant and animal communities have adapted to these conditions but there is a low diversity of species and a shallow food web. With many difficulties and chronic problems, humans have also adapted to the Arctic clime. Long periods of light and darkness that are associated with the polar latitudes place additional stresses on the inhabitants of this region.

The circulation of the Arctic Ocean also contributes to the unique consideration of this water body (See Figure 2). The Beaufort Gyre, found in the western basin north of Alaska, circulates water in a clockwise direction. The Transpolar Drift flows from west of the Gyre near the New Siberian Islands under the North Pole. Its waters join with the East Greenland drift and exit through the Denmark Strait into the North Atlantic. Deep Arctic waters also exit the region through the entire GIUK gap. Arctic water also flows through the Bering Strait and the channels of the Canadian Archipelago along with the Nares Strait with relatively less extent. Water entering the Arctic Ocean from the North Atlantic flows mainly through the Fram Strait between Greenland and Spitzbergen and secondarily through the unrestricted passage east of Iceland and south of Svalbard.
Figure 1. Configuration of the Arctic Ocean
(Source: Modified from CIA, 1991)
Figure 2. Circulation Patterns in the Arctic
(Source: Modified from Lamson and VanderZwaag, 1984)
With input from several rivers, including four of the longest fifteen rivers in the world, and from air currents sweeping in from the lower latitudes as well as from ocean currents, this circulation can distribute contaminants from both local and remote sources to all parts of the Arctic marine environment within a relatively short time. A number of pollutants such as petroleum, metals, pesticides, noise, and plastics found in the Arctic originate from sources both inside and outside the Arctic region. Current and future human action both inside and outside the Arctic elevates the need to identify the impacts to this region, to evaluate their severity, and subsequently to manage the offending human activities in an environmentally sustainable manner.

Up to this point, the Arctic region, including the Arctic Ocean, lacks definition. Boundary delineations for the Arctic are often climate-related. Commonly used limits include the southernmost extent of sea-ice coverage, the southern extent of permafrost, the tree line, and the average 10° Celsius surface air isotherm in July. Not related to climate or to any physical phenomena, the Arctic Circle is also a commonly chosen boundary. Some of these limits are specific to a particular field of study while others are general in nature.

The Arctic region considered in this paper utilizes a general geographical delineation. Gail Osherenko and Oran R. Young describe the boundary of the Arctic to be “all the lands and seas lying to the north of 60 degrees north latitude” with deviations made for areas of tundra inhabited by Native peoples. Compare this boundary with the definition found in the U.S. Arctic Research and Policy Act of 1984 which includes all United States and foreign territory north of the Arctic Circle and all continuous seas. The Finnish request to establish international measures for protecting the Arctic
environment also favored the Arctic Circle boundary. Though the Arctic Circle boundary seems to have preference, the 60 degree north latitude line encircles most of the land inhabited by Arctic populations.

Allowing for deviations as suggested above, the 60 degree north parallel encompasses all Arctic ecosystems, including both land and marine ecosystems. It also envelopes most of the sub-Arctic marine ecosystems, except for portions of the Labrador Sea, and approximately 40% of the sub-Arctic land ecosystems (Refer to Figure 3). A flexible 60 degree north boundary and these observations are pertinent because the agreement to be examined later emphasizes the value of Arctic ecosystems and implies the need for ecosystem-based management. For this paper, therefore, the 60 degree north latitude line will be the southern boundary of the Arctic region.

With this boundary, the Arctic region includes the Arctic Ocean basin and its Marginal Seas (Barents, Kara, Laptev, East Siberian, Chukchi, and Beaufort Seas), all Adjacent Seas (the northwestern Bering Sea; Baffin Bay and Davis Strait; Hudson's Bay; the Labrador Sea; and the Greenland, Iceland, and Norwegian Seas) and the Waters of the Canadian Archipelago. Figure 4 serves as a reference map. The region also includes all land territory north of the delimiting line with some deviations. Additionally, since most of the rivers which discharge water into the Arctic marine environment are within the territory of the eight nations possessing territory north of the chosen Arctic boundary, the land portions of the Arctic region will envelop all watersheds of these rivers. With all things considered, the terrestrial Arctic includes most of Norway and Sweden, all of Finland, most of Russia, the northern third of Alaska, most of Canada, all of Greenland, Iceland, and Svalbard.
Figure 3. Arctic and Sub-Arctic Environmental Zones.
Plain white pattern (in center): Marine and Land Arctic.
Cross-hatching: Marine sub-Arctic.
Parallel pattern: Land sub-Arctic.
(Source: Modified from Dunbar, 1982.)
Figure 4. Reference Map for the Arctic Region.
(Source: ARCSS Workshop Steering Group, 1990.)
Regional Seas Programme of UNEP

The United Nations Environment Programme is an organ of the United Nations (UN), established by UN General Assembly resolution following the 1972 United Nations Conference on the Human Environment (Stockholm). It serves as a focal point for environmental action and coordination within the United Nations system. UNEP initiated the Regional Seas Programme in 1974 to implement a regional approach to the control of marine pollution and management of the marine and coastal resources. The ultimate goal in adopting the regional approach was to tackle, in a manageable and achievable manner, the environmental problems of the oceans as a whole. Within UNEP, the Ocean and Coastal Areas Programme Activity Centre (OCA/PAC), located in Nairobi, Kenya, operates the Regional Seas Programme.

By design, the Regional Seas Programme is action-oriented, addressing both the causes and consequences of environmental degradation. It utilizes a comprehensive approach to combat environmental problems through management of marine and coastal areas. Regional action plans form its core. The following quote from the UNEP document describing the guidelines and principles to follow in preparing an action plan states:

Each regional seas action plan is formulated according to the needs of the region as perceived by the Governments concerned. It is designed to link assessment of the quality of the marine environment and the causes of its deterioration with activities for the management and development of the marine and coastal environment. The Action plans promote the parallel development of regional legal agreements and of action-oriented programme activities.

The OCA/PAC also coordinates the development and implementation of the regional action plans.
Components of an Action Plan

Initially defined as functional tasks by the UN Conference on the Human Environment, the following items are the basic components of a comprehensive regional Action Plan:

- environmental assessment
- environmental management
- environmental law
- supporting measures

Under this structure, proper assessment of the environmental problems of the region logically and functionally precedes any management action. The aim of environmental assessment is to obtain information about the region. Environmental management uses this information to enhance decision-making processes which affect the region's environment. Environmental law provides the legal framework for regional action. This component operates in a variety of modes and at a number of levels. Supporting measures provide assistance to the other three components and to the Action Plan as a whole.

Each of the four components provides for a particular set of actions. These tasks are manifested in activities or projects. The subsequent paragraphs describe each component, its associated actions, and some representative activities.

Environmental assessment

The first action under the environmental assessment component is "the collection and, as needed, the development of comparable data and information on [the] region." These data and information may include status and trends of living and non-living resources; socioeconomic activities which may adversely affect the environment; sources, levels, input pathways
and effects of pollutants; identification of human activities and ecosystems that could be affected or endangered by environmental degradation; and the identification and organization of institutions and experts from the region who could implement the action plan. Noting the last item, the assessment component addresses the institutional environment as well as the physical environment.

The second action under this component is the evaluation of the data and information collected. The next task is the assembly of the data and information into a general assessment of the state of the regional seas environment. The dissemination of the assessment and of the information to the States concerned is the concluding effort. Activities and projects emphasize baseline studies, research, and monitoring. Assumed to be the basis of environmentally sound decisions, environmental assessment is a necessity for effective environmental management and development.

Environmental management

The environmental management component is two-fold: "to assist the Governments in taking environmentally sound decisions on development and to improve their ability to make rational choices among various options concerning alternative patterns of development and allocation of resources." The first action is the identification of significant development activities and their future trends. The next step is the evaluation of the severity and probability of the identified activities' environmental impacts. The third task is the development or discovery of measures to mitigate either the risk or the severity of the environmental impacts. Example projects are waste control, contingency plan development for environmental emergencies, rational marine living resource exploitation, and ecologically-sound tourism development.
While the first two actions overlap with items addressed in the environmental assessment component, all three environmental management tasks focus on the role of management to establish priorities and to make development and resource allocation choices which balance information concerning the environment with the socioeconomic needs of the States' and their populations located in the region. Therefore, an integrated planning approach, which relates the various socioeconomic activities to their environment and to other uses of the sea, receives emphasis in coastal area development and environmental management performed under the Action Plan.

Environmental law

Though included initially under environmental management, environmental law is a separate component. Environmental law in this context includes national legislation and bilateral, regional, and multilateral conventions and agreements that are pertinent to or have influence on the region's environment. Their value in the regional Action Plan relates to the degree with which they provide "firm commitment from States to maintain the environmental quality of the region shared by those States."²⁹

Actions under this component do not necessarily follow any order. They include the harmonization of national legislation, the development and adoption of regional agreements to foster cooperation, and the implementation of existing global and regional agreements relating to the marine environment. An example project is the analysis of existing legal instruments concerned with environmental protection and their application to the region. While these efforts constitute the bulk of the environmental law component, the primary goal is to formalize the cooperative framework set forth in the Action Plan, most often through the adoption and entry into
force of an umbrella regional convention and supplementary protocols which address specific regional concerns.

Supporting measures

The supporting measures component addresses actions necessary to realize the environmental assessment, environmental management, and environmental law components. These mechanisms include financial arrangements; education and training; technology transfer in the form of methodologies, equipment, and personnel; establishment of specialized regional activity centers; establishment of regional institutional networks; etc. Visits by experts and supervision of intercalibration exercises are two project examples.30

The needs for supporting measures differ between regions and between governments within a region. Developing nations often require some financial and technical assistance to initiate their involvement and participation in regional environmental assessment and management. UNEP endeavors to support, and to recruit support, for regional seas programs that involve developing nations.31 Supporting measures provided by UNEP and other entities enable the programs to begin and take root. Further, there is the expectation that the programs will grow and become self-sustaining.

In the discussion above, what seems to be a rigid order for the performance of these actions can be deceiving. At any period in time, one, several, or all of these efforts may be occurring. For example, assessing environmental problems, coordinating environmental management techniques, strengthening national legislation with regard to environmental concerns, and establishing financial arrangements can occur simultaneously. The purpose of the presentation in this section was to list the more important
tasks which are recognized and performed under the particular components of an Action Plan and the usual order of their application.


The Action Plan process has two phases: the preparatory phase and the operational phase. The preparatory phase comprises the development of the draft action plan, along with the necessary projects, and its adoption. The operational phase comprises the implementation of the action plan, periodic reviews and revisions, and specific projects undertaken within the region.

The preparatory phase

The entire process begins with the Governments of the region agreeing to undertake environmental protection within the region. Refer to Figure 5 which presents a schematic flow diagram of the various activities in the preparatory phase. This diagram, and the diagram to follow, is a simplified representation and does not intend to list every activity or all connections and iterations among activities.

The Governments request UNEP to hold an inter-agency consultation. The inter-agency consultation, coordinated by the OCA/PAC, gathers agencies and organizations from inside and outside the UN system. The agencies typically include the Food and Agricultural Organization (FAO), International Atomic Energy Agency (IAEA), International Maritime Organization (IMO), United Nations Educational, Scientific, and Cultural Organization (UNESCO), Intergovernmental Oceanographic Commission (IOC of UNESCO), United Nations Industrial Development Organization (UNIDO), UN Development Programme (UNDP), United Nations Conference on Trade and Development (UNCTAD), World Health Organization (WHO), and World Meteorological Organization (WMO). Two organizations typically involved are the International Union for Conservation of Nature and Natural Resources
Joint Nations Request to UNEP

Interagency Consultation (UNEP, FAO, IAEA, IMO, IOC, et.al.)

- Review of Present Situation
- Fact Finding Missions
- Review of Past Results
- Feasibility Studies
- Review of Legislation

- Workshop(s)
- Seminar(s)
- Training Course(s)
- Expert Consultation(s)

Government-nominated Expert Group Meeting(s)

Intergovernmental Meeting/ Conference of Plenipotentiaries

Figure 5. Preparatory Phase of Regional Seas Action Plan Process
(Source: Modified from UNEP, 1982b.)
(IUCN) and World Wildlife Fund (WWF), both non-governmental organizations dedicated to environmental conservation and protection. At the consultation, the attendants discuss and determine a general strategy for the region, propose the particular program elements organized under the four components, and determine the timing of, and responsibility for, the substantive actions to be undertaken during the preparatory phase.

Substantive actions during the preparatory phase include reviews of the present situation and of past project results, fact-finding missions, feasibility studies, and review of current and proposed national legislation and international law pertinent to the region. The agencies and organizations, with government involvement on the national level, develop a set of preliminary background documents in accordance with the chosen program elements and action plan components. The preliminary documentation synthesizes the information from the various reports and studies and often proposes actions for governmental consideration.

Workshops, seminars, training courses, and expert consultations provide forums for information exchange and permit the review and modification of the preliminary background documentation. Agency and organization members typically conduct these meetings with Government-designated experts from the region in attendance. The goals at this stage are to incorporate the unofficial views of the Governments concerned and to facilitate their adoption of the background documentation, as well as its proposals and recommendations, at the subsequent intergovernmental meetings.

Government-nominated experts hold Group Meetings to discuss and to adopt officially the background documentation. They may commission more studies to fill informational gaps or to elaborate the information
gathered. During these meetings, the experts develop, discuss, and agree on the draft action plan. Unofficial government consultations are conducted concomitantly with the expert group meetings to ascertain the preliminary Government views and to seek unofficial advice on the preparation of the draft Action Plan.

After approval of the draft plan by the Government-nominated experts, each Government reviews the draft Action Plan and its relevant technical and background documentation. The purpose of the individual government reviews is to form an opinion on the plan and to prepare for subsequent discussion.

The Intergovernmental Meeting is "the most important event in the development of the action plan." In preparation for this meeting, each Government reviews the draft Action Plan and its relevant technical and background documentation with an aim "to form an opinion on the submitted proposals." At the Intergovernmental Meeting, the Governments, in their official capacities, gather to discuss the draft Action Plan, to recommend additional actions not proposed in the submitted version, and, finally, to adopt the Action Plan. The Governments may decide to implement the additional actions directly with the Plan or may require them to undergo preparatory work. In the later case, the Governments may choose to adopt the additional actions as part of the Action Plan or to approve them contingent on their successful incorporation with the Plan.

The Conference of Plenipotentiaries is the mechanism by which the Governments officially adopt a regional framework convention and any protocols addressing specific subjects of concern. During this meeting, the Governments also agree on the permanent or interim secretariat of the action plan. They also decide on the periodicity of future intergovernmental
meetings. If such a Conference is not convened for one reason or another, the Intergovernmental Meeting which adopts the Action Plan would determine these last two items.

The development of the treaties traces the same general process as the Action Plan. Sometimes the Action Plan and the treaties are developed in parallel and adopted together as a strong demonstration of the States' regional commitment toward environmental protection and management.

The operational phase.

The approval of the Action Plan commences the operational phase. The Plan organizes the program elements defined under each component and the specific actions and projects to be performed. The subsection describing the Action Plan components highlighted some of these actions. Refer to Figure 6 which presents a schematic flow diagram of the second half of the Action Plan process.

National and Government-designated institutions carry out the actions associated with the four components of the Action Plan. When collaborating on certain problems, the institutions are encouraged to work in cooperative networks with one institution assuming the role of a regional activity centre. The interim or permanent secretariat or the regional coordinating body furnishes support to the institutions and their networks.

Resembling the preparatory phase, workshops, seminars, and expert group meetings and consultations provide organized forums to review and to disseminate the results of actions and projects performed during the continuous implementation of the Action Plan's components. Group meetings of Government-nominated experts also review the results of actions and projects as well as the comments, suggestions, and recommendations generated in the forums listed above. The experts prepare
Figure 6. Operational Phase of Regional Seas Action Plan Process
(Source: Modified from UNEP, 1982b.)
documentation and recommendations and submit them for consideration at Periodic Intergovernmental Meetings.

Periodic Intergovernmental Meetings convene to consider the submitted results and recommendations, to accept or reject them, and to decide on the termination or further course of certain actions. At these meetings, the Governments also review the progress of the agreed work plan, approve new actions and projects, and approve necessary budgetary support. Ordinary Meetings of the Contracting Parties convene to review the status and outline the future progress of the actions associated with regional framework convention and its protocols. They are often held in conjunction with the Periodic Intergovernmental Meetings. Conferences of Plenipotentiaries convene to adopt officially any new conventions, additional protocols, or other legal agreements developed as part of the Action Plan.

Financial support for the early stages of the operational phase and for the entire preparatory phase typically come from UNEP, in the form of "seed money," and in-kind contributions from other United Nations agencies. However, the expectation of the Regional Seas Programme is that, as implementation continues and the operational phase matures, the Governments of the region will assume full financial responsibility along with their growing operational responsibilities. To further this aim, UNEP usually establishes a regional trust fund into which the Governments make annual monetary contributions. The secretariat of the Action Plan administers the funds. The Governments contribute additionally by funding their respective national institutions who are participating in the program or by financing specific project activities.

The organization chosen as the secretariat of the Action Plan coordinates and supervises the plan's implementation. The secretariat may
be an organ of the regional coordinating body or some other international organization (e.g., UNEP). The organization is encouraged to work as much as possible through the UN system and, if necessary, other organizations. It informs the Governments concerned of the various steps taken in the continuous implementation of the Action Plan.

**Arctic Environmental Protection Strategy**

As mentioned in the introduction, the eight Arctic states (Norway, Sweden, Finland, the Russian Federation, the United States of America, Canada, Denmark(Greenland), and Iceland) adopted two documents in June of 1992: the Declaration On the Protection of the Arctic Environment and the Arctic Environmental Protection Strategy. The Declaration pronounces the commitment of the eight States to "a joint Action Plan of the Arctic Environmental Protection Strategy." It states the countries' intent to continually assess the threats to the Arctic environment. It also lists the substantive measures of the Strategy to which the eight Arctic states commit themselves. Those measures are:

- Arctic Monitoring and Assessment Programme (AMAP)
- Protection of the Marine Environment in the Arctic
- Emergency Prevention, Preparedness and Response in the Arctic
- Conservation of Arctic Flora and Fauna.

The following section describes the second document in detail.
The AEPS: Section by section.

The AEPS contains a number of sections. The Introduction forms the preamble for the Strategy. It cites the reasons for the AEPS, lists the participants involved, and pronounces the general purpose of guiding development and environmental protection in the Arctic. The Introduction documents the Arctic States' joint commitment "to international cooperation to ensure the protection of the Arctic environment and its sustainable and equitable development, while protecting the cultures of indigenous peoples."37

Section Two is the statement of objectives and principles. The objectives are five broad, action-oriented goals that the eight countries desire to achieve for the Arctic region. They are:

1. to protect the Arctic ecosystem, including humans,
2. to provide for environmental quality and sustainable utilization of natural resources,
3. to recognize and seek to accommodate the self-determined traditional and cultural needs, values, and practices of the indigenous peoples in relation to Arctic environmental protection,
4. to review periodically the state of the environment,
5. to identify, reduce, and, finally, eliminate pollution.38

The principles are guidelines to the Arctic countries in the achievement of the objectives and the implementation of the Strategy. They address ecological and social aspects, especially those of the indigenous peoples, which need to be incorporated in management, planning, and development actions undertaken in the Arctic; the development, exchange, and incorporation of information in planning and development; the establishment of protected areas; support for and promotion of international
cooperation to protect the Arctic environment; and mutual cooperation in fulfilling responsibilities in the Arctic consistent with the Strategy, "including the use, transfer, and/or trade of the most effective and appropriate technology to protect the environment."

The next section lists and describes six priority pollution issues and their associated problems. There are subsections devoted to persistent organic chemicals (POCs), oil pollution, heavy metals, noise, radioactivity, and acidification. The following section highlights and summarizes the investigations of the status of international agreements for dealing with the protection of the Arctic environment as they relate to the six priority issues.

Section Five describes the cooperative action plan designed to address the six environmental priority issues. Each issue has a number of specific responses. Table 1 summarizes the actions identified for each issue. They fall under the general categories of monitoring and research, administrative measures, reduction and control measures, and use of and adherence to existing international agreements.

The next four sections, Sections Six through Nine, form the core of the Strategy. They define and describe the four programs under which the actions for the priority issues listed above, and for Arctic environmental protection in general, will be implemented. These programs are the same four measures highlighted in the Declaration reviewed previously.

The first program, the Arctic Monitoring and Assessment Program (AMAP), will measure the levels of anthropogenic pollutants entering the Arctic environment and assess their effects. While not specifically monitoring causes and effects of climate change and stratospheric ozone depletion to the Arctic environment, AMAP will develop data exchange links with the programs investigating these two threats. The program will
Table 1. Actions identified for the six priority pollution issues.

<table>
<thead>
<tr>
<th>Monitoring and Research</th>
<th>POCs</th>
<th>Oil</th>
<th>Heavy Metals</th>
<th>Noise</th>
<th>Radioactivity</th>
<th>Acidification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor &amp; conduct research</td>
<td>Monitor &amp; conduct research</td>
<td>Monitor</td>
<td>Conduct research</td>
<td>Monitor deposition &amp; conduct research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Procedures</td>
<td>Conduct national inventories of products, use, and emissions</td>
<td>Consider reporting system for discharges and spills</td>
<td>Conduct research marine mammals &amp; noise exposure assessment techniques</td>
<td>Collate previous studies &amp; measurements with existing databases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reductions and Control Measures</td>
<td>Define problems and develop proposals according to LRTAP* process</td>
<td>Prevent and combat pollution</td>
<td>Implement measures to control conditions leading to release</td>
<td>Incorporate evaluation of noise impacts in planning &amp; approval processes</td>
<td>Establish measures for emergencies &amp; provision of mutual assistance</td>
<td></td>
</tr>
<tr>
<td>Use of Existing Intl Law and Agreements</td>
<td>Reduce and control use and production of chlordane, DDT, toxaphene, and PCBs</td>
<td>Adhere to strictest relevant int'l standards</td>
<td>Use of best available technology and methods</td>
<td>Establish measures for emergencies &amp; provision of mutual assistance</td>
<td>Define critical loads &amp; set emissions targets</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish priorities and timetables for emissions control or cessation for other POCs</td>
<td></td>
<td></td>
<td>Reduce emissions using best available technology</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled from AEPS, 1991.
emphasize "cooperation among the local and regional efforts and global programs in order to obtain better documentation on the environmental situation in the Arctic." AMAP is to make use of existing programs and to develop its capacity incrementally. An Arctic Monitoring and Assessment Task Force and a small secretariat, established in Oslo by the Norwegian Government, will direct this program. Section Six concludes with a description of the initial priorities of the AMAP and the information the program will generate.

The Protection of the Arctic Marine Environment program relies on the application of international environmental law, fora, and standards concerning the protection and preservation of the marine environment to the Arctic region with the simultaneous aim of strengthening recognition of the Arctic in each of these mechanisms. The program supports the continued review of international instruments for relevance to the Arctic, building on the original preparatory work documented in the List of Major International Instruments and Policy Declarations Pertaining to the Arctic. It advocates the accession of the Arctic countries to all international instruments which are determined by the program to be relevant to the protection of the Arctic marine environment. If accession is too difficult, the program advocates, at the least, national application of the embodied principles and regulations. It encourages joint support of initiatives, created and promoted by international organizations, to develop mandatory standards designed to improve protection of the marine environment from accidental pollution and the active application of these standards by the Arctic countries.

The Emergency Prevention, Preparedness, and Response program has, as its foundation, a number of existing bilateral, regional, and global agreements which address accidental pollution. As one part of the
Framework to promote early cooperative action, the Arctic countries will evaluate the geographical coverage of the existing agreements for adequacy over the Arctic. The other part of the envisaged framework is "to convene a meeting of experts to consider and recommend the necessary system of cooperation." A number of elements are listed which might be included in this system, such as coordination and harmonization of policies, systems for information exchange between national groups and to the public, assessment of risks and adverse effects of accidental pollution, and enhancement of regional bilateral and multilateral cooperation through contingency plans and training programs.

The Conservation of Arctic Flora and Fauna program describes a number of cooperative efforts "to improve research and information aimed at protecting these resources and their habitats from pollution and environmental degradation." These efforts include the exchange of research and management information and data, coordination of research, exchange of experts, development of more effective national laws, regulations and practices, and mechanisms for cooperation with the indigenous population.

The final section outlines the mechanism to provide continuity and future cooperation in achieving the protection of the Arctic environment. It notes the agreement of the eight Arctic states to hold regular Meetings on the Arctic Environment, lists the overall functions of the Meeting, and describes its general administrative procedures, including the identification and invitation of observers. This section is, in essence, the charter of a Arctic regional coordinating body. The creation of this body actualizes the "separate panel on the Arctic region through which the environmental policies of the
Arctic countries would be coordinated" that Johnston and others have discussed and desired.\textsuperscript{51}

\textbf{Events leading to the AEPS.}\textsuperscript{52}

Early in 1989, the Government of Finland invited the States of the circumpolar north to meet on the matter of Arctic environmental protection. In late September 1989, representatives of the eight circumpolar countries (and others) met in Rovaniemi, Finland to consult on the protection of the Arctic environment. They recognized that many of the environmental problems each country was addressing individually were shared among all eight countries. The group identified six specific pollution issues requiring immediate attention: persistent organic contaminants, oil, heavy metals, noise, radioactivity, and acidification. Each issue became the subject of a State of the Environment Report.

The group also recognized "the lack of a comprehensive scientific data base and coordinated monitoring program on the state of Arctic Ecosystems" as a restriction to understanding the above pollution issues.\textsuperscript{53} In addition to this lack of information, the recognition of the potential impact of these pollutants on Arctic flora and fauna underscored the need for conservation in a cooperative manner. Recognizing the vulnerability of the Arctic to accidental discharges and uncontrolled releases of pollutants, the representatives also noted the need for enhanced mechanisms to address environmental emergencies in the Arctic. Other possibilities for international cooperation discussed by the group members included integrated research programs and "compilation of a definitive list of all existing multilateral and bilateral agreements on the protection and preservation of the Arctic."\textsuperscript{54}
In mid-April 1990, representatives of the eight circumpolar countries met in Yellowknife, Canada to prepare for international protection of the Arctic. Representatives from the Federal Republic of Germany, the United Kingdom, and the Inuit Circumpolar Conference were invited as observers. The need for international ecological cooperation in the Arctic region, the improvement of Arctic environmental protection through strengthening and broader application of existing legal instruments, and the development of an Arctic environmental protection strategy were the meeting’s themes. This group reviewed the results presented in the six State of the Environment Reports. They also reviewed the List of Major International Instruments and Policy Declarations Pertaining to the Arctic Environment, a compilation of active and adopted global, regional, and bilateral agreements and policy declarations, as it related to the six specific pollution issues. Table 2 lists the gaps identified in the international mechanisms. The group also reviewed a strategy for sustainable development and environmental protection. Finally, Finland offered to host a meeting of high level officials in 1991.

In January 1991, the representatives of the eight States met in Kiruna, Sweden. Observers for this meeting were representatives from the Germany, the United Kingdom, Poland, UNEP, the United Nations Economic Commission for Europe (UNECE), the Inuit Circumpolar Conference, the Nordic Saami Council, and the International Arctic Science Committee. The purpose of this meeting was to conclude the preparations for a ministerial conference to be held later in the year. Through the course of this meeting, the representatives would have defined actions to be taken in each of the six priority concerns, defined and described the implementation programs under which cooperation and action will be organized, and discussed and outlined future plans for cooperation. It is presumed that this
<table>
<thead>
<tr>
<th>Persistent Organic Contaminants</th>
<th>- No limitation on emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>- Limited geographic scope of some international oil pollution instruments - No specific standards for oil transport in the Arctic - Not all Arctic countries party to, or applying principles of, existing oil pollution conventions</td>
</tr>
<tr>
<td>Heavy metals</td>
<td>- Only a few Arctic bilateral agreements for heavy metals - Only a few heavy metal multilateral agreements which do not apply to the entire Arctic region</td>
</tr>
<tr>
<td>Noise</td>
<td>- No instruments addressing noise</td>
</tr>
<tr>
<td>Radioactivity</td>
<td>- No practical mechanisms between national authorities for coordination of radioactivity emergency measures</td>
</tr>
<tr>
<td>Acidification</td>
<td>- No specific provision or geographical coverage for the Arctic in existing &quot;acid rain&quot; emissions agreements</td>
</tr>
</tbody>
</table>

Source: Compiled from AEPS, 1991
group approved a draft Strategy to be submitted for individual Government review and, after the necessary changes, to the ministerial conference.

On 14 June 1991, after two years of work, the First Ministerial Conference on the Protection of the Arctic Environment convened in Rovaniemi, Finland. In their Declaration, the Conference members, namely the ministers and representatives of the eight circumpolar nations, adopted the Arctic Environmental Protection Strategy.

Implementation.

The implementation of the AEPS, as noted in the Declaration and in the Strategy itself, is to occur through specific actions allocated to four measures or programs. In addition to addressing items of concern to each program domain, the specific actions, falling under the general categories of monitoring and research, administrative measures, reduction and control measures, and use of and adherence to existing international agreements, will focus on the identified environmental priorities. Task force meetings, such as the AMAP Task Force, and working group meetings, such as the legal experts, will provide information and methods to perform actions. They will also gather status and prepare documentation to be shared with the Arctic community. Meetings on the Arctic Environment will occur periodically to review the state of the environment, to consider the status of the programs and associated actions, and to revise them as necessary to attain the declared objectives of the Strategy.
Comparison of the AEPS Approach and the Regional Seas Approach

General.

Comparing the AEPS and the Regional Seas approaches, there are many similarities at the general level. Both approaches utilize a regional approach where the states themselves determine the geographical coverage of the program. Both approaches, however, fail to include all countries within the ocean watershed. For example, the Mediterranean Region does not include the Sudan, Eritrea, Ethiopia, Kenya, Uganda, Rwanda, Burundi, or Tanzania, all states whose territory forms part of the Nile watershed. The South Asian Seas Region does not include Afghanistan, Nepal, or Bhutan, all landlocked states within the drainage basin of the defined coastal region. Similarly, the Arctic Region does not contain Kazakhstan, Mongolia, and China. Both methods are initiated, adopted, and implemented by countries with a commitment to international cooperation. This similarity may seem painfully obvious, but for the present and probably for some time to come, sovereign States will conduct environmental action at the regional level only to the extent that these actions support their self-interest. To be shown below, both approaches follow the same general process. Both approaches are action-oriented as defined in a mutually-agreed-upon plan.

One subtle difference between the approaches is the scale and extent of the geographical areas involved. The Regional Seas Programme deals with a variety of marine regions: enclosed and semi-enclosed seas, stretches of coastal areas, and archipelagos. The AEPS deals with an ocean sector. Even if one claims that the ice coverage of a large portion of the Arctic area reduces the importance of this distinction or that the Arctic Ocean is not really an ocean, the size of the region (more than five times the size of the
Mediterranean) and the environmental conditions favor at least the creation of a number of regional bilateral agreements for the circumpolar north which would require coordination between adjoining regional countries.

A more striking difference is membership composition. Membership in the AEPS includes all states possessing territory or exercising jurisdiction in the region, both coastal and geographically disadvantaged states. In the typical Regional Seas program to date, membership falls short of all the coastal states in the region. All eight Arctic states are developed countries, although one could argue that the Russian Federation, which is undergoing economic restructuring, is a developing country. Most Regional Seas programs consist of developing countries. In contrast to the membership of the developed sovereign States, the indigenous peoples of the Arctic, although not accorded a formal vote, participated actively in the AEPS development and implementation. These peoples were represented by the Inuit Circumpolar Conference, the Nordic Saami Council, and the USSR Association of Small Peoples of the North. A Regional Seas program does not identify and involve indigenous groups.

The involvement of the UN system in general, and of UNEP in particular, is another difference. With the Regional Seas Programme, UNEP established the proposed regions and tentative membership lists. The governments of a region contact UNEP to initiate the Action Plan process and to solicit assistance from the UN system and other organizations. UNEP has made this procedure clear to groups which petitioned it to consider the Arctic region for an Action Plan.

As the situation in the Arctic unfolded, the Governments did not petition UNEP. Instead, one government petitioned the other governments of the Arctic to initiate the development of a joint approach to
environmental protection and management in the region. Since developed countries were involved, one can claim that UNEP was not needed to establish an Arctic Action Plan. UNEP, however, does provide a mechanism for continuity and coordination among states that enter into cooperative regional environmental arrangements. This fact may be the reason that the Governments invited UNEP to participate in a reduced role as an observer with a limited voice as opposed to having UNEP serve in a coordinating role. Indeed, one known reason for the observer status was the USSR's desire to limit the number of participants determining Arctic affairs.

Form.

As noted in the Declaration that adopted it, the Arctic Environmental Protection Strategy is the "Action Plan" for the Arctic. A number of other similarities exist between the AEPS and the typical Regional Seas Action Plan. Both documents contain preambles, describe goals and objectives, and establish priority issues. Both documents describe joint and individual actions to be undertaken to address the concerns of the region. Both documents register informal agreements by the governments of a region to cooperate in matters of environmental protection and management while permitting sustainable development. While the Strategy does not explicitly use the same terms, both documents address the same four components.

Delving deeper into the plans, the components of the Strategy and of the Action Plan exhibit many similarities although they may not seem so at first glance. For example, the financial aspect of the Action Plan, found under the supporting measures component, does not appear in the Strategy. One may conclude, however, that the technology transfer and trade principle forwarded in the Strategy constitute financial measures or assistance.
The environmental assessment and environmental management components of the Strategy contain similar and often identical items with the corresponding components in specific Action Plans. Refer again to Table 1. For example, every Action Plan has a monitoring system established through a network of national institutions or laboratories. Exchange of data and personnel is another example. Measures and controls to reduce and to prevent oil pollution are common items with a majority of Action Plans.

The environmental law components have a number of similarities. Both the Strategy and the Action Plan outline legal research to review current and proposed national legislation in light of their respective agreements. Both methods perform surveys of pertinent national and international law regarding the protection of the environment. They both call for the harmonization of national policies and legislation to provide and to promote a strong legal basis for action and commitment to environmental cooperation in the respective regions. The Strategy itself, like the Action Plan, is an informal agreement for cooperation which does not legally bind its members.

Institutionally, the Strategy lacks a secretariat. Therefore, there is no permanent headquarters. The members saw little return from an international regional organization established to administer the day-to-day operations of the entire agreement. In the Regional Seas Programme, however, regional coordinating bodies do not exist in all programs. To perform the actual projects, the Strategy and the Action Plan utilize similar institutional structures. Both structures rely on national groups with commonly-chosen regional centers. Experts and working groups handle the detailed work within special subjects of concern.

The largest difference exists in the environmental law component. The Strategy has no sweeping new regional framework convention legally
binding the nations which is typically a goal in a Regional Seas Action Plan. Consequently, no protocols exist to address specific regional concerns. Moreover, the Strategy does not call for the creation of new conventional international law for the region. It relies rather on the use and enhancement of existing agreements to further the legal component for action in the Arctic.

**Process.**

Considering the events leading to the AEPS and the implementation details of the Strategy itself, the Arctic Strategy approach and process exhibits the same two phases as a Regional Seas Action Plan. The preparatory phase comprises the events leading to the development of the draft Strategy and its adoption.\(^7\) Figure 7 presents a schematic flow diagram of the AEPS preparatory phase. It commenced with the invitation of Finland to the other seven states with territory north of the Arctic Circle to join in a consultative meeting at Rovaniemi. At the meeting, the attendees discussed their concerns for the Arctic region and identified priority topics. Two working groups of experts formed to gather information and prepare reports about the region. The working groups presented their results at preparatory meetings in Yellowknife and Kiruna. The attendees at the preparatory meetings also reviewed and approved a draft Strategy. Finally, ministers and official government representatives met at an intergovernmental meeting, again in Rovaniemi, and adopted the Strategy.

The operational phase comprises the implementation of the AEPS, its periodic reviews and revisions, and the specific programs and actions to be undertaken within the Arctic. Figure 8 presents a schematic flow diagram of this phase. With implementation of the approved Strategy, a number of activities and projects occur. Although these activities and projects operate under the four distinct programs described above, they can be categorized as
Figure 7. Preparatory Phase of AEPS Process
Meeting(s) on the Arctic Environment

Figure 8. Operational Phase of AEPS Process
assessment, management, law, or supporting measures actions. For example, the individual monitoring projects under the Arctic Monitoring and Assessment Program (AMAP) provide information about the state of the Arctic environment to assist determining future management actions. Task force meetings, such as the AMAP Task Force, and working group meetings, such as the legal experts, will provide information and methods to implement actions within the Strategy and its four programs. Intergovernmental meetings (i.e., Meetings on the Arctic Environment) will meet periodically to review the state of the environment, to consider the status of the programs and associated actions, and to revise them as necessary to attain the declared objectives of the Strategy.

Comparing the AEPS process (Reference Figures 7 & 8) with the Action Plan process (Reference Figures 5 & 6), the two overall processes and their respective stages are identical. Governments, in some manner or another, initiate and implement each process. Expert group meetings review working group results in both processes. Intergovernmental meetings discuss, revise, and adopt the final plan. Specialized working groups or task forces handle identified areas of concern. National action, either individually or jointly, provides the implementation mechanism. Regular intergovernmental meetings control the implementation and direction of each method. Even the overall legal structures are virtually identical.

There are three striking differences. First, a single government (Finland) initiated the AEPS process and organized the immediate involvement of the other governments. The Regional Seas Action Plan process requires a group of governments to approach UNEP who then initiates activity with the governments operating in the background. In some cases, UNEP begins the process as a result from the initiative of one or more
members on its Governing Council (e.g., the Mediterranean and the Eastern African regions).\textsuperscript{77}

Second, the governments themselves or their designees conduct the consultations and subsequent scientific and technical work in the AEPS process. In the Action Plan process, the governments or their designees generally refrain from specific activities until the expert group meetings occur. UNEP and the UN system most often perform the work up until this point.

Lastly, the AEPS process lacks a Conference of Plenipotentiaries. Many regional seas programs operate for years before a convention is signed and in force.\textsuperscript{78} The regional convention often comes to pass as international cooperation in the region matures. Since such a convention, however, is not envisioned for the Arctic region at this time, the need to convene a Conference of Plenipotentiaries is absent.\textsuperscript{79}

The first two differences may stem from the desire of the Arctic countries to limit outside influences when developing policies and programs for this region and from the fact that the countries involved are developed countries who require little assistance from the UN system when it comes to establishing international cooperative efforts. The last difference may reflect the desire to retain maximum flexibility for future actions.

**Legal structure.**

Since governmental and public attention often focuses on the role of conventions to lend legitimacy to a regional seas program, closer examination of the two legal structures presents more similarities between the two methods.\textsuperscript{80} Figure 9 presents the informal legal structure of the AEPS. Figure 10 presents the formal legal structure of the Eastern African Action Plan.
Arctic Environmental Protection Strategy (AEPS)

- Protection of the Arctic Marine Environment
- Emergency Prevention, Preparedness, and Response
- Conservation of Arctic Flora and Fauna

Figure 9. Informal Legal Structure of AEPS


- Protocol Concerning Protected Areas and Wild Life and Fauna and Flora
- Protocol Concerning Regional Cooperation in Combatting Marine Pollution in Cases of Emergency

Figure 10. Formal Legal Structure of Eastern African Action Plan
Ignoring the formality, the legal structures are reflections of each other. Both structures have a general framework, overseen by a regional intergovernmental body, with roots into specific programs. It is at the program level in both structures that action, through individual projects, takes place. Not only are the structures the same, but the types of organizations (i.e., coordinating bodies and working groups) which oversee and implement them are as well.

The major (and only) substantive difference between the two structures is the degree of formality. The framework convention and the related protocols are formal, new international instruments expressing a portion of the environmental law component of the Action Plan. The Strategy and its programs are informal agreements organizing, among other things, the existing international mechanisms for application in the Arctic. The advantages of an informal agreement as opposed to a formal agreement are simplicity, speed, flexibility, and confidentiality. Indeed, the use of informal agreements is widespread in a number of fora.

Since the Action Plan, itself an informal agreement, is the core of a regional seas program and the formal, "legally-binding," multilateral treaties are only part of one component of the Action Plan, the difference in the legal structure between the two approaches may simply be a difference in time and location within the process rather than a fundamental one. As noted before, many regional seas programs operate for years before a convention is in force. Moreover, substantive involvement in the Action Plan process and its projects may prove a better indicator of success than a convention and set of protocols.
Discussion

From the above comparison, the Arctic Environmental Protection Strategy, its development process, and its legal structure share many similarities with the Regional Seas Action Plan approach. Based on these similarities, the AEPS defines a regime for environmental protection and management of the Arctic which emulates the Regional Seas approach. Given the large number of similarities and its independent formation outside the UN system, the AEPS development and implementation also validate the use of the Regional Seas approach for regional environmental protection schemes. However, a few differences do exist.

The geographical differences indicate that the Regional Seas Programme approach, as imitated by the AEPS, can be extended to regions of extremely large extent. The successful extension of the Regional Seas Programme approach to such large areas lends promise to its use for interregional cooperation within the same ocean basin, for instance the Indian Ocean.85

Differences in membership, UNEP involvement, the process initiation method, and financial arrangements seem to center on the self-sustaining ability and strong political environments found within and among the developed nations of the Arctic region. This observation suggests that the Regional Seas approach can be a favorable course to environmental protection if the states within a Regional Seas program can sustain the regional programs themselves without UN assistance. While regional self-reliance has been a goal of the Regional Seas Programme, it has been difficult to achieve without UNEP support.86
Institutional and legal differences seem to result from the desire for an informal, flexible, more efficient agreement on regional environmental protection. The use of the informal or "soft law" approach has received criticism. Such criticism does not present a comparison of the benefits and costs of informal instruments with the benefits and costs of formal instruments. It also ignores the observation that informal international agreements exist and operate more effectively than formal ones. As noted before, many of the regional seas programs began and operated for years without codifying actions and measures in legally-binding agreements. The Organization for Indian Ocean Marine Affairs Cooperation (IOMAC) system, as well, operated for three years before any binding legal agreement was adopted. On the other hand, the institutional and legal differences may be temporary, subject to change as the AEPS matures in the overall regime-building process as outlined by the Regional Seas approach. Theoretically, if Arctic international cooperation is nurtured and grows, legal agreements, if found to be necessary, may be concluded. Events in the Indian Ocean and in the North Sea, however, suggest that the more informal approach embodied in the AEPS has precedent and is gaining popularity.

While these differences do exist, they do not diminish the validation which the AEPS has provided for the Regional Seas approach. They demonstrate some extensions and some possible results that the AEPS, as an independently-developed program, can give to the current Regional Seas approach, especially when applying it to issues concerned with interregional ocean management.
Summary and Conclusions

The Arctic Environmental Protection Strategy establishes a international cooperative regime for environmental protection and management in the Arctic. The regime imitates the Action Plan approach applied in a number of regions under UNEP's Regional Seas Programme. Because it was developed independently yet used many of the same concepts and mechanisms, the Strategy validates the UNEP method. Viewing the AEPS as a regional seas program created by developed countries implies that, no matter what means are available to the participants, the Regional Seas approach remains the prevailing method for organizing regional environmental protection.

In addition to supplementing UNEP's existing global network of marine regions, the AEPS extends the Regional Seas Programme approach to encompass a region much larger than previously addressed. In light of this observation and of developments in the Indian Ocean, the AEPS may provide UNEP with some measures to organize and enhance inter-regional and ocean sector management schemes for subjects which cannot be dealt with effectively at the regional or global levels, such as POCs. Likewise, the Arctic Strategy itself may provide an example of how to organize and to conduct ocean management, a topic which seems to be gaining greater attention.

The AEPS and its process embraces the trend where more informal and flexible agreements are desired to achieve results rather than establish administrative frameworks. The agreements reached in the North Sea and in the Indian Ocean show evidence of this trend. As a corollary, the Strategy and its informal agreements enable indigenous peoples to participate in the environmental protection regime by removing formal stumbling
blocks such as the need for international legal standing or personality to conclude regional conventions.

Given the priorities, concerns, and general lack of urgency of the nations involved, the Arctic Environmental Protection Strategy is the current environmental protection situation in the Arctic for the near future. It loosely ties existing bilateral, multilateral, and global agreements together for integrated application to the Arctic. While the AEPS does not confer special treatment in international law to the Arctic, it does apply a proven approach to protection of the Arctic environment.
ENDNOTES


Identifying different ways to organize environmental cooperation in the Arctic, Roginko and LaMourie describe the value of an ‘Arctic Action Plan’ modeled after the regime established for the Baltic or after the Regional Seas Programme’s action plans. See Alexi Yu. Roginko and Matthew J. LaMourie, 1992, “Emerging marine environmental protection strategies for the Arctic,” Marine Policy, 16(4):259-76, pp. 268-70. Discussing methods to realize an International Environmental Strategy (IES) for the Arctic, three Russian authors discuss the implementation of an ‘Arctic Action Plan’ similar in structure to the UNEP sponsored Action Plans of the Regional Seas Programme. However, this discussion takes place at least a year after a regional strategy was put in place. For more information about the IES concept, see Anatoly Kolodin, Natalia Mirovitskaya, and Alexi Roginko, 1993, “The Arctic: Arena for International Environmental Security?,” In: Elisabeth Mann Borgese, Norton Ginsburg, and Joseph R. Morgan (eds.), Ocean Yearbook 10, Chicago: The University of Chicago Press, pp. 277-89.

4 During a meeting to discuss consolidation of five conservation strategies developed for the Arctic territories, the Inuit Circumpolar Conference and representatives of the Canadian Government questioned UNEP concerning the creation of a Circumpolar Action Plan within their Regional Seas Programme. Their desire was to initiate the application of the Regional Seas concept to the Arctic region. The response from UNEP cited the need for an intergovernmental trigger before “[UNEP] would provide diplomatic and expert assistance in developing a regional action plan.” Anonymous, UNEP North American News, 1988, 3(2):2.

Denmark (Greenland), and Iceland. At the time the Strategy was adopted, the United Soviet Socialist Republic (USSR) was extant. This paper does not consider the development in light of the USSR's dissolution, the creation of the Commonwealth of Independent States, and the assumption of Arctic affairs by the Russian Federation.


10 Finland implied an Arctic boundary when it distributed a 'working document' to all nations which have territory within the Arctic Circle. Debora MacKenzie, 1989, "Environmental issues surface at the summit of the world," *New Scientist*, 25 February 1989, p. 29.


13 AEPS 1991, pp. 4-6.


15 This extension places approximately 90% of the sub-Arctic land ecosystems under the Arctic region.


21UNEP, 1982b, Guidelines and principles for the preparation and implementation of comprehensive action plans for the protection and development of marine and coastal areas of regional seas, UNEP Regional Seas Reports and Studies, No. 15, Geneva: UNEP, p. i.

22Ibid.


24Some commentators do not list supporting measures. Rather, they list specific categories usually found under the supporting measures component as individual components. For example, Schröder and Keckes list institutional and financial as specific components and omit supporting measures. Schröder 1992, p. 102; Keckes 1981, p. 18. Haas also lists institutional and financial components. He, however, adds education and support activities as a sixth component. Peter M. Haas, 1991, “Save the Seas: UNEP’s Regional Seas Programme and the Coordination of Regional Pollution Control Efforts,” In: Elisabeth Mann Borgese, Norton Ginsburg, and Joseph Morgan (eds.), Ocean Yearbook 9, Chicago: University of Chicago Press, pp. 188-212, pp. 195-96. This paper uses the components as listed in the UNEP documentation.

25UNEP 1982b, p. 5.


27UNEP 1982b, p. 6.


29UNEP 1982b, p. 6.

30Thacher and Meith 1980, p. 156.

31For information on UNEP’s role in supporting these and other environmental programs, see UNEP Governing Council, 1976, Catalytic Role of UNEP, UNEP/GC/82, 16 January 1976.

32The following discussion was adapted from UNEP, 1982b, pp. 7-11. For another description of the action plan process, see Thacher and Meith 1980, pp. 156-57.

33UNEP 1982b, p. 7.
34UNEP Governing Council 1976, p. 5.


36Ibid.


38Ibid., p. 4.

39Ibid., pp. 5-6.

40Ibid., pp. 7-17.

41Ibid., pp. 18-23.

42Ibid., pp. 24-29.

43Ibid., p. 31.

44Ibid., pp. 30-32.


46Ibid., p. 37.


48Ibid., p. 39.

49Ibid., pp. 34-43.

50Ibid., pp. 44-45.


Three of these nations (Sudan, Kenya, Tanzania) do participate in other regional seas Programs.

Smith (p. 276) describes an ocean sector as a "partly geometrical and partly zonal" management entity which accounts for the water column. It is one of four geographical scales he discusses for overall oceans management. In order, the 4 scales are 1.) global, 2.) ocean sector, 3.) regional, and 4.) local. See H.D. Smith, 1991, "The regional bases of sea use management," Ocean and Shoreline Management, 15(4):273-82, pp. 275-77, for a further description of these four levels.

The coastal states are Norway, Russia, USA, Canada, Denmark(Greenland), and Iceland. The geographically disadvantaged states are Sweden and Finland. No land-locked states exist in the Arctic region.

Of the thirteen Regional Seas Programs, only four of them (Mediterranean, Kuwait, South-east Pacific, and Black) have participation of all coastal nations within the region.

Kolodin et. al. (1993, p. 288) and Roginko and LaMourie (1992, p. 275), who discuss the need for financial assistance and technology transfer in making an environmental regime for the Arctic, lend credence to this argument.

For a specific example, refer to the Mediterranean Action Plan which contains the provisions for a Mediterranean Pollution Monitoring Program (MEDPOL). All Action Plans have, or are encouraged to have, these systems because, in addition to having more complete data to enable sound management of the regions, the Regional Seas Programme supplies data to UNEP's Earthwatch Programme. For more information, see UNEP, 1982a, Achievements and planned development of UNEP's Regional Seas Programme and comparable programmes sponsored by other bodies, UNEP Regional Seas Reports and Studies No. 1. See also United Nations General Assembly resolution 2997 (XXVII).


Roginko and LaMourie (1992, p. 267) recognize and attest to the preparatory nature of the events up to the adoption of the Strategy.

The existence of AMAP compares favorably to programs outlined for Regional Seas action plans, such as MEDPOL. For a detailed description of MEDPOL, see L. Jeftic, 1992, "The Role of Science in Marine Environmental Protection of Regional Seas and Their Coastal Areas: The Experience of the Mediterranean Action Plan," Marine Pollution Bulletin, 25(1-4):66-69, pp. 67-68.

UNEP 1984, p. 3.


Raymond Arnaudo, 1992, Head, Division of Polar Affairs, US Department of State, Personal communication, 17 March 1992. Mr. Arnaudo stated that the circumpolar nations had no intention of concluding a multilateral treaty for Arctic environmental protection.

Harders (1987, p. 298) points favorably to the legal approach used in the large number of regions adopting an umbrella convention and supplementing it with protocols addressing specific pollution sources.


Neuman 1985, p. 47.

Haas analyzed the ten Action Plans operating at the time and notes that the successful ones satisfy three conditions: the existence of an able regional marine science community interested in environmental management applications, the respect of the political decision makers for professional competence of the scientists, and the existence of "channels of contact or influence"
between the two groups. Haas 1991, p. 198. Furthermore, while all three of the “successful” Action Plans have regional treaties in force, three out of the five “unsuccessful” Action Plans have treaties in force. Haas 1991, p. 199-207. Admittedly the comparison is simple but it does suggest too much emphasis is given to the treaty activity within the overall Plan.

85In describing the global nature of the Regional Seas Programme, Schröder (1992, p. 101) states “cooperation among the various regions was always regarded as an important element.”

86Haas (1991, pp. 209-10) describes the loss of momentum which accompanies the withdrawal of UNEP support to a region.

87While recognizing that the ‘soft law’ approach is an improvement over more than what had existed in the Arctic region before the adoption of the Strategy, Kolodin et.al. (1993, p. 287) and Caron (1993, p.379) allude to a desire for formal legal agreements.

88This agreement establishes only the formal organization to guide and to review the conduct of actions in the IOMAC system.

89The increased use of ministerial conferences and more informal organizations to establish environmental protection agreements rather than the conferences of plenipotentiaries and formal organizations and institutions has occurred at the regional level (e.g., the North Sea) and at the ocean sector level (e.g., the Indian Ocean). For discussion of the North Sea approach, see Steinar Andreson, 1989, “The Environmental North Sea Regime: A Successful Regional Approach,” In: Elisabeth Mann Borgese, Norton Ginsburg, and Joseph R. Morgan (eds.), Ocean Yearbook 8, Chicago: University of Chicago Press, pp. 378-401. For a discussion of the Indian Ocean approach, see Barbara Kwiatkowska, 1991, “Current legal developments: the Indian Ocean,” International Journal of Estuarine and Coastal Law, 6(2):133-44.


91For the North Sea, see Andreson 1989, p. 400; for the Indian Ocean, see Kwiatkowska 1991, p. 134.
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