THE POLITICS OF THE ANTARCTIC: A CASE STUDY OF THE ENVIRONMENT IN INTERNATIONAL RELATIONS

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I hereby declare that this thesis is the result of my own independent research and that all authorities and sources which have been used are duly acknowledged.

Lorraine M Elliott
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Writing a PhD thesis is, in the final analysis, an individual exercise. Nevertheless, many people make contributions of varying sorts to the process and I am delighted to have the opportunity to thank them.

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Abstract

This thesis does three things. It describes and analyses the progress of environmental politics in the Antarctic. In doing so, it contributes to a wider research agenda on the environment as an issue in international relations. Finally, it explores questions in international relations theory about the nature of cooperation and change in the international system.

The case study of environmental politics in the Antarctic Treaty system focusses attention on the systemic issues of the adequacy of interstate practices on the management of the environment, the need for new thinking on international cooperation and the role of non-state actors (particularly environmental organisations and the scientific community).

Traditional realist theory, with its state-centric assumptions, is poorly placed to generate propositions which enable these major themes to be investigated. This thesis therefore employs an analytical framework grounded in the liberal institutionalist tradition of international relations theory.

This thesis argues that two dimensions of a regime are important in judging the adequacy of state practice on environmental issues: the prevailing hierarchy of values on security and the environment and the relative weight given to sovereignty or interdependence norms.

The Antarctic regime, based on the Antarctic Treaty of 1959, was constructed as a security regime to avoid conflict over competing territorial claims and to avoid tension between the superpowers in the Antarctic. Yet it was increasingly required to function as an environmental protection regime - a purpose for which it was not designed.

The hierarchy of values in this regime privileged political (and security) concerns over environmental ones. Sovereignty norms dominated. Thus the process of decision-making on environmental issues was, in the final analysis, flawed. The network of environmental rules and procedures adopted was ad hoc, disaggregated and increasingly unwieldy. Implementation of those rules was poorly monitored.

The increasing asymmetry between the normative political values of the Treaty system and the demands for comprehensive environmental protection were most in evidence in the debates surrounding minerals activity in the Antarctic. The particular focus of the case study, in its examination of environmental politics in the Antarctic, is the
negotiation and subsequent overturning of the Minerals Convention and the negotiation of a qualitatively different agreement in the Madrid Protocol to the Antarctic Treaty.

This process of radical change can be analysed in the context of a reordering of the hierarchy of values and a move away from sovereignty norms towards interdependence norms. Non-governmental environmental organisations are a key dimension in mobilising this change. Because they focus critical attention on inter-state environmental practice and, in doing so, bring new values and ideas to the debate, their role needs to find an appropriate place both in the empirical analysis of the Antarctic regime, and in the wider theories of regime-making and change in international relations.
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<th>Full Form</th>
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<td>AAT</td>
<td>Australian Antarctic Territory</td>
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<tr>
<td>ACF</td>
<td>Australian Conservation Foundation</td>
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<tr>
<td>AEIMEE</td>
<td>SCAR Group of Specialists on Antarctic Environmental Implications of Possible Mineral Exploration and Exploitation</td>
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<tr>
<td>AMIC</td>
<td>Australian Mining Industry Council</td>
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<tr>
<td>ASOC</td>
<td>Australian Conservation Foundation</td>
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<tr>
<td>ATCM</td>
<td>Antarctic Treaty Consultative Meeting</td>
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<td>ATCP</td>
<td>Antarctic Treaty Consultative Party</td>
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<td>ATS</td>
<td>Antarctic Treaty System</td>
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<td>BAS</td>
<td>British Antarctic Survey</td>
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<td>BAT</td>
<td>British Antarctic Territory</td>
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<td>BIOMASS</td>
<td>Biological Investigation of Marine Antarctic Systems and Stocks</td>
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<td>CAN</td>
<td>Campaigners Antarctic Notes</td>
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<td>CCAMLR</td>
<td>Convention on the Conservation of Antarctic Marine Living Resources</td>
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<td>CCAS</td>
<td>Convention for the Conservation of Antarctic Seals</td>
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<tr>
<td>CEE</td>
<td>Comprehensive Environmental Evaluation</td>
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<td>CEMP</td>
<td>CCAMLR Environment Monitoring Program</td>
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<tr>
<td>CEP</td>
<td>Committee for Environmental Protection</td>
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<tr>
<td>CLASP</td>
<td>Centre for Law and Social Policy</td>
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<tr>
<td>COMNAP</td>
<td>Council of Managers of National Antarctic Programs</td>
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<tr>
<td>CRAMRA</td>
<td>Convention on the Regulation of Antarctic Mineral Resource Activities</td>
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<tr>
<td>CSAGI</td>
<td>Comité Spécial de l'Année Géophysique</td>
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<tr>
<td>DASETT</td>
<td>Department of Arts, Sport, Environment, Tourism and Territories</td>
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<td>DFAT</td>
<td>Department of Foreign Affairs and Trade</td>
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<tr>
<td>EAMREOA</td>
<td>SCAR Working Group of Specialists on the Environmental Impact Assessment of Mineral Resource Exploration and Exploitation in Antarctica</td>
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<tr>
<td>ECOSOC</td>
<td>Economic and Social Council</td>
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<tr>
<td>EEC</td>
<td>European Economic Communities</td>
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<td>EEZ</td>
<td>Exclusive Economic Zone</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EPA</td>
<td>Environmental Protection Agency</td>
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<td>FAO</td>
<td>Food and Agriculture Organisation</td>
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<td>FoE</td>
<td>Friends of the Earth</td>
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<td>FRG</td>
<td>Federal Republic of Germany</td>
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<td>GDR</td>
<td>German Democratic Republic</td>
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<td>G77</td>
<td>Group of 77</td>
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<td>IAATO</td>
<td>International Association of Antarctic Tourist Operators</td>
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<td>ICAO</td>
<td>International Civil Aviation Organisation</td>
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<td>ICI</td>
<td>International Court of Justice</td>
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<td>ICUS</td>
<td>International Council of Scientific Unions</td>
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<td>IEE</td>
<td>Initial Environmental Evaluation</td>
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<td>IGY</td>
<td>International Geophysical Year</td>
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<td>International Hydrographic Organisation</td>
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<td>IIED</td>
<td>International Institute for Environment and Development</td>
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<td>IMO</td>
<td>International Maritime Organisation</td>
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<tr>
<td>IOC</td>
<td>Intergovernmental Oceanographic Commission</td>
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<tr>
<td>ISBA</td>
<td>International Seabed Authority</td>
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<td>IUCN</td>
<td>International Union for the Conservation of Nature and Natural Resources</td>
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<td>IWC</td>
<td>International Whaling Commission</td>
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<tr>
<td>MARPOL 73/78</td>
<td>International Convention for the Prevention of Pollution from Ships (1973), and its Protocol of 1978</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<td>MEPC</td>
<td>Marine Environment Protection Committee</td>
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<td>MPA</td>
<td>Multiple-use Planning Area</td>
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<td>MSY</td>
<td>Maximum sustainable yield</td>
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<td>NCP</td>
<td>Non-consultative Party</td>
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<tr>
<td>NERC</td>
<td>Natural Environment Research Council</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<td>NIEO</td>
<td>New International Economic Order</td>
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<tr>
<td>NSF</td>
<td>National Science Foundation</td>
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<tr>
<td>PCB</td>
<td>Poly-chlorinated biphenyls</td>
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<td>SCALOP</td>
<td>Standing Committee on Antarctic Logistics and Operations</td>
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<tr>
<td>SCAR</td>
<td>Scientific Committee on Antarctic Research</td>
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<tr>
<td>SCOPE</td>
<td>Scientific Committee on Problems of the Environment</td>
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<td>SCOR</td>
<td>Scientific Committee on Oceanic Research</td>
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<td>SCM</td>
<td>Special Consultative Meeting</td>
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<tr>
<td>SMA</td>
<td>Specially Managed Area</td>
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<td>SMP</td>
<td>Special Meeting of Parties</td>
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<td>SPA</td>
<td>Specially Protected Area</td>
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<tr>
<td>SPRI</td>
<td>Scott Polar Research Institute</td>
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<tr>
<td>SRA</td>
<td>Specially Reserved Area</td>
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<tr>
<td>SSSI</td>
<td>Site of Special Scientific Interest</td>
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<tr>
<td>TAC</td>
<td>Total allowable catch</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>United Nations Development Program</td>
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<td>UNEP</td>
<td>United Nations Environment Program</td>
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<td>UNESCO</td>
<td>United Nations Education, Scientific and Cultural Organisation</td>
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<td>UNGA</td>
<td>United Nations General Assembly</td>
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<td>USMMC</td>
<td>United States Marine Mammal Commission</td>
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<td>WMO</td>
<td>World Meteorological Organisation</td>
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<td>WRI</td>
<td>World Resources Institute</td>
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<td>WTO</td>
<td>World Tourism Organisation</td>
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<td>WWF</td>
<td>World Wide Fund for Nature</td>
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Introduction
THE ENVIRONMENT IN INTERNATIONAL POLITICS: THE CONTEXT AND THE ISSUES

This thesis does three things. It tells a story about environmental politics in the Antarctic. In doing so, it contributes to a wider research agenda on the environment as an issue in international relations. Finally, it explores questions in international relations theory about the nature of cooperation and change in the international system.

To set the Antarctic issue in its appropriate context, I go first in this introduction to a discussion of the place of environmental issues on the international agenda.

The environment in international politics
The debate on environmental issues has become in the 1980s an integral part of the agenda of international politics and is therefore an important subject for students of international relations. Environmental degradation, and the need for environmental protection and management, is no longer a soft issue on the fringes of international politics or the province only of the environmentalist lobbies. The environment is also no longer simply a national issue. It now has transboundary implications and, in an increasing number of cases, global impact. Issues such as air and water pollution, ozone depletion, acid rain, climate change, disposal of nuclear waste and loss of biodiversity now have an impact upon international economic and possibly even security relationships.1 The environment also raises questions about how best to manage human activity in an ecologically sustainable way to minimise further disruption to the physical fabric of the planet, and to deal with the degradation that has already taken place.2

As environmental issues have moved up the hierarchy of the international agenda, a central question has arisen as to whether these issues can be managed in the ways that other international issues, for example international trade, are managed, or whether the

1. Problems of environmental degradation and unsustainable use of resources (such as forest resources) particularly in developing countries, are related to the development debate, the relationship between rich and poor countries, and the difficulty of international debt. The conduct of practices argued to be environmentally unsound has led to calls for restrictions on international trade in certain commodities such as rain-forest timber. The potential for conflict over scarce resources such as water or arable land, which may be the result of environmentally unsound practices, which may in turn be related to problems of poverty, cannot be ignored. The number of environmental refugees, now thought to number in the millions, is another aspect of the international environmental debate which relates directly to questions of welfare, international aid and development.

2. The concept of ecological sustainability is, of course, a contested one.
nature of these environmental issues is such as to require new approaches to global cooperation and decision-making.

It is clear already that there are some features of the debate on environmental issues that serve to distinguish it from the way decisions are made on other core issues like security and international economics. We can turn here to consider the role of states, the role of non-governmental organisations and the role of the scientific community.

With respect to the role of states, there is now a groundswell of argument among environmentalists, academics and, increasingly, those involved in international policy-making on these issues, that the state-centric practices of international politics may no longer be adequate to meet the task of managing transboundary environmental issues and may even act as critical impediments to dealing constructively with these issues.

Competing national interests and the practice of sovereignty are seen as standing in the way of a recognition of common global interests. They are thus argued to form the main barriers to the emergence of effective centralised decision-making institutions on the environment. Rather than the lowest common denominator level of cooperation which usually characterises international decision-making among states, new international norms and values are required to encourage a cooperative internationalism. These norms and values would emphasise shared and common interests among states and peoples, the intrinsic value of the natural world, and the ethic of intergenerational equity. The first task of this thesis is to examine the role of states in managing environmental issues.

While environmental issues have raised these questions about state practices, they also require a rethinking of the role of non-state actors in international relations. International environmental politics has been characterised by the increasingly high profile of non-governmental environmental and conservation organisations. As environmental protection has taken on an international dimension, so too has the environmental movement established transnational coalitions and international organisations. NGOs have sought to reform the practice of states on environmental protection by working to improve the accountability and transparency of state practice. They have identified threats to the environment and drawn attention to breaches of existing rules. They have monitored intergovernmental negotiations, lobbied decision-makers, and sought to inform the public of inter-state practice and process on environmental issues. NGOs have established themselves as a vanguard in advancing new ideas and propositions about protecting the environment and in reassessing the interaction between the human and natural worlds. They have also moved from the margins of the policy debate to occupy a central position within it. A further task of this
thesis is to examine the impact of these political groups on state dominated decision-making on environmental issues.

Along with the arguments about state practice and the role of non-governmental actors, a third distinguishing feature of the environment in international politics is the role of scientific knowledge and the scientific community. The scientific community and the knowledge it produces are ambivalent quantities in the debates about the environment. Scientific knowledge is crucial to understanding the nature of environmental problems and to the search for solutions. However, scientific knowledge can also be a site of conflict. Political debates over meaning and about scientific uncertainty are often used as a justification for little or no action. The scientific community is, in effect, a shadow actor in this: it presents the data and draw the conclusions for policy while generally asserting that its role is non-political and disinterested. In fact, the scientific community has its own interests to prosecute and thus functions as an interested actor in the policy debates. Another task of this thesis is to examine the role of the scientific community and scientific knowledge in environmental debates.

This thesis also raises questions of theoretical significance in the study of international relations. Does the literature of international relations theory provide a good guide to our understanding of cooperative endeavours on the environment among states? What views do international relations scholars hold on the potential for change in state practice and in the international system on environmental issues. Does the literature account adequately for the role of non-state actors (both environmental NGOs and the scientific community) in international environmental politics? To what extent does the literature examine and account for the impact of new ideas, values and knowledge on the agenda of inter-state diplomacy (and the practice of states) with respect to environmental issues?

The study of environmental decision-making on the Antarctic, which is the core of this thesis, is actually a case study of these larger questions of states and non-governmental actors in the international system. This case study focuses on these systemic issues of the adequacy of interstate practices on the environment, the need for new thinking on international cooperation, the role of non-state actors, particularly environmental organisations and the scientific community, and the impact of scientific knowledge.

The Antarctic
The Antarctic Treaty was negotiated in 1959 to prevent interstate conflict over competing territorial claims in the Antarctic, and to avoid superpower tensions.3

3. The Antarctic Treaty was negotiated by the twelve countries which had participated in Antarctic research during the International Geophysical Year (1957-58), many of whom had long
Environmental protection is barely mentioned in the Treaty except for a reference to the conservation of living resources. The Treaty contains no statement of objectives or principles on environmental protection. This is not altogether surprising given the Treaty's purpose and the time of its negotiation. In spite of this lack of attention, environmental issues have become the dominant focus of decision-making under the Treaty. Thus a regime negotiated to offset security conflict has been required to function as an environmental regime when it was not designed for that purpose. As we will see later in this thesis, this conflict of purpose lies at the heart of the Antarctic issue in international politics.

Well over half the recommendations adopted at Antarctic Treaty Consultative Meetings (the primary mechanism for decision-making) have related either explicitly or implicitly to environmental protection and management. The environment agenda has expanded to encompass the development of a protected area system, conduct of scientific expeditions, marine pollution, the adverse effects of tourism and other nongovernmental activities, waste disposal, environmental impact assessment and the effects of mineral exploitation.

Yet, in spite of the growing complexity of, and linkages among these issues they have been addressed in an ad hoc, incremental fashion. This incremental approach evolved in part because of the way environmental issues came onto the Antarctic agenda - as separate and discrete concerns with little attention paid (in the 1960s and 1970s at least) to the connections between them. Political concerns were also an important factor. Once the Treaty was in force, the need to avoid disputes over competing interpretations of sovereign rights in the Antarctic ensured that protecting the political compromise between those states which claimed Antarctic territory and those which did not shaped the pattern of interstate cooperation in the Antarctic and became the determining factor in Antarctic decision-making. The mechanism for enforcing this compromise was the use of consensus decision-making and the mutual veto. In the hierarchy of values thus engendered, protection of the environment, while not ignored, was subordinated to these political interests.

This has resulted in an unwieldy and disparate collection of environmental measures. The Treaty parties did not seek to remedy the deficiencies in the Treaty by elaborating coherent principles and objectives on environmental protection. As with states in the international system generally, the Antarctic Treaty parties also exhibited a distinct Antarctic histories. The twelve were Argentina, Australia, Chile, France, New Zealand, Norway, the United Kingdom (the seven states with territorial claims in the Antarctic), Belgium, Japan, South Africa, the United States and the Soviet Union. The claims of Argentina, Chile and the United Kingdom overlap significantly. See chapter two for detail on this.
reluctance to adopt environmental compliance mechanisms, or to abridge their potential economic advantage in the interests of environmental protection.

There was little criticism of this process and its outcomes in the 1960s and 1970s. In the 1980s, however, the existing hierarchy of values, the incremental, ad hoc approach to environmental protection in the Antarctic and the record of implementation, was challenged by non-governmental environmental organisations. They argued that the environmental measures and practices adopted were inadequate, especially in the light of changing ideas about the importance of environmental protection and new knowledge about the Antarctic environment. Adequate environmental protection, NGOs argued, demanded better environmental management mechanisms for the Antarctic, improved compliance and the elaboration of comprehensive environmental principles. This required environmental values to be given priority over political ones.

In this way, states, non-governmental organisations and the scientific community became involved in a qualitatively different argument and power struggle over the environment in the Antarctic arena. It was the negotiations for a minerals regime which brought this power struggle onto the global public agenda.

The Antarctic Treaty states struggled for almost two decades to produce a regime to regulate Antarctic mineral exploitation which would reconcile competing assertions of national interest (territorial, economic and environmental). This was the internal accommodation. Non-governmental environmental organisations, nationally and internationally, were vocal in their opposition to the minerals negotiations. They called instead for a prohibition on minerals exploitation, for the Antarctic to be declared a World Park and for the parties to negotiate a comprehensive Treaty-based environmental protection regime for the continent. At the same time, NGOs also sought to ensure that if the minerals convention did eventuate, its rules were as environmentally sound as possible.4

The internal accommodation among the Treaty parties appeared to have been resolved by the adoption of the Antarctic Minerals Convention5 in June 1988. There was little external accommodation with the broad demands of the environmental groups and even less with the non-Treaty states. The internal compromise did not hold. The minerals regime was overturned. In an international political reversal the environmental values espoused by non-governmental organisations, and the practices they advocated as

4. Non-Treaty states also opposed the minerals negotiations, not on environmental grounds, but on the grounds that the Treaty "club" had no right to make decisions about a part of the world that was (as the non-Treaty states argued) a global commons.

5. In full, the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) also sometimes called the Wellington Convention.
essential to protect the Antarctic environment, were incorporated to a significant degree in a new agreement within the Antarctic Treaty system\(^6\) - the Madrid Protocol of 1991.

How and why did this happen?

In May 1989 the then Prime Minister of Australia, Bob Hawke, announced that his government had decided not to sign the Antarctic Minerals Convention despite having participated in its negotiation and having agreed to its adoption. The Australian government, Hawke argued, recognised that the Convention did contain environmental protection measures. However, the view held in the 1970s that "mining in Antarctica could be consistent with the preservation of the continent's fragile environment", he said, was now clearly incorrect and on these grounds the Minerals Convention was "basically flawed" (Hawke 1990a:18). The effect of this decision, unless Australia could be persuaded to change its mind, was to scuttle the Convention.\(^7\)

In an unlikely coalition with the French government,\(^8\) Australia urged its Antarctic Treaty partners to prohibit minerals activity and to negotiate a comprehensive environmental protection regime for the Antarctic which would establish the continent as a "Nature Reserve - Land of Science".

These unexpected, unilateral decisions, and the policy initiatives that derived from them, threw the Antarctic Treaty system into a turmoil. Cleaving to a consensus (in this case the Minerals Convention) was a fundamental norm of the Treaty system, and Australia and France had broken the rules by defection from this central norm. In doing so, their Treaty partners argued, they had threatened the stability of the Treaty system which had served the individual and collective interests of the Treaty signatories, in avoiding conflict over territorial claims, since 1961.

The initial response to the Australian/French initiative from other Treaty states was that a comprehensive agreement, and a ban on minerals activity, were not open to

\(^6\) The term is used to describe the Antarctic Treaty of 1959, and the various measures and other agreements that have been adopted under the auspices of that Treaty, including the 199 Consultative Meeting recommendations, the Convention for the Conservation of Antarctic Seals, the Convention on the Conservation of Antarctic Marine Living Resources and the recently agreed Madrid Protocol which has not yet entered into force.

\(^7\) Without the ratifications of all seven states which claim territory in the Antarctic, of which Australia is one, as well as those of the United States and Soviet Union, the Minerals Convention could not enter into force.

\(^8\) Australia was strongly opposed to French nuclear testing in the Pacific and its political role in New Caledonia. France was also not noted for its environmental commitment in the Antarctic or in the region generally. The French Prime Minister, M Rocard, had announced in April that his government wanted to work for a renegotiation of the Minerals Convention, and expressed concern about its environmental provisions, especially in the light of the Exxon Valdez disaster in Prince William Sound.
negotiation. Even those Treaty states which favoured improved environmental protection rules in Antarctica, and even a possible ban on mining, believed that the proposal was politically unachievable. Yet what was non-negotiable in May 1989 had, by October 1991, become a diplomatic reality in the Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol).

These events within the Antarctic Treaty system in the late 1980s can be best explained by an inquiry into environmental decision-making and practice under the Antarctic Treaty since its entry into force in 1961. This task is the core of this thesis.

This case study of inter-state decision-making on environmental issues in the Antarctic Treaty system is an interesting story in its own right apart from its wider implications outlined above. It analyses an important piece of international diplomacy in both historical and contemporary terms, exposing the practices of states and the struggle to open decisions on Antarctic environmental issues to the wider values and influences of non-governmental groups.

The Antarctic has been "long neglected by the mainstream of international law and politics" (Joyner and Chopra 1988:1). There are few book length studies on the international politics of the Antarctic.9 Of these only one (in the English language at least) employs a theoretical framework drawn explicitly from the discipline of international relations.10 Beck (1987/88:159) has drawn attention to an "existing void in interpretations of Antarctica from the perspective of international relations ... theory". This thesis seeks to fill part of that void.

The story of the minerals regime and the Madrid Protocol has not yet been subject to critical analysis in the Antarctic literature. Neither has there been a detailed analysis of the history and politics of environmental issues within the Treaty system. This thesis is, therefore, a timely study which fills a gap in the literature on the politics of the Antarctic and on the Antarctic in the environmental politics literature.11

The thesis proceeds in the following way. Chapter one establishes the analytical framework for the study. It discusses those parts of the literature of international relations theory which have addressed questions relevant to the analytical concerns of

9. See, for example, Auburn (1982), Quigg (1983), Shapley (1985), Triggs (1986b), Beck (1986b) and Peterson (1988). The literature on the Antarctic is not extensively reviewed here. The argument of the thesis responds to that literature where appropriate.


11. The following chapter surveys the international relations literature relevant to this thesis. It does not survey the empirical literature on the Antarctic which, for the most part, lacks major political analytical works. The argument engages with that literature at relevant points in the thesis.
this thesis. It considers first the debates about the potential for cooperation in the international system, and particularly the difficulties the broad realist tradition encounters in providing an adequate model of cooperation when environmental issues are the focus of study. I suggest that realist paradigms, in their propositions about interstate cooperation, provide little insight into questions of values, ideas and knowledge, or into the role of non-state actors. The theoretical framework of this thesis is therefore grounded in an exploration of those models, broadly termed liberal, which seek to incorporate these neglected factors into their explanations. These models seek to extend the state-centric approach of the realist school.

Chapter one argues that the literature on regimes and institutions particularly that work which addresses questions of how states 'learn', leadership, the function of knowledge and ideas, and the role of transnational epistemic communities, adds a new dimension to the study of international cooperation and change which is of particular relevance to the study of environmental issues. It also suggests that this literature still needs to pay greater attention to incorporating non-governmental organisations into the models of learning and change.

Chapter two introduces the Antarctic case study. Using the analytical framework developed in chapter one, it describes first the history of states' attempts in the 1940s and 1950s to come to an agreement on the Antarctic. It then examines the political and legal aspects of the Antarctic Treaty identifying the individual and collective state interests involved. It explores how these influenced the Treaty's normative framework, the rules and decision-making procedures developed, and the process of construction of the Antarctic regime.

In chapter three, I move to a consideration of how environmental issues have been addressed in the Antarctic regime described in chapter two. This chapter draws extensively on primary source material, much of which has become publicly available only recently. Chapter three analyses decision-making on a set of discrete environmental issues: the conservation of fauna and flora, protected areas, tourism and non-governmental expeditions, scientific research, waste disposal, and environmental impact assessment.

This chapter also identifies the actors influencing Antarctic decision-making, both at the formal level (the bureaucrats and scientists) and the informal level (non-governmental organisations and non-Treaty states). In this, the tensions between the internal accommodation and the external accommodation, which characterise the politics of the Treaty system, emerge.
In chapter three I argue further that there was a process of incremental change in the scope and impact of recommendations adopted on the Antarctic environment before the disputes surrounding the minerals convention in the late 1980s. I argue that this incremental process of change became more pronounced in the 1980s and that it was in large part a response to external factors, particularly the activities, arguments and pressures of non-governmental organisations and to the raising of environmental issues in international institutions. Here also the question of changing values, the 'learning' process and the role of NGOs become important in the changing nature of environmental politics in the Antarctic.

Chapter four completes the story of the process of making environmental recommendations and agreements on the Antarctic before the major issue of minerals becomes the focus of Antarctic attention. This chapter examines the conventions on seals and marine living resources as both political and conservation agreements within the Antarctic regime.

Chapter five focuses on the specific question of minerals exploitation in the Antarctic. It is this issue, I argue, where the tensions between competing values on environmental protection within the Treaty system have been most pronounced. Those competing values are first the resource use/environmental protection dualism. There is also an increasing asymmetry between the normative political values of the Treaty system and the demands for comprehensive environmental protection which require a compromise of those political values. In this way, the Antarctic regime was increasingly unable to respond to changing knowledge and external demands.

In order to sustain this argument, chapter five traces the diplomatic negotiations on the minerals question from the early 1970s when the minerals issue was first inscribed on the Treaty agenda, through the formal minerals negotiations commencing in 1982, to the adoption of the Minerals Convention in June 1988. In this chapter I show how the debates in the 1970s about the minerals "problem" took place within the formal mechanisms of Antarctic Treaty system under the control of the Treaty parties, that is "within the club", and how they centred on the need to maintain the political status quo. This chapter also describes the negotiations of the special consultative meeting in the 1980s which resulted in the adoption of the Antarctic Minerals Convention.

In the 1980s the debate broadened (in different ways) with the influence of both non-Treaty states and non-governmental organisations on the "in club" debate. It thus became a much wider debate about environmental protection versus resource exploitation set within the context of changing ideas on international environmental issues. These issues are addressed in chapter six.
Chapter six analyses the politics of the Minerals Convention. It argues that, while the Minerals Convention incorporates a number of valuable environmental principles and procedures for protecting the environment, the scope of those principles and procedures was constrained by the need for political compromise.

In chapter seven, I consider events within the Treaty system since the Minerals Convention was adopted in 1988. I address the rejection of the Minerals Convention by Australia and France in the first half of 1989 and their proposals for a prohibition on minerals activity and the establishment of a "wilderness reserve". This defection from the norms of the Treaty system is analysed using the framework established in chapter one. Chapter seven then traces the struggle for a comprehensive environmental protection regime and analyses the recently agreed Madrid Protocol. The chapter also reflects on the nature of change in the Antarctic Treaty system, and the reasons for the convulsions over the minerals regime, relating this directly to the analytical propositions set out in chapter one.

The conclusion to the thesis, chapter eight, revisits the broad and specific questions raised in this introduction and in the following chapter on theory.

A note on documentation, primary sources and method

This thesis draws upon a wide range of primary source material, detailed in the bibliography. Because the Antarctic Treaty has no central secretariat, access to Consultative Meeting documents depends on the archival capacities of national governments, and their willingness to facilitate access to that material. Although the Consultative Parties agreed in 1985 to establish national contact points with a view to improving the availability of Antarctic Treaty documentation and information this system, to date, has not worked well. However, the archives at the Scott Polar Research Institute library in Cambridge, England, hold a comprehensive collection of Treaty material and I was fortunate to be able to work there in 1989 on some of the

12. See the explanatory notes at the beginning of the bibliography for a guide to referencing of primary material in the text.
13. Under recommendation XIII-1 national contact points were charged with making available, "to the greatest extent practicable and feasible" (paragraph 3) the final reports of Consultative Meetings, the Antarctic Treaty Handbook, and annual exchanges of information under the Treaty, as well as maintaining information on "the location of depositories of data, samples and collections resulting from scientific research in Antarctica, and the nature and location of bibliographies or other information sources concerning reports and published works related to Antarctic matters" (paragraph 5). Some governments were more responsive to my requests for information than others. NGOs, on the whole, were forthcoming with published and unpublished material.
documents from earlier meetings. When I began my research for this thesis in 1988, only material from the first seven consultative meetings (1961 to 1972) had been publicly made available by the Consultative Parties. At the 15th Consultative Meeting (at the end of 1989) this was extended to include material up to, and including, the 14th Consultative Meeting. In spite of this, it was only shortly before this thesis was completed that documents from the more recent meetings were available through the Department of Foreign Affairs and Trade in Canberra.

Other documentation, particularly negotiating texts from the minerals negotiations and the recent Madrid Protocol meetings, has been put on the public record by non-governmental organisations to counter what they see as unwarranted secrecy on the part of the Consultative Parties. Incidentally, this practice has ceased to cause much consternation among the Treaty parties themselves.

I was fortunate to be able to supplement my Australia-based work on primary and secondary sources during fieldwork in 1989. In that year I visited New York (to work at the UN library), and Washington (where I conducted several interviews with government agencies and non-governmental organisations, as well as undertaking research at the Library of Congress and the National Science Foundation). In England I spent time at the Scott Polar Research Institute in Cambridge (where the Scientific Committee on Antarctic Research is also headquartered) and in the Royal Institute for International Affairs library in London. Again I conducted interviews with government and non-government representatives. I also visited the International Union for the Conservation of Nature in Gland, Switzerland, and Greenpeace International in Amsterdam, Holland. During a private visit to New Zealand at the end of 1989, I conducted further interviews, and carried out research at the New Zealand secretariat offices of the Antarctic and Southern Ocean Coalition.

The method used for research and analysis of this subject is of a broadly traditional kind. That is, the questions the thesis addresses are closely related to the contemporary theoretical literature on international cooperation and change. The empirical research proceeds by the methods primarily of diplomatic history, based strongly on primary source research, paying attention in this process to the secondary empirical literature. The methodological focus is political analysis at the domestic, regime and international

14. The 15th Consultative Meeting also decided to make publicly available the minutes of the meetings held in Brussels in 1964 leading to the adoption of the Agreed Measures, and the Final Report of the Special Preparatory Meeting in Paris in 1976.

15. A list of Antarctic Treaty documents that have been used as primary source material for this thesis is included in the bibliography. Documents from the minerals negotiations were not publicly available.

16. A list of interviews is annexed to this thesis.
levels informed by values of the contemporary liberal institutionalist school in international relations.
Chapter one

THE ANALYTICAL FRAMEWORK: THEORIES OF INTERNATIONAL COOPERATION; THEORIES OF CHANGE

Introduction

This chapter establishes the analytical framework of this thesis. Its purpose is to set out those concepts and basic assumptions, drawn from the relevant literature of international relations theory,\(^1\) that will guide the analysis in the following chapters. In this, as with Keohane (1989:158), the object is to "formulate conditional, context-specific generalisations" related to the concerns of this study, rather than an attempt to develop a theoretical model of international cooperation and change.

To be useful such generalisations have to relate directly to the major questions of this study in both its general and particular Antarctic focus. These are, to summarise the discussion in the introduction: how do environmental issues get on the international agenda and how are they managed there? How and why are environmental regimes formed and how do these change? How is the nature of international cooperation influenced by non-governmental actors, new knowledge and leadership?

The task here is to identify those concepts and generalisations in the literature which separately and together may help to frame answers to these questions. This approach to developing an analytical framework for the study does not require a broad-ranging traverse of current debates in international relations theory (although it sits within that wider context of debate) but rather a more modest and focussed selection of particular theoretical issues.

This chapter examines, therefore, those parts of the literature of international relations theory which have addressed issues relevant to the central concerns of this thesis. It considers first the debate about the potential for cooperation in the international system, and particularly the difficulties encountered by the broad realist tradition in international relations theory in providing an adequate model of cooperation when environmental issues are the focus of study.

The chapter then considers those areas of the literature which have explored the nature of change in the international system, with a particular interest in the impact on states of

\(^1\) The literature on international relations and environmental politics theory, which is examined in this chapter, is set out in the bibliography separate from the Antarctic literature in the secondary sources. This is to facilitate ease of reference in a large bibliography.
new ideas and values which, I have argued in the introduction to this thesis, are important characteristics of the debate on international environmental issues. These investigations into the literature on cooperation and change examine propositions about regimes, the importance of knowledge, the role of non-state actors, and the nexus between domestic and international political processes.

In this chapter I argue that the key concepts that underpin realist discourse, deriving as they do primarily from the experience of analysing interstate power and security issues in international relations, do not lend themselves easily to a consideration of the central features of international environmental politics. Those approaches to the study of international relations which are broadly identified as "liberal" provide, I suggest, a firmer foundation for the analytical framework of this thesis.

Theorising about cooperation
Cooperation among states generally implies a degree of conscious collaborative or concerted action, or joint decision-making for the purposes of managing an issue-area. In this thesis, I am concerned with the potential for, and characteristics of, such conscious action over time rather than a short-term coincidence of policy or behaviour. This concern arises not only because it is relevant to the Antarctic case study, but also because long-term multilateral cooperation is appropriate, and indeed essential, for the successful management of international environmental issues. Propositions in international relations theory about the potential for cooperation among states derive from contending views of the nature of the international system. I examine below two of those contending views, realist and liberal, and the propositions on cooperation they generate.

Realism
The realist school of thought² characterises the international system as anarchic and decentralised. By this it is meant that no enduring central authority exists, and that states are independent ("sovereign") actors in the system. In this view, states are the most important actors in international politics which, argues Morgenthau (1985:31) is "like all politics ... a struggle for power". By this definition, states seek to maximise

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² Without engaging the complexities of the large and long-standing debate about realism, I would identify the core texts of the realist school of thought as including E H Carr's The Twenty Year's Crisis (the first edition of which appeared in 1939), Martin Wight's Power Politics (published in its original version in 1946), Hans J Morgenthau's Politics Among Nations (which dates to 1948) and more recently, Hedley Bull's The Anarchical Society (1977). Zacher (1990:143) distinguishes Bull and Wight as the "international society" school within the realist tradition. The traditions of realist theory are carried through in the so-called neorealist writings of authors such as Robert Gilpin (see, for example, War and Change in World Politics, 1981) and, especially, Kenneth Waltz in his Theory of International Politics (1979). For a focussed discussion of neo-realist thought, see Neorealism and its critics, edited by Robert Keohane (1986b).
their power relative to that of other states in order to achieve security in a system which is inherently competitive and therefore insecure. In doing so, states must ultimately rely on their own resources. Thus the principle of self-help underpins that of sovereignty.

Independence, self-help and the maximising of relative power as defining characteristics of state action give form to the expression of state or national interest. The realist paradigm argues that there is a well defined hierarchy of issues in the articulation of national interests and in relationships among states in the international system. The primary interests of states is (and must be) to preserve territorial integrity and military security against other states. International politics is therefore defined, in the realist tradition, as the politics of power and security.

In a system characterised as inherently conflictive, the potential for cooperation is argued to be limited. There is, nevertheless, a spectrum of views within the broad realist school on this issue. At one end, Frankel sees cooperation as only workable outside power politics. Cooperative interaction he argues "does not, properly speaking, come into the ambit of politics ... [it is] successfully [sic] only when it does not affect power relations" (Frankel 1988:108-9).

A more sophisticated version of the realist school of thought observes that even within a condition of international anarchy, there are broadly accepted cooperative norms which generally govern the behaviour of states. Even within power politics, balances of power, alliance systems and spheres of influence involve explicit or tacit cooperative behaviour among states. Bull (1977) in particular has argued that the existence of an international society based on a restricted set of norms or shared values constrains conflict and establishes a potential for some degree of cooperative behaviour.

It would, of course, be misleading to suggest that realist writers have focussed only on the security issues which they argue to be the central concerns of states and of international politics. The key concepts of the realist paradigm have been brought to the study of a variety of cooperative endeavours outside the traditional security domain, particularly in the area of international political economy. In this view, the rational pursuit of national economic security and the struggle for relative economic gains are

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3. See also Waltz (1979:105-6) on the limits to cooperation under structural realism.
4. Even Morgenthau, whom Holsti (1972:181) characterises as "the foremost advocate of the concept of power as the theoretical core of international politics" discusses the "moral limitations upon the struggle for power" (Morgenthau 1985:349).
key factors in international economic relations among states and similarly constrain the opportunities for, and the nature of, international economic cooperation.

Thus for realist writers the potential for cooperation in both security and economic arenas is structurally limited.

Writers in the realist tradition have generally paid little attention to ecological issues as a focus of study. In the hierarchy of issues which realism assumes, environmental issues have not been considered an important focus for the study, or indeed the practice, of interstate relations. They have, therefore, been consigned by realist scholars to the lowest of low politics because of a perception that they are neither "security" issues nor issues in which power relationships are central.

Nevertheless, realist perceptions of the limited potential for cooperation in an inherently conflictive world would hold little hope for the type of international cooperation required to address international environmental issues. Nor, as we shall see later in this chapter, does realist theory accept the possibility of normative change in relations among states in response to global interests or new values. In this respect, realism is inherently pessimistic about cooperation and change.

**Liberalism**

The major point of departure from the assertions of the realist tradition about the behaviour of states, which permits (and indeed encourages) an exploration of cooperation, lies in a contending characterisation of the international system. The liberal school of thought argues that there are numerous examples of long-standing cooperation. Although realism and liberalism both consider states to be purposive self-interested actors liberal writers focus on the importance of international institutions. Although they offer contending propositions about cooperation, liberalism and realism are points on a continuum in the development of international relations theory, rather than diametrically opposed models. Seminal works in the liberal school (broadly defined) include Keohane and Nye (1977), Keohane (1984) and Ernst Haas (1990b). Works by Keohane, Nye, Haas and Young have contributed greatly to the development of liberal conceptualisations of international relations theory. To draw attention to the problem of labelling within the liberal school, we might note that while Keohane identifies himself as a neoliberal institutionalist (1989), Krasner (1983b:2) suggests that Keohane is a modified structural realist. Keohane argues that neoliberal institutionalism subsumes realism (1989:15) and points out the similarities as well as the differences between the two, but Grieco (1990:10) argues that liberalism is not

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6. Gilpin (1981:224) argues that "to the extent that the limits-to-growth thesis is correct, its influence on the behaviour of nation-states may not be as benign and conducive to cooperation as many of its proponents would like to believe". Ophuls (1988:370) warns that "[t]he clear danger is that, instead of promoting world cooperation, ecological scarcity will simply intensify the Hobbesian war of all against all and cause armed peace to be replaced by overt international strife".

7. The term "liberal" is used here to encompass those scholars who argue the case for cooperative potential in the international system and who have focussed on more than power politics in their explanations of inter-state behaviour. Although realism and liberalism both consider states to be purposive self-interested actors liberal writers focus on the importance of international institutions. Although they offer contending propositions about cooperation, liberalism and realism are points on a continuum in the development of international relations theory, rather than diametrically opposed models. Seminal works in the liberal school (broadly defined) include Keohane and Nye (1977), Keohane (1984) and Ernst Haas (1990b). Works by Keohane, Nye, Haas and Young have contributed greatly to the development of liberal conceptualisations of international relations theory. To draw attention to the problem of labelling within the liberal school, we might note that while Keohane identifies himself as a neoliberal institutionalist (1989), Krasner (1983b:2) suggests that Keohane is a modified structural realist. Keohane argues that neoliberal institutionalism subsumes realism (1989:15) and points out the similarities as well as the differences between the two, but Grieco (1990:10) argues that liberalism is not
cooperation among states. In this view, contemporary international politics is characterised by multiple channels of communication between societies (which challenges the realist conceptualisation of states as unitary and predominant actors), a recognition of the lack of utility of force as an instrument of policy (which casts doubt on the centrality of the "power" factor in international politics) and disagreement on the hierarchy of issues (which suggests that security issues do not necessarily dominate international politics). Together these aspects of international politics constitute the condition of complex interdependence (see Keohane and Nye 1977; Ernst Haas 1980:357-8). One of the characteristics of this complex world is an increased level of policy coordination and cooperation.\(^8\) In the liberal perspective, international cooperation is seen "not only as the outcome of relations among states, but of the interaction between domestic and international games and coalitions that span national boundaries" (Haggard and Simmons 1987:513).

Keohane and Nye (1977:3) acknowledge that interdependence is a "vague phrase" but one which nevertheless "expresses a poorly understood but widespread feeling that the very nature of world politics is changing". While not all issue areas satisfy the criteria of interdependence,\(^9\) international environmental issues can be so categorised. They are characterised by multiple channels of communication (especially through the activities of non-governmental organisations) and the use of force is infeasible as a solution to the global threat of ecological insecurity. Further, there is little agreement among states (or among states and other actors) on where environmental issues are to be located in the hierarchy of international concerns. For these reasons, the liberal theories of international relations are worth investigating further.

Writers in the liberal tradition also depart from the realist school in their assessment of the potential for, and the nature of, cooperation among states. States, so the argument goes, are predisposed towards cooperative behaviour in order to manage the conditions of interdependence in an anarchic world.\(^{10}\) Liberal scholars are also interested in the

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8. This complexity has been fostered by technological developments, revolutions in communications and transportation, and the expansion of world trade and finance.

9. The concept of complex interdependence was developed to provide a model for understanding international economic relations. Keohane and Nye (1977) acknowledge that there are issue areas in which realist conceptualisations may be more appropriate, even in a world characterised by interdependence. Interdependence modifies an understanding of an anarchic world, rather than replacing it as an ordering principle. Indeed, Keohane (1986a:1) suggests that whatever facilitates cooperation must be consistent with the principles of sovereignty and self-help.

10. Although the interdependence theorists developed the work of the earlier integration theorists, the concept does not necessarily invoke a normative dimension. It does not suggest that cooperation will be necessarily benign in its intent or impact. Neither do interdependence theorists dismiss the idea that there are power differentials between states, or that states still seek to maximise their interests.
conditions under which cooperation can improve the international system and make for a better world. However, the liberal assertion that states will cooperate under conditions of interdependence is as inherently deterministic as the realist assertion that they will not under conditions of anarchy. It is not enough to assert that cooperation occurs: what is then required is an investigation of why and how cooperation occurs in order to further delineate the departure from the realist tradition and to develop propositions to guide the analysis in this thesis.

**Regimes and institutions**

At the least, states engage in cooperative behaviour and collaborative decision-making in order to reduce uncertainty and minimise risk in their interactions with each other. They are likely to seek to cooperate when they perceive that the joint management of an issue is more beneficial to them (individually) than unilateral action,\(^{11}\) or that a problem cannot be solved without multilateral action,\(^{12}\) Cooperation is likely to be sought when there is a perception among relevant states that it is in their individual and collective interests that a particular outcome be avoided, even if there is no agreement on what should happen in its place.\(^{13}\) Cooperation under these conditions can take a variety of forms, from short-term bilateral accords to multilateral agreements that may require little further policy action, to comprehensive decision-making institutions. Beyond these minimum conditions for international cooperation lie the advantages of cooperation over time and the fact that states also cooperate for a mix of self-interest and altruism (for example, in the field of foreign aid).

Liberal scholars have used the concept of regime to examine recurring patterns of cooperative interaction between states.\(^ {14}\) The most commonly cited definition of regimes is that they are "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations" (Krasner 1983b:2).\(^ {15}\)

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11. For example, the development of satellite technology has required agreement on geostationary orbits in order to avoid potential chaos. The same is true of the radiomagnetic spectrum.
12. For example, as with international terrorism or drug trafficking.
13. For example, when states seek to avoid conflict over resources, or border disputes, even if they are not agreed on how those resources should be managed, or where those borders should be.
14. The word 'regime' has been borrowed by international relations scholars from the study of international law but the concept has been redefined. While the concept of regimes has been identified with liberal international relations theory it could, as Nye (1987:374) observes, also easily be made to fit with realist theory. Indeed, the realist school of thought has responded vigorously to the liberal challenge especially to question the utility of the concept of regimes in explaining cooperation. Consideration of regimes and their role in facilitating cooperation has been applied to the realist concerns of security and the condition of anarchy. See, for example, Oye (1986), Nye (1987) and Jervis (1983). Young (1989b) has sought, with respect to international environmental cooperation, to examine why regimes arise to cope with some transboundary problems but fail to do so for others.
15. Since the concept entered the lexicon of international relations literature, a number of approaches to the study of regimes, and international cooperation, have been developed which
The study of regimes has been more recently embedded in the study of international institutions which Keohane (1990:732) defines as "persistent and connected sets of rules, formal and informal, that prescribe behavioural roles, constrain activity and shape expectations". Regimes, therefore, are but one form of international institution, and are usually based on a formal agreement and given effect through some form of organisation. Because formal agreements and/or international organisations are more amenable to empirical study, they have become the main focus of the study of institutions. It should be noted, of course, that not all examples of interaction between states can be characterised in regime terms.

The basic characteristics of a regime derive from its principles and norms. Principles are the prevailing "beliefs of fact, causation and rectitude" (Krasner 1983b:2) that inform states' attitudes to an issue area. They may or may not be articulated in any formal agreement. Norms (which may also be implicit or explicit) specify standards of behaviour in terms of the rights and obligations of regime participants, and provide guidance on legitimate and illegitimate behaviour. Norms and principles reflect the values held by states. In this respect, as Puchala and Hopkins observe (1983:66), all regimes are biased in that they "establish hierarchies of values, emphasising some and discounting others".

Finlayson and Zacher (1981:564) suggest that norms may be defined as sovereignty norms (thus reflecting realist "politics as usual") or interdependence norms, which "incline states to maximise welfare through collaboration". While the margin between them can be difficult to locate, this distinction is a useful one in examining international environmental politics and especially the Antarctic issue. When sovereignty norms reflect different methodological as well as theoretical approaches. Young (1989b:350-2) identifies utilitarian models, based on game theory, and power focussed models (which have been most in evidence in hegemonic stability theory). Krasner (1983b) distinguishes between the Grotian/liberal tradition, and the modified structural realist approach. For a recent summary of theories of international regimes see Haggard and Simmons (1987). They identify four theoretical approaches to regimes - structural, game-theoretic, functional and cognitive, which they suggest are not mutually exclusive. Young (1990a:340-2) has developed his earlier typology to include five (not necessarily contradictory) streams of analysis - structural arguments, power-based arguments, interest-based arguments, cognitive arguments and contextual arguments.

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16. The definitions of regimes and institutions, as they relate to each other, has changed as liberal scholars have sought to refine the concepts.

17. There is now a considerable body of literature on regimes and institutions, and the nature of cooperative relationships between states in the international system, much of it produced since the mid-1970s. Krasner's edited volume (1983a) remains the most wide-ranging study of the subject. Just as Keohane suggests that it is possible to "trace the evolution of cooperation in an issue-area over time" (1990:741) so it is possible to trace thinking on institutionalism and cooperation in his recent collection of essays (Keohane 1989).

18. One of the most often used examples is the principle (that is, the belief) that free trade enhances the welfare of all countries.
prevail (in spite of an agreement to cooperate), monitoring and compliance rules are likely to be limited, and governments are likely to seek to maintain some control over important decision-making processes, especially where international environmental rules impact upon domestic policy, rather than cede responsibility to an international bureaucracy.19

Rules and procedures establish the functional component of a regime. They are likely to be codified in an agreement (such as a convention or treaty) and to establish processes for decision-making.20 Rules may set out injunctions and specific guidelines on the management of the issue area (as we will see is the case in the Antarctic Treaty system). Together with norms, rules contribute to the behavioural injunctions of a regime. The nature of rules and procedures (the decision-making framework) is determined by the norms and principles of the regime. The better the fit between the two, the greater the internal coherence of a regime, and the more likely it is to persist over time.

The existence and the extent of regimes (and thus the theoretical analysis that surrounds them) has been hotly debated by international relations scholars. The concept is fraught with terminological difficulties, and subject to challenges to its explanatory rigour and usefulness.21 The idea of a convergence among actors' expectations is a crucial component of the liberal definition of a regime and carries with it an implication of a redefining of state's interests and policy objectives. It is on this point that liberal and realist interpretations of regimes differ most strongly.

The realist approach argues that "regimes" cannot be differentiated from the power relationships pertaining among states participating in the regime, and that compliance with norms and rules is conditioned only by a state's short-term interests.22 In other words, regimes are epiphenomenal.

Liberal scholars (including "modified" liberals such as Keohane) argue that regimes have the potential to become intervening variables in the causal relationship between

19. Finlayson and Zacher, in elaborating this distinction, suggest (1981:564-5) that for a regime to exist there must be some degree of commitment to interdependence norms.
20. Keohane (1984:58) suggests that rules may be difficult to distinguish from norms. At the margin they merge with one another. See also Young (1980:334-6) for an elaboration of different types of rules.
21. Stein notes (1983:115) that "scholars have fallen into using the term 'regime' so disparately and with such little precision that it ranges from an umbrella for all international relations to little more than a synonym for international organisations". Kratochwil and Ruggie (1986:764) assert that the "practice of regime analysis is wracked by epistemological anomalies ... [which] debilitate any endeavour to achieve clarity and precision of the concept of regimes and to enhance its productive capacity as an analytical tool".
22. See, for example, Strange (1983).
power and interest, and behaviour and outcomes. Regimes serve to coordinate decision-making, facilitate cooperation and establish accepted patterns of behaviour. Liberal conceptualisations of regime-structured behaviour contend that norms and rules constrain and modify state behaviour over time, and represent more than just a coincidence of short-term interests. They argue that in the context of international institutions, states will subordinate short-term interests in the expectation of long-term (and possibly unspecified) gains.

However, as Keohane himself observes (1990:738) "causal inference is difficult where experimental or statistical research designs are infeasible". Zacher (1987:174) suggests that a "stable pattern of collective behaviour, coupled with statements by at least the most powerful actors in a system that they support certain rights and obligations [nevertheless] provide[s] strong evidence for the existence of regime injunctions", that is, norms and rules. In other words, the perceptions of state actors provide some measure of regime existence.

An exploration of the concepts of regimes and institutions is useful to this thesis because they represent attempts by scholars to understand how cooperation works in the international system. There is a normative aspect to this exercise. If we are to meet the international environmental challenge, then understanding "which patterns lead to more rather than less cooperative behaviour" (Keohane 1989:11) is imperative. Indeed, Young (1989a:viii) is convinced that the tools of regime analysis offer an appropriate vehicle for tackling problems of an environmental kind and for devising institutional arrangements to cope with transboundary environmental problems.

We need to augment earlier propositions about why states cooperate to include an analysis of the processes involved in reaching substantive agreement and, further, how cooperation based on such an agreement is sustained over time. An agreement is not of itself a regime, even though it may form the basis for one. Our understanding of regime (and therefore of cooperation) of necessity incorporates a temporal dimension.

Regimes, the literature suggests, may be imposed by a hegemonic state or negotiated. In this thesis I am interested in investigating negotiated regimes, and the process of

23. Nevertheless there is a widespread recognition that regimes may function at different levels of complexity. They may be comprehensive or incomplete. They may serve simply to provide for an exchange of information, or to coordinate policy, or to provide extensive regulatory mechanisms.

24. This is so even if an explicit agreement exists with respect to an issue area because, as noted later in this chapter, an agreement is not of itself a regime.

25. The concept of an imposed regime has been used especially in hegemonic stability theory. The structural realist approach to regime theory suggests that the presence of a hegemonic power is required for a regime to be established and maintained. In other words, collective action
bargaining that underpins them for two reasons. First, the case study of this thesis, the Antarctic Treaty system, is a negotiated rather than a hegemonic regime (a question addressed below in chapter two). Second, the management of international environmental issues is, in the long run, unlikely to work well under a system of imposition or coercion. Even under conditions of 'benign' hegemony no one state (or even a group of states) is, in the long run, able to provide or impose a public or common environmental good. Further, imposed or hegemonic regimes are more susceptible to free-rider problems (in which actors benefit from access to the public good that a regime provides without contributing to the provision of that public good) than are negotiated regimes. In addressing global environmental issues such as global warming, some degree of willing participation in an agreement (among over 160 states) is required if free-rider problems are to be avoided.

Thus liberal theory, which argues that cooperation is possible without a hegemon, focuses on institutional bargaining and leadership in its explanation of the process of non-hegemonic regime formation and maintenance.

**Institutional bargaining and leadership**

A shared perception among states that they need to cooperate on an issue area (in other words the "demand" for a regime) does not necessarily mean that states will have shared preferences with respect to the form and content of any agreement upon which their cooperation might be based. Cooperation does not imply, and in fact rarely involves, a harmony of interests among states. States will have non-identical preferences and interests that they wish to maximise in a given issue area. The norms, rules and problems can only be overcome if a state with the appropriate resources acts to define a regime, not only in its own interests (a 'coercive' hegemon) but also for the purposes of contributing to order and thus providing a 'common good' (a 'benign' hegemon). While the model has been generalised, hegemonic stability theory arose out of a concern to explain the role of the United States in the post-war international economic order. Hegemonic stability theory has also been used in explanations of the decline of post-war international economic institutions such as the GATT and Bretton Woods. Haggard and Simmons (1987:500-504) canvass the empirical and theoretical challenges to hegemonic stability theory.

26. This is because the idea of the environment as a global commons, or a common good, means that access to the environment is indivisible and non-exclusive. No state can 'opt out'. The idea of common security, that no state should diminish the security of another by maximising its own, is directly applicable to environmental protection and offers a solution to the security dilemma identified by realist theorists (that is, the unintended consequence of maximising one's own security is to encourage feelings of insecurity in others). This analysis only works, however, when an understanding of security is widened to include both economic and environmental security. The idea that all gain when all cooperate in security endeavours is a concept central to that of international cooperation on environmental issues. The difference is that when common military security is threatened, the resort is to collective or alliance security, in other words, the relative gains doctrine. In environmental issues, without a common environmental security framework, there are no relative gains - the stakes are simply too high.

27. The costs of providing a common or public good are therefore disproportionately distributed, while the benefits are not (except that with respect to ecological security, if some states do not participate, the 'good' is underprovided). Those who bear the costs are therefore disadvantaged.
procedures embodied in an agreement represent what individual participating states are willing to accept as not being contrary to their national interests, as well as contributing to their collective interests. They represent what the least flexible state will agree to on any particular aspect of the agreement. As we will see, these outcomes have been typical of the Antarctic regime.

The process of negotiation has been investigated by Young (1989b; 1990b) in his model of institutional bargaining. That process, he suggests (1989b:360-61) "operates on the basis of a unanimity rule in contrast to a majority rule" and is less likely to be characterised by distributive bargaining or the search for relative gains. However, institutional bargaining, in its requirement for unanimity, does not preclude the use of payoffs, incentives or moral suasion. Neither does it suggest that all states are equal in the negotiations, or that power relationships are irrelevant. It assumes neither equity in the outcome, nor even efficiency. Young's model of negotiation fits well with processes in the Antarctic regime.

Successful negotiation (in the absence of a hegemon) depends upon the exercise of leadership. Leadership, in Young's model (1990b) may be structural (of which hegemonic leadership is an extreme type), entrepreneurial or intellectual. In its various forms it involves, he argues, the use of bargaining power, imagination in inventing institutional options, skill in brokering the interests of numerous actors to line up support for such options and the power of ideas (or a combination of these). Under Young's typology, leaders in institutional bargaining need not be states, nor even act as the agents of states. Indeed, his most recent formulation (Young 1991) attends particularly to the role of individuals.

28. The bargaining process typically involves persuading states to accept other than their "bottom line". If congruence between collective interests and individual interests cannot be reached on those issues considered to be fundamental, there will be no agreement. If consensus cannot be found on an issue that is not fundamental to the negotiation, then it is likely to be excluded from the agreement, in order not to prejudice the negotiation process.

29. Hampson (1989-90:55) calls Young's model a "useful antidote" to realist and hegemony-based accounts of the requirements for international cooperation. Young's model of institutional bargaining was developed to deal with inadequacies he perceived in earlier models of regime formation, particularly those concerned with hegemonic imposition or game theoretic prisoners' dilemma models.

30. Young (1989b:361) uses the term "integrative bargaining" to characterise the bargaining process when negotiators "do not start with a common understanding ... [of] the contract curve". That is, they are not sure where the intersection of their common interests might be.

31. In the sense that some states have more issue-relevant resources to bring to bear on influencing other states.

32. States which are to some degree affected by the rules of an agreement may have little or no say in its content. For example, a regime which sets out the general rules with respect to the retiring of debt to lesser developed countries may not include such countries among its signatories, or may continue to reflect the interests of the lender countries and institutions, but with which the recipients have little choice but to concur.

33. The rules and procedures of a regime may not adequately address the task at hand.
This might appear commonsensical to anyone familiar with negotiation theory in domestic politics or even to those familiar with the practice of diplomacy. However, little attention has been paid to leadership or institutional bargaining in theories of international relations, which have been reluctant to shed a commitment to more conventional forms of 'power' or to expand into the 'sociology' of international politics. Incorporating leadership and bargaining into an analysis of cooperation facilitates a study of the role of non-hegemonic states as influential actors in international politics. It points also to the importance of building coalitions to support initiatives in the processes of regime construction and maintenance, as well as in the process of change.34 These generalisations about institutional bargaining, unanimity rules and leadership will be important to the analysis in this thesis of the process of decision-making, and change on environmental issues within the Antarctic Treaty system.

**Compliance**

As already noted, reaching an agreement is a necessary but not sufficient condition for the existence of a regime. An agreement does not constitute cooperation if its norms and rules are never adhered to. Therefore the temporal dimension of a regime must also be supported by a dynamic dimension which involves implementation and compliance.

The strength and stability of a regime is defined by the degree of adherence to its norms and rules by the parties to that regime.35 The relevant question then is how is a regime maintained over a period of time especially if, as Young (1980:339) suggests, a highly decentralised system such as the international system is likely to rely on less formal compliance mechanisms. Understanding the reasons for compliance with norms and rules contributes to the analysis in this thesis of the persistence of the Antarctic Treaty system.

A regime can provide states with some measure of certainty about decision-making processes on an issue area, and provide actors with information which might otherwise be unavailable to them, thereby reducing transaction costs. A cooperative arrangement will persist if the parties continue to believe that the benefits of participation outweigh

34. Young (1990b:3) suggests that institutional bargaining "limits the relevance of theories focussing on coalition formation for those endeavouring to understand the formation of international institutions". I would suggest, however, that coalition building may well be an important factor in the bargaining process. Indeed, more recently Young (1991:291) has argued that "the conversion of structural power into bargaining leverage is also in part a matter of forming effective coalitions". See also Hampson (1989-90:58).

35. The strength of a regime is also dependent upon the legitimacy accorded to it by non-participants. Adherence to the norms and rules by participants is a necessary, although not sufficient, condition in reinforcing the legitimacy of a regime.
the costs. Compliance with regime injunctions may be motivated by calculations of self-interest and, in the short-term at least, by those same interests which motivated states to negotiate the agreement in the first place. Adherence to regime injunctions may not guarantee that a state’s optimal national objectives will be met, but if those goals cannot be achieved unilaterally, then cooperation with other states may ensure a ‘second-best’ outcome which will constrain other states in maximising their relative gains.

The experience of the regime reinforces expectations of reciprocity. In other words, ‘abiding by the rules’ and acting in accordance with regime injunctions rests on an understanding that other states will do the same in the long-term. Compliance and reciprocity thus contribute to confidence-building within the regime. The shared expectation of reciprocity is stronger when it is reinforced by a perception that non-compliance may also be reciprocated, and when non-compliance by any one state adversely affects other regime parties. In the case of the Antarctic regime, maintenance of the system has rested on reciprocal restraint rather than the working through of specific reciprocity across issues.

Adherence to a regime may become a matter of habit or custom through the socialisation or internalisation of norms and rules as a result of the practice of the regime. Imperatives for compliance might also include a sense of obligation, fear of repercussions in the case of defection from the norms or not abiding by the rules, or a belief that defection from the injunctions of one regime may raise doubts as to the trustworthiness of the state in any other regime, either of a similar nature, or with similar actors.

Reciprocity, in other words the expectation that states will meet their obligations over time, bears directly on the problem of international cooperation on environmental issues under negotiated (or non-hegemonic) regimes. The issue of compliance is a particularly important practical aspect of the debate about international environmental politics. Meeting the environmental challenge requires more than agreement to the content of rules and measures: it requires that the content be complied with.

36. The utilitarian model of regimes, which draws on game theory, suggests that states, in cooperating, are acting as rational utility maximisers.
37. For example, an agreement over disputed territory, as the basis for a regime, may not give territorial control to any one state, but it may prevent any other (possibly more powerful) state from gaining that control as in the case of the Antarctic.
38. As Keohane (1986a:3) observes this is an ambiguous terms which can refer to a policy pursued by a single actor, or a systematic pattern of action. For a detailed discussion of specific and diffuse reciprocity, see Keohane (1986a).
39. In game theoretic terms, the incentives to cheat are reduced in iterated games, when ‘players’ can expect to meet again.
How compliance can be encouraged or enforced in a system where states are reluctant to allow an international bureaucracy to oversee their performance is a crucial question. In other words, sovereignty norms are generally dominant in the hierarchy of values. It is non-governmental organisations rather than states that have argued strongly that existing environmental rules have not been adequately complied with. They have increased pressure on governments to comply with specific rules and measures on environmental protection, and sought to increase the accountability and transparency of state actions on environmental issues.

National interests and the domestic/international nexus

A recurring theme in this analysis of international cooperation and its focus on regime-patterned behaviour, is that of a state's interest. The term 'national interest' is an imprecise one which gains much of its apparent strength from its use as a rhetorical political device. Broadly speaking, however, it can be argued that the national interest is seen to lie in policies which advantage (or at least do not disadvantage) the state and its citizens, assuming that those interests are indeed consonant.

At first blush, this may appear to differ little from realist conceptualisations. Nevertheless, what advantages or disadvantages the state is often highly contested within the state. With respect to any particular issue area, decision-makers will articulate policy objectives that are argued to meet the 'advantage' criterion. Specific measures and actions will be sought, or adopted, in pursuit of those policy objectives. In other words, when I talk here about 'national interests' I am talking about a state's policy goals (the ends) and the processes by which they are to be attained (the means) with respect to a particular issue area.

The question of how states define their interests and how their interests change, that is how states "learn", is, Nye suggests (1988:238), one of the most thought provoking questions in international relations. It is also particularly relevant to this thesis. Realist theories pay little attention to foreign policy making and the redefinition of national interests within a study of international relations and therefore offer little guidance

40. With respect to global environmental issues, the question of monitoring and compliance is a touchy subject. Who does the monitoring?
41. Waltz (1979:121) cautions against mistaking theories of foreign policy for theories of international relations. See Mastanduno et al (1989) for an attempt to lay the foundation of a realist theory of the state which bridges domestic and international politics. Their analysis nevertheless posits the "state" as the pivot, looking inwards as well as outwards. It does not consider the effect of domestic factors on the state. Putnam (1988) offers a two-level game model as one attempt to solve the "puzzling tangle" of the relationship between domestic politics and international relations. His focus is on state negotiators who must try to satisfy domestic and international coalitions simultaneously. In other words, successful playing of a two level game requires coincident "win-sets".
here. What needs to be considered in addition to "power and egoistic self-interest" (the staples of realist discourse) as explanations of state action is, as Smith urges (1987:255), "knowledge and the process by which states learn". These concepts are central to the liberal tradition. "Cognitive" insights into international relations suggest that "cooperation cannot be completely explained without reference to ideology [or ideas], the values of actors, the beliefs they hold about the interdependence of issues, and the knowledge available to them" (Haggard and Simmons 1987:509-10).

This also involves an investigation into the interaction between the domestic and international arenas of politics. One must, however, be mindful of Dryzek, Clark and McKenzie's (1989:479-80) caution against losing sight of the international system in considering domestic factors. Otherwise, they correctly imply, one has a theory of comparative foreign policy rather than of international relations.

Propositions about international cooperation which seek to depart from realist power-based explanations need to explore the role not only of individual actors or organisations within the state in the process of defining national interests, but more particularly of those actors where they form transnational communities. Such communities have been increasingly active and influential both within the Antarctic Treaty system and on international environmental issues generally.

Learning and knowledge
Learning, as noted above, is in this case the process of defining (or redefining) national interest, in response to new knowledge. Thus learning is also relevant to the process of change. Although liberal theory emphasises the role of scientific and technical knowledge in enhancing interdependence and cooperation, (and therefore welfare), neither knowledge nor learning need be inherently progressive or benign.

42. The so-called 'second image' and the 'second image reversed'.
43. A point that is often overlooked is that while a multilateral agreement (that is, an agreement to cooperate) is made between states, it often establishes rules that impact upon private entities, for example, mining or fishing companies, telecommunications companies, or industrial enterprises. Giving effect to a regime (compliance) may involve domestic legislative or regulatory initiatives and therefore require the support of domestic coalitions. This level of analysis supports the proposition that the willingness of a government to adopt and comply with cooperative policies (in other words, defining its national interests in terms of cooperation, or learning to cooperate) is linked to domestic factors.
44. Transnational defines interactions across national boundaries where the actors are not agents of the state. Non-governmental actors may, however, interact with national governments in an international setting. I have continued to use the term 'international' for non-governmental organisations which are established at the 'non-national' level (for example, Greenpeace International or WWF-International).
45. That new knowledge may be consensual or contested, and it may be nationally or internationally generated, or both.
Learning occurs at the level of the state or at the level of the regime (institutional learning). It is the process which gives rise to the demand for cooperation on an issue-area. Ernst Haas suggests (1980:390) that "we know that learning has taken place when actors adopt new rules and behaviour that make use of new information and knowledge, or adopt ways to search for such knowledge".

Knowledge, according to Ernst Haas (1980:367-8) is

the sum of technical information and of theories about that information which commands sufficient consensus at a given time among interested actors to serve as a guide to public policy designed to achieve some social goal.

More recently he has defined it as

no more than the temporary consensus of a group of practitioners that a "problem" should be defined in a certain manner, the causes and effects arranged in a certain pattern ... (Ernst Haas 1990a:219)

These are general definitions. The important component is that information does not of itself constitute knowledge: there must be agreement on the meaning attached to that information (the interpretation or 'theory' that surrounds it) amongst a group of people to whom that information is professionally relevant. Without agreement, knowledge can have little impact on regime development, as Krasner (1983b:20) observes, nor on learning in a world of sovereign states. This is important with respect to environmental politics where scientific uncertainty, that is a lack of agreement about the meaning of scientific information, is often used by states as a justification for inaction.

Knowledge is relevant to the process of learning, and cooperation only when it is accepted by decision-makers.46 Knowledge in this case is power only when it informs policy. Learning by states in response to new knowledge is, therefore, a political process whereby those who 'have' knowledge seek to influence decision-makers, sometimes in contest with competing 'knowledge'.

The definition of knowledge must be flexible enough to include new values. This is relevant to international environmental politics in which non-governmental organisations, as well as contributing to the flow of information, bring to the debate competing interpretations of scientific information, and new values and beliefs on what is environmentally acceptable and how we should view our relationship with the natural world.

46. Haggard and Simmons (1987:510) draw attention to the fact that "cognitive approaches cannot predict at what point consensual values and knowledge will produce cooperation".
The norms and rules, and the information provided by a regime, once established, also constitute ‘knowledge’. Liberal approaches to cooperation suggest that national interests and policy objectives come to be defined in a way that is congruent with the norms and rules of a regime. Learning therefore goes to the heart of compliance and is at the crux of the liberal argument that states ‘learn’ to cooperate under a regime (in other words, that regimes do matter).

Transgovernmental and transnational actors: inside and outside the state

As Puchala and Hopkins observe (1983:63) "each regime has a set of elites who are the practical actors within it".\(^{47}\) Bureaucratic elites contribute to the definition of a state’s national interest, that is its policy objectives, although this is often in response to particular interests within the state. These elites are also crucial to the implementation and maintenance of the regime. Their ‘knowledge’ is likely to predominate over that of other actors (domestic and international) once the regime is in place although the degree to which this is so is conditioned by the salience and politicisation of the issue area.

International environmental issues have come to be highly politicised topics on national and international agenda. At both a domestic and international level we might expect, therefore, to see bureaucratic actors competing with other "knowledge based" communities for influence over these issues. Bureaucratic elites have an advantage in this contest in that their location within the formal decision-making apparatus offers some advantages in setting the terms of the debate.

Zacher (1990:153) suggests that "[t]he integration of domestic political systems into a study of the evolution of general patterns of international collaboration should examine how ... linkages among ... elites impinge upon the occurrence and form of regimes" (my emphasis). National elites establish a network of communication with other national elites through the decision-making procedures and rules of the regime.\(^{48}\) Keohane (1984:101) talks about "informal coalitions of like-minded officials" which develop to achieve common purposes and establish networks of acquaintance and friendship. Officials form transgovernmental bureaucratic coalitions with some degree of commitment to a regime and to maintaining their own positions of influence within it. This has been a persistent and influential feature of the Antarctic regime.

\(^{47}\) These elites are most likely to be from within foreign ministries and possibly other government departments with expertise in the issue area. Foreign ministries, charged with the carriage of diplomacy, are often reluctant to relinquish policy control to actors within other departments.

\(^{48}\) Keohane and Nye (1977:34) note that contacts between governmental bureaucracies charged with similar tasks may not only alter their perspectives but lead to transgovernmental coalitions on particular policy questions.
Participation in a regime (that is, experience of cooperation) may alter the way key participants in the state understand that state's interests, although as Nye suggests (1987:381) individual learning is a necessary, but not sufficient condition for the more complex process of organisational learning.

Bureaucrats and policy-makers in participant states in a regime become attuned to the pattern of that regime as it structures decision-making on the relevant issue-area. Their socialisation into its norms and rules is reinforced by interaction with their counterparts in other regime countries. This process may be described as a form of cognitive congruence (Ernst Haas 1980:368). We might expect, therefore, that such elites will continue to be supportive of the regime in contest with other interests within the state as well as outside the state. Nevertheless, bureaucratic elites continue to be agents of the state in a way that, for example, bureaucrats in intergovernmental organisations are not. Therefore while they may seek to maintain the regime, they will also be seeking to advance the interests of the state they represent.

Clearly the role of national bureaucratic elites is central not only to the formation of states' policies but also to the way regimes are managed and how they "acquire" knowledge. But bureaucratic elites do not learn and act in a vacuum - they have to interact with, and possibly compete with non-state actors.

In line with the key features of international environmental politics outlined in the introduction to this thesis, the analytical framework developed here needs also to consider the role of those non-state actors.

Realist theory does not adequately account for the influence of non-state actors. Thus it sheds no light on how actors within societies can use partners in transnational coalitions or transnational institutions to advance (or retard) the learning of new interests by their own governments (Nye 1987:373). However, in line with Young (1989b:364) it would be a "serious mistake to overlook the role of transnational alliances among influential interest groups in developing and maintaining regimes" at an international level, or their role in influencing the definition (and redefinition) of national interests.

49. Holsti (1985:137) suggests that while "[n]onstate actors may well influence the course of international politics ... ultimate decisions on war, peace, security and order depend solely upon the public authorities of states". New models, he argues, are therefore not necessary. There is an internal contradiction in this assertion. If non-state actors may well influence the course of international politics, then they must be accounted for in the models. Holsti makes the mistake of assuming that challenges to the state-centric model of international relations and the need to extend it to include non-state actors is equivalent to an argument that states are no longer the most important actors in international politics or that non-state actors have surpassed states as the new decision-makers in international politics. Waltz (1979:95) makes a similar mistake.
Non-governmental organisations

Liberal approaches to international relations argue that transnational non-state actors are important actors in the practice of international politics. However in broadening their study to include non-state actors, liberal scholars have focussed mainly on intergovernmental organisations or on multinational corporations, especially within the study of international political economy. On the whole, liberal theorists have only recently begun to examine the role of environmental organisations.

Any serious investigation of environmental issues in international politics needs to inquire into the role of non-governmental organisations (NGOs). They are, as Sands (1989:401) observes "repositories and developers of ideas. And they are actual international actors". Caldwell suggests (1988:16) that the "emergence of an organised international environmental movement and a collateral growth of knowledge regarding the ... consequences of environmental problems have generated an evolutionary progression in international institutional development".

On international environmental issues NGOs seek to improve the policies and actions of governments with respect to environmental protection. They lobby national and international decision-makers in their attempts to influence both domestic and international agenda. NGOs also seek to apply indirect pressure on decision-makers through the mobilisation of public opinion on the nature of the environmental challenge and through the instrument of electoral politics.

As domestic actors, NGOs now play an important role in the process of defining, or redefining, national interest on environmental issues. In other words, they contribute to the learning process. However they compete for influence with other actors involved in this process. Domestic NGOs do not act in isolation on international issues. They form transnational coalitions to coordinate their policies and activities on international issues and to facilitate the exchange of information in support of domestic and international campaigns. Rowlands (1991:113) suggests that NGOs also "create channels of communication that can later be used by states' representatives in order to conduct intergovernmental negotiations". On international environmental issues NGOs bring to the debate new values and ideas about what is environmentally acceptable. NGOs also

50. The qualitative difference that may be identified between non-state actors such as MNCs and non-governmental actors such as environmental organisations is that the former continue to have a narrowly-defined definition of 'self-interest' (profits, freedom of access to resources or from government regulation) whereas for the latter, their actions are not primarily geared to self-interest but to the public interest or to a more broadly defined interest of humankind.

51. In the absence of the latter dimension, a study of non-governmental organisations here would rest on the nature of domestic interest group politics.
contribute to the flow of scientific and technical information and may provide an alternative source of information to state and other non-state actors. They focus explicitly on improving the practice of international politics on environmental issues (in the rules adopted and in compliance with those rules). They are established, therefore, in order to bring about change.

Ness and Breckin (1988:271) argue that NGOs "typically face two tasks in reaching their general goals: they must develop some consensus in the world community for the goal, and they must deliver technical assistance" (in other words, knowledge) for that goal. Their success in those tasks will depend on the level of access to decision-makers (nationally and internationally) and in their ability to mobilise public support. At the national level (where NGOs seek to redefine national interests) access is more likely in an open than a closed society. Their voices are more likely to be listened to when there is a lack of unity among decision-makers on what is the best policy. At the international level, where NGOs seek to inform and encourage institutional learning (that is, the adoption of new values and knowledge directly at the level of the regime) access depends on the nature of the regime as it operates internationally. The legitimacy which NGOs acquire in the eyes of state actors is also important and is strengthened by the development of expertise and knowledge over time.

Incorporating the activities of non-governmental organisations into an analysis of international environmental politics requires addressing the distinction between activity and influence. It is a relatively straightforward task to describe the activities of NGOs. Establishing influence is another matter. In part it rests on a counter-intuitive proposition - can we argue that the same outcomes would have occurred without the presence of NGOs - as well as an investigation into the statements and responses of decision-makers. The Antarctic case study shows clearly NGO activity and influence at work on several environmental issues including the overturning of the minerals convention.

Environmental organisations are not the only non-state actors with an interest in the debate on environmental issues. Commercial interests have also been active in the debate, particularly at a domestic level. Nevertheless commercial interests have, at least until now, been less likely to form transnational alliances to support their views on environmental issues. Indeed commercial competition with may well override any sense of common interests among industry groups in different states. The impact of multinational corporations on the debate should not be overlooked on particular issues and may become increasingly important on certain environmental issues.52 The impact

52. A case in point is that of ICI and DuPont whose work on chlorofluorocarbon substitutes made it possible for an agreement on the phasing out of these ozone-depleting substances to be adopted
of the scientific community, which has become influential in the debates on environmental protection, has often been overlooked in discussions of international politics because of a misplaced perception (sometimes fostered by scientists themselves) that they are not political actors and are therefore peripheral to the study of international politics.

A recent addition to the literature on international cooperation, which provides a means of investigating the role of the scientific community, and one which has been adopted by international relations scholars in the context of environmental issues, is that of epistemic communities.  

**Epistemic communities**

Broadly, these are defined as "transnationally organised networks of knowledge-based communities" (Peter Haas 1990:347) but a definition which helps us to identify an epistemic community easily is hard to pin down. The emphasis is on scientific and technical knowledge rather than, for example, 'diplomatic' experience. Peter Haas (1989; 1990) has sought to identify an ecological epistemic community whose members, while sharing a belief in ecological principles, may nevertheless come from a variety of 'scientific' disciplines and backgrounds.

What seems to be important in the definition is that the "network" seeks, in a coherent manner, to influence decision-makers to adopt policies which give effect to their knowledge and beliefs. Their influence is more pronounced when expertise is regarded as important to the making of sound policy, when technical information is at a premium and political leaders and decision-makers defer to experts, and when the knowledge is not contested. Where that is not the case, epistemic communities will be influential only when they are able to repel challenges to their knowledge by other interested actors.

and, more importantly, to be implemented even if not as fast as many environmental organisations would like. Without the support of the large multinational chemical companies, the Vienna Convention and the Montreal Protocol on ozone depleting substances would be empty agreements.

53. As Peter Haas (1989:384) points out the term has been adapted from the literature on the sociology of knowledge, although it has been used in a somewhat more specific manner in international relations literature.

54. Peter Haas (1990:349) refers to an epistemic community as "transnational networks of knowledge based communities that are both politically empowered through their claims to exercise authoritative knowledge and motivated by shared causal and principled beliefs". Ernst Haas (1990b:41) defines an epistemic community as "composed of professionals ... who share a commitment to a common causal model and a common set of political values". These professionals are, he suggests, "united by a belief in the truth of their model and by a commitment to translate this truth into public policy, in the conviction that human welfare will be enhanced as a result".

55. Ernst Haas (1990b:70-71; 221fn23) makes it clear that NGOs might also constitute an epistemic community, although they do not always do so.
The role of epistemic communities has been explored in the processes of compliance with regimes and in enhancing the process of cooperation. Peter Haas argues (1989:377) that the "transformative processes that regimes may initiate or foster" can empower a group of experts (that is, the epistemic community) which then contributes to the development of congruent state policies. In other words, they are potential contributors to the definition of a state’s national interests and thus to the process of learning. Epistemic communities may also be important, with respect to environmental issues, in mobilising states to seek agreements and in influencing the content of those agreements, as well as in encouraging compliance and maintaining regimes. While the Antarctic example demonstrates some of these features of an epistemic community the experience of influencing policy has been less straightforward than the model Peter Haas describes.

Peter Haas (1989:399) suggests that the concept of epistemic communities contradicts three common explanations for the development of congruent state policies: foreign pressure (coercion), public opinion, and the rational anticipation of future benefits by a unitary government. This holds only if epistemic communities are seen to be successful and it is probably simplistic to suggest that these explanations are necessarily mutually exclusive. Very little work has been done on epistemic communities, or the conditions under which they are effective.56 Further investigation is needed into the conditions in which other explanatory factors might, or might not, be relevant.

Cooperation revisited

This section of the chapter, theorising about cooperation, has revealed the extremely disparate, complex and contested nature of generalisations about cooperation, extending from broad-based systemic level concepts through complex arguments about the operations of regimes, to the nature of knowledge-based communities and state and non-state actors. Before turning to the next section, which is about theorising change, it is helpful here simply to summarise those generalisations about cooperation which are useful to understanding the issues at the heart of this thesis - how international environmental politics are managed.

These generalisations seek to depart from those generated by the realist school which would have it that interstate cooperation is, in the end, a victim of the competitive

56. The major empirical study on epistemic communities in international environmental politics has been on the role of ecologists and scientists in the Mediterranean Action Plan. Peter Haas suggests only that it may be generalisable to other environmental issues. Young (1990a:341) observes that while the argument about epistemic communities "requires further elaboration and may not stand up in its strongest form, there are indications that groups of this kind have played significant roles in the formation of some environmental regimes".
nature of the international system and the assertion of states' interests. Instead those propositions which are argued to be useful in examining both the Antarctic case study of this thesis and, more broadly, questions about how international environmental issues are managed, derive from an initial proposition that collective action problems (which might arise because of competing national interests) can be overcome and that states do cooperate where their long-term interests (individual and collective) are seen to lie in seeking joint gains.

The way states mostly cooperate under those circumstances is through regimes and institutions which establish frameworks for, and impart a degree of certainty to, their interactions over time. Regimes operate through norms and rules, bargaining and leadership, and reciprocity and socialisation. Transgovernmental and transnational coalitions play an important role in the creation and maintenance of regimes, and the definition of national interests, through the development and sharing of knowledge and the process of learning.

These concepts and generalisations form the analytical framework for discussing cooperation in this thesis. It is these concepts, generalisations and propositions that need to be examined in the course of the investigation of the Antarctic case study and of environmental politics in international relations as a whole.

Theorising about change

The concept of change, as Rosenau observes (1989:15), is "a difficult and elusive concept, pervaded with ambiguity and marked by a deceptive simplicity". This investigation of the literature on change in international relations theory examines debates about the processes of, as well as the potential for, change.57 The propositions elucidated here will be useful when we examine, later in this thesis, change in environmental politics and practice in the Antarctic Treaty system. Further, the debate about how best to cooperate on international environmental issues includes an explicitly normative and prescriptive demand for change in the way states define national interests and conduct international relations. As outlined in the introduction, this thesis explores how states have responded to those demands, and to new knowledge on the environment, and the extent to which there has been a change in the nature of cooperation on environmental issues.

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57. A word of caution is warranted here. It should not be assumed that changes in a regime, or new policy preferences on the part of any actor within a regime, are inherently progressive or benevolent. They may or may not lead to a strengthening of the regime or to an improvement in cooperation, or in the management of the issue area.
Demands for change

It is instructive to examine briefly the demand for normative change, before proceeding to an investigation of the dynamics, and complexity, of the process of change in international relations. At a functional level, states are challenged (principally by NGOs) to improve their policies and practice with respect to environmental issues. It is argued, however, that in the long term, success in meeting the environmental challenge will be limited while cooperation among states is largely determined by sovereignty values and norms deriving from the state system. As well as an impetus for change in rules and procedures there is, therefore, a demand for new norms and principles, and even for a shift from a state-based international system to some form of "cooperative internationalism".

Thus it is argued that the successful management of environmental problems requires not only cooperative adjustment in the short-term (which can go a long way to mitigating some of the effects of environmental mismanagement), but ultimately a transformation of the international system so that interdependence norms eventually replace sovereignty norms. This critical argument is advanced by scholars who might be described, in the paradigm debate, as "post-realists"58 (Falk 1983:14) and by non-governmental environmental organisations whose challenge derives from the practical experience of the difficulties encountered in moving states on environmental issues.

In this connection, the question arises as to exactly why managing environmental issues should require a transformation of the international state system. Essentially, the argument for a transformation of the state-system rests on the need to come to terms with the cumulative impact of environmentally irresponsible behaviour and the irreversibility of environmental change.

In this view, the playing out of competing national interests in the international system is seen to limit the extent of cooperative adjustment and thus the extent to which it can address these core environmental issues. This is because, in identifying national interests and thus the degree of adjustment that will be accepted, the values of states focus (on the whole) on short-term interests. Environmental security, on the other hand, requires a focus on long-term interests and a recalculation of the value of intergenerational equity and the relative values of the ethic of the natural world and the ethics of human interests. In this transformation, therefore, the existing hierarchy of

58. The models which fit into the "post-realist" or what might be called a post-statist approach vary widely, from the ideas in Gurtov (1988) through the world order models of Falk and Mendlovitz (see, for example, Richard A Falk et.al (eds) (1982) Toward a just world order, Westview, Boulder) to regionalists like Kothari.
values which privileges a state's political and economic concerns over environmental ones must be restructured.

Gurtov (1988:19) argues that the more transnational politics becomes and the more global some of the issues, the less relevant and effective are policies and interpretations based on a narrow concept of national interests. Astrophysicist Carl Sagan, in testimony to a 1985 US Senate Committee hearing on legislative responses to the threat of excessive global warming, warned that

nations ... have to make a change from their traditional concerns about themselves and not about the planet and the species, a change from the traditional short-term objectives to longer-term objectives ... [W]hat is essential is a global consciousness (cited in Seyom Brown 1988:184).

Further, defection from norms and rules of an environmental agreement (when a state's short term interests are perceived to be disadvantaged) can have irreversible consequences for the state of the environment.60

What we are presented with in this particular debate, therefore, are competing value systems. For realist analysts and states operating in what they perceive to be an anarchic world system, the dominant values are sovereignty, autonomy, self-help and interest perceived as states self-interest. For the post-statists demanding change, the dominant values should be interdependence, system transformation, interest defined as human (or even planetary) interests, political accountability, peace, justice and ecological balance.61

The potential for change

Realist approaches to international relations assert that the potential for change is limited by the nature of the international system and by a state's position within that system. Generally, realist models pay little attention to how changes in the intentions and actions of particular state actors come about, except in response to changing power relationships in the international system. Hegemonic stability theory suggests that

59. In a similar vein Caldwell argues (1988:14) that the "complex transnational character of many environmental problems presents special difficulties in a world governed upon premises of exclusive national sovereignty".

60. One might argue here that trade problems require high levels of interstate cooperation and a degree of harmonisation of domestic economic policies as the basic condition for their resolution. Defection from such norms by some states in the case of trade can be damaging but not necessarily irreversible or fatal to a changing trade regime and the international economic order.

change in a regime, or in the international system generally, is dependent upon the
values and structural capabilities of the hegemon. Game theoretic approaches tend to
concentrate on the sets of preferences at any one time and therefore, as Jervis argues
(1988:326-7), set the question of change to one side. Questions of learning through
experience or knowledge, or changes in values and ideas, are generally outside the
ambit of realist interpretations of change.

The theories of the broad realist tradition therefore shed little light on the process of
non-hegemonic peaceful change generally, or with respect to environmental issues
particularly. Further, given its fundamental assumptions, the realist tradition is
unsympathetic to the idea that international politics can incorporate global human
interests into the interests of states. Gilpin (1981:225) argues that there is "no guarantee
of common interest or of a willingness to subordinate selfish concerns to the larger
good". A "unified humanity" he asserts, does not really exist. Carr is similarly
sceptical on the existence of a "harmony of interests" which he describes (1981:42;45)
as the idea that the interests of the community and the interests of individuals coincide
and that "nations in serving themselves serve humanity". We must reject, he argues
(1981:60) as "inadequate and misleading the attempt to base international morality on
an alleged harmony of interests".

The "post-realists" counter that

realist decision-makers may be driven toward globally meaningful
change by self-interest ... [A]s state leaders come to appreciate the non-
military threats to national security they may invest ... more in dealing
with them and eventually more in cooperative responses to problems that
are transboundary in scope" (Gurtov 1988:170-71).

Seyom Brown (1988:306) also argues that there is "no requirement for altruism on the
part of the relevant actors, only that they act consistently with their enlightened self-
interest". However the critical voices have not yet developed, as Falk observes
(1983:15), a "convincing base for a conception of transition from the world that is to the
world that might be, and needs to be, if current challenges are to be met".

The liberal critique of the realist tradition, with its emphasis on cooperation and
international institutions, on transnational actors, knowledge and the processes of
learning, is well-placed to provide some insight into the nature and processes of change
in regimes where power-based explanations are less appropriate, and into change in
perceptions of national interests. It may also provide some insight into the process by
which normative change might come about.
In the liberal tradition, under conditions of complex interdependence, change in the international system can be explained as a product of individual or institutional learning. Nye (1988:239) observes that the "more sophisticated variants of Liberal theory provide a useful supplement to Realism by directing attention to the ways in which domestic and international factors interact to change states' definitions of their interests".

In the light of the analysis of cooperation in the first section of this chapter, there are two questions that can be asked about the nature of change in international relations which are relevant to this thesis. The first is how do regimes change? The second is how do states redefine their national interests? These are different but not unconnected questions. The first focuses primarily on the international dimension: the second primarily on domestic processes. The difficulty is to link the two. The discussion here turns first to the level of the regime, and then to the level of the state.

**Changes in regimes**

Regimes may be inherently resistant to change even when, as Young notes (1983:96) they produce "outcomes that are widely understood to be undesirable or suboptimal". Sunk costs, that is the investment of past efforts, mean that institutions, as Stein suggests (1983:138), are not "lightly to be changed or destroyed". Regimes provide a known and understood framework for cooperation on an issue area. Policy objectives may well be defined so as to support a state's participation in an existing regime. Further, the costs of establishing a new, and unknown, agreement are likely to be considered correspondingly high.62

In response to new technology, information or ideas about the management of an issue area, states may agree to modify existing rules and procedures,63 or adopt and implement new rules and procedures to address new agenda items within the issue area.64 Individually, these adjustments may not be identified as a change, although

62. Established transgovernmental bureaucratic elites within a regime are likely to be resistant to change of anything more than an incremental kind and then often to small changes in rules and procedures rather than in any reordering of the normative framework. Caution is normally the keyword.

63. For example, new information on the breeding habits of a particular species of fish might require a rethinking of total allowable catch levels within a fisheries management regime.

64. This is somewhat akin to Puchala and Hopkins' (1983) evolutionary change, or to Ernst Haas' (1990b) adaptation through incremental growth which, he suggests, is not the same as learning. In their typology Puchala and Hopkins identify evolutionary change as "cognitive learning and the recasting of goals among dominant elites" which occurs when learning and technology foster new or changed goals. It is, they suggest, less common than revolutionary change where new principles and norms are generated in accordance with shifts in power (1983:66). Haas' most recent and extensive work on change is specifically concerned with change in international organisations. It does not specifically address the question of why and how states' interests change at the individual level, nor is he concerned with regimes and institutions in the broader
cumulatively they may prove to be so. This process can be defined as consensual, incremental change. Proposals for change are normally generated through the regime's decision-making processes by representatives of one or more participating state.

The appearance of new actors within the regime, whose beliefs about cause and rectitude (their principles) differ from those of the original members, may also as Ernst Haas (1983:217) observes, generate new demands and different expectations of behaviour. Changes to the rules and procedures of a regime may also occur as a strategic response to external pressures. The extent to which actors outside the formal boundaries of the regime, who may be state or non-state actors, are influential will depend on the salience of the issue-area and the extent to which there is international disagreement over the legitimacy of the regime.

In addition to changes in the rules and procedures that structure cooperation on an issue area, the norms and principles shared by states within a regime may alter. When new norms and principles are adopted to replace existing ones no longer acceptable to the regime states, this effectively means that a new regime is created with respect to the issue-area. The hierarchy of norms and principles inherent in a regime may also be reordered even if their substance does not change. Regime participants may accept the need to moderate sovereignty norms and accept a greater influence of interdependence norms to achieve an outcome that is collectively thought to be desirable. The rules and procedures are then likely to be adjusted to give expression to the altered normative hierarchy. Participating states nevertheless continue to perceive that they will not be disadvantaged by the change.

Most explanations of regime change, especially of change to norms and principles, have focussed on power-related factors within the regime. In other words, change is argued to result from a change in the "distribution of capabilities (overall or within issue areas) among major actors of world politics" (Keohane and Nye 1977:54). These explanations have the advantage of parsimony and may well be appropriate in some circumstances.

65. Thus in imposed or hegemonic regimes, regime change results when the hegemon perceives its interests differently and acts accordingly or when the power of the hegemon declines and it is no longer able to maintain the regime. In negotiated regimes where, as noted above, the distribution of power need not be equal, changes in that distribution may affect the regime. See also Puchala and Hopkins (1983:66) and Young (1983:108). In their typology of four models of change, Keohane and Nye also consider an economic process model which discounts political factors altogether (1977:38-42).
However these explanations do not give an account of the dimensions of international environmental politics of interest here - the relationship between domestic and international factors, the role of transgovernmental and transnational coalitions, and the importance of knowledge and ideas. In their international organisation model of change, Keohane and Nye (1977:54-8) argue that such factors can work to constrain the ability of powerful actors to effect change in accordance with their interests. "Power over outcomes" they suggest (1977:55) "will be conferred by organisationally dependent capabilities such as voting power, ability to form coalitions, and control of elite networks" (their emphasis).

However this still sheds little light on a possible role for non-state actors or bureaucratic elites in the process of learning, or redefining national interests, or in mobilising states to change. The knowledge to which regime participants respond, as discussed above in the section on theorising cooperation, may be generated by the scientific community, or by non-governmental organisations, who function through transnational coalitions to impact upon the regime, as well as upon individual states. The incremental process of change described here results from the interplay between transgovernmental and transnational coalitions.

Redefining national interests
Regime change cannot be separated from changes in national interests. Institutional learning and individual learning are linked. As I have outlined earlier in this chapter, national interests in any issue area are given expression in policy objectives (the ends) and the particular measures and actions (the means) that are believed to meet those broad policy objectives. However, those objectives do not exist independently of the sets of values and principles held by the players in the national and regime games. It is appropriate to consider not only how the definition of ends or means might change but also how new values and priorities are incorporated in these.

Peter Haas (1989:397) distinguishes between single-loop learning (the "pursuit of new instrumental policies while the ends remain constant or unquestioned") and double-loop learning ("the recognition of new ends and the adoption of new means to accomplish them"). Nye (1987:378) offers three ways in which perceptions of national interests may change: because of domestic shifts in power, through cognitive change and learning in response to new knowledge or through normative change.66 A state's policy objectives may change with a change of government or when one group of decision-makers gives way to another. Policy preferences on international environmental issues are increasingly the outcome of domestic political contests in response to international

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66. For example, changing beliefs that apartheid can no longer be tolerated. Change of this sort is based on new values which are not dependent on scientific or technical knowledge.
debates. Traditional foreign ministry elites may be challenged in their policy recommendations by bureaucrats from other ministries, especially the newer environmental ministries. Environmental organisations, the scientific community and commercial interests are also participants in this domestic process.

The process of cognitive learning, and the role of knowledge, have been examined in the first part of this chapter and the analysis there is relevant to this discussion. Cognitive learning may also take the form of paradigmatic learning which Mann (1991:304) identifies as a "radical transformation of a community's norms, values, beliefs, practices [and] perceptions". Thus cognitive change (in response to new knowledge) becomes normative change. Changing values are important not only in reshaping an existing regime, but also in mobilising states to seek to cooperate on environmental issues where no regime exists. The catalyst for a change in values, with respect to environmental politics, is most often to be found outside the formal state apparatus, within the scientific community or the non-governmental environmental community. The Antarctic is a case that demonstrates this.

Redefined national interests and policy objectives, whether they come about as a result of domestic power shifts, or normative or cognitive learning (or a combination of processes) do not of themselves lead to a change in how states cooperate on an issue area. It is useful, therefore, in returning to the international dimension, to explore in a little more depth the linkages between change in a state's policy objectives and change in the cooperative management of an issue, through the mechanism of a regime, to meet those changed goals.

Where a state has new policy initiatives it will seek to have the rules and procedures of a regime reflect, in some way, those changes. In doing so, it will make assessments about which of its preferences are negotiable and which are not. For such preferences to be adopted through the decision-making processes of the regime (that is, incremental change) there must be similar support for the new objectives in other regime states. As with the bargaining process which leads to regime creation, the pace of incremental change will be set by what the least flexible of the influential states (and its decision-makers) will accept as not being contrary to its national interests. In this process, non-state transnational actors may well be influential in mobilising support for new policies, or in hindering their acceptance.

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67. In most countries, environmental ministries have been established only in the years since the 1972 UN Stockholm Conference on the Human Environment.
**Defection**

The examples of Australia and France within the Antarctic Treaty system raise questions about why states defect from the norms and rules of a regime, and how that affects cooperation. The potential for defection is also important in international environmental politics because it bears on the need for compliance and the constraint of free-riders.

As Young has argued (1983:94) "deviance or non-conforming behaviour is a common occurrence in connection with most institutions. Commitment to the norms and rules of a regime can vary over time, both within a state and between states who are participants in a regime. However, defection implies some sudden, unexpected departure from regime injunctions. It may involve refusing to comply with agreed rules or measures, or the breaking of unwritten conventions on what is appropriate practice within a regime. Defection is a manifestation of a change, initially at the level of the state, but also at the level of the regime as it impacts upon cooperation.

In Putnam's terms, defection can be voluntary or involuntary (1988:438). The former refers to "reneging by a rational egoist in the absence of enforceable contracts". Thus, defection appears more profitable (or less costly) than compliance. Involuntary defection "reflects the behaviour of an agent who is unable to deliver because of failed ratification", in other words because of a lack of domestic support.

The test of the importance of a violation to other states rests on the extent to which they feel that their own interests are threatened by the violation, or the comparative value they attach to the norm or rule that has been violated. Defection will be judged more seriously if the defecting state (or states) possesses issue-specific power within the regime and its defection might contribute to regime instability. Thus issue-specific power based explanations can have some utility in connection with an examination of processes inside and outside the state.

Several outcomes of defection are possible. Rather than inspiring a "spiral of conflict" (Jervis 1988:330) it may be confined to one round of action and reaction (in game theoretic terms). Non-compliance or defection does not necessarily lead to a change in the regime, nor to its demise, nor imply that the regime is even inherently unstable. However, continual non-compliance by the actors most affected by the norms and rules

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68. Puchala and Hopkins (1983:89) also note that in most regimes "a certain degree of unorthodox behaviour is tolerated and not taken as a challenge to the regime".

69. Although it might indeed do so as any state cannot be certain of the unintended consequences of defection from regime injunctions.
of a regime is likely to lead to its demise. A defecting state may subsequently withdraw from a regime because of the belief that both its short and long-term interests, that is policy objectives, can no longer be met by continuing to cooperate with other states on the management of an issue area.

Non-compliance or defection is not necessarily dysfunctional. Jervis (1988:330) suggests that "defection in one instance can produce mutual cooperation over the longer run", a proposition supported by Kratochwil (1984:708) who observes that "from non-compliance can come orderly change ... or the establishment of a new and discontinuous order" (my emphasis).

Defection may signal an increasing dissatisfaction on the part of one or more states with the pace of incremental change. Violation may be useful to overcome institutional inertia. The defecting state may then seek to persuade its regime partners to adopt rules and procedures congruent with its redefined objectives or in support of new policy initiatives, and may thus effect regime change. In mobilising support for its initiatives, the processes of leadership and bargaining described earlier in this chapter are relevant. Again, the Antarctic case provides a clear example of leadership and bargaining at work following defection.

The extent to which the defecting state is able to build coalitions and mobilise that support within the boundaries of the regime will depend upon several factors. These will include the extent to which those new policy objectives are shared by other participants in the regime. It will depend upon the impact other states believe the new policy objectives, if adopted, will have on their interests and preferences within the

70. The International Whaling Convention is a case in point. If those countries engaged in whaling cease to abide by its rules, then the regime is no longer effective, even if non-whaling states have not withdrawn from the agreement. Further, regimes do not cease to exist only because of non-compliance with the rules or norms. They may cease to exist because the regime is no longer required. Regimes may also cease to function, but the agreement may not be dissolved. The ANZUS arrangement is a case in point and provides a good case study of change in a security regime. After the New Zealand government's decision not to permit US nuclear-capable vessels into New Zealand harbours (even though there was technically nothing in the ANZUS pact about nuclear vessels) the arrangements under the agreement ceased to operate between the three parties (Australia is the third), although the Australian and US governments continued to refer to the pact in describing their security relationship. Nevertheless the ANZUS treaty has not been declared null and void and it is still possible, if the New Zealand government "changes its mind" that the practices under the treaty will be resurrected. In passing, this is also a particularly interesting example of the processes of change resulting from the impact of new ideas and values on domestic policy processes feeding into the international arena, and of the role of non-governmental organisations in mobilising those ideas. It is also an example of the changing importance given to particular values within a regime (in other words, the security umbrella against Japan which ANZUS was intended to provide in the 1950s ceased to be important and it was possible for other values to be considered).
regime. Transnational non-state actors such as NGOs or the scientific community may be crucial in assisting or hindering a defecting state to mobilise that support.

Conventional international relations wisdom would argue that change in a state’s national interests or in the way states cooperate is unlikely to be based on normative change, or a paradigm shift. However, defecting states may not be necessarily ‘free-riders’ nor is defection necessarily the natural outcome of the incentive to ‘cheat’, in game theoretic terms.

Defection is the outcome of a redefinition of national interests, or the way in which it is believed by relevant actors that the interests of the state can best be met. So called altruistic values (such as support for human rights, or for the protection of nature) have generally been posited as subordinate to political and economic values in determining the way any one state conducts its foreign policy or defines its national interests. National interests are most often argued to rest on short-term and instrumental interests. Yet the discussion on cooperation in the first section of this chapter raised the possibility that learning could occur in response to new values as well as to new knowledge on environmental issues.

The idea of an ‘enlightened’ self-interest (which, by definition, can be linked to learning) involves a balancing of short- and long-term interests, and the recognition of long-term national interests as being connected to (and ultimately met by) a greater global good. Short-term interests are restrained in the interests of long-term gains (which are often loosely defined) which with they might be in competition. The point at which cognitive learning, that is a reassessment of policy goals in response to new knowledge, becomes a normative change based on a new set of values and principles, is unpredictable and the process is not easily amenable to analytical explication.

**Change revisited**

This section on theorising change has revealed that the debates with respect to cooperation on environmental issues relate to the potential for change, the need for change, and the processes of change. Separately, we can make generalisations about each of these. However, even when these generalisations are taken together, we are still unable to see clearly how cognitive change on environmental issues (in the Antarctic Treaty system or in the international system generally) will lead to normative change, or

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71. For example, environmental security or ecological sustainability for future generations is a fairly general goal with little specificity, but which may require constraints upon economic growth and resource use in the short-term.
to a possible transformation in the nature of the international system. This is because the theoretical literature still lacks a causal explanation for these processes.

The context-specific generalisations on change that are set out here derive from that literature which argues, first, that the potential for change is not limited by the nature of the international system and, second, that change is not solely related to shifts in power relationships. These generalisations can be summarised as follows. Change in the practice of international relations, and in the values that guide that practice, is essential if the environmental challenge is to be met. Change in cooperation on environmental issues comes about through transformation of existing regimes, or the creation of new regimes where none existed before. This process of change occurs through the redefinition of national interests (individual learning) and collective decision-making (institutional learning). Non-state actors, especially the environmental movement and the scientific community, are important sources of new knowledge and ideas which serve to encourage learning and mobilise change. As with the generalisations on theories of cooperation, these generalisations concerning change need to be examined critically in the course of this thesis.

Conclusion
The task of this chapter has been to draw out, from the literature of international relations theory, context-specific generalisations to guide the analysis in this thesis of environmental politics in the Antarctic Treaty system and its wider context of international environmental issues.

This chapter has argued that the broad realist tradition in international relations is limited in its usefulness here because its state-centrism restricts what it has to say on factors relevant to international environmental politics: the impact of new knowledge, ideas and values, the role of non-state actors and the interaction between domestic and international politics. This chapter has therefore proceeded from the position that understanding the processes of cooperation and change, as they apply to the Antarctic Treaty system case study and to the management of international environmental issues generally, can be best served by an analytical framework that seeks to look inside the state and beyond the state, and which addresses the admittedly complex linkages between them. In doing so, this chapter has derived the analytical framework for this thesis from the liberal tradition of international relations.

In examining this Antarctic case study and questions about the management of environmental issues on the international agenda, the analytical framework developed here points to an examination of:
the nature of principles, norms, rules and procedures which define the regime and the processes and outcomes that result;

the process of institutional bargaining and the exercise of leadership;

the role of transgovernmental elites;

whether or not an epistemic community can be identified and, if it can, how it has functioned;

the activity and influence of non-governmental organisations;

the nexus between domestic and international politics;

the nature and processes of change.

The relevant concepts and generalisations set out here are often contested, as is made clear in the discussion above. This analytical framework does not formulate these generalisations as propositions at this point, but rather leaves their argument open to examination in the working through of the case study. In the conclusion to this thesis the worth of the concepts and generalisations will be set against the empirical experience.
Chapter two

CONSTRUCTING A REGIME: THE ANTARCTIC TREATY SYSTEM

Introduction
Interstate cooperation on the Antarctic is structured by a regime built on the Antarctic Treaty of 1959. This chapter explores the construction and maintenance of that regime to set the context for the analysis of environmental politics in the chapters which follow.

We should not assume, in line with Oxman’s caution (1978:288), that the Treaty was drafted "in splendid isolation by a group of profound wise men whose overriding characteristic was foresight", an assumption which consigns pre-Treaty events to "a sort of pre-history". The deeply entrenched interests and demands which were brought to the Antarctic negotiating table in 1958 and 1959 were the product of that past, and states were not about to abandon them. Those national interests have continued to dominate the politics of the Antarctic.

Antarctic history and politics prior to the negotiation of the Treaty has been well documented and analysed by Antarctic scholars.¹ The first part of this chapter does not seek to repeat that exercise in any extensive way but to examine, briefly, the historical context of the Antarctic regime.

My concern in the second part of this chapter is to consider the Antarctic Treaty as an inchoate regime. In other words, I examine it as a basis for cooperation, exposing its principles, norms, rules and procedures. This framework has not been widely used in the Antarctic literature, with the exception of Peterson (1988) whose emphasis differs from mine. Peterson is concerned with examining the processes of regime development and implementation generally, whereas I am concerned in this thesis with locating environmental decision-making within the Antarctic regime framework.² As subsequent chapters in this thesis depend on the context-specific arguments developed here, it is worth examining the basis of the regime in some depth, particularly as its major premisses are not widely known.

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² Peterson's work was published before the Minerals Convention was adopted and, obviously, before the negotiation of the Madrid Protocol. The analysis of those agreements forms a major part of the case study of this thesis.
The third section examines the implementation of the Antarctic regime after 1961 and analyses its main normative and procedural features.

I: the history of Antarctic politics

Antarctic history prior to the mid-1950s can be conveniently divided into two slightly overlapping periods - the so-called Heroic Age of exploration (1770 to 1915 or thereabouts) during which time the Antarctic was sought, discovered and explored, and the Imperialist Era (1908 to the mid-1950s) when territorial claims, and the attendant potential for conflict in the region, were established. Throughout, those who have gone to the Antarctic and surrounding oceans have been driven by a combination of motives - adventure, empire, commerce and science.

Even with the benefit of modern technology the Antarctic is a dangerous and inhospitable place. It is a continent characterised by extremes. It is the coldest, driest, windiest place on earth. Average temperatures in the Antarctic rarely rise above freezing, even in the summer months. Annual precipitation is minimal, less even than the Sahara.³ Katabatic winds (caused by local gravitation of cold air currents down steep slopes) can reach 300 km per hour. All but 2 percent of the continent's 13.5 million square kilometres⁴ is covered by a slowly moving ice sheet, with an average thickness of 2000 metres.⁵ The continental ice-cap also extends offshore in permanent ice-shelves.⁶ The continent is almost inaccessible during the long months of winter darkness when pack-ice almost doubles the size of the continent. Large tabular (flat-topped) icebergs which break free of the ice shelves and glaciers compound the dangers to shipping at all times of the year.

Thus the Heroic Age, which began and ended with British explorers, was aptly named.⁷

It was Captain James Cook who first circumnavigated the continent in 1772-75

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3. At the United States Amundsen-Scott station at the South Pole the annual mean temperature is -49°C and annual precipitation averages about 7cm although towards the coast precipitation can be as much as 30cm per year.

4. This is approximately one-tenth of the earth’s land surface and larger than the United States and Mexico combined.

5. At its deepest (or highest, for the Antarctic has the highest average elevation of all the continents) it extends to 4500 metres. This ice sheet contains approximately 70 percent of the world’s fresh water and 90 percent of its ice. If the ice-cap were to melt completely the world’s oceans would rise by about 60 metres (about 200 feet). However, the release of the great weight of the ice, which depresses about one-third of the Antarctic land mass to below sea-level would mean that much of Antarctica itself would still be above water. There are some ice-areas away from the coast - the McMurdo Dry Valleys, the Burger Hills, the Larsemann Hills and the Vestfold Hills.

6. These ice-shelves constitute about 10 percent of the Antarctic. The largest are the Ross, Filchner, Ronne and Amery (all named for Antarctic explorers). As an example, the Ross ice-shelf is about the size of France.

7. The existence of a 'great southern land' had long been a subject for speculation. The Greek explorers speculated on the existence of a geographically-balancing southern continent after
although, as far as we know, he never saw it.\textsuperscript{8} He saw fit to pronounce "...I can be bold enough to say that no man will ever venture farther than I have done; and that the lands which may lie to the South will never be explored" (Quigg 1983:8).

Cook was, unwittingly, the harbinger of resource exploitation in the Antarctic region. His reports of abundant wildlife in sub-Antarctic latitudes attracted sealers (mainly from Norway, Britain and the United States) to the southern oceans where they proceeded to decimate seal populations to such an extent that by 1830 the industry was at an end.\textsuperscript{9}

The first sighting of the continent itself sometime in 1820 or 1821, and thus the right to claim discovery, is disputed.\textsuperscript{10} The British, Russians (later the Soviets) and the Americans have all fielded candidates.\textsuperscript{11}

In the late 1830s scientific expeditions were mounted by the United States (under Lieutenant Charles Wilkes),\textsuperscript{12} the French (Jules Sebastian Cesar Dumont D'Urville) and

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\textsuperscript{8} According to Quigg (1983:8) Cook never claimed to have seen the Antarctic, although he admitted that it was probable that he had seen part of it. He did land on South Georgia and also showed that the Antarctic was not connected to New Zealand which he had 'discovered' in 1769.

\textsuperscript{9} The most sought after seals were the fur seal and the elephant seal. The numbers killed may well be in the scores of millions.

\textsuperscript{10} According to Polynesian legend a Polynesian chief sighted the continent in 650 AD.

\textsuperscript{11} The British assert that Edward Bransfield saw the Antarctic Peninsula late in January 1820. The Americans argue that what Bransfield called Trinity Land was, in fact, an island. The British claim is somewhat undermined by the fact that Bransfield's report to the Admiralty was subsequently lost. However it seems likely, from his charts and crew reports, that he sighted the continent sometime in February (Quigg 1983:10). The Russian contender (later claimed by the Soviets) was Thaddeus von Belingshausen who, in the employ of Czar Alexander I, crossed the Antarctic Circle in January 1820. He never claimed to have seen the mainland, although again his ships log and diary indicate that he may well have done so (Quigg 1983:11). Alexander I Land, which Belingshausen named in January 1829 assuming it to be part of the continent was shown, 120 years later, to be an island. The Americans have fielded two candidates: sealer Nathaniel Palmer (only 21 at the time) who sailed close to the Peninsula in November 1820 and Captain John Davis, who went ashore on the Antarctic Peninsula on 7 February 1821 - the first recorded landing. According to US historians, Palmer must have seen the Antarctic mainland (see Quigg 1983:11). Belingshausen and Palmer met off Deception island (Quigg 1983:12; Shapley 1985:8). Shapley suggests (1985:27) that Captain McFarlane in the British ship, Dragon, may have landed earlier than Davis. The first undisputed landing on the main part of the continent did not occur until 1895.

\textsuperscript{12} David Jaffe believes Wilkes' journey may have provided the model for the story of Moby Dick (see Shapley 1985:28-29). Wilkes' expedition was the first to have the official backing of the US government, by virtue of an act of Congress of 18 May 1836 (Hunter Miller 1927:508). Wilkes was courtmartialled, but acquitted, upon his return to the US.
the British (Captain James Clark Ross). All three made new discoveries which had implications for later debates over territorial rights.¹³

Interest in Antarctic exploration waned after 1830, but was revived again in the 1890s by scientific, and territorial, interests. In the next twenty years, several scientific and exploring expeditions were undertaken.¹⁴

In the early years of the twentieth century, Antarctic expeditions, previously confined to coastal regions, sought to explore further inland culminating in the race for the South Pole.¹⁵ Roald Amundsen planted the Norwegian flag at the South Pole on 14 December 1911, a month ahead of his rival, Englishman Robert Falcon Scott whose party perished on the return journey.¹⁶

From the turn of the century, whaling became the dominant resource industry in the region. Norway and Britain were the main whaling nations, although ships from Japan, the Netherlands, Russia and Argentina were also active. The over-exploitation which had characterised sealing was repeated by the whaling industry.

**Antarctic imperialism**

By the early 1900s thirteen countries had, through the activities of their nationals, established some degree of interest in the Antarctic, based variously on discovery, exploration, commercial activity and scientific investigation.¹⁷ The Antarctic was considered by them to be *terra nullius*, land owned by no-one, and therefore properly open to territorial claims. During the years from the turn of the century until the 1930s (at least) Antarctica became "the scene of a final, frantic phase of Western imperialism"

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¹³ Wilkes' expedition followed and mapped the coast of East Antarctica for 2400 kms, and therefore has some political significance for the inchoate US claim. Dumont D'Urville discovered, but did not set foot on, the coast he named Terre Adélie, later claimed by France. Ross discovered Victoria Land, the Ross Sea and the Ross Ice Shelf, which he called the Great Ice Barrier.

¹⁴ A Belgian expedition led by Baron de Gerlache sailed in 1897 (with a young Roald Amundsen as first mate). Gerlache was the first expedition to winter over in Antarctic waters (because his ship, the Belgica, stuck fast in pack ice). Borchgrevink, a Norwegian-born resident of Australia (financed by private British funds) headed south in 1898. Borchgrevink was the first to winter deliberately on the mainland and, using sledge dogs for the first time in the Antarctic, reached 78°S, further south than anyone had ever been before. Three major expeditions sailed in 1901, from Germany (von Drygalski), Sweden (Nordenskjöld) and Britain (Scott). Other expeditions in this period included Charcot (1908-10), Shackleton (in 1980 and 1914-15), Filchner (1911-13), the first Australasian Antarctic expedition under Mawson (1911-1914), and a Japanese expedition in 1911-12.

¹⁵ In 1907, Shackleton came within 97 miles of the South Pole. The British flag was raised at the South Magnetic Pole on 16 January 1909 by (Australian) Professor Edgeworth David's three man party.

¹⁶ Scott's party reached the South Pole on 17 January 1912.

¹⁷ Britain, Norway, the United States, Russia, France, Japan, Belgium, Australia, Sweden, Germany, New Zealand, the Netherlands and Argentina.
(Henrikson 1986:3) with the race to acquire new territory on the last place on earth available for expansion. Contemporary observers drew attention to the "familiar Imperialist expansion movement" and "the final manifestation of that impulse to explore ... and exploit new lands" (Anon 1930:221).18

This territorial expansion placed the Antarctic firmly and permanently on the international political agenda. By the mid-1940s there were seven formal claims to parts of the Antarctic, established by Argentina, Britain and Chile (the three claims overlapped), Australia, France, New Zealand and Norway (see attached map). An unclaimed sector, Marie Byrd Land, was tacitly 'reserved' for a possible American claim. The claims were contentious. Only five of the seven (Britain, Australian, New Zealand, France and Norway) were mutually recognised. The claimants asserted the right to exercise jurisdiction in their territory over the nationals of any other state, a right not acknowledged by the non-claimant states. Other states with varying degrees of interest in the region argued that the exercise of sovereign rights could only be based upon the perfection of an inchoate title by effective occupation. The inhospitable Antarctic, they argued, had not been effectively occupied by the claimants and the claims were thus invalid.19

The British were the first to lay formal claim to Antarctic territory, based on prior discovery, exploration, commercial and administrative activities.20 In 1908, by Letters Patent, the Governor of the Falkland Islands was charged with the administration of undefined lands lying to the south. No official protests from other states were received. The claim was further delimited in 1917, to describe a sector with its apex at the South Pole, thereby establishing a precedent for other claims which were to follow.21

The applicability of the sector principle to the Antarctic claims is hotly debated by international lawyers. Developed initially to support Canadian claims in the Arctic, it relies there on continuity and contiguity. Hayton (1960b:398) has described the

18. There were 169 expeditions to the Antarctic prior to World War II. 75 were sponsored by the British, with the United States in second place with 24.
20. Britain (through the Governor of the Falkland Islands) levied fees on whaling vessels which had to process their catches on land. The invention of the factory ship in 1926 meant that whalers became less reliant on port facilities.
21. The original 1908 claim mistakenly included parts of the Chilean and Argentine mainland (Shapley 1985:69). The British claim is to all lands lying south of 50°S between 20° and 50°W longitude, and south of 58°S between 50° and 80°W. This includes the South Shetland and South Orkney Islands, which lie just north of 60°S, the line used now to define the outer limits of the Antarctic Treaty area, and South Georgia and the South Sandwich Islands which are just south of 60°S.
Map 1

The Antarctic Treaty Area: territorial claims

Source: Prescott (1981:84)

Note: This map is also reproduced at appendix 1 for ease of reference.
application of this principle to large areas of undiscovered land (and much of the land claimed in the Antarctic had not been discovered when the claims were made) as a "flagrant flaunting of international law standards [which] should be exposed as such".

The British government was keen to claim the whole of the Antarctic for the British empire, a policy endorsed at the Imperial Conference of 1926 (Hunter Miller 1927:508). In pursuit of this aim, and on the grounds of British discovery and exploration, the Ross Dependency was claimed by Order-in-Council in 1923, to be administered by the Governor-General of New Zealand.22 In 1933, again by Order-in-Council, the British government placed 42 percent of the continent, much of it unexplored, under Australian control.23 The Australian government was a much keener claimant than its New Zealand neighbour.

The declaration of the Australian Antarctic Territory had been delayed by the French announcement in 1924 of its formal claim to Terre Adélie, which lay in the area designated by the British for Australia.24 The French claim was based on discovery and exploration, although no French person had ever set foot on the coastline sighted by Dumont d'Urville in 1840.25 It was further defined in 1938, but it was not until 1949 that France attempted (without initial success because of heavy pack ice) to revisit its claim.

United States policy in this period was, in contrast with the British, characterised by ambivalence and vacillation on the claims issue.26 In 1924, Secretary of State Hughes first expounded a policy of non-recognition of the territorial claims on the grounds that discovery had to be followed by settlement to perfect claims to sovereignty over newly found territory (Anon 1947:97; Hunter Miller 1927:509-10). This underpinned American reluctance to declare an Antarctic claim of its own. Nevertheless the government supported extensive efforts by private expeditions to map and claim parts

22. The New Zealand government was uncertain over what to do with territory in the Antarctic. New Zealand's first independent Antarctic activity was not carried out until the 1956-7 season (Bertram 1958:13). The first New Zealander in the Antarctic may have been a New Zealand Maori who participated in Wilkes' expedition in the 1830s (Shapley 1985:29).

23. The 1929-31 British, Australian, New Zealand Antarctic Research Expedition (BANZARE), led by Australian Douglas Mawson, was designed primarily to prepare the way for an Australian claim to that sector of the Antarctic to the south of Australia.

24. The Australian National Research Council urged the government to protest the French action and to protect Australia's strategic and economic interests by establishing a claim immediately.

25. According to McNickle (1949:788) France had advised Britain of her territorial intentions 12 years earlier. Although the French claim was based on discovery, France did not lay claim to other areas of coastline discovered by French explorers. Indeed, French expeditions of 1903-05 and 1908-10 had been to the more accessible Palmer peninsula area (Hayton 1960b:375). The French claim was attached, initially, to the administrative dependencies of the Government General of Madagascar (Hayton 1960b:376). See also Hunter Miller (1927:508).

of the Antarctic for the United States. Secret instructions were issued, encouraging expeditions to do whatever they might to assist a possible US claim.\textsuperscript{27} The revival of US interests in this period began with the Byrd expedition in 1928.\textsuperscript{28} His first expedition was followed by others in which Americans saw and mapped (and secretly claimed for the US) more of the Antarctic than nationals of any other state. This activity established the basis for later US assertions of interest in the whole continent.

In 1939 Norway, concerned over an imminent German claim,\textsuperscript{29} formally asserted its sovereignty, based on exploration as well as commercial activity, over Dronning Maud Land.\textsuperscript{30} The Soviet Union, in its first expression of Antarctic interest, formally refused to recognise the Norwegian claim and reserved judgement on the ownership of land discovered by Russian explorers (Wolk 1958:44).

Argentina and Chile responded to northern hemisphere interest with claims of their own, even though neither had been particularly active in the Antarctic to date.\textsuperscript{31} Their claims were made not on the basis of discovery and exploration but on geographical contiguity and propinquity, and on rights of legal inheritance derived from Spain. Under the Papal Bull of 1493 (later confirmed by the Spanish-Portuguese Treaty of Tordesillas in 1494) the world was divided between Spain and Portugal - Spain was

\textsuperscript{27} Records of claims were classified. None of the claims was formalised, but contributed to the development by the US government of its doctrine of “constructive occupation” - discovery followed by subsequent exploration by air or land, coupled with a formal claim to possession as well as other acts, such as administrative acts, short of actual and permanent settlement (Shapley 1985:46-7,67).

\textsuperscript{28} On 29 November 1928, Byrd and his crew were the first to fly over the South Pole, although Byrd was not flying the plane (Shapley 1985:34). The first flight in the Antarctic was on 16 November 1928, by the Australian Sir Hubert Wilkins.

\textsuperscript{29} In 1938-39 Hermann Goering sent Captain Alfred Richster on the catapult-sip Schwabenland to the Antarctic to carry out an aerial mapping expedition. German planes mapped 350,000 square miles of the continent and dropped swastika claim markers (Mitchell 1981:69). German rights to the Antarctic had been renounced in Article 118 of the Versailles Treaty after World War I (Hunter Miller 1927:508). No such requirement was made after WWII, although earlier German activity was not followed up by either of the two post-war Germanies in the immediate post-war period.

\textsuperscript{30} Norway had already claimed Bouvet Island in 1928 and Peter I Island, west of the Peninsula, in 1931. The basis of these claims had been Norway’s extensive whaling activities in the area. Norway’s claim to the mainland is to the coast and hinterland only; its southern and northern boundaries are undefined. One reason for this is that the ‘sector principle’ is not advantageous to Norway in the Arctic, and so Norway has wished to avoid giving it credibility by using it in the Antarctic (Quigg 1983:112) even though that principle is generally thought inappropriate for the Antarctic. Nevertheless Norway does recognise the British, Australian, New Zealand and French Antarctic claims which do utilise the sector principle (although they do not, technically, adopt the contiguous and continuous basis that applies in the Arctic).

\textsuperscript{31} The Chilean press referred to the 1946 Byrd expedition as "an armed invasion of Chilean territory" (Anon 1947:97).
given the New World, including undiscovered lands, which included the then unknown Antarctic.32

The Chilean claim, which substantially overlapped British territory, was promulgated by Presidential Decree in 1940. The President argued that his decree did not establish a new claim, but served only to define Chile’s historical rights in the Antarctic. Japan responded with a diplomatic note reserving all Japanese rights in the Antarctic.33 Chile did not send an expedition to the Antarctic until 1947.34

Argentina’s assertion of sovereignty over the area also claimed by Chile and Britain, is usually dated to 1943 although, as Hayton notes (1960b:379) "as a matter of principle Argentina has not issued any formal claims document. Title ... is viewed as original and continuous from the beginning of the Republic".35

Thus by WWII there were seven claims to 85 percent of the Antarctic. The overlapping of some of the claims, and the refusal by some states to acknowledge the validity of any of the claims, was a source of potential tension.

In the years after the Second World War political interests dominated the Antarctic debate. As claimant states sought to assert their sovereign rights, and as the new bipolarity of the post-war international order, dominated by the United States and the Soviet Union, extended even to the Southern polar region the potential for conflict grew. Hayton (1956:590) refers to the "concerted - though not yet bellicose - rivalry" of this period, which was characterised by "an increase in the vigor and size of exploration programs, in the number of bases manned, and in the frequency of nationalistic declarations".36

32. See Hayton (1956) for a good and (then) contemporary discussion of the Argentinian and Chilean claims. For a discussion on the involvement and attitudes of other South American states, see Clark (1988) and Child (1988a).
33. At Australia’s insistence, Japan was required to renounce all claims and rights to the Antarctic in the San Francisco Peace Treaty of 1951 (Article 2e of Chapter II).
34. This expedition established a base in the South Shetlands named 'Soberania' - sovereignty (McNickle 1949:787). The Chilean claim followed a commissioned study of Chile’s titles by Professor Escudero Guzman of the University of Chile.
35. The boundaries of the claim are set, apparently, by a Presidential decree of September 1946 which prohibits publication of Argentinian maps without all of the claimed territories as set forth in that decree (see Hayton 1960b:379). Hayton (1956:587) notes that the first official Argentinian assertion of sovereignty may have come with a note to the Universal Postal Union in 1927. In 1942 Argentina sent its first formal expedition to Antarctica although there had been annual relief voyages to an Argentinian meteorological station in the South Orkneys since 1904. That station was established by a Scotsman, William A Bruce, but was handed over to Argentina when he failed to gain support from the British government.
36. The claimant states habitually sent diplomatic notes to any non-claimant state sending an expedition to their territory, offering facilities or granting permission to visit, or reminding them of the territorial status if overflight was planned (see Maquieira 1986:50).
Conflict was most likely between the three overlapping claimants, Argentina, Britain and Chile. Although Argentina and Chile had been unable to reach a boundary agreement on their claims they nevertheless agreed that there was a South American Antarctic and that they were the only countries with exclusive rights of sovereignty over it.37 A British suggestion in 1947 that the competing claims be submitted to the International Court of Justice for arbitration and settlement was therefore rejected.38

The British naval operation *Tabarin* of 1944-45 was intended to reinforce British presence as a counter to that of Argentina and Chile.39 Argentina revived its Antarctic Commission in the 1940s, and in the 1946-47 and 1947-48 seasons both Argentina and Chile sent expeditions into the area also claimed by Britain. The British government formally protested at these alleged acts of trespass.40 The potential for conflict was tempered somewhat when the three governments agreed, in the 1949 Tripartite Naval Agreement, not to send warships south of 60° South latitude.41

Both superpowers were active in the Antarctic after WWII. In 1946 the Soviet whaling flotilla, *Slava*, accompanied by Soviet scientists, appeared in the Southern Ocean.42 In 1946-47 the United States despatched 13 ships and over 4000 service personnel to the Antarctic on *Operation Highjump* to train personnel and test equipment under polar conditions (with an eye to possible conflict in the Arctic). Secretary of State Acheson urged the expedition to take steps which might assist the US in supporting a claim of sovereignty.43 The Navy conducted coastline mapping operations and photographed an

37. This agreement followed discussions in March 1941 between the heads of their Antarctic Commissions (see Hayton 1956:586) confirmed by later discussions in 1948. Agreement was difficult because any settlement of boundaries would have implications for the dispute between them over the Beagle Channel. The US had also proposed a Pan-American sphere of influence in the Antarctic but interest in this waned as US interest in maintaining an influence over the whole continent grew. Hayton (1960b:385) has characterised this as an extension of the Monroe Doctrine to that part of Antarctica in the Western Hemisphere, motivated by the challenge of the Axis powers and the war in Europe.

38. Britain reiterated this suggestion in 1951, 1953 and 1954 and in 1955 made a unilateral application for arbitration which was subsequently dropped.

39. *Tabarin*, which established bases on the Antarctic Peninsula, was subsequently transformed into the Falklands Islands Dependency Survey, which was the forerunner of the present day British Antarctic Survey, responsible for Britain’s scientific activity in the Antarctic (see Headland 1989:310).

40. The then recently retired Director of the Scott Polar Research Institute in Cambridge, England, referred to Argentina and Chile as the "two open usurpers" (Bertram 1958:7). Another British author had described "barefaced Argentinian and Chilean claim-jumping" (Illingworth 1953:551).

41. This agreement was renewed annually until the late 1950s. See Auburn (1982:84) and Beck (1986b:34).

42. This followed Soviet ratification of the International Whaling Convention.

43. 68 claim markers were dropped but no public announcement about these actions was made.
estimated 60 percent of the Antarctic coastline (one-quarter of which had not been previously seen).

Scientific research, which had been the corollary of exploration in the Heroic Age, continued to be inextricably linked with politics. The claimants viewed scientific activity as further evidence of their permanent presence in the Antarctic and thus supportive of the validity of their territorial claims. Between 1945 and 1950, at least ten nations sent scientific expeditions into sub-Antarctic and Antarctic waters. These expeditions were now almost always sponsored by governments, rather than privately sponsored as had been the norm before WWII.

Political interests in acquiring and maintaining Antarctic territory were joined by strategic interests. Concerns about Soviet interest and activity in the Antarctic, reinforced by memories of hostile German activities during the war, and compounded by the potential for territorial conflict among the claimants (especially Argentina, Chile and Britain all of whom were US allies) prompted the US government to initiate informal and exploratory discussions with the claimants on a possible legal settlement for the continent.

Various proposals were canvassed with little success. The claimants were opposed to any internationalisation of the Antarctic (that is, anything that removed decision-making from their exclusive hands). A proposal that the Antarctic be established as a United Nations Trust Territory was not well received. In response, however, the Chilean government (with what we might now characterise as considerable foresight) proposed

44. The occupation of winter scientific stations on a continuous basis dates to 1944 (Headland 1989:308).
45. Britain, New Zealand, France, Argentina, the Netherlands, the US, Chile, Norway, South Africa and Sweden (Headland 1989:310-336).
46. German activity in the Southern Ocean during the second world war pointed to the potential for southern sea lanes to be controlled by hostile powers, a scenario which also concerned Argentina and Chile. Part of the Norwegian whaling fleet had been captured by German Commerce Raiders in 1941 in the southern ocean, and German submarines had been active in sub-Antarctic waters. The US and Britain were also worried about hostile control in the event of either the Suez or Panama canals being denied them as trading routes.
47. Argentina and Chile argued that British activity in the area constituted a threat by an outside state under the 1947 Inter-American Treaty of Reciprocal Assistance - the Rio Pact - which defines a security zone reaching to the south pole, and tried to pressure the US Government, also a signatory to the Pact, to support them against the British. Had the US accepted this interpretation it would have been tantamount to a tacit acceptance of claims (Peterson 1988:62) For a recent account of the impact of the Rio Treaty on the geopolitics of Antarctica and the Southern Cone see de Castro (1988).
48. As Young observes (1989a:55) "there was no need for a regime covering Antarctica before states began to assert jurisdictional claims to the continent and to establish research stations in the region".
a five-year freeze of all claims and rights, during which time further scientific cooperation would be encouraged.49

In August 1948 the US government publicly sought responses from the seven claimants to the concept of a multiple condominium, stressing the importance of scientific investigation and research in the Antarctic, and the need to find a solution to the problem of the conflicting sovereignty claims.50 The United States envisaged an "extended exchange of views, consideration of suggestions, and probably reconciliation of varying viewpoints" although no formal conference was contemplated "at present" (Anon 1948b:301). Replies from all seven claimants were received by March 1949, but there was clearly no common ground among them.51

The Soviet Union made it clear that it would not countenance any domination of the Antarctic by the United States and its allies. In 1949 the semi-official Geographical Society of the USSR passed a resolution asserting that the Soviet Union had an "indisputable right ... to participate in the solution of questions concerning the Antarctic" (Wolk 1958:45) and that they had every reason not to accept or recognise any solution made without their participation.52 In June 1950 (just before the outbreak of the Korean War) the Soviet government addressed a note to the United States and six of the seven claimants53 declaring that any discussion on the future of the Antarctic should not take place without Soviet involvement, citing von Bellingshausen's voyage and recent Soviet whaling interests.54

49. This proposal was drafted by Professor Escudero who had conducted the inquiry into Chile's sovereignty claim.

50. Throughout this period the US had not rejected the possibility of making a claim of its own. President Eisenhower had approved a 1954 National Security Proposal that the US make a formal claim although in 1956 he revised US Antarctic policy to delete references to permanent stations and ongoing mapping programs (Shapley 1985:60-61; Beck 1986b:41). In the 1956/57 season, United States nationals deposited 31 claims in various parts of the Antarctic.

51. Argentina rejected it out of hand on the grounds of "uncontestable sovereignty". Chile again offered the Escudero Declaration as a counter-proposal. New Zealand and the UK thought it a useful basis for discussion. France and Australia saw no need to discuss the sovereignty issue at all, although they supported the principle of scientific investigation. Norway was somewhat equivocal.

52. See Wolk (1958:43). The President of the Society, L S Berg, asserted that Soviet interest in the Antarctic had always been there but that the economic and general domestic difficulties which had beset the USSR during the first years of its evidence had prevented the government from taking the necessary practical steps.

53. There were no diplomatic relations between the Soviet Union and Chile at the time.

54. The Soviet note also referred to the great economic value of the territory of the Antarctic and adjacent waters, as well as its scientific significance (Hayton 1960b: 381-2). Many commentaries have referred to the time lag of almost 130 years between Bellingshausen's exploration and the revival of Soviet interest. However it is worthwhile noting that prior to the late 1920s the US had been absent (at least officially) from the Antarctic for almost 90 years, and the French claim had been based on a sighting 80 years previous, with no intervening French activity in that part of the Antarctic.
In the absence of any common ground discussions stalled in the early 1950s. This faltering of interest has generally been described (with hindsight) as a failure to establish a regime (Peterson 1988:50-66). However discussions in the late 1940s were little more than an exchange of views as opposed to detailed negotiations. The scope and nature of an Antarctic problem was not clearly defined among the claimants and the US. The claimants did not perceive any urgent need for an agreement among them, either in terms of benefits to be gained or losses to be minimised. Their interests were defined primarily in terms of the exercise of their sovereign rights. US presence in the Antarctic was generally accepted and, in the absence of active interest from other states, any territorial or legal challenge to the claimants' interests did not seem imminent. While rivalry between the overlapping claimants was potentially a matter for concern, it had been contained to some extent by the Tripartite Naval Agreement.

The only point on which there was agreement was the exclusion of the Soviet Union. However, in spite of Soviet pronouncements, and some concern about superpower rivalry extending to the Antarctic, the Soviet Union was not active in the Antarctic (except for whaling) and showed no signs of becoming so in the near future.

Science and politics: towards a regime
The nature of Antarctic politics changed in the mid-1950s as a result of international attention generated not by explorers nor even predominantly by diplomats and international lawyers, but by the scientific community. Concerted scientific research during the International Geophysical Year (1957-58) reaffirmed not only the intrinsic value of Antarctic science, but also the link between politics and science which has characterised the Antarctic since.

The International Geophysical Year (IGY), an ambitious programme of scientific investigation, began on 1 July 1957 and lasted, in fact, until the end of 1958. It was

55. US attention was diverted by the Korean War, and internal disagreements on US policy undermined any attempts to seek a solution with the claimants. Chilean interest in advocating the Escudero proposal was waning in part because of its forthcoming (1952) election.

56. To recall, under this agreement Argentina, Britain and Chile had agreed not to send warships south of 60°S.

57. The intention to exclude the USSR as an unfriendly power was set particularly against the background of the blockade of Berlin and the Berlin Airlift of June 1948, in which both the US and the UK were involved.

58. Antarctic IGY research included investigation into the aurora and airglow, gravity, cosmic rays, ionospheric physics, geomagnetism, meteorology, oceanography, seismology and glaciology (Department of State 1964:4) and contributed immeasurably to knowledge about the region and, indeed, the planet.

59. On the IGY generally, see Bertram (1958), Beck (1986b:46-58), Quigg (1983: 46-55). Plans for a third International Polar Year had evolved to become an international scientific programme encompassing the whole earth. Worldwide, 67 countries took part (Shapley 1985:59). Planning for the IGY generally attempted to separate politics from science. Resolutions were passed at planning meetings to the effect that IGY activities would not "modify the existing status of the
co-ordinated by the Comité Spéciale de l’Année Géophysique Internationale (CSAGI) of the International Council of Scientific Unions (ICSU). In the Antarctic a total of 12 countries (the seven claimants, the US, Belgium, Japan, South Africa and the Soviet Union) conducted scientific programs in over 60 research stations. In September 1957 the ICSU established the Special (later Scientific) Committee on Scientific Research to coordinate science in the Antarctic after the IGY. This non-governmental body provided an institutional focus for the development of an epistemic community and was to become an integral part of the Antarctic regime.

In the interests of advancing knowledge about the Antarctic, scientists intended that cooperation would be encouraged and politics put to one side during the IGY. Military activity was banned as contrary to this spirit, although logistical support by the military was permitted. Mapping activities were also considered inappropriate in the Antarctic because of the political implications for claims. In accordance with the principle of scientific cooperation, meteorological and rescue services were pooled and the exchange of science personnel was encouraged.

Scientists lobbied successfully, through their national IGY committees, to secure an agreement on free access to all parts of the Antarctic for the purposes of scientific investigation. Under this agreement, which was formulated in a resolution of CSAGI, the exercise of sovereignty by the claimants was to be held temporarily in abeyance in the interests of science. Scientists from any country would free to go anywhere in the Antarctic without being subject to diplomatic protest notes and confrontations over the location of bases. In effect this embodied the principles of the Escudero Declaration proposed some years earlier by Chile as a possible solution to the claims issue. What is important is that the tacit support of the claimant governments was obtained to put it into effect. In this way, cooperation between states (although not strictly intergovernmental) began in the Antarctic with some limited concession to interdependence norms.

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60. For a summary of the interests of the IGY states, albeit from a British perspective, see Bertram (1958). Not all of the Antarctic stations were new ones - in 1955 there had been 20 stations on the Antarctic continent, operated by Argentina, Chile, the UK and Australia. 19 of these were peninsula stations; the other was Australia's Mawson station.

61. In both the 1956/57 and 57/58 seasons, Soviet meteorologists wintered at Little America V station, and US meteorologists wintered at the Soviet station Mirny (Department of State 1964:5).
Nevertheless, this scientific cooperation did not mean an absence of politics. Given the potential for tension among the claimants and between the superpowers, it was perhaps naive to hope (as the scientists did) that politics and science could be kept completely separate. For example, the decentralised "mother-daughter" system for communication of essential weather data was constructed so that no "daughter" station was reliant on a politically unsympathetic "mother" (Shapley 1985:87-88). The US, which had already established a base at McMurdo in 1955, established the Amundsen-Scott base at the South Pole, effectively giving it a geographic foothold in all sectors.

More importantly, scientific activity itself had direct political implications. Bertram argued (1958:10) that, with the exception of Belgium, the IGY Antarctic nations had aspirations and interests that extended beyond the scientific. He argued (1958:2) "it is the naive alone who are convinced that pure science is the sole stimulant" for the increase in activity. Hayton argued (1960b:370) in a similar vein: "in the absence of the political purpose it is doubtful whether so much energy and money would have been budgeted for permanent meteorological observatories and geographic and oceanographic investigations".

The so-called 'gentlemen's agreement' on freedom of access to all parts of the continent, and the temporary 'freezing' of the claims that accompanied it, was scheduled to last only for the duration of the IGY. The potential for a resurrection of prior conflict over territory, as well as the spectre of future tensions between the superpowers, encouraged the Antarctic states to think once more about a treaty for the continent.

62. No-one had stood at the South Pole since Scott in 1912. Shapley (1985:85-86) gives a nice account of how decisions were made about the siting of some of the bases in order to avoid confrontation. According to Shapley (1988:313) the US had not planned a South Pole station. However at a 1955 IGY planning meeting, the Soviet delegate announced that the USSR intended to put a base there. The French chairperson (Shapely suggests with a quick wink to the US delegate) countered this by saying that the US already had plans for siting a station there, even though they had not till that moment. The Soviets were therefore "diverted" to the Pole of Inaccessibility. Quigg (1983:48) tells the story differently, suggesting that the US had expressed a prior interest in the South Pole site.

63. The siting of the seven US scientific stations was influenced by the Department of Defence and a 1954 National Security Council memorandum and was intended to insure that the US was second to none in the Antarctic (Quigg 1983:49).

64. Many of the scientific stations had been constructed to close when the IGY finished. In many countries IGY funding had been a 'one-off' arrangement which was unlikely to continue.

65. In the early 1950s Britain, Chile and Argentina had resumed their heated diplomatic correspondence over their conflicting claims (see Hanessian 1960:447). In 1952, British and Argentine expeditions exchanged gunfire (although without casualties) at Hope Bay. See Beck (1986b:35) for details. See Beck (1986b:32-36) also for a description of the various actions taken by the three competing claimants to assert their sovereignty over the area. In 1953 tension arose after the British tore down an Argentine hut on Deception Island and arrested two Argentine personnel who were expelled as illegal immigrants.
The Soviet announcement that it would remain in the Antarctic after the IGY caused "genuine apprehension that the most dangerous inter-nation rivalry of all time, the Cold War, might be extended to the South Pole" (Hayton 1960b:371). Bertram (1958:18) argued that "political stability in Antarctica in the next few years is certainly improbable". These Cold War fears were exacerbated by the Soviet invasion of Hungary in 1956 and by the dawning of the missile age. Hayton (1960b:382) noted that "some countries were visibly nervous [at Soviet activity] and lamented privately that a final settlement of the political status of the area had not been reached prior to the widening of the field of participation to include the unscrupulous and unpredictable chief of the Communist bloc". The Australians especially were worried about Soviet activity in its territory where the USSR had built its IGY bases.

Discussions on a settlement resumed during the IGY, this time with a greater sense of urgency. The IGY provided governments with an opportunity to break the impasse of the late 1940s and early 1950s on the sovereignty question. Territorial concessions were made and political arrangements tested without states having to make formal or long-term commitments. However, the political landscape had changed since 1948. The claimants and the United States were no longer in a position to negotiate an exclusive settlement. Other interests had joined the debate. The Soviet Union could no longer be excluded from any discussions or agreement and the other Antarctic IGY states (Belgium, Japan and South Africa) were unlikely to accept any agreement made without their involvement.

Thus the demand for a regime, that is for cooperation, arose in response to pressures from states outside the key 'in-group' (the claimants and the US). Those external states could not be excluded from any subsequent agreement on the Antarctic.

In May 1958, well before the IGY finished, US President Eisenhower formally invited the eleven other Antarctic IGY states to participate in a conference for the purposes of

66. Quigg (1983:144) notes that Admiral Dufek, who had been a leading figure in the US IGY effort, had drawn up contingency plans in the event of hostilities in the region.

67. The launching of Sputnik on 4 October 1957 fueled concerns about Soviet technological ability and the spectre of "[Soviet] intercontinental missiles poking their snouts out of southern ice fields" (Anon 1958:94).

68. When Secretary of State Dulles had visited Australia in March 1957, the Australian government asked him to do something about the situation.

69. In 1956, New Zealand Prime Minister Nash had revived the UN trusteeship proposal but again it was not well received. Various proposals were also made for some form of expanding condominium based initially on the US, New Zealand and Australia (Quigg 1983:140). In 1956, and again in 1957 and 1958, India, concerned at the possibility of conflict in Antarctica, proposed that the question of the Antarctic be placed on the UN General Assembly agenda, but did not press the matter in the face of Argentinian and Chilean opposition and lack of support from Britain. However this served to indicate that there was a potential for interest from non-Antarctic states.
concluding an agreement for the management of Antarctica. Although the US took the initiative here, it did not function as a hegemon in the construction of the Antarctic regime, a point which is discussed in greater detail below.

The US invitation suggested that "the need for coordinated scientific research in Antarctica ... will continue for many more years" and that it was "desirable ... to reach agreement ... on a program to assure the continuation of the fruitful scientific cooperation" of the IGY. "Such an arrangement", it suggested, "could have the additional advantage of preventing unnecessary and undesirable political rivalries in that continent, the uneconomic expenditure of funds to defend individual national interests and the recurrent possibility of international misunderstanding" (cited in Hayton 1960b:371). In fact, this "additional advantage" went to the heart of the matter: avoiding conflict was the fundamental reason for negotiating a treaty. As Heap puts it (1983:105) "few, if any, of the governments invited were attracted by the positive aspects of the Treaty. The crucial stimulus was ... fear. Each government had its own scenario of the chaos it foresaw if the Treaty was not successfully concluded".

The invitation expressed the belief that a treaty could be concluded "without requiring any participating nation to renounce whatever basic historic rights it may have asserted" (in Hayton 1960b:371). It might just as well have observed that such a treaty could not be concluded otherwise. This provision was the quid pro quo for claimant participation in the negotiations and was crucial to the negotiations and the Antarctic Treaty. It was to be the fundamental principle of the Antarctic regime.

As well as a common interest in preventing conflict there were other interests which could best be met by a treaty. In spite of their ideological rivalry, the USA and the Soviet Union had similar interests in the Antarctic. Neither had made a formal claim but each had reserved its right to do so in the future.70 They were equally suspicious of each other's motives. Each wanted to prevent the other gaining a dominant foothold. In May 1957, Senator Wiley, in introducing a congressional resolution on Antarctica, stressed "the prevention of a seizure of strategic areas by Russia [sic]" as a vital factor

70. The United States also took the opportunity to assert its "substantial rights and interests in Antarctica" including the right to make a territorial claim (or claims). The Soviet Union made a similar assertion in its otherwise positive response to the US invitation. A claim by the US at this time would have angered its allies, and effectively denied it the free access to the whole continent that it sought, as well as possibly motivating the Soviets to make a claim; similarly a unilateral Soviet claim would also have caused tensions, especially if it overlapped any of the other claims. The only unclaimed sector, that area called Marie Byrd Land (discovered and explored by American Byrd) was considered to be available for the US to claim. A joint resolution was introduced into the US House of Representatives in January 1957 for the purpose of declaring American right of sovereignty over the unclaimed sector and providing for the President to take such steps as were necessary to establish US sovereignty rights over other areas of the continent.
in US Antarctic policy (cited in Purver 1984:890). Similarly the Soviet Union warned of American imperialist designs to "seize the whole of the Antarctic" (cited in Purver 1984:890). Nevertheless, both were aware of, and wished to avoid the logistic and financial costs of conflict between them in the Antarctic.

All seven claimants were faced with the potential erosion of their influence in the Antarctic as a result of activities by other states. Bertram suggested (1958:3) at the time that "the five nations regarding themselves as possessed of mainland sectors are capable of loss" (he ignores Chile and Argentina). The passage of time, he said (1958:20) was "not ... in favour of the five mutually-recognising sovereign powers".71 The Economist noted that "the British have a particular interest in a quick settlement, since the longer it is delayed the further they will be outclassed by the lavishness of American and Russian expenditure" (Anon 1957a:112). The potential costs of conflict and the difficulties of militarily protecting territorial interests were high, with little chance of success. The chances of legal settlement of title in favour of any of the claimants were likely to be low.72 The claimants also sought, to varying degrees, to contain the influence of the superpowers and of the three non-claimant IGY states.

_Treaty negotiations: 1958-59_

On 4 June 1958 the State Department announced that all 11 states had accepted the US invitation. Negotiations for the treaty were conducted in two stages. Over 60 informal (and secret) meetings were held between 13 June 1958 and 13 October 1959, to facilitate frank discussion and compromise and possibly also not to alert other countries to the discussions.73

Points of difference during these meetings derived mainly from contending views about the exercise of sovereignty in the Antarctic.74 The claimants, especially Chile and

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71. His distress is obvious in respect of the level of activity of the commonwealth countries vis-a-vis others. He said "our grandfathers must turn in their graves at this astonishing change in maritime power and forethought and at the depths to which the British commonwealth has sunk, so that great exploratory ventures into British Antarctic territory must set out in chartered foreign vessels flying foreign flags, because the whole commonwealth has no adequate shipping available" (Bertram 1958:21).

72. Hayton (1956:608) had also argued that "in all likelihood, Britain will experience extreme difficulty in seeing this Antarctic question through to a legal showdown".

73. Documents from the meetings are still classified, as are those of the formal treaty negotiations which followed. However, researchers have recently been able to work from the personal papers of Admiral Dufek, who was the US Antarctic Projects Officer at the time, and who was kept informed of progress of the meetings through a series of detailed memoranda. Shapley's analysis (1985:91-100) is based on those unpublished notes from what she terms the "shirtsleeves meetings".

74. The Soviet Union was reluctant to discuss anything of substance at the informal meetings in 1958 and 1959, maintaining that only questions of an agenda and representation for the formal conference should be considered. However the Soviet Union altered its position as progress was made by the other representatives on draft provisions. This may have been in part due to its
Argentina, would not agree to any provision which derogated from their rights as territorial sovereigns. Thus questions of administrative arrangements, compulsory dispute settlement and jurisdiction were contentious.

Other issues on which there were significant differences of opinion included demilitarisation, the related question of inspection, the membership scope of the Treaty and the exploitation of resources. Nevertheless, considerable progress was made on draft provisions at these secret meetings.75

The Antarctic Treaty was formally negotiated at the Washington Conference which began on 15 October 1959.76 As with the preparatory meetings, the more than 50 formal and informal meetings of the Washington Conference were also held behind closed doors, except for the opening and closing sessions.77 Thus a precedent was set for what Davis (1987a:27) has called the "closed circle mentality" which has continued to characterise the Antarctic regime. The Antarctic Treaty was concluded and signed on 1 December 1959, less than seven weeks after the formal conference began.

II: The Antarctic Treaty78
The Treaty is an agreement to deal with a dilemma of common aversion in that the parties had a common interest in avoiding a particular outcome.79 It proscribes desire to expand participation in the treaty negotiation. The Soviet Union was especially keen that Poland be asked to join with the other 12. Poland had been active, in conjunction with the Soviets, during the last part of the IGY. Plans to establish a permanent base in 1959/60 fell through for budgetary reasons (Hayton 1960b:389).

75. In November 1958, the US representative submitted draft articles around which further discussions would centre. By mid-March (1959) participants agreed that the first three articles should provide for Antarctica to be used for peaceful purposes only, for freedom of scientific research in the area, and for international cooperation in the conduct of this research. By mid-May there was some measure of agreement on draft provisions on the territorial claims, inspection, jurisdiction, the relationships between signatory and non-signatory countries, accession, the zone of application, periodic meetings of signatories, settlement of disputes, and the revision and ratification of the Treaty (Department of State 1964:9).

76. The Washington Conference took place after Khrushchev's visit to the US in September 1959. The main areas of contention were the area of application, jurisdiction and dispute settlement, and membership scope (Hanessian 1960:467). On 23 October delegates announced that they had reached agreement on the principle of international cooperation in scientific research and exchange of information and on the principle of non-militarisation. This is not surprising, given that these issues had been effectively settled during the pre-negotiation discussions and were based on IGY precedent. By mid-November 1959, the USSR and the USA had agreed on an inspection system. Argentina, with the support of the other southern Hemisphere nations, introduced the question of a complete ban on all nuclear explosions and the disposal of radioactive waste (see Shapley 1988:315).

77. The Conference was organised into two Committees - the First to address scientific issues (which were, on the whole, not contentious), the Second, legal and political ones. A credentials committee, a drafting committee and a committee on style were also established.


79. See Stein (1983:120-130) on dilemmas of common aversion and common interest.
potentially conflictive activities and thus establishes a regime of mutual security. The Treaty is a product of the internal accommodation among the parties on their differing and entrenched views on territorial sovereignty and the exercise of jurisdiction. It reconciles the seemingly irreconcilable. In line with the process of bargaining which underpins a negotiated regime, the Treaty represents what the least flexible of the parties could be persuaded to accept in the pursuit of its own interests. It is characterised by a contrived ambiguity which leaves much open to interpretation.

The Treaty is a combination of an open membership agreement in theory, and a limited membership agreement in practice. Under the rules of article XIII, accession to the Antarctic Treaty is open to any member of the United Nations. Non-UN members may accede only on the invitation of the decision-making parties to the Treaty.  

Article IX establishes a two-tier system of treaty membership which entrenches the authority of the original signatories and those acceding states which gain decision-making status by conducting substantial scientific research in Antarctica (collectively known as the consultative parties). Thus science provides the basis for political privilege in the Antarctic regime and for membership of the Antarctic 'club'. There is no role for those acceding states which do not conduct research (the non-consultative parties). Substantial research activity is not defined although examples are given.

These provisions of article IX and XIII represent a compromise between parties (such as the Soviet Union) which advocated open membership and those (such as the United States) which wanted a limited membership. In other words, any state may accede, but only a few may make decisions, and only after making the considerable financial outlay that Antarctic research involves.

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80. Several states expressed their concern at this limitation on open accession (see Bush 1982:42-43). Apparently one state held out on this issue, and thus consensus could not be reached on anything more. Both North and South Korea acceded to the Treaty under the invitation provision.

81. Under this article the original signatories will always be able to participate in decision-making, even if they do not continue to undertake scientific research. For example, Belgium, Japan and Norway closed their IGY stations but were not required to relinquish consultative status. Japan returned to the Antarctic in 1965 and Norway in the 1968-69 season. Until 1983, those who could not 'participate' in decision-making were not able even to attend consultative meetings as observers.

82. While the Treaty establishes rules for accession, it contains nothing on the procedures by which a state shall become a consultative party. Van der Essen (cited in Quigg 1983:148) a long-serving Belgian Antarctic diplomat who was at the Washington Conference suggests that the conditions and procedures for consultative membership were discussed extensively during the negotiations.

83. Peterson (1988:41) suggests that this incorporates an implicit principle to the effect that there is an Antarctic community that should share the continent and its governance. However given that the Treaty is, theoretically at least, an open one, the nature of this Antarctic community is unclear. Nevertheless, it is certainly possible to argue that there was an assumption on the part of the twelve that they had a demonstrated right to negotiate the Treaty.
In examining the Antarctic Treaty as the basis for a regime, I consider here its principles, norms, rules and procedures. There are three fundamental principles (which, we recall from chapter one, are statements of belief, causation or rectitude) in the Antarctic Treaty (all of which draw on the experience of the IGY), which give rise to aspects of the normative and procedural framework of the regime. The first relates to the compromise on sovereignty, the second to the need to maintain the Antarctic as a zone of peace and the third to the importance of scientific research and cooperation.

**The compromise on sovereignty**
The unstated objective of the Treaty was to find, and maintain, a successful compromise on the exercise of sovereign rights in order to protect the interests of all parties, claimant and non-claimant. Thus the principle of compromise on sovereignty was entrenched in the Treaty.

Article IV is the focal point of this internal accommodation between the original signatories. It is best to reproduce it in full:

1. Nothing contained in the present Treaty shall be interpreted as:
   (a) a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica;
   (b) a renunciation or diminution by any Contracting Party of any basis of claim to territorial sovereignty in Antarctica which it may have whether as a result of its activities or those of its nationals in Antarctica, or otherwise;
   (c) prejudicing the position of any Contracting Party as regards its recognition or non-recognition of any other State’s rights of or claims to territorial sovereignty in Antarctica.
2. No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.

Article IV thus confirms the existence of the territorial claims, but makes no statement as to their legal validity. It is non-discriminatory in that it applies equally to the claimants, those with a basis of claim (the United States and the Soviet Union) and the non-claimant parties. Under the protection of article IV, nothing that the claimants do, or do not do, can be argued by others to diminish their rights to sovereignty or, by them, to enhance those rights.84 While the claimants recognised in the late 1950s that their interests could be best protected by a treaty, they would not agree to anything that prejudiced their individual positions on the exercise of territorial sovereignty.

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84. Note, however, that article IV does not prevent acts or activities which might be considered the prerogative of a sovereign state - it simply says that they cannot be used in support of the assertion of claims.
Article IV does not solve the sovereignty question: it puts it to one side.85 It is for this reason that it has been the subject of considerable criticism from international lawyers. It has been called an illusory safeguard (Auburn 1982:110) and a "constructive evasion" (Wyndham 1980:195). Marcoux (1971:379) argues that it casts the concept of Antarctic sovereignty into a "purgatory of ambiguity". Hayton (1960a:359) expressed his concern about the "questionable ... practice of writing sweeping exclusion articles" although he suggested also that the "drafters ... need to be congratulated on the formulation of this element of the treaty, for it was, without the slightest doubt, absolutely essential to a successful conclusion of the agreement".86

This article establishes what Peterson (1988:42) calls the suggestive norm that conflict on the sovereignty question should be avoided. It refines the 'gentlemen's agreement' of the IGY, which was in turn based on the Chilean Escudero proposal of the late 1940s. It fulfils the promise contained in the US invitation of 1958 that states would not have to renounce any historic rights in the Antarctic.

Article IV gave rise to the norm that no state would push its position on the claims to a logical conclusion. Thus the compromise is maintained, and conflict deterred, not by the threat of mutual force, nor by a hegemon, but by a reciprocal acceptance of mutual restraint.

The exercise of jurisdiction in the Antarctic was another issue inextricably linked to the sovereignty dispute. Under the rules of article VIII, observers, scientific exchange personnel, and their staffs, are subject to the jurisdiction of the Contracting Party of which they are nationals. This article says nothing about jurisdiction in respect of other personnel (military, scientific and support) in the Antarctic, whether part of a national program or not.87 Efforts at Washington to reach agreement something more substantial were unsuccessful. The British delegation had hoped for a "more complete system of jurisdiction" (see Bush 1982:40-41) but article VIII represents the minimum that could be agreed in the face of opposition from Argentina, Chile and France. They strongly opposed any suggestion that national jurisdiction should apply on the grounds that it would undermine their claims to sovereignty (in spite of the provisions of article

85. The question which has exercised the minds of international lawyers is the extent to which international law can be frozen. A strict interpretation of IV(2) would be that, should the treaty collapse, the situation as at 1961 in respect of claims would pertain. This would also mean that the practice of free access could not be argued to support the application of a law of common spaces to the Antarctica. Bush (1982:60-61) lists a "string of questions" raised by article IV(2).

86. Statements made at the final session of the Plenary Committee (see Bush 1982:38-39) indicate that each participating state interpreted article IV as supporting its position on sovereignty which was the intention of the drafters.

87. Peterson (1988:43) suggests that this silence confirms that states retain jurisdiction over their ships, aircraft, stations, national and scientific expeditions.
IV). The non-claimants would not accept territorial jurisdiction on the grounds that it would imply the rights of claimants to exercise jurisdiction over nationals of non-claimant states. In the absence of any middle ground the issue was simply omitted. Disputes between parties over the exercise of jurisdiction are to be addressed by consultation among them with a view to reaching a mutually acceptable solution.

In a further concession to the differences over jurisdiction, Article IX(5) provides that rights under the Treaty, such as the right of inspection, to conduct scientific programs and to exchange personnel are conferred directly from the date of signature, rather than waiting until entry into force which might imply that the exercise of these rights was subject to approval from other parties.

The peaceful purposes principle
The preamble to the Treaty establishes the principle that "it is in the interests of all mankind that Antarctica shall continue for ever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord".88

Linking the Treaty with the wider good (the "interests of all mankind") was intended to counter arguments that the Treaty was an exclusive agreement among twelve states for the protection and furtherance of their own interests. It suggests, rather, that the Treaty also provides a public good (peace and stability) from which all can benefit.89

This principle expresses the belief that conflict in the Antarctic would be inimical to the interests of the signatories and would undermine the compromise on sovereignty. "Discord" refers not only to actual conflict on the ice, but also to diplomatic disagreement over the status of the claims. It might also be taken as a gentle hint to the international community that they should not engage in disputes about the status of Antarctica. Peaceful purposes are not defined although scientific investigation clearly meets the test. Thus the consultative parties can determine what constitutes a peaceful purpose at any time while the Treaty is in force.

In support of the peaceful purposes principle, article I of the Treaty confirms the practice of the IGY and prohibits "inter alia, measures of a military nature".90 It can therefore be inferred that anything not of a military nature is a peaceful purpose.91

88. Several references are made to the principles and objectives of the Treaty in its articles, but these are not specifically elaborated, thus leaving the Treaty parties to define them.
89. See Conference on Antarctica (1959) for statements to this effect.
90. This provision was strongly backed by the British, Soviet and French delegations (Hanessian 1960:468). Beeby (1972:12) indicates that the final wording owed much to the Soviet drafting effort.
91. More recently this has raised questions about whether scientific research which has military applications, for example Very Low Frequency research, contravenes the Treaty. See,
"Inter alia" signifies that the Treaty parties may prohibit any other activity determined by them not to be a peaceful purpose.

Measures of a military nature are not defined exclusively, but do include "the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapon". In a continuation of IGY practice, article I permits the use of military personnel or equipment in support of scientific research or for any other peaceful purpose. However, in the absence of sanctions, as Almond (1985:246-7) observes, the demilitarisation rules are hortatory. Nevertheless, under the Treaty an entire continent and its surrounding oceans are effectively demilitarised, something unique in international relations.

Nuclear explosions and the disposal of radioactive waste in the Antarctic are prohibited under the rules of article V. This article effectively applies to peaceful nuclear explosions.

In further support of the peaceful purposes principle, Article XI establishes limited procedures for resolving disputes among parties over the interpretation or application of the Treaty. Parties may choose a method of resolution after consultation among them. A dispute may be referred to the International Court of Justice but only if all parties to the dispute agree. The majority of Contracting Parties had been willing to accept compulsory arbitration by the ICJ but Argentina, Chile and the Soviet Union opposed this (Hayton 1960a:363). Hayton (1960b:407) lamented that the disputes settlement provisions were "weak, permissive and [add] little or nothing to the present opportunities and obligations of the nations involved". In fact, these procedures have never been invoked.

particularly, Hemmings (1990). Non-governmental organisations have raised the possibility that the US McMurdo station was being used to assist the MX missile program with targeting information (CAN, # 27, 1985).

92. Although Peterson notes (1980:392) that official Argentine maps label some bases as scientific stations, but others as army bases or naval outposts. See also Financial Times, 21 January 1983.

93. Neither of the superpowers were keen on this rule being incorporated into the Treaty (Hanessian 1960:467). The prohibition is subject to the provision that if all consultative parties are signatories to any other international agreement which addresses those issues, the rules of that agreement shall apply. In any event, this has not occurred.

94. Non-peaceful nuclear explosions and the testing of nuclear weapons would be prohibited under the provisions of article 1. Article V, it should be pointed out, does not prohibit the peaceful use of nuclear energy. However the experience of the US nuclear reactor (known as Nukey Poo) between 1962 and 1972 as a source of energy in the Antarctic has not been repeated. The reactor was never fully operational, was subject to radioactive leaks, and in the end was decommissioned at considerable cost, given that vast amounts of contaminated rock and soil had to be returned to the US for disposal, because of the prohibition on disposal of radioactive wastes in the Antarctic. Van der Essen (cited in Quigg 1983:148) suggests that the peaceful use of nuclear energy in the Antarctic was one of the most time-consuming issues at the Washington Conference.
Scientific research and cooperation

The preamble to the Treaty also sets out the principle that "the establishment of a firm foundation for the continuation and development of such cooperation on the basis of freedom of scientific investigation in Antarctic as applied during the International Geophysical Year accords with the interests of science and the progress of all mankind". Again, the parties imply that they are providing something (scientific knowledge) for the benefit of all. Scientific investigation is established as a peaceful purpose and as the *raison d'être* of activity in the Antarctic.

Articles II and III set out norms and rules on scientific investigation. Freedom of scientific investigation, and cooperation towards that end (which, as the preamble notes, is in the interests of all mankind) is to continue as it applied during the IGY. Article III sets out rules for the exchange of information on scientific programs in Antarctica and for the exchange of scientific personnel. Under article VII, the parties agree to provide (to each other) information on expeditions, stations and military personnel and equipment in the Antarctic.

Paragraph 2 of article III exhorts signatories, in implementing the principle of international cooperation in scientific investigation, to give "every encouragement ... to the establishment of cooperative working relationships with those Specialised Agencies of the United Nations and other international organisations having a scientific or technical interest in Antarctica". While, taken together, articles II and III may be argued to reinforce a degree of openness with respect to scientific investigation, those cooperative relationships have not been widely encouraged by the parties. The main exception is the Scientific Committee on Antarctic Research, a relationship which is explored later in this chapter.

The remaining articles of the Treaty deal with the practical aspects of activity in the Antarctic and the procedural components common to any international agreement. They are, nevertheless, shaped by the compromise on sovereignty as much for what is omitted as for what is included.

Decision-making: the consensus rule

Article IX sets out rules and procedures for decision-making by the consultative parties and is the closest the treaty comes to establishing any form of administrative machinery.

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95. Scientific observations and results are to be exchanged and made freely available, although to whom is not specified.
It also articulates the consensus, or unanimity, rule which has become a fundamental norm of the Treaty system (discussed in section III below).

Under paragraph 1 the original Contracting Parties, are to meet in Canberra within two months of entry into force of the Treaty, and thereafter at suitable intervals and places

for the purpose of exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating and considering, and recommending to their Governments, measures in furtherance of the principles and objectives of the Treaty, including measures regarding:-
(a) use of Antarctica for peaceful purposes only;
(b) facilitation of scientific research in Antarctica;
(c) facilitation of international scientific cooperation in Antarctica;
(d) facilitation of the exercise of the rights of inspection provided for in Article VII of the Treaty;
(e) questions relating to the exercise of jurisdiction in Antarctica;
(f) preservation and conservation of living resources in Antarctica.

The Treaty parties have argued that this is not an exclusive list. They suggest that any issue which relates to the principles and objectives of the Treaty (which is open to interpretation given that the principles and objectives of the Treaty are not defined) and which meet the test of a peaceful purpose, is a valid matter for the consultative agenda.

No voting rules are established in the Treaty itself. Article IX does provide that "the measures referred to ... shall become effective when approved by all the Contracting Parties whose representatives were entitled to participate in the meetings held to consider those measures". Article IX thus provides an effective veto for consultative governments and ensures that neither the claimants, nor the non-claimants, can be outvoted. The requirement for consensus is implicit. The rule that consultative recommendations be adopted by consensus was made explicit in the Rules of Procedure drawn up prior to the first consultative meeting. Bush (1982:82) argues that the "weak administrative arrangement is consistent with the limited objects which states, especially those claimant states which particularly feared erosion of their claimed sovereign rights, envisaged for the treaty".

Area of application
The area of application of the Treaty proved to be a contentious issue in the negotiations. Article VI establishes the rule that

the provisions of the present Treaty shall apply to the area south of 60° South Latitude, including all ice shelves, but nothing in the present Treaty shall prejudice or in any way affect the rights, or exercise of the rights, of any state under international law with regard to the high seas within that area".96

96. The lines of delimitation of four of the claims stretch to 60°S at their northernmost and thus technically encompass areas of high seas. The Chilean and Norwegian claims have no northern
This does not provide a definition of Antarctica which is not defined in the Treaty (even though it is used 40 times) except that where the term is interpreted by the Treaty parties to mean the continent, it includes all ice-shelves. Ice-shelves, therefore, are not high seas, even though they are not grounded on land. This was particularly important for New Zealand, much of whose claimed territory encompasses the Ross Ice Shelf.

Article VI was drafted "so as to leave indefinite the question of what was the high seas" (Phleger cited in Bush 1982:144). It provides no assistance as to whether the continental shelf or territorial waters are high seas or not. In this respect it is linked with the ambiguities of article IV. For the claimants, the continental shelf and territorial waters are part of sovereign territory (and therefore under national jurisdiction): for the non-claimants they were not. Oxman (1986:225) observes that a "difficult question is whether the prohibition on new claims or enlargement of existing claims [in article IV] applies to coastal state jurisdiction".

Article VI is also ambiguous on whether any high seas rights are to be restricted under the Treaty. It could be argued that military activity and the disposal of radioactive waste are high seas freedoms and that the Treaty rules which prohibit those practices do not apply when they are conducted on the high seas within the Treaty Area. In practice those high seas freedoms which are not explicitly the subject of any other article of the Treaty may be exercised freely (on the high seas) as long as they meet the test of a peaceful purpose.

Compliance rules
Compliance is an important feature in the development of a regime (an aspect discussed below in section III of this chapter). There are no explicit rules in the Treaty to enforce compliance.

The Treaty does include inspection rules "to promote the objectives and ensure the observance of the provisions of the present Treaty". Article VII sets out rules about what may be inspected, by whom and under what conditions but provides no guidance on what procedures are to be followed if an inspection reveals violations of the boundary, and the British claim is set at 50°S and 58°S, although the area of the British claim between that and 60°S was separated after the Treaty was signed to become the Falkland Islands Dependencies (Beck 1986b:68). The limits of the Tripartite Naval Agreement were set at 60°S.

97. Shapley (1985:95) notes that the British were charged with the task of drafting this article, and came up with 15 definitions of ice.

98. Although New Zealand was a reluctant claimant, and even offered at the Washington Conference to relinquish its claim, if all other claimants did likewise.

99. See Bush (1982:66-70) on the high seas provisions of article VI.
Treaty. All areas of Antarctica, including all stations, installations and equipment within those areas, and all ships and aircraft at points of discharging and embarking cargoes or personnel, are to be open at all times to inspection. Inspection is therefore intended to be continent-based, rather than covering activities on the high seas. However inspection may be conducted only on a unilateral basis: no agreement could be reached on multilateral inspection or the establishment of an independent inspectorate. Thus the rules are limited. Only consultative parties may conduct inspections. This article is nevertheless significant in that it represents the first agreement by the Soviet Union and the United States on mutual inspection, although not on their territory.

The parties are also required, under article X, to "exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any activity in Antarctica contrary to the principles and purposes of the present Treaty". However this is a general exhortation which adds little to the already weak compliance rules.

Amendment of the Treaty
Under the amendment procedures elaborated in Article XII amendments or modifications to the Treaty may be made at any time after entry into force by unanimous agreement, and ratification, by the consultative parties. The consensus requirement is thus reinforced.

100. Peterson (1988:44) suggests that the rules for prior notice of scientific programs and the exchange of scientists (article III) also contribute to ensuring compliance with Treaty rules.
101. Article VII also provides for aerial observation. For those states which denied the validity of the claims this reinforces the argument that there is no territorial airspace in the Antarctic. The claimants, however, can permit overflight of their territory by accepting it as a specific provision of the Treaty and as a concession to the principles of scientific cooperation. US President Eisenhower was apparently particularly pleased with this provision which he saw as an echo of his 'Open Skies' proposal (Shapley 1988:315).
102. However, given that Antarctica is not defined, and that the provisions of the Treaty apply south of 60°South, the question might be raised whether inspection of installations and equipment that are not ships, for example, drilling rigs, are covered by this provision, or whether this would be an infringement of high seas freedoms.
103. Soviet fears of setting a precedent for inspection in arms reduction agreements precluded collective inspection or the establishment of an independent inspectorate.
104. The inspection provision had initially been linked to the demilitarisation provision, but the provisions were delinked in the face of opposition by the superpowers.
105. This article raises a general question of treaty law: to what extent are non-signatories bound by either the provisions or sentiments of an agreement to which they are not party. For example, are non-Treaty parties bound to refrain from making the Antarctic the scene or object of international discord. Shapley (1985:98-99) notes that a draft article on the rights of non-parties was drafted, but later dropped. See also Bush (1982:99-103).
106. Non-consultative parties then have a period of two years from the date of entry into force to also accept any amendments, which become effective for that NCP at the time of the notification of ratification. If no such ratification is deposited within two years, then that NCP is deemed to have withdrawn from the Treaty.
A conference "to review the operation of the Treaty" may be requested by a consultative party after the Treaty has been in force for 30 years. This has led some observers to conclude, erroneously, that the Treaty expires after 30 years. It is, in fact, of unlimited duration. Amendments or modifications adopted at a review conference require the support of a majority of Treaty signatories, including a majority of the consultative parties.\footnote{This majority rule applies only to review conference amendments and does not replace the consensus rule implicit in article IX.} However, because review conference amendments can only enter into force when all consultative parties have ratified them, consensus is still likely to be sought in spite of the majority rule. Further, while non-consultative parties (NCPs) may participate in a review conference, their subsequent ratification of amendments does not contribute to effecting entry into force.

Paragraph 2(b) establishes withdrawal procedures but only in connection with the review conference procedure. If a review conference amendment has not become effective within two years, any party (consultative or non-consultative) may withdraw from the Treaty, such withdrawal to take effect a further two years from notification of such intention.

**Omissions**

There were a number of fundamental omissions from the Treaty, related almost exclusively to differences on the exercise of sovereignty and jurisdiction and the reluctance of some of the claimants to accept anything that could be seen to impinge of their autonomy. The absence of enforcement and compliance rules has already been mentioned. The Treaty does not establish a secretariat or organisation with legal personality, a point on which most of the parties would not concede. Thus decision-making remains firmly under the control of national governments.

The question of resource exploitation (especially mineral resources) was also omitted from the Treaty, because of its implications for the contentious sovereignty question. Shapley (1985:97) suggests that a provision was drafted but its content is not known. As resource exploitation was not considered to be an imminent activity, and not fundamental to the treaty, it was left to one side.

From the perspective of this thesis, the Treaty also contains almost no reference to environmental protection with the exception of the conservation and preservation of living resources in article IX. It was added as an afterthought at the insistence of Chile more as a result of concern over the economic impact of unregulated exploitation than for the intrinsic protection of wildlife. It is the only topic listed in article IX(f) which is not referred to in more detail elsewhere in the Treaty. Peterson (1988:45) suggests that
the prohibition on nuclear explosions and the dumping of radioactive waste reflects an implicit concern with the Antarctic environment. However the southern hemisphere governments who introduced this topic were more concerned (at this stage) about the effects of radioactive fallout on their own environments than they were about protecting the Antarctic environment. This omission relates not to the sovereignty issue but to the timing of the Treaty (environmental issues were not of high salience in the late 1950s) and to the focus of the Treaty as a security agreement.

These omissions were to become main points of contention in the development of the the Antarctic regime and focal points for change.

**The Treaty as a political bargain**

The Antarctic Treaty was greeted warmly as a precedent for agreement between the superpowers and as a model for international cooperation. In the context of the Cold War, the Treaty was genuinely perceived as a potentially significant step in the "construction of a durable peace" (Hanessian 1960:461).

President Eisenhower, in his State of the Union message to Congress early in January 1960, called it "a significant contribution toward peace, international cooperation and the advancement of science" (Department of State 1964:10). Hayton (1960b:408) argued that its "exhortations and declarations help keep alive that glimmer of hope for the peaceful solution of the military-ideological confrontation of our age; the struggle for survival by the western-liberal tradition in the face of a "no holds barred" challenge from Communism". The Department of State (1964:10) thought it a "pioneering document".

Not all, it should be said, were so enthusiastic. During United States ratification hearings, for example, several dissenting opinions expressing concern about Soviet involvement were heard. One witness called the Treaty an "instrument of the peace offensive of the Soviet empire" (Shapley 1985:101). As already noted, the Treaty came under particularly heavy fire from those international lawyers who found it less than satisfactory as a legal document. Their concern was not so much with its political implications as its legal weaknesses which derived in particular from article IV (and its failure to solve the sovereignty question) and the absence of sanctions or any formal organisational structure.

However, the Treaty needs to be interpreted as a political document as much, if not more than as a piece of international law. It is a compromise which "secures nearly

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108. Indeed, the Treaty only just attained the two-thirds majority required for ratification. The Senate vote was 66 to 21.
everything that was possible of agreement, given the diverse dispositions of the participating states" (Hayton 1960b:409). Indeed, compromise (through the search for consensus) has become a hallmark of the successful operation of the Treaty. Shapley (1985:91) characterises it as "an unfinished political deal". There was, at that time, no possibility of finishing that deal.

Sir Esler Denning, leader of the UK delegation at the Washington Conference, chose to characterise the Treaty as "almost entirely a self-denying ordinance on the part of the signatories, who will derive from it virtually no privileges but only obligations" (Conference on Antarctica, 1959:37). However to portray the treaty as one in which the future expression of national interests was to be put to one side in favour of a greater good is to misrepresent both the Treaty and the processes that led to it. As noted earlier, the parties were motivated by self-interest in seeking to negotiate a Treaty. In the late-1940s the claimant governments and the United States had not been convinced that any agreement could protect their interests. Indeed the claimants were concerned that their interests might be compromised by a treaty. However by the late 1950s, as Oxman (1978:296) observes, "the Antarctic Treaty was possible because states, including the territorial claimants, had reason to believe that without it their national interests might be prejudiced" (my emphasis). As noted earlier, this perception was changed by the involvement of new states whose interests were likely to conflict with those of the claimants and the US.

However the Treaty does not substitute for national interests, it complements them and could not have done otherwise. The Treaty satisfies policy goals which were based on the desire for a guaranteed presence in the Antarctic, influence over decision-making on Antarctic issues, and for recognition of the differing positions on territorial claims. Influence, supported by the effective veto and the consensus norm, is guaranteed. The decision-making processes are non-discriminatory as between the twelve original signatories. Guaranteed freedom of access to all parts of the Antarctic satisfied those who did not accept the exercise of sovereign rights by the claimants. The claimants, on the other hand, were able to accede to freedom of access, to inspection, to territorial overflight, and to the fact that the Treaty did not formally recognise their claims, as a concession to scientific cooperation and the pursuit of peace, protected by article IV which meant that those concessions could not later be used as legal argument against their effective occupation.

Peterson (1988:87) suggests that the Washington Conference (and, by implication, the Treaty) demonstrates the link between overall and issue-specific power. This is not, however, a clearly sustainable proposition. Five of the claimants (Australia, New Zealand, Norway, Argentina and Chile), while important Antarctic powers with
considerable influence over the Antarctic negotiations, had little overall power in the international system. What is probably more relevant is that, even given superpower involvement, the original signatories were able to establish a strong founding coalition vis-a-vis other states because of their issue-specific power (rather than overall power) which was enhanced because there was little interest in Antarctic issues from other states in the late 1950s.

While it is true that the United States took a leading role in mobilising the Treaty negotiations this not the action of a hegemon. Peterson (1988:85) suggests that most of the provisions of the Antarctic Treaty fully reflected the shared preferences of the superpowers. The point is, however, misleading in that she also observes, correctly, that on further investigation most of those interests were also shared by the other parties. Krasner (1985:252) also suggests that the "basic American objective was to stabilise strategically the Antarctic area" but neglects to mention that this goal was shared by the other states, especially the claimants. Indeed, as section two of this chapter has demonstrated neither the US nor the USSR were able to impose their preferences on the negotiations.

Power-based explanations for the establishment of a cooperative regime in the Antarctic are therefore clearly unsatisfactory. As the formal basis for a regime, the Treaty is a negotiated, rather than an imposed agreement. It can reasonably be characterised as the product of institutional bargaining. This process rests on integrative bargaining which is encouraged by the "absence of a fully specified zone of agreement" (Young 1989b:366) rather than the pursuit of relative gains and distributive bargaining.

Young (1990b:32) argues that we can expect to encounter leadership in action whenever we observe success in the formation of international institutions. Yet it is not clear what leadership role was exercised, and by which state or states, in the Treaty negotiations. There is not a strong case for arguing that the United States, or any other state, acted as a structural leader by employing "bargaining power to bring pressure to bear on others to accede to the terms of the proposed constitutional contract" (Young 1990b:10).

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109. Similarly, neither Belgium nor South Africa could be considered major powers.
110. Peterson (1988:85) supports this contention when she argues that "there was no hegemon at work".
111. The US proposal of the compromise on sovereignty was based on proposals put forward by Chile in the 1940s.
112. Institutional (and therefore integrative) bargaining, Young suggests (1989b:366), can only succeed when the issues at stake lend themselves to contractarian interactions.
113. Entrepreneurial leaders (Young 1990b:17) are most often individuals who "employ negotiating skills to put together deals that would otherwise elude participants". It may be that Paul Daniels, chief US negotiator at the informal meetings in Washington at which considerable agreement was reached on draft treaty provisions, acted in this way (see Shapley 1985:111; Beck 1986b: 63, 73, 116, 170; Quigg 1983:146).
Indeed, Young (1980:354) has typified the Antarctic Treaty negotiation process as a "small group of actors with strong or generally compatible interests banding together to work out an acceptable set of arrangements". Along these lines Kremenyuk (1991:30-31) suggests that the Antarctic Treaty is the result of a joint-problem solving approach, by which the negotiators seek to find an acceptable solution to a problem the nature of which is agreed upon, a process he too distinguishes from a relative gains model of negotiation.  

III: the Antarctic Treaty system

Under the rules of article XIII(5) requiring ratifications from all twelve original signatories, the Treaty came into effect on 23 June 1961, upon receipt of the final notices of ratification from Argentina, Chile and Australia. Yet, as I have argued in chapter one, an agreement is at best an inchoate regime.

Young suggests (1980:336) that the substantive core of any international regime is to be found in a collection of rights and obligations. As this chapter has shown, the Treaty clearly imposes obligations upon the signatories. It also confers privileges, or rights upon the consultative parties. Indeed, it would be more correct to say that the original signatories conferred rights upon themselves through the formal agency of the Treaty.

However regimes, as Young argues (1980:336), must also include a "procedural component [which] encompasses recognised arrangements for resolving situations requiring social or collective choices". To this might be added an informal component which extends the norms and rules of a treaty to define implicit standards of behaviour.

114. He suggests that in relative gains bargaining, the main interest of any party is to maximise its gain by building up bargaining power (Kremenyuk 1991:30). It may be that building up bargaining power is what the USSR tried, unsuccessfully, to do in the informal negotiations prior to the Washington Conference by refusing to discuss anything of substance.

115. In accordance with the final act of the Washington Conference, the participating governments met in Washington on 27 January 1960 and continued to meet to consult and make recommendations to their governments on interim arrangements regarding matters dealt with in the Treaty (Department of State 1964:11). In all, 37 meetings were held before entry into force, at which delegates produced Rules of Procedure and a draft agenda for the first consultative meeting.

116. This approximates Krasner's (1983b:2) definition of norms which he describes as "standards of behaviour defined in terms of rights and obligations".

117. For example, to preserve peace, not to carry out nuclear explosions or dump radioactive wastes, not to assert new claims, not to undertake military activity, to guarantee free access to the continent, to encourage scientific cooperation and to exchange scientific information, to take account of the interests of humankind and to acknowledge responsibility in accordance with consultative recommendations.

118. Such as the right of free access, the right to conduct inspections and observations (including the right of overflight), the right to conduct scientific programs and, most importantly, the right of exclusive decision-making on Antarctic issues.
upon which compliance and the strength of a regime ultimately rests. Both this procedural framework and the informal normative component of the Antarctic regime are elucidated here.

*The procedural framework*

It was not clear in 1961 just what would eventuate from the operation of the treaty. When the twelve consultative parties met in Canberra, Australia, less than two weeks after the entry into force of the Antarctic Treaty, for the first of the meetings convened under the provisions of article IX, the task before them was to implement the Treaty's principles and objectives and to ensure compliance with its norms and rules. There was, as this chapter has shown, little guidance in the Treaty as to how they should attempt this task. This was because the Treaty was a political agreement among the parties to solve problems of the past, rather than a blueprint for future action.

Nevertheless it did provide a framework for future interstate cooperation on the Antarctic and, if compliance could be assured, a degree of certainty and predictability to those interactions. The rules and procedures on decision-making set down in article IX were sufficiently general as to be susceptible of interpretation. Article IX was itself a compromise between those who, with an eye to the future, wanted some form of administrative machinery, and those who wanted none. Peterson (1980:381) calls it more of a coordination technique although Sollie (1985:42) considers that it is "close to being a legislative process for extending and supplementing the Antarctic Treaty". Hayton (1960a:367) argued that it would not "be a proving ground for a rather advanced form of international administration".

Those who negotiated the Treaty provided for decision-making on Antarctic matters to remain firmly in the hands of the consultative governments. Under the control of the consultative parties, the article IX procedures have given rise to a complex network

119. The Argentine delegation at the Washington Conference argued forcefully that the conference had "not been convened to institute regimes or create structures ... It is not its mission to change or alter anything" (Conference on Antarctica 1959:31).

120. From the first consultative meeting the parties adopted the procedure of meeting in private. The Final Reports of those early meetings give no indication of the substance of debates. Documents were confidential and no formal minutes were kept. Reports recorded only administrative details (such as the names of participants, the agenda adopted), opening speeches at the public plenary, and recommendations adopted. Reports may be adopted by a majority of delegations, although often the report notes if it has been adopted by consensus. A proposed change to the rules of procedure to the effect that reports should be adopted by consensus was unsuccessful.

121. Under the "suitable intervals" provision of article IX consultative meetings have come, by convention, to be held every two years. A preparatory meeting for each consultative meeting sets the agenda. The practice has increasingly been for those meetings, in agreeing to the agenda by consensus, to debate issues of substance as well. At the most recent consultative meeting, the 16th, the parties decided to meet annually but without preparatory meetings. The consultative parties also continued the process of meeting behind closed doors, and making little detail about their deliberations available to the public.
of recommendations, separately negotiated conventions\textsuperscript{122} and supplementary procedures such as meetings of experts and special consultative meetings.\textsuperscript{123} Collectively this has come to be known as the Antarctic Treaty system, defined by its participants as the "whole complex of arrangements made for the purposes of regulating relations among states" in the Antarctic (Handbook 1989:xii).\textsuperscript{124}

The view that prevailed at the first consultative meeting, and over the following years, about the procedural implementation of the Treaty is best represented by the eloquent counsel of the head of the Chilean delegation, His Excellency Señor Mora (who had also been present at the Washington Conference):

It is the opinion of the Chilean government that in this First Consultative Meeting the best service we can render for the safeguarding of the Treaty ... is to proceed cautiously in our eagerness to make it operative and fruitful, and to recommend only such measures as, after lengthy study of the various projects, convince us of their obvious usefulness and immediacy. If we are to avoid unproductive misunderstanding and harmful friction, we must proceed with caution ...

In Antarctica, it may be more advisable to wait for problems to arise and then seek the most reasonable means of solving them, than to hasten to propose theoretical solutions for presumptive events or situations ... in no case must we overstep the provisions of the Treaty ...

Consequently at this First Consultative Meeting, we should begin by avoiding all matters on which we are divided for it is essential to the objectives of the Treaty that close cooperation be established among us and that an atmosphere of the utmost harmony should prevail ... we should renounce any attempt to achieve perfection if the measure proposed does not muster unanimous consent. It is better to be content with a modest achievement than to back spectacular solutions which might later be rejected by our governments.

The Antarctic Treaty is an event of too recent birth to be stamped with the hallmark of perfection. Its application may have far-reaching and beneficial repercussions so long as we proceed with prudence, in order to do it safely.

For example, we must avoid the formation of bodies which could create the impression that we are establishing a supra-national administration for Antarctica. This would not be in keeping with the letter or with the spirit of the Treaty (Final Report 1961:25).

\textsuperscript{122} The separate conventions - the Convention for the Conservation of Antarctic Seals (CCAS), the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) - are discussed in subsequent chapters of this thesis.

\textsuperscript{123} A list of consultative meetings, of recommendations, and of special consultative meetings are appended to the thesis (see appendixes 4, 5 and 6).

\textsuperscript{124} There are two useful collections of the measures adopted by consultative parties. Bush's (1982) comprehensive volumes of inter-state and national Antarctic documents is organised on both a chronological and country by country basis, enhanced by extensive cross-indexing and supported by analysis, particularly from the perspective of questions of international law. The Handbook of the Antarctic Treaty system collates these measures on an issue by issue basis, but with little critical analysis.
This emphasis on caution, on avoiding conflict and seeking consensus, which has become the hallmark of the Antarctic regime, has engendered a functional, ad hoc, and piecemeal approach to decision-making. The Treaty system is both "decentralised and functionally oriented" (Triggs 1986a:17). As Shapley observes (1988:316) Antarctic administration is pragmatic - "rules [are] adopted only for immediate problems; sweeping principles [have been] eschewed in favour of limited measures". This characterisation of the Treaty system is shared by the participants:

various measures and actions have been taken as and when a present or future need for them has been perceived. The practice has been essentially pragmatic; there has been no systematic attempt to provide for an all-embracing code for the governance of Antarctic activities (Handbook 1989:xii).125

Measures adopted at consultative meetings, under the provisions of article IX and the rules of procedure, are hortatory rather than mandatory: they urge, suggest, and recommend rather than require or enforce action. There is a strong tendency to avoid enforcement mechanisms and sanctions.

The Treaty parties have expanded their decision-making process in a limited way by adopting "new institutions and techniques" have been created "only as and when necessary ... in response to [a] well-defined need and well-defined problems" which require collective action (Scully 1986b:405; my emphasis). A special consultative meeting was first convened in 1977 as a procedure for dealing with applications for consultative party status.126 Special consultative meetings have also come to be increasingly used to deal with issues which require faster decision-making than the regular consultative process is capable of. In particular they have been used to negotiate the separate conventions which have extended the functional scope of the Treaty.

In spite of the expansion of procedural mechanisms, the Treaty parties have also sought to maintain their authority over Antarctic decision-making. Meetings of experts have been convened from time to time to discuss practical problems relating to Antarctic

125. The Handbook of the Antarctic Treaty system is edited by Dr John Heap of the British Foreign and Commonwealth Office, a long-time Antarctic diplomat (and scientist before that) of high standing.

126. In 1977 Poland indicated that it believed it had fulfilled the criterion required for consultative party status. In the absence of any rules in the Treaty on how to address this situation, the original signatories decided that it should not be automatic, but rather 'awarded' by the existing consultative parties. Their decision on this matter was, however, intended to take effect immediately rather than requiring the subsequent agreement of all governments in accordance with article IX of the Treaty. As Bush observes (1982:337) this is representative of a more flexible decision-making approach.
activities. However, only experts from consultative parties may attend, unless unanimous agreement is reached to invite other experts who have no voting rights. Few steps were taken to establish cooperative working relationships with UN agencies or other international organisations. Where such relationships have proved necessary, the consultative parties have made it clear that they will not accede to the authority of any other organisation on Antarctic issues.

Matters which were inherently conflictive, or upon which consensus could not be reached because of their implications for the political and legal compromise of the Treaty, were quickly removed from the consultative agenda.

There was continued resistance to any formal institutionalisation of the regime. The British observed at ATCM-I that they "had little doubt that when we come to consider our agenda we shall find it advisable to recommend to our governments that they establish some form of permanent administrative machinery however modest in scope, to facilitate inter-governmental cooperation in the intervals between Meetings of this group". This was not to be the case. Administrative responsibility was devolved onto the host government of each consultative meeting. Communication between meetings was to be conducted through bilateral diplomatic channels (recommendation I-XIV). The matter was discussed at the second consultative meeting and inscribed on, but subsequently dropped from the agenda of the third consultative meeting. It was not formally raised again until the 1980s and has still not been settled.

127. For example, on telecommunications.
128. The reports of such meetings are submitted to consultative meetings for final consideration. At the third consultative meeting, the New Zealand delegation (Doc/P13, 1964) argued that technical meetings convened by the consultative parties did not have the same status as consultative meetings.
129. The World Meteorological Organisation has been an exception to this (see Bush 1982:55-56; 122).
130. The Treaty has not totally depoliticised the Antarctic. In 1973 the President of Argentina took his entire cabinet to the Vicecomodoro Marambio station, declaring it to be the temporary capital of Argentina (Mitchell 1981:70). A baby was born to an Argentine woman in Antarctica in January 1978, and marriage ceremonies have been conducted there. In January 1977 President Pinochet of Chile went to the Antarctic, taking with him a large chest of soil collected from various parts of Chile, as a symbol of Chilean unity. The Argentine press expressed surprise at his provocative behaviour in Argentinian territory: in Pinochet's opinion he had never left Chile (Neilson 1977).
131. Their suggestion that the Australian government be entrusted, at least for the time being, with essential administrative services was not adopted. Australia had apparently been keen to have a secretariat established in Canberra and this was a bone of some contention at early consultative meetings.
132. The consultative parties have adopted a numbering system for recommendations which identifies the meeting at which it was adopted (the first part) and sequential numbering of recommendations for that particular meeting. For example, I-XIV is the fourteenth recommendation adopted at the first consultative meeting.
133. A seemingly less contentious New Zealand suggestion (P.13, 1962) that intersessional meetings be held at least quarterly at the Washington mission of the host government of the forthcoming consultative meeting, (later revised to refer only to the diplomatic mission of the host
The question of jurisdiction was one such issue even though it was specifically set down in the Treaty as one of the issues on which parties could consult. The British raised it at the second consultative meeting.\textsuperscript{134} Although the item was listed in the draft agenda (Doc.1, 1962)\textsuperscript{135} it was not on the agenda included in the Final Report and there is no reference in the final report to it having been discussed.

\textit{The informal component: norms and standards of behaviour}

Cooperation under the Antarctic Treaty has succeeded because the Treaty parties have continued to put their differences on the sovereignty question to one side. It points to the importance of article IV (which allowed all Treaty states to maintain their position on the exercise of sovereignty in the Antarctic) in the development of the Treaty regime. As Young observes (1989a:182) it serves to "clear away an otherwise intractable complex of conflicting ... claims so that opportunities for cooperative ventures can be addressed in a spirit of integrative bargaining and joint problem-solving".

Kimball (1988c:15) notes that "every time [the consultative parties] seek agreement on a new measure, they must once again find a balance that preserves the positions of ... countries claiming territory in Antarctica and those that do not recognise any claims". Thus decision-making is often slow. However this imperative for compromise has been a major factor in the Antarctic Treaty system, sometimes to the detriment of effective management.\textsuperscript{136}

Negotiation and compromise are strengthened by the consensus process which is valued by the Treaty parties as essential to maintaining the regime. Thus consensus, once

\textsuperscript{134} In an explanatory memorandum (Memo.Expl.6, 1962) the UK observed that while this was a very complex subject, for which reason the UK had refrained from raising the substance of the issue at Canberra, that is, at the first consultative meeting, it was an issue that ought to be addressed, before the problem arose in an acute form. They suggested that a Committee of Experts be convened to examine the position relating to jurisdiction in Antarctica and to formulate appropriate recommendations for further consideration (P.10, 1962).

\textsuperscript{135} Documents from Antarctic Treaty Consultative Meetings are listed in a separate section of the bibliography.

\textsuperscript{136} Wyndham (1980:187) gives the example of the 1968 Conference on Antarctic Telecommunications convened by the Treaty parties which was unsuccessful in agreeing on a workable scheme for the transmission of Antarctic meteorological data to the World Weather Watch because some claimants were unwilling to allow another state - a rival claimant or a non-claimant - to be the only designated source of data for their territory. Five sources were listed when two would have sufficed.
reached, is not to be broken. This rule, as Peterson observes (1988:94) has "remained undisturbed because it is essential to the continued existence of the regime". It was for this reason that the Antarctic and French defection from consensus in 1988, the subject of chapter seven, was so contentious.

There is also a shared understanding among the Treaty parties that differences between them on Antarctic matters should be managed within the confines of the consultative process and that tensions on non-Antarctic matters will not affect Antarctic cooperation. In maintaining their authority over Antarctic decision-making consultative parties have sought also to keep Antarctic matters off the agenda of other international institutions.

Thus in the hierarchy of values (which Puchala and Hopkins suggest (1983:66) exemplifies all regimes) conflict avoidance, consensus, maintenance of the political compromise and the authority of the consultative parties, take precedence other values such as over scientific cooperation and environmental protection. As chapter three will show, this has had substantial implications for environmental decision-making.

Compliance

As Beeby observes (1972:16) the Treaty "is not framed in such a way as to guarantee the implementation of its terms". Its weaknesses - the absence of compliance rules and sanctions and the ambiguous nature of its articles and provisions - "leave [it] open to the criticism that its successful implementation depends entirely on the maintenance of the same cooperative spirit ... [that] brought [the parties] to draw it up" (Beeby 1972:15-16). Nevertheless, the Treaty system is a remarkably successful example of international cooperation, and the founding coalition, together with states which have acceded to the Treaty, have maintained a high degree of internal cohesion.

This cohesion and the successful maintenance of the regime is indicative of the importance placed upon the Treaty by its signatories as the best vehicle available for the protection of their individual and collective interests. Once agreed to and in force the Treaty became the guarantor of the parties' interests in the Antarctic. As long as the Treaty remained in place, the spectre of conflict could be subdued, and other national interests could be met (or at least not undermined). Its members, as Quigg notes

137. Numerous instances are given of the latter: for example, continued US and Soviet involvement in the Treaty system, without apparent acrimony, during such tensions as the Bay of Pigs, the invasions of Czechoslovakia and Afghanistan. The most frequently cited example is that of the British and Argentinians continuing to attend consultative meetings together during the Falklands/Malvinas War.

138. For a useful and concise recent study of the interests of individual states in the Antarctic Treaty system, see Rowland (1988:15-25).
are held together by powerful interests in common. The Treaty provides a mechanism whereby seemingly irreconcilable differences can be accommodated.

Thus the "habit of cooperation [that] has been maintained and developed" (Beeby 1972:4) is generated by self-interest. As Shapley bluntly puts it: "the Treaty has worked because it suits the individual national interests of those countries with stakes in Antarctica - not because it asks them, in effect, to join hands and sing" (1984:30). Quigg similarly observes (1983:163) that "the Treaty is seen to serve their individual interests more efficiently than any conceivable alternative and therefore they feel it must be preserved at the cost of difficult compromises".139

This process rests on more than a calculation of short-term interests. Rather it reflects the realisation of long-term individual and joint gains. Further, sunk costs (that is, the investment of past effort) make any alternative to the Treaty system especially one which might erode the influence of existing consultative parties (especially the claimants) inherently unpalatable. Agreement to cooperate under the Treaty, rather than pursue a unilateral path, rested on individual state learning. Once those policy adjustments (and a shift of norms) were achieved, the process of institutional learning ensured that states identified both their individual and collective interests with the maintenance of the Treaty regime.

The Treaty parties were assisted in the development of the regime by the fact that, as Francioni (1986:163) observes, "the international community treated the Antarctic continent with benign neglect" after the Washington conference. The issue dropped from the international agenda for almost two decades.

There has also been a remarkable continuity, and cohesion, of Antarctic decision-makers which has continued even with the growth of the Treaty system. Through the regular consultative meetings, a network of individuals (mainly diplomats and international lawyers, with some scientists) with extensive experience of the Treaty system has been established. The low political salience of Antarctic issues, nationally and internationally, meant that there were few domestic constituencies on Antarctic issues (except for scientists, who are discussed below). The same people who were involved in the multilateral process of cooperation were also pivotal actors in establishing national Antarctic policies and defining national interests. Thus the transgovernmental elite, socialised into the norms of the Treaty, was important in maintaining and defending the Antarctic regime.

139. This point was stressed in many of the interviews I conducted during research for this thesis. Participants talked about the need to moderate national interests and demands in the interests of protecting the Treaty system, and a common interest, in order to avoid conflict.
Science and politics

The discussion so far has concentrated on political and diplomatic cooperation in the Antarctic. Scientific cooperation, which was specifically encouraged in the Treaty exists, for the most part, at a different level through practice 'on the ice' and through the coordination of scientific research. Nevertheless, recommendations adopted at consultative meetings have established rules for the conduct of scientific research and the encouragement of scientific cooperation.

Science was confirmed in the Treaty as an important part of the agenda of Antarctic politics although the Treaty was not, as Zumberge (1987:4) and Gould (1971:54) erroneously suggest, negotiated to protect a scientific programme. Science was, as Richard Laws suggests "used as a means to an end by providing an excuse to remove a potentially controversial region from international conflicts" (1987:250).

The relationship between science (and the scientific community) and the consultative process is a somewhat ambivalent one. The focus for scientific cooperation has been the Scientific Committee on Antarctic Research (SCAR), which was established by ICSU during the IGY. SCAR is a coordinating body whose members are national Antarctic committees, not individual scientists. It is charged with the initiation, promotion and coordination of scientific activity in the Antarctic, with a view to framing and reviewing scientific programs of circumpolar scope and significance. It does not conduct scientific research itself.

While SCAR is not mentioned in the Treaty, even though it predates it, the consultative parties have come to rely on it heavily for advice on all manner of issues, including protection of the environment. It is thus a source of knowledge upon which institutional learning might be based. It has effectively become the Treaty system's scientific secretariat through the work undertaken by its various Working Groups. Yet there is no direct relationship between SCAR and the consultative process. Advice is sought from SCAR through national Antarctic committees and is, in turn, officially transmitted to consultative meetings through national delegations. Until recently SCAR representatives were not even invited to attend consultative meetings at which their recommendations were being discussed. The consultative parties have sought to

140. Young (1989b:373) suggests that CSAGI and SCAR had a leadership role in forming the regime for Antarctica in 1959. While it is the case that cooperation under the IGY provided an example for the diplomats and international lawyers to adopt as the basis for the Antarctic Treaty, the scientific community was not directly instrumental in its negotiation.

141. A former director of the British Antarctic Survey.

142. This question of the relationship with SCAR was dealt with at the first consultative meeting and indeed in the preparatory meetings prior to that. Governments were recommended, individually, to encourage SCAR to continue its advisory work on scientific cooperation. The short
ensure that SCAR's participation is advisory only and do not commit themselves to take its advice.

Generally the scientific community, and SCAR, has sought to distance itself from the politics of the Treaty system. SCAR has neither sought nor undertaken an advocacy role. Indeed, Robert Hofman\textsuperscript{143} goes so far as to suggest that "science has been completely independent of the politics surrounding Antarctica" (cited in Wolfe 1983:425). The scientific community has perceived its Antarctic role in two ways - the first, the conduct of scientific research in the pursuit of knowledge and the second, responding to requests for information and advice from the ATCPs.

The scientific community is an interested actor in the regime. Political influence and prestige within the Treaty system is linked directly to the conduct of scientific research. Therefore, as Walton observes (1987b:61) "it must be expected that political considerations will inevitably intrude, in some countries, in the selection of which scientific activities to support".\textsuperscript{144} Senior scientists have been included in consultative delegations. Nevertheless, Laws argues (1987:251) that lawyers and diplomats predominate at consultative meetings, and that the "few scientists present have second-class status, although almost invariably they represent the only practical experience there".

Further, scientists have clearly benefited from the successful maintenance of the Treaty system and therefore have some vested interest in its successful implementation.\textsuperscript{145} As Laws notes (1987:250) "Antarctic scientific research has profited from its role in perpetuating this political truce by continuing to receive financial support from governments".

However, it is not clear that the scientific community can be identified as an epistemic community within the Antarctic regime, especially when we recall that the definition assumes a degree of conscious policy advocacy.

\textsuperscript{143} Scientific Program Director of the United States Marine Mammal Commission.
\textsuperscript{144} The quality of scientific programs has become an important debate in Antarctic politics which will be addressed in subsequent chapters.
\textsuperscript{145} There is some anecdotal evidence that national scientific communities have been influential in pressing their governments to become signatories to the Treaty.
Expansion of the regime: limited incremental change

The Antarctic regime was consolidated in the 1960s and 1970s. Once the early consultative meetings had laid the procedural groundwork, there was little effective pressure for substantive change until the 1980s. The limited expansion of the Treaty system in the 1960s and 1970s took the form of incremental decision-making through the adoption of new rules and procedures in response to policy proposals, always guided by the need for unanimity and consensus. The development of the environmental agenda, in this way, is examined in chapters three and four.

In the 1980s the Treaty regime was subject to internal and external demands for change. Nevertheless even in the 1980s, the extent of the response by the consultative parties was constrained by the boundaries set by the normative framework of the Treaty system.

The internal dimension

Between 1961 and 1980 there were only nine new signatories to the Treaty. The decision-making club did not expand until 1977 when Poland became a consultative party. In the 1980s, however, the number of treaty signatories and the number of consultative parties expanded dramatically. This expansion was not unconnected with the debate about mineral resource exploitation.

Since 1980 twenty more states have acceded to the Treaty, and the number of consultative parties has increased by fourteen. The new consultative parties include countries such as India, China, Brazil, Uruguay and the Republic of Korea. This increase in the number of consultative parties was not unconnected with the process of strengthening the Treaty system to resist outside challenges. The existing consultative parties sought to co-opt developing states to counter criticisms of the Treaty system as a club for western, industrialised states.

The involvement of non-traditional Antarctic states such as India and China has altered the balance of interests within the system, although their involvement has not subdued the perceived need to maintain the political compromise on sovereignty. Indeed the newer states have become rapidly socialised into the traditional norms of the Treaty system and have become staunch supporters of the Treaty system. Nevertheless, as Beeby observes (1991:14) "it is [now] much less easy to generate a dynamic that will

146. See appendix 3 for a list of contracting parties to the Treaty.
147. This would make the total number of signatories 41 including 27 consultative parties - except that the reunification of Germany changes the numbers to 40 and 26 respectively, as both the FRG and GDR had been consultative parties.
148. The rules on substantial scientific activity were relaxed to accommodate some of the newer Antarctic Treaty parties as part of the process of ensuring their participation in the system.
lead to a consensus acceptable to all". If the numbers continue to increase, he suggests, "there might need to be a search for new methods of arriving at a consensus".

That states have acceded to the Treaty and sought to attain consultative party status provides one measure of the legitimacy (and the strength) of the Treaty system. States have acceded for a combination of motives including the chance to participate in scientific investigation (and the prestige that accompanies that), to participate in decision-making and discussions on the future of the Treaty system, and the potential for access to resources. They benefit from access to decision-making on an equal basis and from the scientific expertise of the more experienced Antarctic countries.

The external dimension
The 1980s heralded a growing international interest in the Antarctic which was fostered especially by the debate over mineral resources. Third-world countries led the challenge in the UN General Assembly, where they accused the consultative parties of constituting an exclusive, secretive club managing the Antarctic for their own ends. Environmental non-governmental organisations became increasingly and publicly critical of consultative parties' record in protecting the Antarctic environment, a criticism which was located in a growing public awareness of the importance of environmental protection. These external demands are explored in greater detail in subsequent chapters.

Response to demands for change
In the context of internal and external pressures for change in the 1980s, it was not surprising that, with reluctance on the part of some, a cautious reassessment of the procedural framework of the Treaty system began to take place. The normative framework, however, was little affected.

The issue of the operation of the Treaty system, including the 'openness' of the system came back onto, and this time stayed on, the agenda. The vexed question of administrative arrangements and the establishment of a secretariat should once again be raised. However this question has still not been settled in the face of opposition from

149. See, for example, Mansukoski (1987:15) on Finland, Joyner (1990b:53) on India, Lee (1990b:581) on China.
150. The national Antarctic programs of consultative parties have often provided assistance to the newer Treaty parties in the conduct of their scientific work.
151. As a general issue the wider circulation of information about the treaty system, such as Final Reports, had been first considered in 1977 although little was done until 1983. By the 1980s reports were more fulsome and often used to contain decisions and set out further programs for action which were not the subject of recommendations.
Argentina with the support of some of the newer consultative parties such as India and East Germany.\textsuperscript{152}

As the numbers of acceding states increased, non-consultative parties (NCPs) became increasingly dissatisfied at being excluded from the decision-making process. From 1983 they were invited to attend consultative meeting (as observers only), a decision which Kimball (1983a:5) called a "major departure from prior practice".\textsuperscript{153}

The new openness extended to making publicly (although not easily) available documents tabled at consultative meetings.\textsuperscript{154} During the 1980s the Final Reports of the consultative meetings became increasingly detailed and often contained the substance of agreements and programs of further action which were not incorporated into recommendations.

From ATCM XIV (1987) the consultative parties invited experts from appropriate international organisations to assist with deliberations at regular consultative meetings.

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\textsuperscript{152} It was raised briefly at the 11th Meeting in 1981, possibly motivated by the recent conclusion of CCAMLR under which a small secretariat was to be established, and discussed more fully at the 12th Meeting (1983) where it was agreed that "the establishment of a more permanent infrastructure ... would be premature at the present time" (Final Report 1985:14). Discussion was again widened at the 14th Meeting (1987) to include the possibility of cost-sharing in respect of consultative meetings. The financial burden of each individual consultative meeting fell on the host government. Some delegations expressed the view that there may be no alternative to the creation of a permanent secretariat which should, nevertheless, be "proportional to real needs, which in the immediate future called only for something modest in scope and cost" (Final Report 1987:12). Predictably this was again deferred for further consideration. The Final Report of the 15th Meeting sets out in some detail the arguments on this matter, with the observation that "in view of the differing arguments that had been expressed, the Meeting was unable to reach a consensus on this issue".

\textsuperscript{153} The question of observers at consultative meetings had been raised at the 11th Meeting in 1981 where the view was expressed that this issue required careful thought before any conclusion could be reached. In 1983 NCPs were invited for the first time (on a one-off basis). An invitation was extended to NCPs to attend the 13th meeting (including the preparatory meeting) in 1985 where the consultative parties decided that the invitation to NCPs should be on a permanent basis, subject to new rules of procedure. NCP delegations may attend all formal working group and committee meetings and speak, unless a consultative party delegation requests otherwise but may not participate in the decision. Draft rules of procedure were adopted to incorporate this change. In a further development of the decision-making process, the report of the 12th Meeting notes that the draft rules would be circulated to governments for their consideration and any government which had not indicated its views by 1 April 1984 would be taken to have accepted the text.

\textsuperscript{154} At the 13th meeting (1985) documents from the first three consultative meetings (1961, 1962 and 1964) were made publicly available, unless any party objected. Things moved quickly after that. The 14th Meeting released documents from the 4th to the 7th Meetings, and the 15th Meeting did so for all subsequent meetings, including any documents from that 15th meeting not otherwise designated. At the 12th Meeting in 1983 the circulation of the Final Reports was widened to include the UN Secretary General, no doubt a response to the inscription of the Question of Antarctica on the General Assembly agenda that year.
meetings. Organisations invited to that meeting included the WMO, IUCN and SCAR. At the 15th Meeting, the organisations from which experts were invited to attend was widened considerably.

Thus the Antarctic Treaty system at the end of the 1980s was, to some extent, procedurally different from the system of the 1960s. There was, however, no change in the hierarchy of values or in the dominance of sovereignty norms. That change was to come with the overturning of the Minerals Convention and the negotiation of the Madrid Protocol (discussed in chapter seven).

Conclusion

The Antarctic Treaty of 1959 is a negotiated rather than a hegemonic agreement, with limited objectives. Its primary focus was the avoidance of conflict between claimant states (especially Argentina, Britain and Chile whose claims overlapped), between claimants and non-claimants (over the validity of the claims) and between the superpowers (both of whom maintained a presence in the Antarctic). Thus the hierarchy of values implicit in the Treaty and the regime ultimately places political and security concerns before economic or environmental ones where those interests are seen to be in conflict. The fundamental principle of the Antarctic regime is the protection of the compromise on sovereignty. Only if this political bargain is maintained can other interests be met. In this regard, the consensus rule, and the exercise of mutual restraint on the sovereignty question, have become foundational norms of the Treaty system.

155. The issue was first raised at the 12 consultative meeting. At the 13th Meeting some delegations expressed concern that disadvantages (unspecified) might flow from premature invitations if these were made without a careful study (Final Report 1985:26). A decision on inviting experts was not made until the 14th consultative meeting. It was decided that such decisions should be made as part of the preparatory process for each meeting. The Rules of Procedure were amended accordingly. At the preparatory meeting for the 14th ATCM there was an attempt to include UNEP as one of the bodies to be invited as an observer but this was blocked by nations opposed to the inclusion of UN bodies. The Chair of the working group considering the agenda item for which the expert has been invited may "with the agreement of all the Consultative Parties" invite an expert to speak. Experts do not participate in decision-making and may participate only in those discussions for which they have been specifically invited.

156. It is extraordinary that after 24 or more years of providing scientific advice to the consultative process and essentially being responsible for the substance of a number of environmentally related aspects of the system it was only now that SCAR was to be invited to send an observer to the consultative meeting. What is more extraordinary is that the item SCAR was asked to assist with was that on air safety in Antarctica, at a meeting where its report on the Protected Area system was also under consideration. Note also that this process differs from that by which a SCAR observer (as opposed to expert) presents a general report to the Meeting on SCAR activities.

157. This did not extend to representatives from non-governmental environmental organisations generally although three consultative party delegations (Australia, New Zealand and the United States) had begun to include such representatives. The role of non-governmental organisations is addressed in later chapters of this thesis.
Although Finlayson and Zacher suggest (1981:564) that some degree of commitment to interdependence norms is required for the development of a regime, in that parties forego a degree of independent decision-making, the Antarctic Treaty system is nevertheless characterised by a continuing substantive commitment to sovereignty norms.

The key actors in the development and maintenance of the regime were the diplomats and (to a lesser degree) the scientists who made national Antarctic policies and were also the international decision-makers on Antarctic issues. The principles and norms inherent in the Antarctic Treaty dictated the nature of the decision-making process and informed standards of behaviour which became both valued and expected by the key actors as the Treaty system developed. Similarly, as that decision-making process was seen to work over time in protecting interests and preventing conflict, its value was reinforced. Thus a learning process underpinned the development and strengthening of the regime. Reciprocity, that is a shared expectation that all parties would adhere to the norms of the Treaty, served to build and reinforce confidence in the Treaty system as a guarantor of states' interests.

The procedural framework which was based on those values resisted institutionalisation and reinforced the consensus rule and the authority of the consultative parties (and the bureaucratic elite) over Antarctic decision-making. In the 1980s there was a limited opening up of the Treaty system in response both to internal and external demands for change. However this change was incremental and limited. It was within this framework that the Treaty parties addressed environmental issues - a process explored in the next chapter.
Chapter three
THE ANTARCTIC ENVIRONMENT: POLITICS AND OUTCOMES

Introduction

The Antarctic Treaty is not an environmental treaty. Protection of the environment is barely mentioned. Only the preservation and conservation of living resources is referred to and that was as much to do with economic sustainability as it was to do with the intrinsic protection of Antarctic species. However, inter-state cooperation on the Antarctic has been marked by the development, through the adoption of consultative recommendations and other instruments, of an environmental regime nested within the Antarctic Treaty system.

This chapter traces the development of that nested regime showing how its form was conditioned by the procedural and normative dimensions of the Treaty system which were examined in chapter two. The first part of this chapter describes the Antarctic environment that the rules and procedures were intended to protect. The chapter then discusses the actors involved in the environmental debate - the bureaucratic actors within the Treaty system, the scientists and non-governmental organisations.

Finally the chapter exposes the general environmental principles and norms, as well as the specific rules and procedures adopted on a range of environmental issues. The specific issues explored here are the conservation of fauna and flora, the development of the protected area system in the Antarctic, the conduct of scientific expeditions, waste disposal, environmental impact assessment and the question of tourism and non-governmental expeditions.

There are three themes in this analysis. First, the decision-making process and the norms that guided it were, in the final analysis, flawed with respect to environmental issues. Second, as a result, the set of rules and procedures adopted was limited. Third, the implementation of those rules was erratic.

The discussion in this chapter provides the context for the analysis in subsequent chapters of the events surrounding the minerals conventions, the Australian/French proposal for a comprehensive environmental protection convention and subsequent changes in the environmental regime. The analysis here is necessarily selective. Numerous documents on a wide variety of environmental issues have been tabled at consultative meetings over a period of thirty years - this chapter cannot incorporate discussion of them all.
The Antarctic environment
The Antarctic terrestrial ecosystem is marked by limited biological diversity "due to geographic isolation, low temperatures, lack of water, persistent strong winds and primitive soils" (Lucas and Dingwall 1987:222; Rudolph 1970:52-53). By contrast with the sparse terrestrial ecosystem, the marine ecosystem of the Southern Ocean is teeming with life. There are four species of Antarctic seal and two more species which breed in the sub-Antarctic islands and range across the whole Southern Ocean (Laws 1983:609; Roberts 1977:99). The southern oceans are also host to six species of baleen (filter-feeding) whale and two species of toothed whale (Tierney 1978:8). Forty species of breeding birds, of which penguins are by far the most numerous, inhabit the Antarctic region although only sixteen of them actually breed on the continent itself (Tierney 1978:8). In spite of this abundance of life, the marine food-chain is a remarkably short and simple one, depending primarily on a small shrimp-like crustacean, the Antarctic krill, which is the main food of whales, seals, penguins and sea-birds (see Lucas and Dingwall 1987:226). Antarctic fish provide a further link in the short food chain.

Both terrestrial and marine ecosystems are vulnerable to, and slow to recover from, disturbance. The simple terrestrial ecosystem lacks the regenerative powers of more elaborate ecosystems (Rudolph 1970:53; Holdgate and Tinker 1979:19). A recent SCAR report notes that the unique terrestrial ecosystems and species which have adapted to the harsh Antarctic environment may be extremely vulnerable to changes in their local environment (Benninghoff and Bonner 1985:13). Similarly, the short food-chain makes the marine ecosystem vulnerable to perturbations to any constituent part.

Disturbance to the Antarctic ecosystem as a result of human activity can take a variety of forms. Economic activity, activity associated with the conduct of science and

1. There are only two species of flowering plant, found mainly on the Antarctic peninsula, although there is a "surprisingly complex association" (Lucas and Dingwall 1987:222) of lichens, mosses and microfungi. The largest land-based fauna are two small insects. The remainder of the terrestrial fauna consists of "mites, springtails, microscopic rotifers, tardigrades, protozoa, and nematode and rare enchytraeid worms" (Rudolph 1970:52).
2. The crabeater, Weddell, leopard and Ross.
3. The Southern fur seal and the Southern elephant seal.
4. The blue, fin, sei, humpback, minke and southern right whale.
5. The sperm whale and the killer whale.
6. Penguins and other birds are considered to be part of the marine ecosystem because they depend on the sea for food and, apart from breeding, spend much of their lives at sea.
7. Most of the 200 species of Antarctic fish belong to the group Notothenioidae and have developed physiological properties which allow them to survive in the cold southern waters NERC/BAS [n.d.]:1).
8. A footprint in an Antarctic moss bed may last for decades, for example.
9. In their report for SCAR, Benninghoff and Bonner list possible impacts on Antarctic terrestrial, marine and atmospheric environments (1985:43) and categories of activities that might be reasonably expected to have a significant impact on the Antarctic environment (1985:46).
tourism all have the potential for adverse environmental impact. Economic activity in the past has resulted not only in the near decimation of particular species (first seals and then whales) but also in severe disturbances to the balance of the ecosystem. The impact of the exploitation of krill and fish stocks remains a central debate of the Antarctic Treaty system. (Both this and the potential environmental impact of minerals activity are canvassed in chapters four and five.)

Human presence in connection with scientific activity can have, and has had, localised impact on the Antarctic environment, particularly on terrestrial and fresh-water ecosystems on the continent and in-shore marine habitats. The most suitable location for scientific stations are the predominantly ice-free coastal regions required by bird and seal populations for breeding grounds. Human impact of this sort includes disruption to breeding colonies, the potential introduction of alien diseases and viruses, localised marine and terrestrial pollution as a result of sewage and waste disposal (where there is little natural biodegradation) and the burning of fuel for heat and energy, and the impacts of the construction of stations and support facilities.

The increase in the number of countries conducting scientific research in the Antarctic in the 1980s raised concerns about the cumulative impact of bases built in close proximity to each other. The increase in the number of consultative parties brought with it an increase in the number of people in the Antarctic, both scientists and support personnel and a consequent increase in the potential for adverse environmental impact. As most countries rely on ships to transport personnel to the continent, this increase in activity also brought with it an increase in the potential for accidents and marine pollution. Similar impact problems to those noted above arise from tourist activity, especially in those areas where repeated visits can have a cumulative impact (see Hart 1988).

11. Some Adelie penguin rookeries, for example, cover several square kilometres and the breeding season population may number several hundred thousand birds (Lucas and Dingwall 1987:222).
12. King George Island has become the most 'inhabited' and overcrowded part of the Antarctic, because of its relatively easy access, which makes it attractive to acceding states wishing to establish a scientific station in order to attain consultative party status. The potential for cumulative impact of this sort was recognised by at least some commentators early one. Robert Cushman Murphy (himself an Antarctic scientist) noted (1962:2) that "parties from a dozen or more nations, working year after year in the Antarctic, could do very much more harm than the single, occasional expeditions that entered the field between the 1840s and the beginning of the present century".
13. In spite of requirements that data on personnel in the Antarctic be exchanged between treaty parties information on the total numbers in any one season is difficult to come by. A US Congressional Research Service report in 1987 was unable to find complete data. Their totals for the summer population was almost 2700 but figures from several countries were not available (Browne 1987). Most observers suggest the summer population could be anything between 4000 and 6000 people.
The Antarctic environment, in its undisturbed state, is a valuable scientific laboratory for its contribution to knowledge about the Antarctic and the earth generally.\textsuperscript{14} There is still a great deal to be learned about Antarctic ecosystems and scientific knowledge is a necessary component of sound environmental and conservation decision-making. The "continuing nature of Antarctic scientific activity requires that ... the Antarctic environment [be kept] in the best possible condition" (Benninghoff and Bonner 1985:18).

As well as increasing knowledge about the Antarctic, research there can reveal a great deal about past climatic changes and about the impact of past global pollution. The Antarctic also provides an important baseline for measuring the effects of contemporary industrial pollution, in particular the impact of ozone-depleting and greenhouse gases.\textsuperscript{15} Disturbances to the Antarctic environment as a result of human activity are likely to erode this scientific value.

The Antarctic, distant as it is, plays an important role in global weather patterns and acts as a heat sink for the planet by reflecting incoming solar radiation (IUCN 1984b:5; Drewry 1988:7-8). Severe perturbations to the Antarctic environment could affect the albedo (reflective) factor although the extent to which that is likely to occur as a result of locally generated activity is unclear.\textsuperscript{16} Nevertheless changes of this sort in the Antarctic "are likely to have global impacts" (Laws 1990:10).

The debate about environmental protection in the 1980s focussed not only on the continent's scientific value but also on the its intrinsic wilderness and aesthetic values. To this extent, environmental protection has a value in its own right, not just as a contributing factor to resource sustainability and scientific investigation. An untouched Antarctica, as Mitchell notes (1980:14) "has a significant symbolic and aesthetic role which extends beyond the strictly scientific sphere". This debate addressed the importance of preventing localised impacts as well as maintaining the integrity of the environment as a whole.

\textsuperscript{14} Antarctic science includes geophysics, geology, atmospheric physics and chemistry, physical, biological and chemical oceanography, glaciology, biology, physiology (including human physiology), meteorology and environmental monitoring. Benninghoff (1987:13-14) notes that Antarctica "yields key information about global systems such as heat budget, magnetism, atmospheric electricity, plate tectonics, ocean currents and ocean chemistry".

\textsuperscript{15} Ice-cores and samples of recent snowfalls reveal traces of pollutants and heavy metals whose origins lie outside the Antarctic, but which are dispersed there through atmospheric circulation (Drewry 1988:10). Traces of radioactive fallout from atmospheric tests have been found in the Antarctic, and DDT has been located in penguin.

\textsuperscript{16} Benninghoff and Bonner (1985:45) raise the problem of dust and litter impacting upon localised Antarctic environments in this way. The problem was more seriously debated in the context of extensive industrial development in the event of minerals activity.
Benninghoff and Bonner (1985:21) identify two major components of environmental protection in the Antarctic: first, the maintenance of the high productivity and ecological relationships in the southern ocean and, second, the maintenance of the unspoiled environment and fragile ecosystems of the land, inlands waters and ice-covered areas of the continent. The consultative parties have addressed both aspects in the development of the environmental regime.

The actors: bureaucrats, scientists and NGOs
The environmental sub-regime was developed and consolidated through the consultative process conducted, for the most part, behind closed doors. Decision-making on environmental issues, as on Antarctic issues generally, was dominated by the Antarctic bureaucrats.17 As observed in chapter two, decision-makers became well socialised into the norms of the Treaty system and, given the smallness of their number, established close networks among them. Within this group there were a select few, perhaps a dozen, who were acknowledged by all participants to be experienced hands and to have some political 'clout' in the system.18

Delegations to consultative meetings were usually made up of foreign ministry officers supported by representatives from national Antarctic operators (that is, the organisations responsible for the conduct of Antarctic programs) and Antarctic scientific institutions. Some countries, especially Chile and Argentina, included delegates from their defence ministries.

Few delegations, if any, included delegates from environment ministries or representatives with particular environmental expertise, a point which Barnes (1990d:33) suggests hampered substantive discussion.19 By contrast, representatives from energy and industry ministries (and private enterprise) were included once minerals issues came onto the agenda. The same is true of the fisheries issue. United Nations or other intergovernmental organisations outside the Treaty system, with expertise or interests relevant to protection of the Antarctic ecosystem, were rarely called upon for advice (although this changed in the late 1980s).

17. In the 1960s and 1970s they represented only the twelve original signatories with Poland joining their number in 1977.
18. A senior Antarctic diplomat, a member of this inner group, explained that they knew each other well. Proposals and ideas for consultative meetings were often discussed by them between meetings in an informal collaboration to ensure that politically sensible proposals were put to the meetings.
19. The US and Norway seem to have been the first to include representatives of environment bureaucracies in their delegations, from ATCM-VIII in 1975.
Scientists

The scientific community, particularly through the agency of the Scientific Committee on Antarctic Research, had a major role in providing the knowledge upon which the rules and procedures of the environmental sub-regime were based. Nevertheless, in line with SCAR's determination to separate science from politics (an approach also favoured by the consultative parties), this role was essentially advisory. SCAR did not seek an advocacy role. Nevertheless, a formal role for SCAR was written into some of the environmental measures adopted by the Treaty parties.

Environmental issues were most often dealt with by the conservation sub-committee of the SCAR Working Group on Biology and later by the Group of Specialists on Antarctic Environmental Affairs and Conservation.20 SCAR's advice was often moderated by the political dictates of the system. As John Heap has observed, the consultative parties fed SCAR's advice "as one of many factors into the political context of the decision to be made" (1988:22-3).

Scientists were well placed as a source of knowledge, and the have their interests protected, in that in the 1960s and 1970s they were the only Antarctic constituency besides the diplomats. They were also in the situation of being both the users of the Antarctic and the enforcers of its environmental rules. While operationally convenient, there was a potential clash between these roles.

Non-governmental organisations (NGOs)

The third identifiable group of actors involved in debates about the environmental regime are non-governmental conservation and environmental organisations who were increasingly active, and influential, in the 1980s. NGOs have brought to the Antarctic debate new ideas and values on environmental protection. The expansion of the Treaty system's environmental agenda in the 1980s was in part a response to the pressures exerted by NGOs.

Kimball (1988d) has undertaken a detailed survey of Antarctic NGOs and the development of their interest in Antarctic issues. That extensive exercise is not repeated here. Rather, the key features of this involvement are identified. NGO interest in the Antarctic dates to the late 1970s and was spurred by concern about the potential exploitation of the marine ecosystem during the negotiation of CCAMLR. This interest

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20. In 1986 the SCAR Executive acted upon a proposal to establish the multidisciplinary Group of Specialists on Antarctic Environmental Affairs and Conservation, to replace the arrangement whereby environmental matters were considered by a sub-committee of the Working Group on Biology. It was also suggested that SCAR should draft its own principles on the protection for the Antarctic environment and that application for SCAR membership should include a commitment to comply with those rules (Kimball 1987d:25).
was heightened by the minerals negotiations (which began in 1980s) and, more generally, by what NGOs perceived to be "real and potential" threats to the Antarctic environment (Greenpeace nd(i):8) and a less than satisfactory environmental protection record on the part of the consultative parties. In this respect, they act as a ginger group outside the formal mechanism of the system. In the closed atmosphere of the Treaty system, NGOs have sought to impose transparency and accountability on the Treaty parties by reporting details of the meetings and releasing confidential documents.21

Early NGO activity was organised on a national basis, primarily in the United States, Australia, New Zealand and the UK. In 1977, the transnational Antarctic and Southern Ocean Coalition (ASOC) was formed to provide greater coordination between national NGOs with an interest in the Antarctic in the belief that their developing expertise and knowledge could best be used collectively.22 ASOC is primarily a clearing-house for information: it does not direct members activities.23 Greenpeace International, the largest member organisation of ASOC, on the other hand specifically provides policy direction as well as coordinating action on a transnational basis among its national offices.24 Information often travels more quickly through this transnational network than it does between foreign ministries on a bilateral basis.

While ASOC can now point to a large organisational membership the number of experienced Antarctic lobbyists is still relatively small. In this respect NGOs mirror the formal Treaty system, where a small group of people with considerable 'institutional memory' have dominated the decision-making process.

NGOs have sought to influence governments' international behaviour (in Treaty meetings and in their practice in the Antarctic) by creating domestic pressures and influencing public opinion. In some consultative states, particularly the US, UK, Australia and New Zealand, NGO representatives are involved in the policy process

21. The changing attitude towards confidentiality of documents by the ATCPs in the 1980s may well have been in part a response to the NGO habit of making material public. In other words, they sought to pre-empt the NGOs.
22. ASOC now points to a membership of over 200 organisations in 35 countries. It operates through secretariats in Australian, New Zealand and the United States where NGOs had also been taking a keen interest in the CCAMLR negotiations.
23. Members of ASOC include national organisations with a specific Antarctic concern, as well as environmental and conservation organisations with a wider policy interest. Some of the better known members are nature conservancy groups of long-standing (such as the Sierra Club of the Audubon Society in the US) whereas others are representative of the 'second wave' of environmental organisations such as Friends of the Earth (founded in 1969), Greenpeace (1971) and the World Wide Fund for Nature (WWF).
24. Greenpeace International formally established its Antarctic campaign in mid-1983. Greenpeace International does not deal directly with the public, although it represents over 3 million members worldwide. It coordinates campaign activity among national Greenpeace offices (in over 20 countries), prepares position papers and fact sheets, and works directly to meetings of the Treaty system.
although sometimes with a degree of reluctance on the part of bureaucrats. By the early 1980s three countries (the US, Australia and New Zealand) regularly included NGO representatives on their delegations but this was not adopted by other consultative parties until recently and is still a limited practice. However, the ‘inside’ NGOs provided an important link with the ‘outside’ lobbyists at Treaty meetings. NGOs have had a lower profile in other consultative states, especially in Latin America and the newer consultative parties.

Until recently, NGOs had little success in gaining independent access to the formal mechanisms of the Treaty system. ASOC and Greenpeace International first applied for observer status to meetings of the Commission and Scientific Committee of CCAMLR in 1983. ASOC was successful in 1988. ASOC was granted observer status to the special consultative meeting on comprehensive measures in 1990 and was invited as an expert organisation to the 16th consultative meeting in 1991.

NGOs have adopted a variety of tactics in seeking to influence the policy process at a national and international level. Since the late 1970s, they have maintained a lobbying presence at ATS meetings. Their analyses of Treaty initiatives and decisions are circulated to delegates as ‘non-papers’ and are often the only alternative source of information for delegates, especially those new to the consultative process or, from 1983, for non-consultative parties. Further, these policy alternatives are not constrained by the political concerns of the Treaty system. Thus NGOs stand as another source of knowledge, often in contest with the scientific community.

25. They were joined by Denmark, an NCP, from the 1983 meeting when NCPs were able to attend for the first time.
26. For example, Greenpeace has an office in Argentina but not in Chile. The first workshop of Latin American Antarctic NGOs was held in 1990 with the aim of setting up a Latin American NGO transnational network which would join in the efforts of the international NGOs (see Yafiez and Zaflartu (1990). Greenpeace has observer status at a number of international organisations and conventions. ASOC was granted observer status at the IWC in the early 1980s.
27. See Kimball (1988d) for further details. In 1984 the Commission decided that, as Greenpeace was a member of ASOC, it would consider the ASOC application only. A decision was postponed in subsequent years as the Commission sought further information from ASOC and then tried to obtain a consensus among its members for granting such status.
28. Lobbying activities included publication at each Treaty meeting of the newspaper ECO which is circulated to delegates and to the media). NGOs hold press conferences and host dinners and other social functions. Coordinators of the NGO lobbying presence normally advise the meeting secretariat in advance of the lobbying team. ‘Accredited’ NGO representatives are usually given official badges to guarantee entry into the consultative meeting venue (although not, of course, into the meeting itself). They are usually granted access to delegates at coffee breaks and are often invited to attend functions held by the embassies of Treaty parties. The ASOC report on ATCM XV, for example, notes that NGO representatives were invited to attend every function.
29. NGO representatives were more experienced in the ways of the consultative process than the NCPs.
NGOs have increasingly drawn on 'in-house' scientific expertise in order to put coherently argued policy alternatives to the Treaty parties. This was useful also in establishing credibility with the scientific community, many of whom were equally concerned about environmental protection but were less than complimentary about the environmentalists. A former director of the British Antarctic Survey observed that while "scientists tend to avoid publicity and are constrained to be truthful about their work [i]t is self-evident ... that environmentalist ... propaganda tends to be blatant and less scrupulous" (Laws 1985:55). British scientist Nigel Bonner (1987a:149) went so far as to suggest that the Antarctic "is today facing its severest threat - not from the exploiters but from those who claim to be wholly dedicated to the cause of environmental conservation".

Antarctic bureaucrats have also displayed a somewhat ambivalent attitude towards NGO representatives. Quigg (1983:179) notes that

> [w]hile showing proper respect for conservationists in public, officials involved in Antarctic affairs in the United States and Britain particularly are in a state of more or less perpetual irritation with the environmentalists for what is often seen as their demand for absolutes, their unwillingness or inability to comprehend the reality of international politics, and the processes of negotiation among sovereign states.

Non-governmental organisations also turned their attention to the compliance record of ATCPs with the measures and recommendations they had adopted under the Treaty by making violations public (often with the additional support of photographic evidence). They argued that the traditional approaches to decision-making under the Treaty were inadequate in meeting environmental responsibilities.

NGO criticism, Auburn suggests (1987:6), has been "increasingly sophisticated". Shapley describes (1988:329) environmental groups as "important sources of lateral and vertical communication within the regime". In reporting the meetings and educating the public NGOs "create and inform a wider constituency for Antarctic matters" (Kimball 1990d:32). The extent to which NGO tactics have had an impact on the rules and procedures adopted by the consultative parties is difficult to assess. The parties have accepted that they must be seen to respond positively to the increased public attention generated by NGOs. The New Zealand head of delegation at ATCM-X (1979) noted that "the international community at large, international organisations and private groups interested in the environment are looking to the consultative parties to live up to

31. Kimball (1988d:50n) gives examples of technical studies prepared by NGOs and workshops sponsored by them.

32. His concern here was over the implications of NGO demands in the early 1980s that the Antarctic should be managed under a United Nations regime.
the high ideals" which the Parties professed to hold environmental protection (Final Report 1979:78). NGO influence was marked in the overturning of the minerals convention, discussed in chapter seven below.

**The Greenpeace Antarctic campaign**

NGO effectiveness in calling the Treaty parties to account increased with experience and was assisted by the high profile of the Greenpeace International Antarctic campaign. The first Greenpeace Antarctic vessel, the *MV Greenpeace*, left New Zealand at the end of 1985 to establish a scientific station at Cape Evans.33 This attempt was unsuccessful because of severe pack ice. The base was built by the second expedition in January and February 1987.34 Four expeditioners wintered over that year and personnel were exchanged on the resupply voyage in the austral summer of 1987/88.35 During that voyage, Greenpeace ‘inspected’ a number of bases in the vicinity of Cape Evans as well as the Antarctic Peninsula and adjacent islands to draw attention to violations of environmental protection measures.36 On its next voyage in the 1988/89 austral summer, the Greenpeace expedition visited 25 scientific bases and again drew attention to violations of the codes of conduct.37 By 1990 Greenpeace had conducted environmental inspections at 39 Antarctic stations (de Poorter and Schmidt 1990:39).38 Greenpeace announced recently that the base would be closed so that its campaign could concentrate on monitoring environmental practice in the Antarctic.

The Greenpeace Antarctic expeditions and the World Park Base were intended to serve a political and a scientific purpose.39 Greenpeace sought to demonstrate to the consultative parties that expeditions and scientific research could be conducted in an environmentally sound manner in accordance with the various environmental protection measures in place.40 They also sought to raise public awareness of Antarctic issues and

33. An environmental impact assessment was carried out prior to establishment of the base, and was circulated to all Treaty consultative parties. World Park Base was established in territory claimed by New Zealand.

34. The site chosen was close to where the Mear-Swan ‘Footsteps of Scott’ expedition had established a support base in early 1985. The Greenpeace expeditioners dismantled this base and removed it from the Antarctic.

35. A new hut was erected during the resupply and a wind generator and solar panels were installed to cut dependency on diesel-generated power. Stored wastes were returned to New Zealand.

36. Greenpeace also drew attention to stations where the measures were complied with. The report of those inspections was distributed to all Treaty nations.

37. During these inspections expeditioners often took steps to rectify situations which were having adverse environmental impacts, such as transferring fuel from leaking barrels to new ones.

38. It is unlikely that any of the consultative parties would have conducted this many inspections throughout the life of the Treaty system.

39. In 1986 Greenpeace established ‘Antarctic embassies’ in twelve countries, and appointed naturalist David Bellamy as the British ‘ambassador’ to Greenpeace’s Antarctic World Park (see The Times 1 February 1986).

40. Their scientific program included studies into the effects of low light levels on human physiology, studies of coastal fish and meltwater lakes, as well as tests on soil and water samples taken from the bases of consultative party bases.
to acquire expertise to support their application for observer status to the Treaty. They were, they argued "looking over the shoulders of bases, literally ... [and] morally" (Wilkinson 1988).

This put increasing pressure on the consultative parties to respond, especially in a world where environmental issues were moving up the agenda. The consultative parties were keen to assure the world of their responsible stewardship of the Antarctic at a time when they were under some pressure in the United Nations for being secretive and exclusive and where electoral pressure in at least some of the consultative parties could be mobilised. That response is examined later in this chapter.

The International Union for the Conservation of Nature and Natural Resources (IUCN), which was established in 1948, is another environmental organisation with a well-developed interest in Antarctic issues. Like ASOC, it is an umbrella organisation. However, unlike ASOC which is a coalition of NGOs, IUCN membership comprises both government and non-government organisations. The IUCN is not a lobbying or pressure group in the style of ASOC or Greenpeace. Rather it sees its role as a one of providing advice and expertise where appropriate to promote conservation objectives. Nevertheless IUCN does share with the more advocacy-oriented NGOs a concern about the adequacy of environmental rules and regulations.

IUCN has been somewhat more successful than other organisations in establishing a working relationship with the scientific community although, as Kimball notes (1988d:40) this was a tentative and somewhat wary collaboration in its early stages. While the IUCN saw SCAR as the best channel through which to approach the ATS to promote conservation objectives "SCAR's relatively closed network of old Antarctic hands was somewhat sceptical of IUCN's lack of Antarctic credentials" (Kimball 1988d:40). However, in late 1985 a joint IUCN/SCAR working group on long-term conservation in the Antarctic was established, although some form of collaboration had been suggested as early as 1982.

Antarctic decision-makers also viewed IUCN somewhat differently, given its standing as an organisation with government as well as non-government membership. It was

41. By establishing a permanent base and conducting scientific research, Greenpeace International had effectively met the criteria applied to the granting of consultative status to states.
42. Kimball (1988d:37) suggests that it was Center for Law and Social Policy (CLASP) and IIED which encouraged IUCN to become more involved in Antarctic issues.
43. Barnes (1984:172) styles IUCN as a hybrid NGO. Greenpeace International is a member of IUCN as are many of the Treaty parties.
44. This collaboration resulted in the establishment of a joint task force to develop a long-term plan for Antarctic conservation and environmental management which would give effect to an "integrated and comprehensive approach" (Kimball 1986:2).
invited to attend, as an observer, the diplomatic conference at which CCAMLR was signed in 1980 and to participate (again as an observer) at institutional meetings under CCAMLR.\textsuperscript{45} Since 1987, IUCN has been invited to send an expert to consultative meetings to assist in discussion on the agenda item on human impact on the Antarctic environment.

**The Antarctic environmental regime**

The consultative parties adopted a "prevention rather than cure" approach in seeking to regulate activities which might have an environmental impact that "a reasonable person would look upon as being at least regrettable" in the understated language of the Handbook (1989:1101). However, in adopting measures on environmental protection the consultative parties have sought to balance the recognised need to minimise environmental impact with the needs of scientific research, tourism and resource exploitation.

Environmental needs were not only set against other uses of the Antarctic, but were also subordinated to the political concerns of the regime. Those concerns, as outlined in chapter two, were dominated by the need for accommodation on the exercise of sovereignty. The imperative for consensus and compromise meant that the results of decision-making and negotiation were of a lowest common denominator kind.

This hierarchy of values did not favour environmental protection. Auburn (1982:274) suggests that "sovereignty, politics, logistic convenience and the facilitation of scientific research prevail over environmental considerations". Broady (1983:26) notes that "political and economic control is the major consideration: limiting damage to the environment is secondary". The need for consensus, and for the political compromise on sovereignty to remain undisturbed, were paramount.

Decision-making on environmental issues in this context was issue-specific and thus piecemeal. It was also frequently slow. The process of negotiation and compromise meant that sometimes years passed before substantive rules and procedures could be agreed upon. Draft recommendations were often watered down so that agreement could be reached. Contentious issues were often deferred. Monitoring and enforcement mechanisms were avoided. The decentralised nature of the Treaty system worked against consistency of implementation practice across the Treaty parties. The environmental measures thus established by the Treaty system were, as Kriwoken and

\textsuperscript{45} The institutions of CCAMLR first met in 1982. IUCN was not the only organisation with observer status. Others included the FAO, the Intergovernmental Oceanographic Commission, the IWC and SCAR. In 1986, the IUCN observer at the Commission meetings noted that for the first time he was able to be present at a working group meeting without being challenged (Kimball 1988d:46).
Keage observe (1989b:41), disparate and fragmented. The regime was incomplete and ad hoc.

This process has given rise to two debates which are not unique to the Antarctic. Both relate to questions of regime efficiency. The first questions whether a process dominated by sovereignty norms and characterised by lowest common denominator decision-making is capable of producing 'good' environmental rules. The second asks whether the emphasis on voluntary compliance which characterises sovereignty norms undermines the effective implementation of environmental protection rules. Ultimately, these debates are about competing values and ideas.

The argument has been advanced by non-governmental organisations, environmental experts and scientists, that the slow decision-making process, with its emphasis on political compromise, means that the rules adopted are increasingly inadequate as environmental protection and management measures. NGOs in particular have also argued that those rules which have been adopted have not been adequately observed. As Kimball (cited in Barnes 1986:436) has noted

a primary weakness of the system, which stems from the need to avoid prejudicing either claimant or non-claimant position, is its lack of specificity with respect to enforcement rights and procedures to consider allegations that the rules are not being complied with.46

Inspection under article VII of the Antarctic Treaty is the only formal means of detecting violations of environmental measures. However, a reluctance to rock the boat meant that even when violations were noted, parties were unwilling to bring them to the attention of the consultative process in any formal way. Violation of environmental protection rules was not considered fundamentally destabilising to the regime, whereas arguments over those violations might have been.

In the 1960s and 1970s the smallness and cohesiveness of the Antarctic club and the general lack of international attention to the Antarctic, combined with a low level of international consciousness about environmental protection issues generally meant that potential difficulties over the inadequacies of environmental rules and implementation could be masked. However by the late 1970s it was clear that "the legal and political

46. The question of whether consultative recommendations are legally binding on states has not been settled. Recommendation III-VIII, in suggesting that new consultative parties be urged to accept existing recommendations and to inform other Parties of their intention to apply and be bound by them implies that the recommendations can be argued to be binding. However their force in international law is unclear (see Bush 1982:96-98). In spite of recommendation III-VIII the consultative parties seem to have taken a position that the recommendations are morally binding but not binding in law.
arrangements for governing ... the Antarctic lag disturbingly behind the human ability to affect [this] region" (Schatz 1978:477).

The Antarctic environmental agenda expanded in the 1980s in response to a number of factors. The number of people in the Antarctic each year increased as the number of consultative parties grew. Scientific research contributed to the growing (although still limited) knowledge about the Antarctic environment and about the impact of human activity upon it. Protection of the environment became an international agenda item. Concerns were raised by scientists about the impacts of environmental degradation.47 Increasing national concerns about the state of the environment reinforced international concerns as transboundary impact, such as air and water pollution, became more pronounced and directly affected people's quality of life.

In this context, interest from non-governmental organisations ensured that public attention was focussed both on the decisions the consultative parties made and the way those rules were implemented.48 The consultative parties were increasingly required to respond to these pressures.

Principles and norms

In a series of general recommendations the consultative parties declared their commitment to protection of the Antarctic environment and set out principles and norms in support of this which have become an integral component of the Antarctic regime.

The first clear articulation of those environmental principles came in a recommendation (VI-4) adopted at ATCM-VI in 1970.49 The consultative parties recognised that

(1) in the Antarctic Treaty Area the ecosystem is particularly vulnerable to human interference;
(2) the Antarctic derives much of its scientific importance from its uncontaminated and undisturbed condition;
(3) there is an increasingly urgent need to protect the environment from human interference;

47. For example, the depletion of the ozone layer and potential for climate change as a result of the accumulation of greenhouse gases, especially carbon dioxide.
48. The common heritage debates in the United Nations did not make substantial references to environmental protection (until the late 1980s) concerned as they were more with access to resources.
49. The Chilean delegation submitted that there was an obligation to investigate with the utmost urgency the negative effects of man's impact on nature and possible measures of control. The body of this draft suggests that "... man's activities [should] be eliminated insofar as possible with the exception of activities related to scientific investigations proper" (ANT/24, 1970). A symposium on this matter, they suggested, should be held at the earliest possible date.
In support of this principle, recommendation VI-4 also established the general norm that "the Consultative Parties should assume responsibility for the protection of the environment and the wise use of the Treaty Area". Thus the principles of scientific research and environmental protection are linked, and environmental protection is placed in the context of the "wise use" of the Antarctic. In other words, environmental and utilitarian values are linked.

This norm adds to the Parties' obligations under the Treaty but there is nothing to say how that obligation should be met. The principles and norms elaborated in this recommendation have been recalled and reinforced in subsequent recommendations which establish specific rules and procedures for environmental protection and management. The consultative parties argued that, by virtue of their experience and knowledge, they were in the best position to undertake this task. As discussed elsewhere in this chapter, this stewardship of the Antarctic environment was subject to critical review in the 1980s.

In recommendation VIII-13 (adopted in 1975) the consultative parties are exhorted to "act in accordance with their responsibility for ensuring that such measures are consistent with the interests of all mankind ... in considering measures for the wise use and protection of the Antarctic environment". Further,

> no act or activity having an inherent tendency to modify the Antarctic environment over wide areas within the Antarctic Treaty Area shall be undertaken unless appropriate steps have been taken to foresee the probable modifications and to exercise appropriate controls with respect to the harmful environmental effects such uses ... may have.

These principles and norms were again stated in a declaration on environmental protection adopted at ATCM IX in 1977 (recommendation IX-5). This elaboration of general principles on environmental protection, however, was not translated into a comprehensive set of environmental standards against which human activity would be measured, in spite of the increasing number of environmental recommendations and the complexity of the issues.

Rules and procedures
Consideration of environmental issues initially focussed on the conservation and preservation of living resources which was specifically set out in the Treaty as an issue for the consultative process. The effects of tourism was inscribed on the agenda in 1966

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50. This also reinforces the general norm of the Treaty system that Antarctic issues should be kept firmly within the purview of the Treaty system.

51. The description and analysis here draws on documents from consultative meetings which are now publicly available, primary material from non-governmental organisations, the final reports of consultative meetings, and secondary sources.
and the preservation of historic monuments in 1968. Since 1970 "Man's [sic] impact on the Antarctic environment" has been a standing agenda item, and environmental topics now include marine pollution, conduct of scientific expeditions, waste disposal, the development of a protected area system, the siting of scientific stations, environmental impact assessment and the effects of the exploitation of mineral resources.

As well as the increasingly complex network of rules and procedures adopted in consultative recommendations, which are discussed in this chapter, the Treaty parties have negotiated three separate conventions. Those conventions, which attempt to balance environmental and utilitarian values are the Convention for the Conservation of Antarctic Seals, the Convention on the Conservation of Antarctic Marine Living Resources and the Convention on the Regulation of Antarctic Mineral Resource Activities and are examined in the following chapters.

i. The conservation of Antarctic fauna and flora

The first environmental issue addressed by the consultative parties was that specifically mandated by article IX(f) of the Treaty, the conservation and preservation of "living resources". Debate on this issue at the first two consultative meetings culminated in the adoption, at the third consultative meeting in 1964, of the Agreed Measures on the Conservation of Antarctic Fauna and Flora.

While the Treaty parties were genuinely concerned to establish conservation measures, the substance of those measures was dictated by sensitivities over the exercise of sovereignty and jurisdiction. Bush (1990:126) notes that this engendered an "unwillingness ... to have any but the most rudimentary institutional structure to oversee implementation of the Agreed Measures".

The Agreed Measures had their genesis in guidelines for the protection of living resources developed by the Scientific Committee on Antarctic Research (SCAR) at its 1960 meeting. Several delegations submitted draft recommendations which proposed adopting SCAR's guidelines. There was, however, disagreement over the extent of

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52. Its inscription on the agenda appears to have been proposed by the US which had provided preliminary views on this matter at preparatory meetings.
53. Roberts (1966:2) (then senior Antarctic diplomat with the British Foreign office) suggests that it was included in the Treaty because of pressure from biologists on the need for conservation measures and because it was a relatively uncontroversial subject.
54. Those guidelines were tabled at the first consultative meeting in 1961 (SEC Paper/8, 1961).
protection.\textsuperscript{56} Chile (Doc./P15 CORR 1, 1961) suggested that rules should be vigorously observed by Antarctic personnel and that strict compliance should be ensured.\textsuperscript{57} Chile also favoured the establishment of wildlife sanctuaries where no interference of any kind would be permitted, "not even such exceptions to the conservation measures recommended by SCAR as are allowed in the rest of Antarctica". The US on the other hand (Doc./P13, 1961) suggested that protection rules could be relaxed for the "exploitation of fauna for commercial gain, on terms which accord with sound conservation principles".

The United Kingdom delegation, anticipating a lack of consensus, submitted a draft recommendation (Doc/P18, 1961) suggesting further consideration of this issue, but annexing measures which might be voluntarily observed in the meantime. This was a favoured tactic of the British delegation as a way of achieving a measure of agreement to advance consideration of an issue.

Recommendation I-VIII acknowledged the urgent need for measures to conserve the living resources of the Treaty area and protect them from uncontrolled destruction or interference by humans. In spite of this acknowledged urgency, governments were urged only to consult on the form in which it would be most suitable to establish "in due course" internationally agreed measures for this purpose. In the interim, general rules of conduct extracted from SCAR's guidelines were to be issued "to the extent possible under national legislation".\textsuperscript{58} This enabled the rules to be given some status, without requiring any formal commitment on the part of the Treaty parties but fits with the voluntary nature of recommendations that was to become a hallmark of the environmental regime.

Little further progress was made at ATCM-II. The United Kingdom and Chile tabled proposals similar to their 1961 suggestions.\textsuperscript{59} Recommendation II-II expressed the

\textsuperscript{56} A senior Antarctic diplomat suggested in an interview that the debate on the Agreed Measures was a resource one - whether wildlife could be "utilised".
\textsuperscript{57} Drafts by the US and Australia omitted references to compliance.
\textsuperscript{58} These suggested guidelines were not as extensive as those proposed by the UK.
\textsuperscript{59} The UK (Doc P.3, 1962) tabled a "Draft Convention on the Conservation of Wildlife in the Antarctic" which differed little from the annex to Doc P/18 circulated at ATCM 1. A new draft article suggests that areas may be designated "nature reserves" for the express purpose of safeguarding and perpetuating natural communities of animals, with human interference kept to a minimum. This is in addition to "absolute sanctuaries" which adopts the Chilean suggestion of no interference whatsoever. In an explanatory memorandum (Memo.Expl.1, 1962) the UK government expressed its belief that an international convention was the best method of dealing with this issue. Chile also tabled a draft recommendation (Doc P.4, 1962) entitled "Measures for the Protection and Conservation of Living Resources and exchange of information on the subject" As a result of working group debate held on 24 and 25 July in connection with the British and Chilean proposals, the secretariat tabled a recommendation (Doc P.18, 1972) which was subsequently adopted as recommendation II-II.
conviction that the rules attached to recommendation I-VIII should be scrupulously observed. A further exchange of information was recommended as well as consultation "with a view to the establishment ... of effective and internationally agreed measures on this subject".

Differences over the "form in which it would be most suitable to promulgate whatever measures might finally be agreed upon" and the area to be covered by such measures contributed to the difficulties in reaching a consensus. Governments were asked to formulate a draft text as part of the preparation for ATCM-III.

Delegates to the preparatory meetings for ATCM-III convened a working group to do this. As a result the Agreed Measures for the Conservation of Antarctic Fauna and Flora were drawn up and adopted as an annex to recommendation III-VIII. Governments were called upon to approve them as soon as possible and implement them without delay. Under recommendation III-IX the Agreed Measures were to be treated as interim guidelines "as far as feasible".

Under the Agreed Measures the Antarctic Treaty Area was designated a Special Conservation Area, although this concept is not defined. The "killing, wounding, capturing or molesting of any native mammal [except whales] or native bird" was prohibited, except in accordance with a permit. Permits could only be issued for specific purposes (to provide food, specimens for scientific study, or for museums, zoological gardens or other educational or cultural institutions) and were to be limited to ensure that the natural ecological balance was maintained. Harmful interference with

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60. The wording here is taken from the UK draft at the first consultative meeting (Doc.P18, 1961).
61. The British favoured a convention but others were less supportive, favouring a code or recommendation. The US delegation was concerned that they would not be able to get Senate ratification of a conservation convention (Myhre 1986:47-48).
62. In his analysis of the preparatory meetings for the third consultative meeting, Myhre (1986:48-53) discusses the difficulties the delegations had in respect of what form these measures should take - a convention, a code or some other form of agreement. Differences of opinion related to the national processes required to give effect to different types of agreements.
63. This did not happen. The United States, for example, did not adopt legislation to give effect to the Agreed Measures until 1978. By 1983 Japan still had not ratified them although legislation had finally been passed in 1982 which enabled Japan to do so (Bush 1982:169). Japan's ratification was deposited before the 1985 consultative meeting.
64. This became a standard formula in respect of conservation and other recommendations that still had to be ratified by Governments in accordance with legislative procedures and which might take some time. Of course it also raises the question that the recommendation establishing interim guidelines had itself to be ratified.
65. It was suggested that the Treaty Area be declared an "International Wildlife Reserve". Argentina and Chile wanted the word "international" removed; the Soviet representative wanted it kept in. The US representative said his government would accept a phrase such as Special Conservation Area, Protected Natural Haven or Nature Sanctuary (see Doc./1, 1964).
66. Whales are specifically excluded because they are only to be found in the high seas regions of the Treaty Area and because they were already under the protection of the International Whaling Convention.
the normal living conditions of native mammals and birds was to be minimised. The introduction of non-indigenous species, parasites and diseases except in accordance with a permit was prohibited. However, the permit system allowed each state to operate unilaterally. Thus the Agreed Measures and the issuing of permits did not affect the juridical position of states on territorial sovereignty in Antarctica (Colson 1980:853).

Areas of outstanding scientific interest could be designated Specially Protected Areas (SPAs) and accorded special protection to preserve their unique ecological system. Strict guidelines were established on the types of activity which permitted in SPAs. The Measures also provided for the designation of Specially Protected Species (SPSs). No SPAs or SPSs were designated at this meeting, even though the draft recommendation contained suggestions for both.

Documents show that the measures could well have been stronger. Australia unsuccessfully lobbied for the inclusion of a clause specifying that permits should not be issued for the killing of females except in unavoidable circumstances. A US suggestion that harmful interference should include "polluting waters adjacent to the coast or ice-shelves" and "undertaking any kind of construction within seal or bird colonies" (with an exception for existing stations) was not adopted (see Doc.1, 1964). Neither were British and Chilean suggestions for "absolute sanctuaries".

The Agreed Measures echo article VI of the Treaty in both its coverage (south of 60°South, including all ice shelves) and its saving of high seas freedoms. The prevailing opinion is that the Measures therefore apply to the continental shelf and the ice sheet, but not to off-shore waters (Boczek 1983-4:370; Bush 1982:147). Australia argued that the Agreed Measures should cover "all areas of floating ice" (Doc.1, 1964),

67. Permits are to be issued by an "appropriate authority" defined as "any person authorised by a Participating Government to issue permits" (article II(d) of the Agreed Measures).
68. Myhre (1986:53) notes that neither Argentina nor Chile would allow anything in the Measures "to hint at a lessening of national sovereignty".
69. There is nothing to indicate whether parties are required to respect each others permits or to give national recognition of all SPAs (Boczek 1986:92).
70. See Boczek (1986) for a detailed analysis of SPAs.
71. The Belgian delegation wanted this exception removed. It is unclear what the implications of the Belgian proposal would have been, given that it appear to have meant that any station already constructed which was within a seal or bird colony would be in contravention of the Agreed Measures. Governments were urged to take all reasonable steps towards alleviating coastal marine pollution (article VIII) although this was not specifically defined as harmful interference. The UK proposed a draft recommendation (Doc/P5, 1964) on oil pollution which referred to existing international conventions and suggested that governments convey to the Intergovernmental Maritime Consultative Organisation (IMO) the need to find a solution to the problem of oil pollution in the Southern Ocean to prevent further harm to the wildlife of the Antarctic Treaty Area. It was not adopted, most probably because of the suggestion that the issue be addressed by another institution.
presumably to extend the measures to cover seals, believing that without such coverage the Measures would lose much of their effectiveness. Many delegates apparently agreed on the desirability of effective protection for animals on drifting ice, but were reluctant to exceed the limits of article VI of the Treaty.\footnote{72}

While the format of the Agreed Measures allowed governments to take appropriate legislative steps to give effect to those conservation principles, there is no way to enforce the Measures in practice. No compliance mechanisms are adopted. Bush suggests that the Agreed Measures imposed a "relatively low level of obligation" (Bush 1990:127). Participating governments are simply urged to "take appropriate measures to carry out these Agreed Measures".\footnote{73}

SCAR was encouraged to continue its interest in conservation matters and was asked to advise on those matters it considered should be listed in the annexes to the Agreed Measures.\footnote{74} Wyndham (1980:187) suggests that a "careful analysis of the specially protected areas adopted ... will show signs of continuing sensitivity" on the claims issues. At the 4th consultative meeting in 1966, Australia proposed three SPAs, the United Kingdom eight, and the US and NZ jointly proposed four.\footnote{75} The claimants (NZ, UK and Australia) proposed only areas within their claims. These SPAs were adopted under recommendations IV-1 to 15. Under recommendations VI-16 and 17 Fur Seals and Ross Seals were designated Specially Protected Species.\footnote{76}

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\footnote{72. Norway and the US in particular thought the Australian proposal could not be admitted as it stood. New Zealand suggested that the question of the protection of seals might be dealt with separately.}

\footnote{73. A suggestion that governments should "take appropriate action including such legislative and regulatory measures as may be required to carry out these Agreed Measures" proved to be contentious. The Chilean representative proposed that the phrase underlined above be removed: the Soviet and the US representatives supported its retention. In the final event the Chileans prevailed (see Doc/P.1, 1964).}

\footnote{74. The British delegation had suggested (Doc/P3, 1964) that SCAR be invited to prepare, every three years, an independent scientific report in the light of the Agreed Measures, making suggestions on the collection of records, issuing of permits and schedules of SPSs and SPAs.}

\footnote{75. The proposals were based on suggestions made by SCAR at its September 1966 meeting. A paper tabled by the UK listed these 15 proposed areas, and left two 'slots' blank for areas proposed by France. Further details about those two areas appear not to have been forthcoming, as only 15 SPAs were adopted at ATCM IV.}

\footnote{76. At ATCM-III the US suggested that elephant seals should also be included. Recommendation IV-18 adopted a New Zealand suggestion for cooperation between governments in issuing permits where more than one government was working in the same area. A standard form for the exchange of information on permits issued, and the status of native mammals and birds, is adopted under recommendation IV-19 and SCAR's decision to study these matters was welcomed. Recommendation IV-20 urges governments to accept recommendations 1 to 19 as interim guidelines until the Agreed Measures become effective. It does, however, raise the interesting dilemma that a recommendation urging acceptance of interim guidelines would not itself become effective until agreed to by all governments.}
After this meeting only minor adjustments were made to the Agreed Measures and these focussed on the permit system. In 1968 (ATCM-V) article II(d) of the Agreed Measures, which defined the "appropriate authority" to issue permits was amended (in recommendation V-6) to ensure that the functions of a person so authorised would be in accordance with the Treaty, scientific principles and the Agreed Measures. Boczek (1986:91-2) suggests that this was to allay concerns that issuing permits might be used for political reasons in a way that prejudiced claims. At ATCM-VIII (1975) the Agreed Measures were amended to require permits for entry into SPAs for a "compelling scientific purpose". No guidelines were given on how such a purpose might be defined.

Between 1966 and 1983 only two more SPAs were designated even though they were central to the protection of the Antarctic environment. In the same period three SPAs were terminated. In 1968, only two years after its designation, an SPA on the Fildes Peninsula of King George Island in the South Shetlands was modified to make it much smaller (recommendation V-5) because of the construction of two scientific stations in the area. Construction had begun after the adoption of the Agreed Measures (although they were not yet formally effective) and thus violated at least the spirit of the Measures. In other words, when the protection of an SPA conflicted with human activity, the latter use prevailed.

In 1975 (ATCM-VIII) this designation, along with two other SPAs, was terminated (recommendation VIII-2) and downgraded to a lesser protective category of Site of Special Scientific Interest. Thus, ten years after the Agreed Measures had been adopted, areas deemed in need of protection because of their unique ecological nature were being denied that protection.

A report on the purposes and designation of SPAs prepared by the SCAR Working Group on Biology was presented to the seventh consultative meeting (1972) by the British delegation. SCAR was concerned that existing SPAs were not fully

77. This was done at the urging of Chile (see documents ANT.3; ANT.3 Rev 2, 1968).
78. Under the rules of article IX of the Treaty, this recommendation technically amended a prior recommendation which was not yet formally in force.
79. This followed recommendation VI-8 (1970) by which governments were urged to prohibit entry into a Specially Protected Area except with a permit.
80. The Coppermine Peninsula on Robert Island was designated a SPA under recommendation VI-10 in 1970. Chile withdrew its proposal for 'Island Deception' to be so designated. Annotations to the provisional agenda (ANT/2, 1970) indicate that there was disagreement between Chile and the UK on this, but give no further details. It seems that the area proposed included off-shore waters thus raising questions about high seas freedoms and jurisdiction over territorial waters. Litchfield Island in the Palmer Archipelago was designated as an SPA under recommendation VIII-1 in 1975.
81. The bases were the Soviet Bellingshausen and the Chilean Teniente Marsh.
82. This redesignation seems to have been in response to SCAR's suggestions (see ANT/1, 1975).
representative of major Antarctic land and freshwater ecological systems. Recommendation VII-2 suggested that Specially Protected Areas be reviewed "in due course" to include areas with unique complexes of species, areas which were the only known habitat of a particular species, or contained interesting breeding colonies, or areas which should be kept 'inviolate' for future comparison with disturbed areas. SCAR was invited again to conduct this review.

After ATCM-VIII (1975) the preservation and conservation of fauna and flora on land dropped off the agenda until the 11th consultative meeting in 1981 where no recommendations were adopted. Three new Specially Protected Areas were established at the 13th consultative meeting (1985) (recommendations XIII-10, 11 and 12). By this time the consultative parties were addressing these issues in the context of public debate about the adequacy of conservation measures in the Antarctic and the exposure by NGOs of violations of the Agreed Measures. This debate is examined below.

**ii. Sites of Special Scientific Interest (SSSIs)**

The designation of Sites of Special Scientific Interest grew out of the experience of Specially Protected Areas under the Agreed Measures although this new category was not incorporated into the Measures. Scientists were concerned that some method was needed to protect areas which were important to scientific investigation from wilful interference. SPAs could not be used for this purpose because they were specifically designed for the protection of fauna and flora rather than broader scientific values.

At ATCM-VII (1972) the British delegation suggested (ANT/8, 1972) that there should be special study areas where scientists could be confident that long or short-term experiments would not be disturbed. The category of Site of Special Scientific Interest was established under recommendation VII-3. Unlike SPAs, each SSSI was to

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83. In 1970 the British delegation had tabled a document which collated information on numbers of animals killed and captured in the Treaty Area between 1964 and 1969. This paper observed that "clearly there is at present no serious direct threat to Antarctic mammals and birds. This does not, however, rule out the possibility of very restricted over-exploitation of some local populations" (ANT/14, 1970).

84. The number of SPAs was to be kept to the minimum in number and size to meet the requirements, in keeping with a British suggestion that some of the SPAs were too big. SCAR's report suggested that there be no change to the criteria for selection of SPAs (ANT/1, 1975).

85. The Final Report makes no statement on this what was discussed under this agenda item.

86. The question of marine fauna was addressed in the Convention for the Conservation of Antarctic Seals and the Convention on the Conservation of Antarctic Living Marine Resources, both of which are discussed in chapter four.

87. The description of SPA No 7 was amended (recommendation XIII-13). Recommendation XIII-14 proposed that these recommendations would be considered interim guidelines until they became effective.

88. The US had made a similarly suggestion at the preparatory meeting.
have a management plan. SCAR was asked to make suggestions for appropriate sites and plans for consideration at the 8th consultative meeting. Under recommendation VIII-4 (1975) seven sites proposed by SCAR were established. Responsibility for initiating SSSIs therefore clearly lies with SCAR.

An eighth site was designated in 1979. At the 13th consultative meeting in 1985, 13 new sites approved by SCAR were designated (recommendation XIII-8). A further four terrestrial sites, proposed by the United Kingdom, were adopted at ATCM-XIV in 1977.

While there were few difficulties with the designation of terrestrial SSSIs, marine sites proved to be contentious. The issue was on the agenda for twelve years before agreement was finally reached. The designation was contentious because of concerns about infringements of high seas rights under article VI of the Treaty. It also raised the issue of whether immediate off-shore areas were high seas or territorial seas, a point on which the parties could not agree.

Several national committees expressed an interest in the designation of marine SSSIs at the 13th SCAR meeting in 1974. The question of Specially Protected Marine Areas and Marine SSSIs was inscribed on, and then deleted from, the agenda for the 8th consultative meeting (1975). At the 9th consultative meeting in 1977 Chile proposed two marine sites. Boczek (1986:96) suggests that Chile's motivation was the political consideration of asserting its jurisdiction over offshore waters. In the absence of consensus SCAR was invited to consider this issue. SCAR's recommendations on this issue (along with Chile's proposals) were discussed by a working group at ATCM-X in 1979, but again differences could not be resolved.

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89. Which it duly did at its 13th meeting in September 1974.
90. These included the three SPAs terminated by recommendation VII-2. The relevant management plans were to be considered interim guidelines until formally in force. Recommendation VIII-3 provides guidelines for SCAR to follow when designating sites and elaborating management plans. These criteria established by the consultative parties to guide SCAR were those already proposed by SCAR at its 13th Meeting and used in the management plans for the seven SSSIs adopted at this consultative meeting.
91. The expiry dates of the management plans for the seven SSSIs already designated were extended under recommendation 6 after SCAR had recommended no change to the content of these plans and "experience of the practical effects of the management plans ... had shown them to be an effective means of reducing the risk of harmful interference in areas of exceptional scientific interest". At ATCM-XII in 1983, the US delegation circulated a message from the President of SCAR explaining that SCAR had not yet reviewed the designations for SSSIs 1 to 8 which were due to expire before the next consultative meeting. SCAR requested that designations be extended until the next consultative meeting "when an informal [sic] decision could be made". Accordingly recommendation XII-5 extends the expiry dates for all eight SSSIs (including that for No 7 which had already expired).
92. The expiry dates of sites 2 to 8 were extended in accordance with SCAR's report (recommendation XIII-7). Under recommendation XIII-9 the consultative parties implemented SCAR's recommendation that the management plan for Site No 1 be amended.
Marine SSSIs were discussed again at ATCM-XII in 1983. Chile, Argentina and the UK jointly proposed a site that was partly terrestrial and partly marine. However delegates decided that any such proposals should be carefully examined in the light of Article VI of the Antarctic Treaty and other factors (Final Report 1983:9). The issue was deferred until SCAR had approved SSSIs partly or wholly in the marine environment even though this proposal had been supported at the 17th SCAR meeting.

Proposed management plans for marine SSSIs (there were now three proposals) were not adopted at ATCM-XIII (1985), in spite of SCAR’s concern that this issue had been on the table for several years. Several delegations also stressed the importance of the designation of these sites. However at least one (unnamed) delegation continued to argue that marine SSSIs contradicted freedom of the high seas, and consensus could still not be reached. The three marine SSSIs proposed by Chile were finally adopted at ATCM-XIV in 1987.

iii. Extension of the protected area system

Specially Protected Areas and Special Sites of Scientific Interest were the basis for a system of protected areas in the Antarctic. SCAR was involved in providing advice to the consultative parties on both, but all final decisions rested with the consultative process.

By the end of the 1970s, however, only thirteen SPAs and seven SSSIs had been designated (although, as noted above, the number of SSSIs increased in the 1980s). By 1985 the protected area system covered only 0.15 percent of the ice-free part of the continent (Lucas and Dingwall 1987:234), the area where most human activity (and therefore most interference) was likely to take place.

As early as 1972 SCAR expressed concern that SPAs did not adequately represent (and therefore protect) Antarctic ecosystems. However it was not until the 1980s that consultative parties began seriously to examine the effectiveness of the protected area system in response to the growing international interest in the Antarctic.

93. At least one of these sites (Deception Island) had first been proposed by Chile for inclusion as a SPA under the Agreed Measures in 1970.
94. Confidential reports would suggest that this Party was most likely the USSR.
95. The rationale and criteria for designation of marine SSSIs (to provide guidance for SCAR) was set out in recommendation XIV-6 as well as the appropriate information required in a management plan (again following guidelines already established and applied by SCAR).
96. This system was supplemented by designation of Historic Monuments and Sites. The initial list of historic sites and monuments took eleven years to complete. Wyndham (1980:87) suggests this was directly related to sensitivity on the claims issue.
At ATCM-XIII (1985) Australia proposed a new category of protected area on the grounds that the existing arrangements (that is, SPAs and SSSIs) were not sufficiently flexible to provide protection for areas with aesthetic or wilderness values but with no immediate scientific interest. Australia proposed a category of reserve which would allow for the management of areas with such values while not precluding activities which were unlikely to jeopardise those values. In tabling its proposal Australia acknowledged that it was a response to concern in the international community for increased levels of protection for Antarctic environments.

Several delegations expressed some sympathy for the proposal but considered that it required further study. Others thought such measures unnecessary (Final Report 1985:20). Several delegations (unnamed) argued that the establishment of a new category of protected area could bring political problems, although what they might be is not specified (Final Report 1985:21).

The US delegation thought that it was timely to ask SCAR to review the various mechanisms for environmental protection. The Australian and American proposals were combined in recommendation XIII-5 which requested SCAR to provide scientific advice on the system of protected areas in the Antarctic, and to advise specifically whether an additional category of protective area was required.

SCAR’s response to recommendation XIII-5 was tabled at the 14th consultative meeting. It was the first comprehensive review of the protected area system in the twenty-year life of the Agreed Measures. SCAR made five recommendations. Periodic visits, it suggested, should be made to protected areas to assess whether the objectives for which they had been designated were being met. Information from those visits should be circulated among consultative parties, as well as being made publicly available. SCAR proposed also that management plans should be required for SPAs and suggested that additional protective areas should be designated to provide for representative examples of Antarctic terrestrial, inland water and marine ecosystems. A new category of protected area should be established which would "to the greatest

97. This was in spite of a lack of support for a similar proposal made at the preparatory meeting.
98. At the preparatory meeting for the 14th ATCM Australia’s proposal on additional protective measures was apparently seen by some delegations as a claimant plot to exclude other activities and nations from large areas of the continent. If this is the case, given that Australia claims 42 percent of the continent, they would have to have been sizeable protected areas!
99. The US delegation also tabled a general paper on the Antarctic Treaty system as a conservation system. The introductory note states that, for the sake of brevity, the term "conservation" is used in a sense which includes environmental protection (ANT/XIII/INF.9, 1985).
100. There is extensive discussion on this in the final report of the meeting. Australia took a decisive role in proposing draft recommendations on this and other issues.
extent possible, provide for buffer zones, multiple use, management plans and values other than those of a purely scientific nature" (SCAR 1987:Appendix 6).

The Final Report notes (1987:39) that several delegations were of the view that the concept of multiple use was not sufficiently developed, conceptually or operationally. They felt that future discussion would be assisted by having before them examples of management plans for SPAs, as well as for possible multiple use areas. No recommendation was adopted. Nevertheless, as Kimball (1987d:10) notes the meeting "accepted in principle the need to agree on additional protective measures". The Final Report (1987:41-42) included a suggestion that provisional management plans for seven specified areas might be prepared for the preparatory meeting for XV consultative meeting noting, however, that this did not imply any commitment to their eventual acceptance.

When the issue of the protected area system came onto the agenda of ATCM-XV in 1989 it was in the context of broader debates about environmental protection following the Australian/French decision not to sign the Minerals Convention and the stated intention of those countries to pursue the negotiation of a comprehensive environmental protection regime. The parties moved with uncharacteristic speed at this meeting to give effect to SCAR’s recommendations, although this might well have been to defuse the Australian and French proposals and to foreshadow anything that might be on the agenda of the special consultative meeting. ATCM-XV is discussed further in chapter seven.

The provisions of the Agreed Measures for the protection of fauna and flora and the adequacy of the protected area system came under increasing scrutiny in the 1980s from non-governmental organisations as well as from environmental management experts.

The most publicised example of violation of the Agreed Measures is the construction of an airstrip by the French at the Dumont D'Urville station at Pointe Geologie. The initial environmental impact report was inadequate, a point noted by French scientists themselves. The construction involved blasting to create a runway strip between five small islands, disturbing and killing birds, even though the station had been constructed 1986.

101. Australia tabled a paper (ANT/XIV/WP/16, 1987) to show how the suggested new category could improve the effectiveness of protection under the Antarctic Treaty, setting out a lengthy ‘hypothetical’ example of its possible application. Australia (ANT/XIV/WP/17, 1987) supported SCAR’s recommendations and stressed that the SCAR report needed “urgent and serious attention ... in order to properly meet our responsibilities under article IX of the treaty and to respond to international concerns over the adequacy of our care for the Antarctic environment”.

102. This has been well documented by NGOs. See, for example, ASOC (1985a), Greenpeace (1987a, 1987b, 1989b).
in that location specifically because of the scientific value of the penguin rookeries nearby.

During construction of the Chinese 'Great Wall' station on King George Island, penguins were chased with sticks and glass and metal objects were place in nests, in contravention of the Agreed Measures. Considerable disruption was also caused to scientific experiments of German hydrologists. The construction of Hallett station in 1968 resulted in the displacement of a penguin rookery covering two acres (Quigg 1983:50-51). In spite of the provisions of the Agreed Measures, as Muller-Schwarze and Belanger (1978:380) argue, "there can be no doubt that breeding populations of Antarctic birds are adversely affected by direct exposure to man's activities in Antarctica".

The SPAs and SSSIs were inadequate and susceptible to human interference. The existing protected area system, Kriwoken and Keage suggested (1989b:36), cannot "adequately protect the Antarctic environment over the full range of human activities and their consequent environmental pressures". As noted above SCAR was also concerned about the limited scope of the protected area system.

Again as noted above, the construction of two bases on the Fildes Peninsula (King George Island) resulted in a decrease in the size of the SPA designated there and, finally, in the termination of that designation. The biologically important melt-lake which was included in that SPA was used by the Chilean base as a dump site (Anon 1988j:19).

Thus both the Agreed Measures and the protected area system were subject to compliance problems. This aspect of the environmental regime is addressed later in this chapter.

103. Snow gauges, water gauges and measuring pipes were broken. China was still granted consultative party status in 1985.
104. There was often little attempt in the 1960s and 1970s to clean up after the construction of a base. For example, see Lipps (1978:348) on the construction of the US Palmer station in 1968.
105. In a single incident during the 1970/71 season a helicopter taking off over the Cape Crozier rookery caused several thousand incubating Adelie penguins to leave their nests in panic. Their eggs rolled out of the nests and were lost. This incident was either in direct contravention of the Agreed Measures, or it points to the inadequacy of the Agreed Measures in protecting fauna and flora. Navy helicopter flight patterns are argued to have caused a 50 percent reduction in breeding at one penguin rookery close to McMurdo (Manheim 1989).
106. See also Schofield (1976:20) who suggests that the impact and overall scope of conservation measures and system of protected areas are limited. Boczek (1986:84) notes that the designation of some SPAs has been advantageous in the protection of wildlife. He notes particularly the giant petrel colonies in the Rookery Islands and the fulmarine petrels and southern skuas on the Budd Coast. See also Lucas and Dingwall (1987:233-37) for arguments on deficiencies in the protected area system.
iv. **Code of Conduct for Antarctic expeditions and station activities**

By 1970 the consultative parties had begun to establish rules and procedures to provide protection for parts of the Treaty Area, or for species found therein. Yet there was little guidance on what was acceptable practice outside those areas, particularly in respect of the general conduct of expeditions and activities at scientific stations.

In 1970 the Parties asked SCAR (in recommendation VI-4) to identify the types and extent of human interference and to propose measures to minimise this. In the meantime, governments were urged to take interim measures to reduce known causes of harmful interference. SCAR's recommendations were discussed at ATCM-VII (1972) and governments were urged to adopt them as voluntary guidelines for the conduct of their expeditions and stations, "as far as feasible and practicable" (recommendation VII-1). The item was referred to the eighth ATCM to be discussed in detail where delegates adopted a short "Code of Conduct for Antarctic expeditions and station activities", based on SCAR's report.

Under recommendation VIII-11 the Parties were to observe the Code "to the greatest extent feasible". There was, thus, no formal obligation in this respect. The first section of this Code of Conduct recommended procedures for the disposal of solid and liquid waste. The sections on the introduction of alien species and minimisation of disturbance to breeding colonies and concentrations of birds and mammals simply drew attention to the Agreed Measures. The fourth section suggests that "in the planning of major operations in the Antarctic Treaty Area an evaluation of the environmental impact of the proposed activity should be carried out by the Antarctic operating organisations concerned". It stopped short of suggesting, however, that such operations should not be cancelled or modified if a negative evaluation was made. Evaluations may be circulated through SCAR channels to other states engaged in Antarctic activities.

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107. The Final Report for this meeting gives no information on this discussion or on the content of SCAR’s recommendations.
108. Incineration is permitted for combustible materials (except batteries which are to be removed from the Treaty area). Non-combustible materials may be disposed of at sea. Plastic packaging and plastic and rubber products are to be removed.
109. Some national Antarctic operating agencies, particularly the US, had been applying environmental impact procedures to their activities in the Antarctic.
110. The first environmental impact assessment in the Antarctic seems to have been conducted for the Dry Valleys Drilling Project in 1973 (Frazier 1974b:60) because earth scientists wanted to explore the geological record in rock, and biologists wanted to protect the unique valley ecosystems from any disturbances.
As Auburn notes (1982:287) the Code was weaker than the SCAR proposals in a number of ways. Most important, he suggests, was the omission of the requirement for a comprehensive statement of anticipated short-term and long-term effects on the environment and its ... associated macro- and micro-biota, together with their primary, secondary and tertiary consequences; a delineation of all probable unavoidable adverse effects, with suggestions for means of minimising them (Auburn 1982:287).

Some (unnamed) delegations felt that this recommendation could have been even stronger, and expressed their reservations accordingly (Final Report 1975:8). This code provided the only specific guidelines for expeditions for almost a decade.

The code of conduct and the issues of waste disposal and environmental impact assessment were not addressed again until the 12th consultative meeting in 1983, eight years later. By this time, the consultative parties' implementation of the Code of Conduct was being publicly challenged by non-governmental organisations and by others. Bonner and Walton (1985:357) argued that little effort was made at many research stations to observe the Code of Conduct. Over the years, as Lemonick notes (1990:30) the consultative parties "spilled oil into the seas, dumped untreated sewage off the coasts [and] burned garbage in open pits".

As Campbell and Claridge (1987:333) suggested one of the greatest concerns in the Antarctic was the management practices, or more importantly the lack thereof, employed to cope with increasing densities of people at scientific stations. Indeed, the Parties themselves recognised that since the Code of Conduct was adopted in 1975 their record "has been longer on intention than action" (Handbook 1989:2103).

v. Waste Disposal
The problem of disposing of waste in the Antarctic grew with the increase in human activity in the 1980s. Most of the material brought into the Antarctic stayed there. Waste included not only sewage and food scraps, but fuel, batteries, chemicals, packaging, old machinery and equipment. The cumulative effects of waste disposal impacted on local habitats as well as being aesthetically unpleasant. A conspicuous feature of many Antarctic bases is their associated dumps.

111. It was at this meeting that consultative parties also adopted the general norms that no activity with an inherent tendency to modify the environment should be undertaken unless appropriate steps had been taken to exercise appropriate controls (recommendation VIII-13).
112. Scientists with the British Antarctic Survey.
113. This point has been consistently made by NGOs as well. See, for example, Merriam (1990:19-20).
Schofield (cited in Campbell and Claridge 1987:332) suggests that the enormously accelerated rates at which materials are being introduced into the Antarctic is irreconcilable with ecological reality. Bonner and Walton (1985:357) explain that every year thousands of tonnes of cargo and millions of gallons of fuel are brought into Antarctica, very little of which is ever removed.\textsuperscript{114}

As noted above waste disposal was addressed in the Code of Conduct of 1975. It was inscribed on the agenda again in 1983, but it was not until 1989 that a substantive recommendation was adopted.

At the 12th consultative meeting in 1983 the host Australian delegation proposed amendments to the Code of Conduct.\textsuperscript{115} However, while recommendation XII-4 refers to a general increase in consultative party awareness of the environmental impacts of waste disposal in the Antarctic region, governments are recommended only to seek the advice of their national Antarctic operating agencies on any problems which have arisen in implementing the Code of Conduct and the desirability of revising the Code, especially in respect of the on-site treatment and removal of wastes. This reflects the consultative parties' assertion that practical experience (which, they argued, only they possessed) was the best basis for decision-making.

SCAR undertook a preliminary review of this matter and it was on the agenda for the 13th consultative meeting in 1985. Again the Australian delegation submitted a draft proposal (ANT/XIII/WP 25, 1985) noting that since the 1975 Code of Conduct was adopted there had been changes in both the perception of what constituted pollution and in analytical techniques. Thus demand for new rules and procedures was in direct response to new knowledge. Suggested guidelines on waste disposal procedures were annexed to the draft but were not accepted by the meeting for inclusion in recommendation XIII-4. SCAR was asked to undertake a "comprehensive review" of the waste disposal aspects of the Code of Conduct.

SCAR's Panel of Experts was unable to prepare a final report for the 14th ATCM in 1987, although an interim report was available. Its efforts were hindered by "variable and insufficient information provided by national program operators" (Kimball 1987d:10). Indeed, the Final Report of this Meeting (1987:31) made a point of noting that delegates were concerned at the limited replies received to date. National Antarctic operators were urged to respond promptly and as fully as possible to the SCAR questionnaire. No recommendation was adopted but the Final Report sets out a number

\textsuperscript{114} The US Antarctic program brings in over 6 millions gallons of fuel into the Antarctic each year (Merriam 1990:19-20).

\textsuperscript{115} The final report of this meeting gives little information on the debate on this issue.
of points of agreement among the delegates on the need to improve waste management practices (Final Report 1987:32-34). Parties were also urged to take into account a number of goals in the conduct of their Antarctic activities: cleaning up existing sites, minimising the amount of waste, recycling wherever possible and removing waste which could not be disposed of in an environmentally sound manner. It was unusual for such a lengthy and detailed statement of action to be included in a final report.\textsuperscript{116}

SCAR's report on Waste Disposal was completed and published before the 15th consultative meeting where it was considered by the consultative parties. The recommendation adopted (XV-3) not only revised the Code of Conduct but went further than the SCAR suggestions, in an attempt to improve waste disposal practices in the Antarctic (see chapter seven).

In improving waste disposal rules the consultative parties were mobilised by the activity of non-governmental organisations.\textsuperscript{117} As noted earlier in this chapter, Greenpeace had begun to conduct environmental inspections of Antarctic stations and to make the results of these widely known. In doing so, they exposed poor waste disposal practices and minimal compliance with the code of conduct.

As an example, they found 47 drums of discarded fuel (many of them leaking) near the airstrip of an abandoned UK base on Deception Island (Anon 1988k:18). At the US Palmer station, raw sewage, plastics, rusting metal and laboratory chemicals were disposed of into the sea. The waters near McMurdo (the main US base and the largest in the Antarctic) were found to contain high levels of polychlorinated biphenyls (PCBs) and heavy metals than would be permitted in the US.\textsuperscript{118} Again, compliance went to the heart of the issue of environmental protection.

vi. \textit{Environmental Impact Assessment}

The question of the utility of EIA procedures in the Antarctic was also raised in the 1980s in the context of a reassessment of the adequacy of the Code of Conduct. Debate on this issue continued to be marked by resistance to centrally imposed rules which might be seen to compromise national autonomy over the conduct of Antarctic activities. The debate was also hampered by the fact that many of the consultative

\textsuperscript{116} The Final Report was adopted by consensus so it is fair to assume that all parties were in agreement with this statement. Its status with regard to the requirement of governments to take action is unclear.

\textsuperscript{117} For example, ASOC members had conducted a survey of states waste disposal practices and suggested a model waste disposal program which they produced in a paper for distribution to the consultative parties. (See ECO XLV(1), October 1987)

\textsuperscript{118} A report in \textit{The Guardian} of 20 February 1989 noted that seven 40 gallon drums of untreated waste had been collected from the McMurdo outfall, and that the waters contained levels of cadmium which would be illegal in the US.
parties had little or no domestic experience of EIA procedures even though they had become a more widely applied procedure in domestic circumstances during the 1980s.

Environmental impact procedures were on the agenda at ATCM-XII in 1983. As the UK and Australia noted\(^{119}\) activities in Antarctica were not generally subject to prior scrutiny of their potential environmental effects. They recommended the adoption of interim guideline procedures which they annexed to draft recommendations\(^{120}\).

Under recommendation XII-3 detailed assessments were to be conducted for activities with the potential for significant impact, in accordance with *national* procedures. Only research and logistic activities were covered and assessments were not to prejudice scientific investigation. There was no requirement that assessments should be circulated to other Parties or made available for public comment. This recommendation also reasserted the consultative party belief that "states involved in Antarctic research activities are in the best position to assess potential environmental impacts of such activities and to develop assessment procedures".

While the recommendation noted that a measure of comparability between national procedures might become desirable in the future, there was clearly no intention at this stage of imposing comprehensive procedures. Some (unnamed) representatives urged caution in the search for "whatever element of comparability it might be found prudent to apply, *on a national basis*, to such procedures" (Final Report 1983:6, my emphasis).

There was also some resistance from the scientific community to EIA procedures which they argued would interfere with freedom of scientific research. However, given that as the practical enforcers of existing environmental protection rules the scientific community had to take some responsibility for compliance problems, self-regulation was a potentially flawed strategy.

SCAR was invited to offer advice on categories of scientific and logistic activity which might be expected to have a significant impact on the environment, and on the elaboration of assessment procedures which might be applied "on an experimental basis"\(^{121}\).

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119. ANT/XII/1, 1983 (UK) and ANT/XII/1/REV 1, 1983 (Australia)
120. These procedures were based on a detailed international study by the Scientific Committee on Problems of the Environment (SCOPE), a committee of the International Council of Scientific Unions (of which SCAR was also a committee) (Handbook 1989:2104). The work of SCOPE was also referred to in the draft recommendation.
121. The interim guidelines suggested by the British were not appended to this recommendation, but the Final Report contained steps found in some national EIA procedures which, it was suggested, might be useful to SCAR in considering this matter.
No recommendation was adopted at ATCM-XIII in 1985, but there was extensive discussion. SCAR’s report duly included categories of activity that were likely to have a significant environmental impact. There was some concern among delegates about the implications of such a list, and resistance to the idea of mandatory EIA procedures being imposed on national Antarctic agencies.

The British delegation attempted to alleviate these concerns so that consensus could be reached. In a discussion paper (ANT/XIII/INF 7, 1985) the UK suggested that “our purpose ... is to ensure that forethought is exercised with respect to the environmental impacts that scientific and logistic activities might have in Antarctica ... not to provide that any activity which is likely to have a significantly adverse impact should not go ahead for that reason alone” (emphasis in original). SCAR’s list, the British suggested, was much less forbidding if it was taken as indicative only of the sorts of activity for which an assessment should be prepared. On the understanding that any recommendation would be hortatory rather than mandatory the British though that the potential for conflict between national legislation and Antarctic procedures could be minimised. The Final Report noted that EIA procedures "do not presuppose any mechanism for coordination" (1985:20).

The British submitted a draft recommendation (ANT XIII/WP 20, 1985) on assessment guidelines. Although a number of delegations indicated they were in a position to accept the proposal, others raised questions of a scientific and operational nature and agreement on the form of a recommendation could not be reached. However, the British guidelines were annexed to the Final Report and a number of delegations indicated their intention to adopt them.

At this meeting the consultative parties also adopted a recommendation, XIII-6, on the siting of scientific stations. Where stations were established in the same vicinity, national Antarctic operating agencies were urged to consult together to safeguard

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122. The United States, Britain, New Zealand and France tabled examples of environmental impact assessments prepared for proposed Antarctic activities.
124. The British position is significant in that Nigel Bonner, one of the authors of the SCAR report, was also a member of the UK delegation and would, one assumes, have had some input into the drafting of the British paper.
125. There was some perception that this was a mechanism to increase international control over such activities. An article in The Times (21 October 1985) noted that a bid to increase international control over scientific experiments in Antarctica and their effects on the environment had been defeated, observing that it will be up to each government to decide whether the environmental impact of its scientific program is acceptable.
126. This draft distinguishes between initial environmental assessment and detailed Environmental Impact Statements which are to be carried out if the initial assessment indicates the likelihood of a significant environmental impact. The British draft also provides an illustrative list of the sorts of research and logistic activities that might reasonably be subject to this process.
scientific activities, and to avoid operational logistic difficulties and undue adverse environmental effects arising from cumulative impacts. This problem was related also to wasted scientific efforts. Some of the newer parties, in attempting to fulfil the scientific activity criterion for consultative party status, were simply duplicating scientific work being done by stations in the same area rather than conducting new work. Indeed, the status of science and the quality of the scientific research undertaken in the Antarctic has become a serious issue in the Treaty system although it has not yet been addressed formally.

At the 14th consultative meeting in 1987, the UK indicated that it would be seeking to have the EIA guidelines tabled at ATCM-XIII adopted in a formal recommendation and submitted a modified version (ANT/XIV/4, 1987) of its 1985 draft.

The Parties finally agreed to new rules on EIA under recommendation XIV-2. A comprehensive environmental evaluation (CEE) is required where an initial environmental evaluation (IEE) determines more than a minor impact is likely. Under this recommendation a CEE should include a description of the activity (and possible alternatives) and the estimated impact (including second order and cumulative effects). Other Parties are to be given an opportunity to comment on the evaluation. Considerable attention was paid to what constituted a significant environmental impact. Although some delegates were keen to "introduce a measure of comparability" between assessment procedures the final decisions and the development of appropriate criteria for procedures is left, again, to each national authority.

Thus, in accordance with the sovereignty norms that dominate the Treaty system, there is to be no centralised oversight of the procedures nor any means to enforce compliance. Indeed, it was resistance to any centralised or imposed rules which had contributed to the length of time taken to adopt new EIA rules.

127. The two new consultative parties, Uruguay and China, had established bases on King George Island where the problem of station crowding was most acute.
128. This point was made in interviews by several senior Antarctic diplomats.
129. The kind of work being undertaken by some of the newer parties focussed primarily on measuring and monitoring, particularly in the field of meteorology, rather than new and Antarctic-specific primary research.
130. The illustrative list of activities included in the earlier UK draft has been dropped. Its proposal generally tracks the goals and principles on EIA adopted by the Governing Council of UNEP in June 1987.
131. The British suggestion that SCAR be involved in this process was not adopted. The UNEP principles, upon which these guidelines are based, suggested that countries consider the comments of government agencies, members of the public or relevant experts or interested groups, a provision not adopted by the Treaty parties.
vii. Tourism and non-governmental expeditions

This item was first inscribed on a consultative agenda in 1966 (ATCM-IV). The consultative parties sought to regulate tourism and non-governmental activity on the grounds of protecting the environment but it raised the difficult question of jurisdiction over 'unofficial' persons. This has always been a contentious issue and few substantive rules on tourism have been adopted even though the issue has been on the consultative agenda for over twenty years. The debate about a statement of accepted practices has been protracted and the idea of special tourist areas has not yet been satisfactorily resolved because the parties have no individual or collective jurisdiction to constrain access of non-governmental persons to any part of the Antarctic.

Generally speaking, neither consultative parties nor the scientific community looked favourably upon tourist and other non-governmental activity. This was in part because it reinforced the idea of Antarctica as subject to the 'law of open spaces' and because it challenged consultative party control over the Antarctic. There was nothing in the Treaty or international law that required tourism operators or non-governmental expeditions to ask permission of any state or person to visit the Antarctic. Scientists were irritated by constant interruptions to their work by tour parties wanting to visit stations, and there was the very real problem of ill-prepared expeditions requiring costly and time-consuming emergency assistance.

The first commercially organised ship-borne tourist expedition visited the Antarctic in 1966 (Handbook 1989:2201). At ATCM-VI (1966) a short recommendation was adopted recognising that tourist expeditions could prejudice the conduct of scientific research, the conservation of fauna and flora and the operation of Antarctic stations. The government of a country in which an expedition was being organised was requested to advise other governments whose bases the expedition planned to visit. This notification is provided for pragmatic reasons rather than as a matter of jurisdictional or territorial right (Colson 1980:865).

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132. Non-governmental expeditions differ from tourist activity (which is, of course, also non-governmental) in that the latter are "for the most part ... recreational and adventurous ... having little more than notional support from the government of the country in which they are organised [and] ... being heavily dependent on sponsorship or other private contributions in cash or kind" (Handbook 1989:2201).

133. Information on non-governmental expeditionary activity was set down in recommendation I-VI (1961) as one of the items which should be included in the annual exchange of information between Treaty parties.

134. See Boczek (1988) on the legal status of tourists and other visitors in the Antarctic.

Governments were also asked to advise tour operators of conditions upon which they would grant permission for visits to their Antarctic stations.\textsuperscript{136} Such permission, it was suggested, should be withheld unless reasonable assurances were given on compliance with the Treaty and its recommendations. There is an implicit recognition here that governments do possess some jurisdictional rights over their stations in the Antarctic.\textsuperscript{137}

This matter was again discussed at the sixth consultative meeting in 1970. Recommendation VI-7 restated concerns about the growth in tourist activity and set out suggested restrictions on tourist and non-governmental expeditions to ensure that visitors comply with environmental protection measures already applicable to official expeditions. Visitor entry to SPAs was to be prohibited and Historic Monuments were to be respected.

At the seventh consultative meeting in 1972, the UK delegation floated the idea of designating Special Tourist Areas to which visitors could be encouraged to go so that environmental impact could be minimised and localised (ANT/8, 1972). As well as incorporating this suggestion, recommendation VII-4 acknowledged that a statement of accepted practices in the Treaty Area would be of benefit to unofficial visitors and should be considered further at the 8th consultative meeting.\textsuperscript{138} Consultative parties were urged to consult well in advance of ATCM-VIII on the possibility of designating such areas and to "use their best efforts" to ensure that the provisions of the Treaty and recommendations on the conservation of fauna and flora were applied in practice to all visitors not sponsored by them.\textsuperscript{139}

While the Parties recognised at ATCM-VIII (1975) that "tourism is a natural development in [the Treaty] Area and ... it requires regulation" (recommendation VIII-9, my emphasis), they were clearly unsure how to do this. This recommendation refers to an annexed Statement of Accepted Practices and an annexed list of areas to which tourists will be encouraged to go but no annexes were adopted. It was intended that they be completed at the 9th consultative meeting. A draft Statement was discussed at ATCM-IX but because of time constraints (according to the Final Report) it was again

\textsuperscript{136} At ATCM-V (1968) several delegations provided information on tourist expeditions proceeding from their countries, and on conditions of access to stations which had been adopted.

\textsuperscript{137} Draft recommendations circulated by several delegations observed specifically that "tourism is not mentioned in the Antarctic Treaty" (Doc No 44, 1966) but this qualification did not survive to be included in the final recommendation.

\textsuperscript{138} It was suggested that such a statement should also stress the need for self-sufficiency and prior notification.

\textsuperscript{139} The Soviet Union suggested that the Agreed Measures could be extended to non-governmental expeditions and tourist activity.
deferred to the next meeting. Similarly, no action was taken to list or define areas of Special Tourist Interest.

Under recommendation X-8 (1979) a draft Statement was adopted, six years after it was first proposed. The Statement, intended as a guide for tour operators, sets out principles deriving from the Treaty and subsequent recommendations on the protection of the Antarctic environment, as well as the substance of recommendations adopted by the consultative parties to this end. It restates the administrative requirements elaborated in earlier recommendations on tourist activity. Given that this is all it did, there is no justifiable reason for the length of time it took to reach agreement. Recommendation X-8 also included a section on 'Guidance for Visitors' for distribution to tourists as a guide to good conduct in the Antarctic.

The issue of Special Tourist Areas was again deferred. At the 11th consultative meeting (1981) work was begun on the principles that might be adopted if such areas were to be designated, but there was some doubt as to whether it would be prudent to proceed further with this matter. It was agreed, therefore, that there should be further study of these issues with a view to considering them again at the 12th consultative meeting.

No recommendation was adopted at ATCM-XII (1983). The difficult question of who was responsible for ensuring compliance by tourists and non-governmental expeditions was also deferred. However the draft statement was annexed to the Final Report.

This statement was to be incorporated into the annex of recommendation VIII-9 adopted in 1975. The Working Group which considered this matter also had before it a paper on tourist and private expeditions to the Antarctic, from the SCAR Working Group of Logistics. For example, on the protection of native fauna, on harmful interference, on SPAs and SPSs, historic monuments, SSSIs, pelagic sealing, and waste disposal. For example, the need for advance notice, assurance of compliance with relevant provisions of the treaty and recommendations.

This guide is a short and simple list of 'do's and don'ts'. While this recommendation focuses on tourist activity, it also suggests that consultative parties may request information about a non-governmental expedition if they are asked for help or advice. Such expeditions are urged to carry adequate insurance. The fourth section of the recommendation urges Governments to advise commercial aircraft operators that present levels of commercial overflight activity in the Antarctic exceeded existing capabilities for air traffic control, communication and emergency and search and rescue services. This assessment was to prove tragically correct and at ATCM-XI Representatives expressed, in recommendation XI-3, their deep sympathy following the Mt Erebus disaster of 28 November 1979, and recommending that the site of the accident be declared a tomb and left in peace.

Delegates also considered adopting a common response to requests for assistance from non-governmental expeditions but this matter was also deferred.

Discussion focussed on the issue of providing emergency assistance to non-governmental expeditions. Concerns were raised about the disruption to scientific work, the expense of providing assistance and possible danger to life, in spite of humanitarian obligation to provide assistance. A recommendation affirming the traditional Antarctic principle that expeditions render all assistance feasible in the event of an emergency request for help had been adopted at the first consultative meeting (recommendation I-X).
expeditions with the Treaty and recommendations was again raised. It was suggested (see Handbook 1989:2207) that this should rest with "those States whose physical or juridical persons organise such expeditions". A draft recommendation to this effect was withdrawn when no consensus could be found. At the 13th consultative meeting, this issue was again deferred, on the grounds of "insufficient time" to give it adequate attention (Final Report 1985:25).\(^{147}\)

The UK delegation proposed a code of practice for tourist and non-governmental expeditions at ATCM-XIV (ANT/XIV/WP/16, 1987) which sought to consolidate various existing provisions into a single statement. Concern was expressed both about the complexity and the possible inadequacy of existing measures on tourist and non-governmental activity. However in what was by now a familiar pattern no recommendation on this matter was adopted: it was again deferred to the next consultative meeting. Several delegations expressed concerns about the increase in tourist and non-governmental activities and their impacts on localised environments (noting that there was some evidence that violations of existing standards had occurred), about disruption to the conduct of scientific research by increasing number of tourist visits to stations programs,\(^{148}\) and about the increasing possibility of accidents (Final Report 1987:50-51).\(^{149}\)

The same sorts of concerns were again raised at the 15th consultative meeting in 1989 in the context of debates on comprehensive measures for environmental protection. The Meeting agreed that a comprehensive review of the issue was required, possibly leading to further measures to regulate tourist and non-governmental activities. It was agreed that such a review should be undertaken by the special consultative meeting to be convened to discuss further the matter of comprehensive measures for protection of the Antarctic environment. This issue is taken up again in chapter seven.

The consultative parties had done little but review the issue. Indeed by this time North American operators of ship tours had released their own environmental guidelines for

\(^{147}\) The delegation from FRG presented an information paper which summarised the obligations of consultative parties with respect to tourism and non-governmental expeditions, and it is likely that the British delegation was suggesting a strengthening and unifying of various procedures that applied to tourist and non-governmental expeditions. At that Meeting the British delegation suggested that it might be appropriate to attempt to codify existing recommendations. It is not clear exactly what this point in the Final Report of the 13th meeting means. SCAR also presented a report to ATCM-XIV on non-governmental activities in the Antarctic, recommending the preparation of a handbook and a uniform code of conduct (Kimball 1987d:25).

\(^{148}\) The US provided information (ANT/XIV/INF/43, 1987) on the steps it had taken to limit the number of tourist visits to its accessible Palmer station, because of concerns about the interruption to scientific research and the effect on the surrounding environment.

\(^{149}\) The Lindblad Explorer ran aground on at least two occasions, one requiring the crew to abandon ship (Dingwall 1990:10).
expeditions. The only substantive recommendation adopted by the consultative parties did little but recall the provisions of the Treaty and subsequent recommendations. The difficult issue of Treaty parties obligations with respect to enforcing compliance with these rules by tourist organisers was not resolved. This has continued to be contentious issue within the Treaty system as discussed below in chapter seven.

Regime efficiency

The environmental regime described above was established and consolidated by the consultative parties in the 1960s and 1970s. This regime, nested as it was within the broader normative and procedural framework of the Treaty system, was shaped by the dominance of sovereignty norms in the Antarctic Treaty system. The US described it this way: measures were developed in advance of potentially disruptive activity but only after sufficient interest in taking action had been expressed to create the political will to act. This interest was in turn driven by technological developments and an increase in human activity (ANT/XIII/INF.9, 1985).

The principles and norms of this environmental regime were generally not called into question. What was debated was how those principles and norms were to be interpreted and whether the rules and procedures adopted, constrained as they were by the political requirements of the Treaty system, were adequate. This assessment of regime efficiency can be addressed in two related questions. First, how successful were the rules and procedures of this regime as environmental management mechanisms? Second, have the rules, such as they are, been properly implemented and observed?

These were predominantly questions of the late 1970s and the 1980s and were raised in response to changing knowledge about the Antarctic environment and new ideas and values about environmental protection and environmentally acceptable behaviour. That new knowledge was generated, for the most part, by the scientific community but the debates about its implications for environmental protection were mobilised by non-governmental organisations. On both counts the consultative parties came in for criticism. "With exceptions", Auburn has suggested (1987:6), "the past record of the consultative parties in environmental assessment and protection is properly open to attack".

The rules of the environmental sub-regime established guidelines for the conduct of human activity in the Antarctic, including the construction of stations, the conduct of support activities and the disposal of waste so that Antarctic fauna and flora, and the

150. Ziolkowski (1990:18) reports that NGOs considered the voluntary guidelines a welcome first step but generally were thought not to go far enough.
environment generally, would be minimally disturbed. The main features of this environmental regime are the lack of institutional framework and linkage between recommendations, implementation based on self-restraint rather than compliance rules and slow decision-making as a result of the need to maintain a consensus and avoid conflict. As Kriwoken and Keage argue (1987:6), this has resulted in a flawed management mechanism. The slowness of decision-making has proved to be a problem when activities on the ground have come to move far more quickly than the Treaty negotiations. In other words, decision-making was out of step with knowledge.

The discussion in this chapter draws attention to the slowness of the decision-making process, the limited rules that were adopted and the problems of violations and subsequent localised impact on the Antarctic environment. The impact of human activity in the Antarctic has been well documented, by scientists as well as by NGOs, and points to the limitations of the measures in place in meeting the environmental principles articulated by the consultative parties.

The newer Antarctic parties, especially those which have become active in the 1980s, often have a much better record than the 'old hands'. Indeed the Soviets observed that "among the most backward stations are the two major expeditions, the American one and ours".151

The question of adherence to the environmental regime raises the issue of compliance. As noted in this chapter, compliance mechanisms were avoided in accordance with the political demands of the system which resisted anything that seemed to erode national autonomy and sovereignty over the conduct of activity in the Antarctic. The consultative parties argued that the inspection procedure was an adequate mechanism for ensuring compliance with environmental rules. However, the rules on inspection were included in the Treaty primarily to oversee the demilitarisation provisions. Not only did the potential for inspection fail to ensure compliance, no steps were taken by the parties when violations of the rules were revealed by inspections.

For example, a 1971 US inspection report indicated that at both Casey (an Australian base) and Mirny (a Soviet base) dogs were running free in contradiction of the Agreed Measures. Yet neither the US nor any of the other parties to whom the inspection report was circulated, raised this issue in a consultative meeting. In 1985 a US inspection team found hydrocarbon seepage at every station visited, and reported that those stations also burned plastic or used plastic garbage bags for trash disposal at sea in

contravention of the Code of Conduct. Again, this violation was not raised at a consultative meeting.

As Kimball notes (1988c:18) "parties to the treaty have traditionally been reluctant to 'rock the boat' by asking too many questions about each others activities in Antarctica". This arose first, because violations of the environmental rules were not considered destabilising to the regime whereas disputes over them might well have been. Second, many of the consultative parties were, at some time, in violation of the rules. Thus there was, in effect, an 'in-club' conspiracy of silence.

It was the NGOs outside the formal boundaries of the regime who brought questions of compliance to public attention.\(^{152}\) The consultative parties have responded to this external pressure in what is, for the most part, a state of imposed accountability. For example after an NGO report detailed inadequacies of US waste disposal practices in the Antarctic (Manheim 1988) (acknowledged by the National Science Foundation to be accurate (International Herald Tribune, 17 August 1988)), the NSF took steps to improve practices at US bases and produced its own report on US environmental practice (NSF 1989d).\(^{153}\) The Foundation has asked for increasing funding ($30 million over five years) "to clean up the debris of past operations and to bring present operations into agreement with current regulations, prevailing attitudes and current technology" (CAN # 68, 1989).\(^{154}\) Nevertheless in doing so they noted that clean-up and compliance with environmental rules should not interfere with or delay scientific work (Anon 1990j:2).\(^{155}\)

Nigel Bonner\(^{156}\) suggests (CAN #68, 1989) that the improvement in environmental practice found during a joint New Zealand/UK inspection was due in large part to Greenpeace visits the year before. Claude Lorius\(^{157}\) has suggested (1990:8) that conservation organisations "have sensitised scientists and logistics people to inadequate controls and misbehaviour in the past".

\(^{152}\) In its regular inspections of stations Greenpeace has also been at pains to draw attention to instances of compliance with the rules. For example, the Brazilian commanding officer who sends his twelve winterers out with trash bags to hunt rubbish (Anon 1988k:19).

\(^{153}\) This report recognised, for example, that the sewage discharge systems at both Palmer and McMurdo did not meet the Code of Conduct (NSF 1989d:27) and that solid and hazardous waste management practices at McMurdo did not conform to sound environmental practice in the Antarctic.

\(^{154}\) The NSF held meetings with NGOs in February 1989 to discuss the clean-up initiative.

\(^{155}\) In another example, 40 tonnes of waste, including discarded machinery and leaking tins of caustic soda were cleaned up at the Australian Casey base following public criticism by a British scientist.

\(^{156}\) Former Deputy-Director of the British Antarctic Survey.

\(^{157}\) Former President of SCAR.
Nevertheless the widening of the environmental agenda and improvements in practice did not overcome the problems of complexity and fragmentation which were at the core of the environmental regime. That required a comprehensive reassessment of the measures. This issue is taken up again in chapter seven.

Conclusion
The process of decision-making on the environmental sub-regime rested, as it did in the Treaty system generally, on negotiation rather than imposition by a hegemonic state. Consultative parties were engaged in a joint-problem solving exercise focussed on common, but limited, environmental objectives. The development of the regime effectively resulted from incremental change within the Treaty system.

The bureaucratic actors who were the core of Antarctic decision-makers applied the broader norms of the Treaty system, into which they were socialised, to environmental issues. It was these actors who effectively 'owned' the issue. The scientific community was an important participant as a source of knowledge and advice but it did not adopt an advocacy position. Further it was an interested actor in that most of the rules were designed to regulate the conduct of scientists and scientific research. In this respect the role of the scientific community, as a potential epistemic community, in encouraging compliance with environmental rules must be questioned.

By the late 1970s, rules and procedures were in place for the protection and conservation of fauna and flora and the designation of SPAs and SSSIs. The consultative parties had begun to consider how to regulate tourist activity (but made little progress) and put in place a general code of conduct for scientific expeditions. While these recommendations imposed obligations, they incorporated no enforcement rules. Implementation and, to a great extent, interpretation were the responsibility of individual governments and national operators. Most of those issues, as shown, continued to be of importance in the 1980s. However the agenda of the 1980s also widened to include a more detailed consideration of waste disposal procedures, environmental impact assessment and the adequacy of the Antarctic protected area system.

New issues were added to the agenda in response to the increase in human activity as well as to new knowledge about the Antarctic environment. The consultative parties sought to regulate human activity not only because of the environmental impact of such activity, but also because of fears that unregulated activity might have the potential to upset the Treaty system and its political compromises.158 Thus incremental change

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158. This view was put to me by more than one senior Antarctic diplomat.
was a process of both individual and institutional learning. National interests (that is, policy goals and the means to achieve them) were defined (or redefined) to include Antarctic environmental protection in a way that reflected the new rules and procedures adopted by the Treaty system. However, this process of incremental change, and the ad-hoc, issue-specific approach to decision-making in the Treaty system, meant that the measures adopted lacked integration.

The lack of minutes from any of the consultative meetings means that it is difficult to assess whether any state, or states, took a leadership role on environmental issues. Nevertheless the documents tabled at these meetings make it possible to suggest that a number of countries were at the forefront of putting proposals to meetings. Those countries were the United Kingdom, the US, Australia, Chile and, to a lesser extent, New Zealand. Of those, Britain seems to have seen itself as the foremost advocate of 'quiet diplomacy' as the basis for negotiation and consensus. Its approach to decision-making in the Treaty system generally was to take a long-term view and seek to build consensus incrementally. The British tactic was to define problems clearly in the belief that agreement on the nature of the problem would advance consensus on the nature of the solution. At least one observer has argued that the British were the only party with concern for the environment which was able to effectively initiate solutions to environmental problems. Nevertheless, because of the perceived need to balance political interests with environmental ones those solutions were increasingly out of step with protection. This approach also precluded long-term planning and the elaboration of clear goals for environmental management in the Antarctic.

The late 1970s and the 1980s were marked by a growth in environmental consciousness on the part of the public and, to some extent, policy-makers. In the 1980s there were demands, by NGOs in particular, for an end to the piecemeal and disjointed approach to environmental decision-making and the permissive approach to compliance which characterised the environmental sub-regime. This push for a more comprehensive approach took place almost entirely outside the formal bounds of the Treaty system.

The consultative parties argued that the rules and procedures adopted to protect and manage the Antarctic environment were adequate to the task and provided evidence of the strength and flexibility of the Treaty system in that it could respond to changed demands and needs. However this judgement of success rests on political criteria in that environmental regime has been developed in such a way as to not undermine the

159. This comment is taken from a confidential report. The British position may have been helped by the fact that SCAR was headquartered in England at the Scott Polar Research Institute, and senior Foreign Office Antarctic diplomats have always had close ties with both SPRI and the British Antarctic Survey (both of which are in Cambridge).
compromise on sovereignty. The environmental rules adopted did not compromise the fundamental national interests of the Treaty parties outlined in chapter two and thus they contributed to the internal coherence of the regime. From the perspective of their ability to protect the Antarctic environment from adverse effects of human activity, a different judgement is made: the environmental regime was, in the final analysis, flawed.
Chapter four

LIVING 'RESOURCES' AND THE LIMITS TO CONSERVATION

Introduction
The question of resource use in the Antarctic, which was inscribed on the consultative agenda from early on, raised not only environmental concerns, but also the question of economic interests, as well as the usual political and legal dimensions of the Antarctic Treaty system. Thus it added a new factor to the calculus of Antarctic decision-making.

The resource issue fell into two categories - first, living 'resources' or marine fauna which raised questions of species conservation and second, mineral resources which raised questions of the direct and adverse environmental impact of mineral extraction activity. The consultative parties negotiated three conventions on resource use - the Convention for the Conservation of Antarctic Seals (CCAS), the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA). The separate convention model (rather than consultative recommendations) was adopted, first, because these were activities of interest to non-Treaty parties. Rules established under consultative recommendations would have regulated and constrained consultative party activity but not that of non-Treaty states. Second, in the case of seals and marine living resources, the activities to be regulated were primarily high seas activities which were outside the direct control of Treaty recommendations given the provisions of article VI which protected high seas freedoms. Finally, rules established under a convention would be legally binding on all signatories.

This chapter addresses the living 'resource' issue. It describes the process of the negotiations for CCAS and CCAMLR and analyses the conventions in terms of the fundamental characteristics of the Antarctic regime set out in chapter two. Finally, it assesses the conventions as conservation agreements.

Both CCAS and CCAMLR were negotiated in accordance with article IX(f) of the Antarctic Treaty which explicitly allowed the consultative parties to establish measures for the protection and conservation of living resources. (The negotiations for CRAMRA on the other hand, which are dealt with in the following chapters, sought to regulate an activity on which the Treaty gave no guidance). The use of the word 'resource' in this connection implies that marine fauna was something which was potentially exploitable, even if under strict rules.
Consensus decision-making guided the negotiations which were restricted to the consultative parties and were held, as usual, behind closed doors. Both conventions were negotiated in advance of extensive interest in the exploitation of marine resources with the intention of thus limiting adverse impacts of over-exploitation of the marine ecosystem as well as possible conflict over resource use. To this extent they were consistent with the "prevention rather than cure" (Handbook 1989:1101) approach to environmental issues within the Treaty system. However, in neither case were the consultative parties prepared to prohibit the exploitation, on any comprehensive basis, of the 'resource' in question.

Both conventions were characterised by the dominance of sovereignty norms in the institutional, decision-making and compliance rules adopted. Regulatory and decision-making authority remained in the hands of the Antarctic Treaty Consultative Parties. Compliance and enforcement rules were limited. Thus the conservation components of both conventions were limited by political factors in the same way as were the environmental protection measures examined in chapter three. While styled as conservation agreements by the consultative parties, both conventions favoured political and economic interests over environmental concerns, a factor which has given rise to doubts about their effectiveness as conservation instruments.

**Convention for the Conservation of Antarctic Seals**
The consultative parties negotiated CCAS in the late 1960s and early 1970s. There was, at that time, little international interest in the Antarctic and the NGO presence and the challenges from non-Treaty states that characterised later negotiations were absent. There was, then, little need for an accommodation with external interests. The internal accommodation between the consultative parties was also less troublesome than it was to be in later negotiations. No consultative state had entrenched commercial interests in sealing, although Norway's experimental catch of crabeater seals in 1964 provided some incentive to advance the negotiations. Sealing activity on the high seas did not impinge upon territorial rights or the exercise of maritime jurisdiction. Nevertheless conservation values were set against political and (potential) economic interests in the negotiations. Differences among the consultative parties focussed particularly on whether to prohibit or regulate sealing activity and, if it was to be regulated, the extent of compliance and enforcement rules that were acceptable.

The question of how to protect seals on the high seas (including floating ice) arose during the negotiation of the Agreed Measures (see chapter three), which established rules only for the taking of seals on land.

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1. The consultative parties were also concerned that agreement among them would be more difficult in the face of entrenched economic interests once commercial activity had begun.
At ACTM-III (1964) Australia, concerned about the inability of the Agreed Measures to protect seals on the high seas or on floating ice, tabled a proposal (Doc/P4, 1964) to prohibit pelagic sealing.\(^2\) While the Treaty parties were generally sympathetic to the protection of seals, mindful of the results of unregulated sealing in the nineteenth century, there was some opposition to a complete ban on sealing.\(^3\) The UK, for example, thought that "it would be better to anticipate the establishment of a rationally controlled industry ... rather than to attempt any direct prohibition of sealing".\(^4\) In other words, conservation and utilitarian values were to be balanced.

As with the Agreed Measures the form of an agreement on sealing was disputed (see Myhre 1986:56-58). Some delegations favoured something akin to the Agreed Measures and others argued that a separate convention would be more appropriate.\(^5\)

At this meeting, the Parties agreed to voluntary regulation (\textit{not} prohibition) of pelagic sealing and the taking of fauna on pack ice, on a national basis, to ensure the survival of the species and avoid serious disturbance to natural ecological systems. Any suggestion of collective enforcement was avoided. Governments were asked to consider this matter "on as broad a basis as practicable" in preparing for ATCM-IV.\(^6\)

Interim Guidelines for the Voluntary Regulation of Antarctic Pelagic Sealing were adopted at ATCM-IV in 1966 (recommendation IV-21).\(^7\) These guidelines, based on SCAR proposals, identified seal stocks as a "resource of potential value" which should not be depleted by overexploitation. While the guidelines provided for an annex on maximum sustainable yield (MSY) levels for seal catches and the establishment of sealing zones, no MSY levels were included in the annex to the recommendation and no

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2. Pelagic sealing is defined as the "killing or capturing for commercial purposes [of] any member of the order Pinnipedia on floating ice or in the sea" (Doc/P4, 1964).

3. Myhre (1986:57) suggests that Norway in particular was likely to have opposed any prohibition. In spite of this, Norway took a strong conservationist line during the negotiations. Myhre (1986:58) suggests that the British were also opposed to a moratorium.

4. They suggested that this could be done with relatively simple procedures of alternating open zones and setting maximum annual catch numbers. In looking to the lessons of the past the consultative parties sought to ensure that if sealing were to occur again on a commercial level, stocks should not be depleted to the extent that the exercise became uneconomical.

5. The UK, US, France, Argentina, Chile and Belgium initially argued for an instrument in the form of agreed measures. Australia, Japan and South Africa supporting a separate convention. The US later supported this option as well.

6. Recommendation III-XI was based on a joint proposal submitted by the US, Norway, the USSR, the UK and Australia (Doc/P4/Rev.1, 1964).

7. The word "Voluntary" was added to draft recommendations proposed by the United Kingdom and the United States delegations.
zones were designated at this meeting. SCAR was asked to provide the consultative parties with information on both (recommendation IV-22). A revised version of the guidelines was prepared by SCAR's Working Group on Biology. These new guidelines included provisions for a permit system for the taking of seals within designated Seal Reserves.

At ATCM-V (1968) the UK government tabled SCAR's recommended guidelines along with a draft convention (ANT 26, 1968) in the hopes that a binding agreement on the protection of seals could be negotiated. However there was still no consensus among the Parties on the form of an agreement. Governments were urged to "voluntarily take account" of the modified guidelines (recommendation V-7) and to study the draft convention with a view to considering it again at ATCM-VI (recommendation V-8).

In 1970 at ATCM-VI, delegates decided that the conservation of seals in the sea should be considered "outside the framework of the Antarctic Treaty, since [it] ... does not fall within the scope of the latter and is of interest to countries which are not Parties to the Antarctic Treaty" (cited in Handbook 1989:3102). A series of informal meetings "for an unofficial exchange of views" on a draft Convention was held concurrently with ATCM-VI (see Handbook 1989:3102).

The Convention was adopted at a Conference on Antarctic Seals held in London from 3 to 11 February 1972 and opened for signature on 1 June of that year. Although this diplomatic conference was separate from the consultative process only the twelve Antarctic Treaty Consultative Parties were represented. Further, the draft convention had already been debated and virtually agreed to within the consultative process.

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8. Under the guidelines the Ross Seal was to be totally protected except when taken for scientific purposes. At this meeting fur seals and Ross seals were also designated specially protected species (on land) under the Agreed Measures.

9. Those guidelines were approved by the SCAR executive at the beginning of November 1968 and subsequently circulated to national Antarctic committees. SCAR suggested that Seal Reserves could be designated for a seal breeding area or the site of long-term scientific research on seals.

10. Both were appended to the final report of the meeting.

11. The Belgian delegation (ANT.2, 1968) suggested that measures on pelagic sealing should go further than the voluntary rules of recommendation IV-21.

12. A draft convention was subsequently transmitted to consultative governments for consideration. This Convention was now styled as a convention for the conservation of Antarctic seals, rather than using the earlier language which had described it as a convention for the voluntary regulation of Antarctic pelagic sealing.

13. No negotiating documents are available from this meeting.

14. The conference was a separate diplomatic conference, not a special consultative meeting. The Chilean government later expressed its concern that the issue had been dealt with formally outside the Antarctic Treaty framework (see Bush 1982:228).

15. The FAO was invited as an observer because of its interest in Southern Ocean marine resources.
In his opening address to the February conference, the British Parliamentary Under-Secretary of State for Foreign and Commonwealth Affairs observed that the Treaty Parties were "attempting to widen the scope of our Antarctic conservation interests to include the High Seas" which could not be done under the Agreed Measures (in Bush 1982:247). He reassured delegates that the purpose of the convention was to conserve seals, not to encourage commercial sealing. An official US document suggests, to the contrary, that "during the ... negotiations it was very clear that the reason for the Convention was to provide for utilisation of the seal herds but prevent their overexploitation should harvesting begin" (Department of State 1974:24).

The Convention is designed to "promote and achieve the objectives of protection, scientific study and rational use of Antarctic seals" (preamble). The central principles of the Convention are that Antarctic seals (described as an important living resource) should not be depleted by over-exploitation and that a satisfactory balance within the ecological system should be maintained. The Convention establishes permissible catch levels (which are subject to review in the light of scientific assessments) for Crabeater, Leopard and Weddell seals. Ross Seals, Southern Elephant Seals and all fur seals are to be fully protected.16 The Convention sets out rules on closed and open sealing seasons, sealing zones and reserves and provides an indicative list of other protection measures which the parties may adopt. Special permits allow seals to be taken for food, for scientific research, or as specimens for museums, educational or cultural institutions. SCAR has a formal role in providing scientific and technical advice and collating information on seals provided by the consultative parties.17 The rules on the institutional framework provide that a commission and scientific advisory committee will be established only if commercial sealing begins.

The Convention is closely tied to the Antarctic Treaty. Control of the decision-making process remains in the hands of the consultative parties. States may accede to the Convention only on their invitation.18 Contracting Parties to CCAS affirm the provisions of article IV (the sovereignty article) of the Antarctic Treaty as they apply to the seas south of 60°South. As Bush suggests (1982:249), this represents an attempt to widen adherence to an important aspect of the Treaty regime. Argentina and Chile, the most active of the claimants, also made declarations on signing the Convention to the effect that it did not impair their rights of territorial jurisdiction including maritime zones (Bush 1990:134).

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16. These seals were protected because of their already depleted populations and their vulnerability to exploitation. Weddell seals are subject to controls on the taking of young.
17. SCAR may seek the advice of the FAO in fulfilling its obligations under the Convention.
18. In practice a government which wishes to accede advises the Depository Government (the UK) which conveys this advice to existing Contracting Parties who must agree unanimously to the accession.
The dominance of sovereignty norms in the Treaty system contributed to weaknesses in the Convention which limit its potential effectiveness as a conservation regime. The US suggested that opposition to its proposals for stronger protection measures, including observation of operations and enforcement of regulations, was based on juridical rather than commercial interests and went so far as to ensure that a statement to this effect was incorporated into the Final Act of the Conference (in Bush 1982:261-2). There is no collective enforcement mechanism. Each signatory party is to adopt measures for its nationals and flags under its jurisdiction. A system of inspection may be established but there is no requirement that it must be in place before sealing commences. Nor is any sealing nation specifically required to advise the other contracting parties of its intention to begin sealing. There are no provisions for national catch allocations.

The Convention did not enter into force until March 1978 and has never really been put to the test. Its institutional framework has never been activated. There is at present no commercial harvesting of seals in the Southern Ocean, although over the past 21 years about 15,000 seals have been taken (ASOC 19881:1), including an ‘exploratory’ harvest of 4802 seals by the USSR in 1986/87. Several parties have not fulfilled the reporting requirements on this activity (USMMC 1987:85).

The first CCAS review conference was held in London in 1988 in response to the Soviet harvest which, while within permissible catch levels, was thought to be above that necessary for scientific purposes. No substantive amendments were made to the Convention, although the UK and Australia made several proposals. Only minor amendments were adopted. Two minor alterations to the Annex sought to encourage exchange of information with parties to other ATS instruments (such as CCAMLR) and to extend protection of Weddell seals to include pups. A suggestion that applications

19. Article 3(1)(k). No details are provided on how this might work in practice. Under article 6(1)(a) if an inspection system is established after commercial sealing is in place, decisions may be taken by a two-thirds majority which must, nevertheless, include all the Contracting Parties present at the meeting.

20. Unanimous ratification was not required. Entry into force followed upon the deposit of the seventh instrument of ratification.

21. Permits to take the seals were issued for scientific purposes for a much smaller number than were killed. See ASOC (1988m) on the limited scientific research that was actually undertaken on the seals killed.

22. The Convention provides for a review conference to be held every five years. A review conference was not held in 1983 because, in the absence of any sealing activity, no need was perceived. Kimball (1990d:11) suggests that it was held "by correspondence".

23. Both proposals were put forward by Australia. These amendments took effect from 27 March 1990.
for special permits be circulated in advance was resisted as an attempt to introduce assessment of national science programs under the rules of the Convention.24

CCAS is, in essence, an inactive convention.25 It figures in the contemporary environment debate to the extent that it is charged with being an inappropriate and inconsistent agreement. ASOC argues that changing public attitudes towards the killing of seals mean that an agreement which permits commercial sealing activity is no longer acceptable. The environmental NGOs also argue that CCAS is inconsistent with both the Agreed Measures26 and the ecosystem approach to marine management which exists (in theory at least) under CCAMLR.27

Convention on the Conservation of Antarctic Marine Living Resources
Once the seals convention was finalised, the consultative parties turned their attention to the possible impact on the marine ecosystem of the unregulated exploitation of other marine resources. They were spurred by a growing commercial interest in krill (which began in the 1960s)28 and by the increasing exploitation of fish stocks in the 1970s.29 Interest in harvesting the southern ocean fishing grounds grew as the declaration of exclusive economic zones closed traditional coastal fishing grounds in other parts of the world to distant-water fishing fleets.

In negotiating the Convention the consultative parties were keen to enhance their control over Antarctic decision-making.30 As with the seals issue, the marine living

24. The final report of the review conference did note, however, that the use and purpose of special permits needed clarification. An NGO report of this meeting suggested that the parties feared establishing a precedent for easy amendment. There were also concerns about allowing a path for EC entry into the Convention (ASOC 19881).

25. In spite of this, states have continued to accede to the Convention as they have become members of the Antarctic Treaty. As at 22 July 1991, there were 15 contracting parties to CCAS.

26. For example, commercial sealing is permitted on floating ice at sea under CCAS but is prohibited on land and ice-shelves under the Agreed Measures.

27. NGOs argue that the permissible catches in the annex to CCAS are based on a simplistic understanding of the marine ecosystem. The taking of seals, they suggest, ought to be totally prohibited (see Greenpeace 1988d).

28. Krill is especially important to the Antarctic food chain which, as explained in chapter four, is a short and simple one. Birds, seals and whales depend on it. Krill has not yet been put to any widespread commercial use as a food source, in spite of its high protein content, because of problems associated with rapid deterioration after catch and a subsequent unpleasant taste. It has most often been reduced to 'fish-meal' for pig and poultry food, or used as bait. Krill harvesting was begun by the Soviet Union and Japan but Poland, West Germany, South Korea, Argentina, Brazil, Chile and Taiwan have also sent fishing vessels into the Southern Ocean. The Soviets dominate the krill industry (see McElroy 1984:242; 253-4).

29. Fish stocks which have been harvested have included cod, herring, tooth fish, southern blue whiting and Patagonian hake. As early as 1970 the Soviets took a catch reported to be about 432,000 tonnes of fish (McElroy 1984:240).

30. The minerals issue was also in the minds of the consultative parties. The marine living resources convention was in part a test of their ability to negotiate rules and procedures on a resource issue which had sovereignty implications.
resources convention was adopted at an international conference although in this case the negotiations were conducted in a special consultative meeting.

Both the internal accommodation among the consultative parties and the external accommodation with environmental and non-Treaty state interests were more contentious than in the seals negotiations. The negotiations disclosed serious political and economic divisions among the consultative parties even though, as Barnes argues (1982b:272), "the interests of the [Antarctic] club dominated" over those of other states. The claimant/non-claimant split was central to the negotiations, particularly with respect to the exercise of coastal state jurisdiction over maritime areas. The parties were also split between fishing and non-fishing states. Japan and the USSR, the two major fishing states, argued at every opportunity for the utilisation of resources to be given more emphasis and conservation values less (Barnes 1982b:282n). Non-fishing states, on the other hand, took a generally stronger conservation line. The demands for a degree of external accommodation stemmed from the interest of non-Treaty states in the exploitation of marine resources of the Southern Ocean and from environmental NGOs in conservation of those resources.

The negotiations
The consultative parties first considered this issue formally at ATCM-VIII in 1975. From the beginning debates about marine living 'resources' were couched in terms of competing uses. In recommendation VIII-10, the consultative parties recognised the need "to promote and achieve, within the framework of the Antarctic Treaty, the objectives of protection, scientific study and rational use of [Antarctic] marine living resources" (my emphasis). Scientific study was identified as a necessary basis for effective conservation measures and SCAR was urged to convene a meeting to discuss and report on current scientific programmes on the Southern Ocean marine ecosystem.

Interest in marine resources from outside the Treaty system was actively opposed by the consultative parties who were spurred to prevent any possible erosion of their authority over Antarctic decisions. Sri Lanka raised the question of Antarctic marine resources at the 1975 session of the UN Economic and Social Council (ECOSOC). A report

32. This was the wording which also defined their approach to seals in CCAS.
33. The SCAR meeting called as a result, in 1976, established the BIOMASS (Biological Investigation of Marine Antarctic Systems and Stocks) research programme in conjunction with the Scientific Committee on Oceanic Research (SCOR).
34. Sri Lanka's questions about available information on Antarctica's natural resources were made in the context of a debate on coastal development and the use of the seas.
subsequently prepared by the ECOSOC Secretariat on marine resources in Antarctica was not circulated following objections from the consultative parties. The UN Food and Agricultural Organisation (FAO) also expressed interest in the question of marine living resources in the Antarctic and Southern Ocean. In 1976 FAO proposed a joint $45 million project in conjunction with the UN Development Program (UNDP) to develop Antarctic living resources for the benefit of all countries. Delegates to the 1977 FAO Fisheries Committee argued that the resources of the Treaty Area should be shared by the whole international community (see Orrego Vicuña 1988:474). This specific interest in living resources arose in the context of calls for a new international economic order and the negotiations for the UN Convention on the Law of the Sea, both of which are discussed further in the chapters on minerals.

At the 9th consultative meeting in 1977, delegates agreed to convene a special consultative meeting to prepare a draft agreement on marine living resources and urged that a definitive regime be concluded at a "decisive meeting" before the end of 1978 (recommendation IX-2). This recommendation set out the principles upon which an agreement would be based: the prime responsibility of consultative parties for the protection and conservation of the environment in the Antarctic Treaty had to be recognised and the provisions of article IV of the Treaty, on territorial claims, were not to be affected. If necessary, the regime was to extend north of 60°S (without prejudice to coastal jurisdiction in that area) in order to ensure the effective conservation of species of the Antarctic ecosystem. Governments were urged to observe interim guidelines "pending entry into force of the definitive regime for Antarctic marine living resources". These interim rules required very little of the Parties: they were urged to cooperate in exchanging statistics on resource catches and to show the "greatest possible concern and care" in harvesting so as not to deplete stocks. A working group on marine living resources convened at ATCM-IX agreed that "conservation" would include rational use and that harvesting would not be prohibited and a statement to this effect was included in the Final Report of the meeting. Thus conservation was perceived not to be incompatible with exploitation.

Only the consultative parties were eligible to participate in the Second Special Consultative Meeting which was convened for the negotiation of an agreement on

35. The proposal was put to the FAO by the Group of 77. In 1976, after UNDP approved a much-reduced $202,500 budget for the FAO information program, following Treaty party objections, on the Southern Ocean, Argentina, Chile, Australia and the UK reminded the FAO not to overlook the consultative parties role and responsibility in the area (Barnes 1982b:278n).
36. In 1977 FAO produced three reports on southern ocean marine resources.
37. The intention conveyed in recommendation IX-2 was the SCM would draft the Convention but that it would be adopted at a separate conference.
38. The regime was also to exclude catch allocations and other economic regulation of harvesting (Final Report 1977:340).
marine living resources. Three formal and two informal negotiating sessions were held prior to the "decisive" conference at which the Convention was adopted. As was usual Treaty practice, the negotiations were conducted in secret.

At the first session in Canberra (in February/March 1978) eight draft conventions were tabled. A single negotiating text was produced by the Chair as a basis for further discussion. This meeting was followed by another in Buenos Aires in July at which negotiations almost broke down because of intransigence on a number of issues including sovereignty and jurisdiction, conservation standards and decision-making rules (see Barnes 1982b:251-55). A draft convention which was acceptable to most delegates, except the French, was produced at an informal meeting in Washington in September 1978. French objections were directly related to its sovereignty concerns. France advised that it was not prepared, at that stage, to attend an international conference (Barnes 1982b:255).

A second informal meeting in Berne, Switzerland in March 1979 also failed to conclude negotiations. Informal consultations at the tenth consultative meeting in 1979 produced a statement to be attached to the Final Act of the SCM which addressed French concerns on coastal state sovereignty.

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39. There were by now thirteen consultative parties, with Poland having become an ATCP in 1977. See appendix 5 for SCM-II sessions.

40. There are a number of useful analyses of the negotiation of CCAMLR, including Gardam (1985) and Frank (1983-4). The most comprehensive is probably that by Barnes (1982b) who was a non-governmental organisation representative on the US delegation.

41. The US argued unsuccessfully for open negotiations and publication of the negotiating texts but, as Barnes observes (1982b:281n) they expended little political effort on this. A decision was made at ATCM-XVI (1991) to make documents from these negotiations public.

42. Argentina, South Africa, Poland, Japan, Australia, Chile, France and the USSR. An American proposal was tabled later (Barnes 1982b:281n).

43. Their specific concern related to their right to establish conservation measures in the 200 mile EEZ around Kerguelen and Crozet islands, sub-Antarctic islands over which French sovereignty was not disputed but which fell into the area covered by the draft convention. The draft contained no recognition of jurisdictional rights of coastal states because of the territorial dispute on the Antarctic continent. See Bush (1982:405-6) for a list of islands in the CCAMLR area north of 60°South. Other countries with islands in the same geographic and juridical position were happy with the draft. Some delegates apparently wondered whether France was serious about having the convention finalised. Barnes (1982b:257) suggests that French intransigence may have been a delaying tactic while a bilateral fishing agreement with the USSR on access to Kerguelen fishing grounds was completed.

44. Australia proposed the Berne meeting. It is not clear why this meeting was held in Switzerland, which was not a signatory to the Antarctic Treaty. At ATCM-X (1979) governments were urged to seek an early conclusion to the negotiations and entry into force of a convention (recommendation X-2).

45. Several nations were as yet unwilling to agree formally to this statement.
Delegates met again in Canberra on 5-6 May 1980 to complete preparations for the international conference at which the convention (discussed below) would be adopted.\textsuperscript{46} The formal conference began on 7 May. Both West and East Germany,\textsuperscript{47} as well as several interested organisations\textsuperscript{48} were invited as observers. Their participation, however, was constrained by Soviet objections to their presence and they were not permitted to speak at any of the sessions.\textsuperscript{49} Barnes' account (1982b:259) suggests that the final conference was dominated by ten days of fruitless negotiations and that a compromise package that would attract a consensus was put together in late-night weekend session.

The convention was adopted on 20 May and opened for signature by the fifteen participating consultative parties in September 1980.\textsuperscript{50} The Convention entered into force on 7 April 1982 after the eighth instrument of ratification had been deposited.\textsuperscript{51}

\textit{The Convention}

Areas of disagreement during the formal negotiations included the area of application of the convention, the type of conservation and management principles that would be adopted, the exercise of coastal-state jurisdiction, the nature of decision-making rules and participation in the negotiations and the Convention. The final convention is a compromise on all counts. On these crucial issues, the hierarchy of values inherent in the Treaty system dominated. Political and economic interests overrode environmental ones and ultimately weakened the conservation potential of the agreement. The agreement is tied closely to the Antarctic Treaty and decision-making remains under the control of the consultative parties. Boczek (1983-4:375) describes the Convention as an agreement "with limitations which may have an adverse impact upon the functioning of

\textsuperscript{46} The Netherlands (a non-consultative party) and the Republic of Korea (not at that stage an Antarctic Treaty signatory but engaged in fishing in the Southern Ocean) had asked to attend this meeting (and the final conference) but were blocked by Poland and the USSR (Barnes 1982b:258). Taiwan (also not an Antarctic Treaty signatory) was also apparently excluded from the final conference on political grounds (Barnes 1982b:272) although he does not say what they were.

\textsuperscript{47} Both were Treaty parties but not yet consultative parties although West Germany had indicated its wish to be considered for consultative party status. They were invited because of their demonstrated interest in Southern Ocean fishing.

\textsuperscript{48} Representatives from SCAR, the FAO, the European Communities, the Intergovernmental Oceanographic Commission (IOC), International Union for Conservation of Nature and Natural Resources (IUCN), International Whaling Commission (IWC) and the Scientific Committee on Oceanic Research (SCOR - another ICSU committee) attended. The question of ASOC attendance was raised but according to Barnes (1982b:259) the UK, Chile and the USSR privately told Australia that they had reservations about this.

\textsuperscript{49} The USSR initially proposed that all working group and committee meetings be closed to observers. This would have included EEC representatives, a suggestion that the British would not countenance (Barnes 1982b:258-9).

\textsuperscript{50} The 11th ATCM welcomed, in recommendation XI-2, the conclusion of the Convention, and urged governments to seek the earliest possible entry into force of the Convention.

\textsuperscript{51} Bush (1982:422) notes that an early draft would have required ratification by all states.
the conservation regime". Frank (1983-4:313) calls it a "self-serving Convention in the
guise of an international conservation regime".

The objective of the Convention is the development of suitable machinery and measures
for the conservation of Antarctic marine living resources. Any harvesting activities
must be conducted in accordance with the Convention. It establishes a Commission, a
Scientific Committee and a secretariat. The Commission, which is to meet annually, is
charged with implementing the objectives and principles of the Convention,
facilitating research, compiling data, analysing and disseminating information,
identifying conservation needs and formulating and revising conservation measures. In
doing so, it must also take full account of any relevant measures or regulations
established or recommended by consultative meetings.

The Scientific Committee is established as a consultative body to the Commission. It
provides a forum for consultation and co-operation on the collection, study and
exchange of information on marine living resources, provides scientific advice,
develops standards for conservation measures and conducts other activities as the
Commission may direct. The secretariat, to be headed by an Executive Secretary, was
the first (indeed, to date, the only one) to be established within the Antarctic Treaty
system. It is to perform functions entrusted to it by the Commission.

The Convention applies to marine living resources south of the Antarctic
Convergence. The definition of the scope of the Convention was a contentious issue
during the negotiations. The UK, Norway, New Zealand and the US supported a
definition of the Antarctic Convergence based on biological and scientific grounds
which tied it to the southern ocean ecosystem. France, South Africa, Chile and
Argentina favoured geographic coordinates (Barnes 1982b:281n). As a compromise the
Convention implies in article I(4) that the Antarctic Convergence can be identified by

52. Meetings of the Commission can be also be convened if one-third of its members so request. In
any event, this has not happened.
53. However the list of Scientific Committee functions do not include conducting scientific
research. The conservation minded countries were unsuccessful in their attempt to have
harvesting tied to research programs designed and approved by SCAR or the Scientific
Committee (Barnes 1982b:263).
54. Although the Minerals Convention created a secretariat it has not been established given the
effective demise of that Convention (see chapter seven).
55. Marine living resources are defined in the Convention as "populations of fin fish, molluscs,
crustaceans and all other species of living organisms, including birds, found south of the
Antarctic convergence" (article I(2)). Article I(1) says that only those marine living resources
between 60° South and the Convergence which form part of the Antarctic ecosystem are covered.
This general definition is wide enough to include seals and whales even though seals were
already the subject of the Agreed Measures (when on land) and the CCAS (when on floating ice
on the high seas) and whales were subject to the International Whaling Convention of 1946.
56. The Antarctic Convergence is a zone of transition where the cold southern waters meet, and sink
beneath, warmer waters.
the northernmost limits of the Antarctic ecosystem but it also sets out a series of co-
ordinates to further define this limit.57

The debate about the area of application was susceptible to political interests. Ar-
gentina successfully requested a redrawing of the co-ordinates of the Convergence, in
the Drake Passage, further away from its territory.58 As noted above, France was also
concerned about its rights to a 200 mile EEZ around Kerguelen and Crozet Islands
(which lie outside the Antarctic Treaty Area but inside the Antarctic Convergence).
While not successful in having co-ordinates redrawn, it did manage to have a statement,
which effectively gave France control over conservation measures in the area around
Kerguelen and Crozet, included in the Final Act of the Conference.

The Convention adopts an innovative ‘ecosystem approach’ to the conservation of
marine living resources, rather than the single-species approach common to most
fisheries agreements.59 This management standard was linked to the adoption of the
Convergence as the defining boundary of the Antarctic marine ecosystem and the
Convention. Specific conservation principles in support of the ecosystem approach are
set out in article II. Any decrease in the size of harvested populations to levels below
those which ensure its stable recruitment is to be prevented. Ecological relationships
between harvested, dependent and related populations are to be maintained and changes
in the marine ecosystem which are not potentially reversible over two or three decades
are to be prevented.

This multi-species approach was spearheaded by the US. The fishing states preferred a
weaker management standard based on single-species total allowable catches (TAC)
and the USSR and Japan argued strongly against an ecosystem conservation standard.
They acquiesced because of the requirement for consensus in decision-making and the
inclusion of an objection provision.

The rule that Commission decisions on matters of substance are to be taken by
consensus (article XII(1))60 constitutes a potential flaw in the Convention giving, as it

57. The exact boundaries of the Convergence cannot be precisely defined by geographic
coordinates. The coordinates used in the Convention roughly approximate those used to define
FAO statistical reporting areas.

58. The Argentinian instrument of ratification included a statement to the effect that nothing in the
Convention affected or impaired its rights of sovereignty and maritime jurisdiction in the areas
covered by the Convention under its sovereign control (in Bush 1982:431).

59. Conservation is defined, in accordance with earlier decisions, to include 'rational use'.

60. The question of whether an issue is one of substance or not is also one of substance, and is
therefore to be decided by consensus. Non-substantive matters are decided by simple majority.
An early proposal would have established a weighted voting procedure to favour ATCPs over
any other Contracting Party to the Convention (Barnes 1982b:245). Proposals were also put
forward for a two-thirds majority and the first draft of the Convention incorporated this proposal.
does, a veto over conservation measures to any fishing state. The US, UK and Japan wanted a majority-based system, but Argentina, Chile, Poland and the Soviet Union opposed it. Any member of the Commission also has 90 days to advise that it is unable to accept any conservation measure, adopted nevertheless by consensus, and is therefore not bound by it. This ‘opt-out’ clause, which might seem something of a superfluous requirement given the consensus rule, entrenches a double veto. The conservation measures thus comes into effect except for any state which ‘opts out’. This limits the potential effectiveness of the conservation measures if the objecting states are the fishing states.

There were differences between the claimants and the non-claimants during the negotiations over the rights of the claimants, as coastal states, to exercise jurisdiction in economic zones and the distribution of any benefits of resource activity in those zones. Both related directly to the sovereignty issue. The issue was complicated because, within the area covered by the Convention, were islands over which sovereignty was not disputed and over which the relevant claimant could exercise coastal state jurisdiction. The claimants argued that this right should apply to all territory. The non-claimants refused to make any concessions on these issues.

A so-called ‘bifocal’ approach to the exercise of coastal state jurisdiction was therefore adopted, reflecting the contrived ambiguity of the Antarctic Treaty on the sovereignty issue. Article IV of the Convention can be interpreted differently by claimants and non-claimants. Article IV(2)(b) states that nothing in the Convention, nor acts or activities taking place while it is in force, shall:

be interpreted as a renunciation or diminution by any Contracting Party of, or as prejudicing, any right of claim or basis of claim to exercise coastal state jurisdiction under international law within the area to which this Convention applies.

The claimants can interpret this as referring to the undisputed islands north of 60°S and the disputed territorial claims south of that area, while the non-claimants can interpret it as referring only to the former. While, as Triggs argues (1985:203), this "contrived

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61. This was an instance on which the USSR and Japan, the two major fishing states, did not agree.
62. The USSR proposed that the Convention should state that the claimants did not have the right to exercise sovereignty in coastal areas. The claimant response was to suggest that special rights for claimants be incorporated, including economic benefits from catches by other states in their EEZs (Barnes 1982b:253-4).
63. This article essentially repeats the provisions of article IV of the Antarctic Treaty.
64. Argentina and Chile both made proposals on environmental grounds which had political significance for the claims. Argentina advocated a "reserved" zone around the continent in which fishing activity would be prohibited. This was opposed on the grounds that it could
result achieved by such a dual interpretation is of dubious legal value" it did enable agreement to be reached. The Convention, however, makes no specific reference to access to EEZs or to the distribution of economic benefits.

The primacy of the Antarctic Treaty is established in article V which requires Contracting Parties to CCAMLR which are not parties to the Antarctic Treaty to acknowledge the special obligations and responsibilities of the ATCPs for the protection and conservation of the Antarctic Treaty Area. Australia unsuccessfully proposed that this be deleted on the grounds that it could be interpreted as ascribing a degree of exclusivity to the Antarctic Treaty parties that was both unreasonable and of dubious legal effect (Bush 1982:407). Contracting Parties must also agree to observe the Agreed Measures and other measures adopted by consultative parties in fulfilment of this environmental responsibility.65 Thus the Convention requires acceding states to accept the "de facto control of the Antarctic Treaty parties over any decisions concerning the ... continent and surrounding waters" (Barnes 1982b:240). Furthermore, parties to the Convention are required to be bound by articles IV (on the claims) and VI (on high seas rights) of the Antarctic Treaty.

All states which participated in the final conference (that is, the consultative parties plus East and West Germany) were eligible to become original signatories to the Convention. Subsequent accession to the Convention was limited to states with an interest in research or harvesting activities related to Southern Ocean marine living resources. However a state must be actively engaged in such activities to become a Commission member. Thus the two-tier membership criteria of the Antarctic Treaty is replicated here. Britain, France and Belgium argued that the EEC should also be a full participant in the Convention but there was opposition to this from the Soviet Union and Poland (Barnes 1982b:256). The compromise solution was that the EEC could accede to the Convention (but could not be an original signatory) and would then be eligible for membership of the Commission. Its accession would, however, be subject to consensus agreement among the members of the Commission.66

The Convention sets out principles upon which a system of observation and inspection should be based, but includes no specific rules and procedures on this.67 The elaboration of such a system is the responsibility of the Commission. There is no

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65. Contracting Parties are thus obliged to protect marine fauna when on land where they are more susceptible to exploitation.

66. Indeed, there was some opposition to EEC accession and consultations were held before consensus could be reached.

67. The UK, US, Norway and New Zealand favoured an inspection and observation system being included in the Convention (Barnes 1982b:251).
provision for a centralised or independent inspection system. Inspectors are to report to their own governments who report in turn to the Commission. Any prosecutions or sanctions are the responsibility of the flag state of the offending vessel.

To meet the demands of the external accommodation the Commission and the Scientific Committee are required, "as appropriate", to develop cooperative relationships (including entering into agreements) with international organisations with overlapping interests and competence on southern ocean issues. Article XXIII specifically mentions FAO, SCOR and the IWC in this connection. This cooperation has most often involved according observer status to relevant organisations. There was some concern expressed at the first CCAMLR meeting that the rules on observer participation were unduly restrictive (CCAMLR 1982:3).

Leadership

No one state seems to have taken a firm leadership role in the negotiations for CCAMLR. Young suggests (1990b:14) that the US acted as a structural leader in articulating the Convention although he provides no analysis of the negotiations. He describes structural leadership as the deployment of bargaining power to influence the behaviour of other participants by bringing pressure to bear on them to accede to the term of the proposed agreement (Young 1990b:10). That bargaining power, he argues, arises from asymmetries among the participants which is likely to take one of two forms. Either an actor (the structural leader) has less to lose from no agreement than the others and thus its bargaining power lies in its willingness to bring pressure to bear by threatening not to accept proposals to the detriment of those who require a cooperative outcome, or an actor has more to gain than the others, which inspires it to use side payments and promises of rewards to engender support for its cooperative proposals (Young 1990b:11-12). However it is not clear that the US had either more or less to lose than the other participants in the CCAMLR negotiations, nor that it exercised bargaining power of the sort Young suggests. Indeed, it was unsuccessful, as noted earlier, in persuading other states to adopt its conservation proposals.

The main fishing states (the USSR and Japan) and the claimants (especially France) were able to exercise their issue-specific bargaining power within the Treaty system and the CCAMLR negotiations, to ensure that their interests were protected in the bargaining process. Their support was essential to a successful conclusion to the negotiations. However, this represents the negative exercise of structural power within

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68. Observers may be barred from session meetings if any Commission member so requests; members may object to observers speaking. No distinction is made between observers from states and those from international organisations. Observers may submit documents for distribution although no translation services are provided unless a member of the Commission requests it (see Kimball 1988d:44).
the process of institutional bargaining. Their bargaining positions were marked by a refusal to accept certain proposals rather than a positive leadership role in offering institutional options or brokering the interests of other actors to reach an agreement. Particular individuals may well have exercised entrepreneurial leadership in moving the negotiations forward although, unlike the minerals negotiations which followed, there was no continuity of chairpersons. Ambassador Rowland, of Australia, who chaired the first negotiating session compiled the initial draft which established the shape of the final convention. John Negroponte (of the US) was instrumental in finding a way around the impasse on the northern islands issue and the exercise of coastal state jurisdiction caused by the French.

The scientific community
A degree of intellectual leadership was exercised by the scientific community during the negotiations for CCAMLR in its advocacy of the ecosystem model. Barnes (1982b:250) suggests that the US Marine Mammal Commission (USMMC) first articulated this as an appropriate conservation standard for Southern Ocean fisheries. There was certainly support from the Antarctic scientific community generally (Powell 1990:61). Richard Laws, from the British Antarctic Survey, was especially effective in convincing non-scientific delegates of the soundness both of the Antarctic Convergence as an appropriate boundary and of the ecosystem approach as a conservation standard (Barnes 1982b:281n). 69

However, while the scientific debates played an important role in the early negotiating sessions they were soon overshadowed by political and economic concerns. Barnes notes (1982b:266) that there was only a small number of scientists on the delegations and that their lack of political power in the negotiations reflected a general lack of power in both national and international arenas. As a result, the role of the Scientific Committee within the Convention was limited. Barnes (1982b:266) suggests that "no delegation was willing to expend political capital to assure that the Scientific Committee had the power, staff, funding, and independence that arguably would be required to furnish advice grounded in fact and risk assessment, instead of economics and politics".

Government officials, in particular foreign ministry representatives, rather than scientists have been the main participants in the Commission. Heads of CCAMLR delegations are frequently individuals who also have a high profile in Antarctic Treaty

69. Barnes also refers to the role of Professor Moiseev in convincing his Soviet colleagues (and Japanese as well, Shapley suggests (1985:151)) to accept the ecosystem approach. While Barnes doesn't identify him as a scientist, Shapley does (1985:151) noting also that it was Moiseev who first raised the question of krill and its exploitation at a SCAR symposium in 1968.
consultative meetings and are socialised into the norms of the Treaty system. In most of the Convention states there is little domestic interest in the Antarctic fisheries resource issue because they have no long distance fleets interested in southern ocean fishing. Where those interests do exist, the political process within the Commission, particularly the emphasis on consensus for the adoption of conservation measures, enables national economic interests to override scientific or environmental interests.

CCAMLR is a Convention in which knowledge is an essential component of successful implementation and therefore there is, in theory at least, a potentially powerful role for scientists. However, the Scientific Committee has generally not been as effective as it might because of the dominance of the Commission in decision-making and because of the continuing paucity of scientific data upon which to base conservation decisions. The generation of that data is constrained by political factors (in that it requires fishing states to report their statistics accurately and in full which they are reluctant to do) and by financial constraints (the research programs required to compile adequate scientific evidence in support of ecosystem models are expensive).

Much of the Scientific Committee’s time in the early years after the Convention’s entry into force was spent in disputes over the role of the Committee and between those states who wanted maximum data to be reported and the fishing states, especially Japan and the USSR, who opposed this. Further, the scientists who participate in the Committee’s meetings do so ultimately as national representatives, not as independent scientific experts. This constrains the extent to which they can function as an effective epistemic community.

Puissochet suggests (1991:73) that relations between the scientists on the Scientific Committee and government officials in the Commission have not always been as smooth as they might be. However, it was not until the late 1980s that scientists on the Scientific Committee began to express openly their concern that their views and judgements on conservation measures were being ignored by the Commission. This may well have had some impact in terms of the more recently adopted conservation measures discussed below.

70. States such as Australia, the US and the UK wanted the Scientific Committee to fulfil its consultative functions and to provide scientific evidence upon which management decisions would then be based. The USSR perceived it much more as a political body, responding to national interests (see Orrego Vicuña 1991:30-31).

71. Gulland (1988:232) suggests this was because they felt that data reporting requirements had been used against them in the IWC to strengthen restrictions on whaling.

72. Puissochet is a senior French Antarctic diplomat.

73. For example, in 1989 the convenor of the Working Group on Fish Stock Assessment made an official statement that deplored the fact that the opinions of the Scientific Committee had been disputed or rejected by certain members of the Commission (Puissochet 1991:73-4).
Non-governmental organisations

The CCAMLR negotiation has been described as the issue on which NGOs "cut their teeth" (Bush 1990:143). Bush (1990:137) suggests that the substantial interest and pressure from environmental groups was a new factor in these negotiations (Bush 1990:137). However, the various accounts of the negotiating process make little reference to NGO activity or argument, with the exception of the International Union for the Conservation of Nature which is not an advocacy organisation. The US delegation included two NGO representatives but it seems to have been the only one to do so. Barnes suggests (1982b:280n) that the International Institute for Environment and Development was the main NGO trying to keep the public informed of the negotiations but this does not seem to have extended to a direct lobbying function.

Rules in the Convention do allow for participation by non-governmental organisations where those organisations can contribute to its work. The Convention parties have been slow to involve environmental NGOs in subsequent debates, although the US, Australia, New Zealand and the UK now include NGO representatives on their delegations. ASOC and Greenpeace International first applied to the Commission for observer status in 1983 but it was not until 1988 that ASOC (but not Greenpeace) was granted this status. This delay was because of doubts expressed by some parties about what kind of contribution ASOC could make to the work of the Commission.

NGOs have continued to monitor the performance of CCAMLR and have maintained a lobbying presence at Commission meetings. The Greenpeace Antarctic expedition has also monitored fishing vessel activity in the southern ocean (Greenpeace 1990b). NGOs have sought on this issue, as with others in the Treaty system, to increase the accountability and transparency of practice under the Convention. NGO policy has generally been not to oppose harvesting but to advocate that more stringent conservation measures be adopted and that implementation be improved. In seeking to influence the CCAMLR process in this respect, the NGOs must rely on their presentation of scientific argument: the conservation of fish and krill is an issue on which it is difficult to stimulate public or political attention.

74. Bush suggests (1990:137) that the convention contains a number of provisions which reflect the interests of those groups, but he does not elaborate.
75. The two were the Director of the Sierra Club International Office and the Director of the Center for Law and Social Policy (Kimball 1988d:36). Although Kimball does not name the Director of CLASP, it is likely to have been Barnes.
76. Non-governmental, in this case, includes bodies such as SCAR, SCOR, ICSU and the IUCN.
77. This application was not without precedent. Greenpeace and ASOC have observer status with the IWC, for example, which is responsible for whales in the Southern Ocean. Greenpeace was not granted observer status to CCAMLR on the grounds that it is a member organisation of ASOC.
Success as a conservation instrument

The Convention and its implementation have come in for considerable criticism with particular emphasis on its limitations as a conservation agreement. The Convention permits fishing activity unless it can be shown on the basis of sound scientific data that it should be controlled. As noted above, the provision and interpretation of sound scientific data has been problematic. Kimball (1990d:15) suggests that the fishing states should be required to prove that conservation goals will not be adversely affected by harvesting.

The decision-making process is inherently slow and subject to national interests and political bargains. The Convention's decision-making organ, the Commission, meets only once a year for approximately twelve days. Decision-making under the Commission constitutes a collection of national representatives who meet to try to merge their governments' individual policies into decisions that accord with the goals of the Convention (Powell 1990:68). They have not been successful in doing so because of the clash of exploitation and environmental interests in the context of the consensus rule. Under this rule, the fishing states have successfully opposed conservation measures which run counter to their short-term economic interests.

CCAMLR meetings have focussed predominantly on the management of fish stocks. In the first five years only seven conservation measures were adopted and Howard suggests (1989:131) that they contributed little to the protection of the marine ecosystem. These measures have not prevented the depletion of fin fish stocks. Indeed, measures have been not usually been adopted until stocks are already depleted, thus negating the precautionary approach which the consultative parties argue characterises the Convention.

The issue of conservation measures for the krill fishery was not addressed until 1989 and measures were not adopted until 1990. Those moves were opposed by Japan and the USSR on the grounds that adequate scientific data was lacking (Nicol 1990:6). As an Australian official recently observed "it is difficult to argue that CCAMLR is being successfully implemented when there is no agreed conservation approach to the largest fishery [krill] in the area" (Heyward 1990:5).

78. Powell is the Executive Secretary of CCAMLR.
79. These measures were of two types only - restrictions of mesh size and the closing of certain fisheries (see Howard 1989:131-135) for details.
80. Part of the difficulty with adopting conservation measures for krill is that not enough is known about either their biology or ecology to enable the design of workable management models (Powell 1990:66). Krill catches are presently thought low enough to not have an impact on related and dependent species.
81. They have also argued that they have no plans to extend their krill fleets.
The rules that have been adopted have differed little from measures adopted under ordinary fisheries agreements which are not based on an ecosystem model (Puissochet 1991:74). The practical problems of implementing an ecosystem approach have been compounded by inadequate and incomplete submission of data which has contributed to uncertainty in establishing conservation measures. This scarcity of information and the related difficulty of establishing what is the best scientific evidence available upon which to make decisions has resulted in less rather than more caution. The fishing nations in the Commission have often opposed restrictions on catch levels on the grounds of insufficient data existing to support such measures. It is the fishing nations, however, who are one of the major sources of data.

The Convention also gives no guidance on procedures for the division of species and total allowable catches between fishing states. The establishment of national catch limits is not specifically listed in the Convention as a conservation measure because of sovereignty and autonomy implications.

A limited inspection system was not implemented until the 1989/90 season. Inspections must be brief (one or two hours) and involve one or two inspectors only (Puissochet 1991:75). As Powell (1990:67) observes, a system that permits foreign nationals to board one's vessels has not been easily accepted by the fishing states. This concern has prevented observation rules, which would involve the presence of observers on board during a voyage, from being resolved.

Australia and New Zealand have been the leading states in expressing concern at the inadequacy of measures adopted and in seeking to push the Commission towards the ecosystem approach advocated in the Convention. However, the consensus requirement, and a lack of issue specific power (within CCAMLR at least) on the part of both countries, meant that neither was particularly successful in the early years of CCAMLR.

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82. At time of writing there were fourteen conservation measures in effect. Others which had been adopted have superseded or ceased to be effective. Seven more conservation measures are due to come into effect on 3 May 1992.
83. See Basson and Beddington (1991) on the problems of implementing article II of the Convention which sets out the principles of the ecosystem approach.
84. See Howard (1989:140-145) for details.
86. Australia may have a situational or 'psychological' advantage as the state in which the CCAMLR institutions are located and where the Commission and Scientific Committee meetings are held. Australian decision-makers and scientists are able, at least, to be in close informal contact with the secretariat.
There has recently been some movement within the Commission to adopt more wide-ranging conservation measures. Fifteen measures were adopted at the 1991 Commission meeting. They include steps to minimise incidental mortality of seabirds, requirements for notification of new fisheries and procedures to protect sites in which studies are being undertaken for the CCAMLR Ecosystem Monitoring Program (CEMP). The CEMP protection measure (Conservation Measure 18/IX) requires the adoption of a management plan which may include a *hortatory* code of conduct.87

Nevertheless, these new measures, while going further than previous ones, still fall far short of what is required to give effect to the ecosystem approach and to ensure that the marine fauna of the Southern Ocean is properly protected.

**Conclusion**

Both CCAS and CCAMLR extended the legal framework of the Treaty system. They widened the scope of cooperation among the consultative parties, strengthened their hold on Antarctic decision-making and ensured that conflict among them could be avoided. To this extent they met the test of success within the Treaty system. However both conventions are flawed as conservation instruments if judged from the perspective of environmental values. In both cases, the conservation rules and procedures were compromised by political and economic demands. Thus the hierarchy of values in the Antarctic Treaty system was reinforced. In both conventions, conservation values were important in principle but the rules and procedures adopted and, in the case of CCAMLR, the record of implementation, did not match this commitment.

Implementation of conservation measures under CCAMLR was subject to the same problems which bedevilled other environmental protection measures under the Treaty system. The decision-making process, which required consensus for all decisions, while politically important, was flawed in terms of ensuring that good environmental rules would be adopted. The reluctance, on political grounds, of some states to agree to centralised or independent monitoring, enforcement or inspection provisions, meant that the fishing states have been free to act as they will, with little oversight or recourse on the part of the conservation-minded states. Although CCAS has not been implemented to any degree except for the reporting requirements which, as noted earlier, have not always been met, it is likely that the same weaknesses would have met with a similarly limited success as a conservation instrument.

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87. Although conservation measures are the responsibility, under the Convention, of the Commission, any ATCP may request that a Commission resolution on CEMP site protection be discussed at a regular consultative meeting (CCAMLR 1991:6-12).
Nevertheless, as noted above, there have been some changes in the operation of CCAMLR. Those changes, which signal at least a degree of willingness by the fishing states to modify their interpretation of what can best meet, or at least not compromise, their national interests, may be attributed to an informal and doubtless uncoordinated 'coalition' of the conservation-minded states, the scientific community and the NGOs. Both the conservation-minded states within the Commission and the scientific community have taken a much firmer line on the need for scientific advice to be accepted and for effective conservation measures to be adopted. Those changes can also be located within the context of intensified debate on the way in which the consultative parties have, or have not, exercised their environmental stewardship of the Antarctic, a debate mobilised to a great extent by the NGOs. This debate was especially important during the minerals negotiations, which I turn to in the next chapter.
Chapter five


Introduction

The third of the resource conventions negotiated by the Antarctic Treaty Consultative Parties was the Convention on the Regulation of Antarctic Mineral Resource Activities. The minerals issue brought into the open tensions among the consultative parties which had been more easily managed in the living resource negotiations. It was the issue on which competing national interests were most in evidence, and the issue which throughout its negotiation and afterwards challenged the stability of the Treaty system. It was the pivotal issue in bringing Antarctic environmental protection to the forefront of public debate and the one which generated the most critical attention from states which were not members of the Antarctic Treaty.

The Antarctic Treaty contains no reference to mineral resources or their management. This omission was deliberate. Shapley says (1985:95) that nothing in the notes of the pre-conference negotiations indicates it was discussed there. If not, then it was certainly discussed at the 1959 Washington Conference. Sollie suggests (1977:8) that a proposal to include a provision on economic activities in the Treaty was tabled and rejected. Mineral resources involved questions of ownership and rights to exploitation which, in the face of differences over sovereignty, would have rendered agreement between the claimants and non-claimants almost impossible in the late 1950s. Given that minerals activity was unlikely in the near (or even not so near) future, this was an issue that the original signatories felt could be sidestepped in the negotiations in 1959.

Little interest was expressed in Antarctic mineral exploitation in the 1960s. However in the 1970s the minerals issue presented the Treaty parties with a major challenge to the accord between them. Commercial interest in Antarctic mineral resources increased with the 1973 oil price rise and the Arab boycott of oil exports to western industrialised states. Several Treaty Parties were approached by companies wanting to undertake prospecting in the Antarctic area and seeking information on the conditions under which they could secure exclusive rights to minerals in the Treaty area. The United Nations negotiations for the third Law of the Sea Convention (which began in 1973) and calls from less developed countries for a New International Economic Order in the 1970s

1. Sollie (1983:318), on the other hand, suggests that some mention was made of the minerals issue at those meetings.
2. Wyndham (1980:183), an officer with Australia’s Department of Foreign Affairs, suggests that one of Australia’s aims at the Washington Conference was to avoid any reference in the Treaty to the economic exploitation of Antarctica, although he does not indicate why this policy was pursued.
began to direct attention towards the global commons which, in this argument, included the Antarctic. This interest from a diversity of parties impelled the consultative parties to inscribe the question of minerals exploitation, somewhat cautiously, onto the consultative agenda.

In the 1980s this issue, more than any other, ensured that the benign neglect with which the rest of the world had generally treated the Antarctic gave way to increasing attention. Non-Treaty states actively challenged the rights of the Antarctic club to negotiate a regulatory regime for mineral resources in an area argued to be a global commons and therefore, as with the deep seabed, subject to the common heritage principle. NGOs focussed on the importance of environmental protection in the Antarctic and the extent to which this was, or ever could be, compatible with development of mineral resources. In both arguments, the interests of the international community (seen to lie either in freedom of access to resources or in environmental protection) were set against those of the Treaty parties.

While the consultative parties responded to external factors in first addressing the minerals question, the subsequent debate and negotiations on minerals exploitation in the 1970s and 1980s was shaped primarily by tensions internal to the Treaty system. Consideration of what to do about this issue opened a Pandora's box of contentious matters relating to the differing juridical positions of the consultative parties which they had previously sought to avoid. Other divisions, which cut across the fundamental claimant/non-claimant split, also arose within the ranks of the consultative parties.

This playing out of differences took place at both a normative and procedural level as an exercise in joint-problem solving and institutional bargaining. The minerals issue raised two questions crucial to cooperation under the Antarctic regime. First, how could the Parties cooperate to arrive, through the process of institutional bargaining, at a consensus agreement that maintained their interests (individual and collective) and, second, how could they structure activity-specific cooperation within that agreement. They had to consider not only what principles were appropriate in shaping cooperation on minerals activity (the normative level), but also what rules and procedures could best give effect to those principles (the procedural level) and, at the same time, satisfy the matrix of competing state interests while not undermining the Treaty system which served the collective interests of the consultative parties. There is no doubt that it was the hardest challenge they had faced, not excluding the formulation of the Treaty itself.

This chapter deals primarily with the first of those debates - that is, how the process of institutional bargaining proceeded with respect to the challenge described above. It briefly discusses mineral resources in the Antarctic and introduces the fundamental
collective interests of the Treaty parties with respect to the minerals issue. It then discusses how the consultative parties addressed the issue in the 1970s and describes the formal negotiations for the minerals convention in the 1980s in the Fourth Special Consultative Meeting.

The next chapter examines the resolution of those questions and competing interests. It focuses particularly on the settlement of the internal and external accommodation and the playing out of the hierarchy of values during those negotiations which saw politics and economics again take precedence, in the final analysis, over environmental concerns.

**Mineral resources in the Antarctic**

A great deal remains to be learned about the geology of the Antarctic (especially the ice-covered regions). Assessments of Antarctic mineral resources are consequently incomplete and highly speculative. The probability that mineral deposits exist in the Antarctic is quite high: the chances of finding them are considered to be small (Wright and Williams 1974:1). Even if minerals were to be found in large quantities, there are technological, economic and environmental obstacles to their successful exploitation.

Speculation on mineral potential in the Antarctic focuses on hard-rock (on-shore) minerals and hydrocarbons and relies substantially on analogy with those continents which, along with Antarctica, were once part of the supercontinent Gondwanaland. The existence of mineral bearing structures in those parts of Australia, South America and Africa which were contiguous with the Antarctic margins has suggested to geologists that similar structures are likely to exist in the Antarctic. Although traces of a large number of minerals have been reported in the Antarctic, no such analogous mineral bearing structures or large deposits have yet been found.

3. The geology of East and West Antarctica differ. East (or Greater) Antarctica is largely a precambrian shield laid down over 570 million years ago, with later precambrian and paleozoic sediments around its margins. West Antarctica, which includes the Antarctic Peninsula, is younger, dating to the Mesozoic (about 200 million years ago) and consists of a series of islands of igneous rock. See, for example, Thomson and Swithinbank (1985) and Spletstoesser (1985).

4. There has also been some discussion on the potential for ice as an Antarctic resource. Ice is basically a renewable resource and raises quite different technical questions than either on or off-shore non-renewable resources. Manganese nodules from the deep sea-bed are thought to be of interest because of their high content of copper, nickel and cobalt, rather than their manganese content (Anon 1977:20). However it is thought that the mineral content of nodules is latitude dependent, and that they are much richer closer to the equator. Southern ocean nodules are therefore unlikely to be mined.

5. Stewart (1963) listed 222 mineral species, sub-species and varieties, including some questionable occurrences, that had been reported in the previous 70 years. He noted that many of these had been found only in minute amounts with some having been described only after microscopic examination. See also Potter (1969:17-19).

6. Further, the Gondwana analogy is subject to some modification. While comparisons are made between the geology and plate tectonics of the Antarctic Peninsula and the South American
Iron ore has been located in the Prince Charles Mountains, and in the Dufek Intrusion in the Pensacola Mountains (see attached map). Coal occurrences are widespread in the exposed areas of the continent, particularly in the TransAntarctic Mountains where coal deposits are speculated to be extensive.\(^7\) The Dufek Intrusion, which compares geologically with the South African Bushveld (Zorn 1984:5-6), has also been identified as a possible site for chromium, platinum, nickel ore, cobalt and copper although only traces of these minerals have been found there. The difficulties of locating extensive deposits,\(^8\) if they do exist, arise because so much of the land mass is buried under ice.

Much more attention has been paid to the possibility of finding off-shore hydrocarbons. The most favourable locations for hydrocarbon deposits are considered to be the basins of the Weddell\(^9\) and Ross Seas, the continental margins of the Bellingshausen and Amundsen Seas, and the Prydz Bay area off the Australian Antarctic Territory. Indications of hydrocarbon potential have been found, most often during routine scientific geological research,\(^10\) but no confirmed hydrocarbons have yet been located in the Antarctic.

\(^7\) Nevertheless the coal that has been found is of low grade with a high ash content. It would require considerable processing to produce a burnable product in any quantity (Potter 1969:27).

\(^8\) A mineral occurrence is the presence of a mineral, often in very small quantities. A deposit is a more substantial quantity and a reserve is a deposit whose size and extent has been measured or calculated and that is known to be of commercial value now or is expected to become so in the future (Holdgate and Tinker 1979:14).

\(^9\) Although seismic reflection profiles collected from the continental margin of the Weddell Sea by the West German Federal Institute of Geosciences and Natural Resources contained volcanic layers rather than sedimentary rock, indicating that this area might be less prospective for hydrocarbons than previously thought.

\(^10\) In 1973, the US research ship Glomar Challenger found traces of ethane and methane in three of four holes drilled while carrying out scientific work in the Ross Sea. The Glomar Challenger was not searching for oil or gas. The Ross Sea holes were cemented to prevent gas leaks, and scientists aboard said that no conclusions could be made about possible deposits (Shapley 1985:124). These finds have been cited as evidence of hydrocarbon potential although as Elliot (1977:III-5) points out, methane is "not considered an indicator of ... hydrocarbon deposits" and neither is the presence of hydrocarbon reservoirs necessarily mandated by the presence of ethane. Sediments taken from the Bransfield Strait in 1985 were considered by West German researchers to provide evidence of oil deposits at lower depths. A 630 metre core drilled from McMurdo sound by a joint US-NZ glaciological research team contained asphaltic residue indicating that hydrocarbons had been present at some stage (possibly millions of years ago) but had later leaked out.
Map 2
Minerals in the Antarctic: locations mentioned in the text
Studies over the past twenty years have argued that no commercially exploitable deposits of minerals are known to exist in the Antarctic.¹¹ In spite of this the Antarctic is often presented as a storehouse of mineral riches with hypothetical predictions of the extent of mineral finds in the Antarctic abounding. Bertram's assertion (1958:4) that "a great deal of nonsense has been written on the subject" has not lost any of its validity. The most frequently-cited figures are US Geological Survey estimates from the 1970s that the continental margins of West Antarctica might contain discoverable¹² deposits in the order of 45 billion barrels of oil and 115 trillion cubic feet of natural gas, quantities which would have almost matched proven US reserves.¹³ Although no attempt was made to verify this estimate, which has been dismissed by subsequent scientific reports as "based on unacceptable processes of extrapolation" (Holdgate and Tinker 1979:16), it continues to be cited as authoritative, particularly in the media. Similarly impressive and equally hypothetical estimates have been made since.¹⁴

Throughout the period under discussion (from the late 1950s onwards) statements on the commercial potential of Antarctic minerals resources have (with one or two exceptions) been consistently pessimistic in contrast to the possibly unwarranted optimism for finding deposits.

¹¹ Stewart (1963) observed that "as far as may be ascertained, no commercial deposits have been discovered ... ". Potter (1969:29) in a study for Resources for the Future suggested that the "chances of [the Antarctic] having commercial minerals are probably less than one percent of those of the 'related' continents, South America, Australia and Africa". A report for the US Geological Survey concluded that "Antarctica ... has no known economically recoverable resources of any category" (Wright and Williams 1974:2). Crabbe stated (1985:365) that "despite much speculation, there are still no known petroleum or mineral resources in Antarctica". Laws (1990:9) has more recently argued that "there are no proven commercial resources, either of hard rock minerals or of hydrocarbons. Their actual occurrence is speculative".

¹² Only about one-third of discoverable reserves are considered to be recoverable.

¹³ (SCAR/EAMREA 1979:14) notes that there is some doubt that these were official USGS estimates. They were not included in the USGS circular on mineral resource potential (Wright and Williams 1974). The report of the group of experts convened at ATCM IX cautioned that these were speculative figures and "should not be cited unless supported by much firmer evidence" (in Handbook 1989:3345) and noted that it had been advised that these figures originated from an unpublished, highly provisional calculation in an internal USGS document (see also Mitchell 1977b:91). They were formally attributed to USGS by Spivak (1974). Nossiter (1977) argues that these papers were written at a time when the Ford Administration was eager to find new oil resources under the threat of a future Arab boycott. He suggests that the Carter administration later downplayed these figures because of a desire, shared by the oil companies, to convince the public that oil was a scarce resource and it was therefore reluctant to advertise any possible new finds.

¹⁴ In 1979 a Gulf Oil representative was reported as suggesting that the two most likely Antarctic sites in the Ross and Weddell Seas could yield up to 50 billion barrels of oil (Bell 1982:24). Japanese estimates in 1980 were in the order of 45 billion barrels of oil and 3.3 trillion cubic metres of gas. A 1980 report prepared for the West German Federal Institute of Geosciences and Natural Resources estimated recoverable oil reserves of 4 billion tonnes (30 billion barrels) and 4 trillion cubic metres of gas (Zom 1984:4).
Even if minerals deposits were to be found, there would be enormous physical barriers to their exploitation, both on and off-shore. The continental ice sheet would make land-based mining activity difficult. The climate and the dangerous and unpredictable weather conditions would compound the hazards. The months of almost total darkness during the Antarctic winter would limit the working season. Access to the continent by sea is impossible for a large part of each year because of pack ice. Mineral processing requires water which, surprisingly enough, is in short supply in the Antarctic.

Operational obstacles would also arise with respect to the extraction of offshore oil and gas, should deposits be found. The Antarctic continental shelf is much deeper than most other parts of the world\textsuperscript{15} although the extent to which this would be a major barrier to drilling is disputed.\textsuperscript{16} Icebergs, which are more numerous and often much larger\textsuperscript{17} in Antarctic waters than in the Arctic would present a danger to drilling rigs. Bottom-scouring bergs\textsuperscript{18} could severely damage well-heads and any submarine pipelines laid to carry oil.

Economic obstacles also arise. All equipment and personnel would have to be transported long distances. Transportation costs, the distance from markets and the high salaries that would have to be paid for work in such difficult environment means that deposits which might be commercially attractive elsewhere in the world would not be so in the Antarctic.\textsuperscript{19} Thus "the economics of Antarctic land minerals seem utterly impossible" (cited in \textit{Financial Times}, 26 August 1983).\textsuperscript{20}

With respect to hydrocarbons it is likely that only a supergiant field would ever be commercially attractive. Crabbe suggests (1985:366) that any discovery smaller than a field of at least 500 million barrels\textsuperscript{21} would not be economically viable. A Gulf Oil

\begin{footnotes}
\item[15.] An average depth of 500 metres compared with an average depth of 200 metres elsewhere. The continental slope is also steeper.
\item[16.] Experts at a 1985 conference held in the Antarctic observed that, in contrast to exploration techniques which made it \textit{nearly} possible to conduct exploration drilling in the Antarctic, production systems suitable for potential hydrocarbon exploitation in Antarctica were still in the development phase. Complete sub-sea production systems were argued to be required because the water depths were too great to permit floating operations (Polar Research Board 1986a:265).
\item[17.] The berg known as B9, for example, was 110 by 50 kilometres in size.
\item[18.] In 1978-79 a Norwegian expedition found iceberg scouring at depths of up to 400 metres in the Weddell Sea with "plough marks" 25 to 50 metres wide and 5 metres deep on the sea bed (Zorn 1984:6).
\item[19.] There are also known mineral deposits in parts of the world which are far more accessible.
\item[20.] This observation was made by a consulting geologist for Rio Tinto Zinc.
\item[21.] By way of contrast, the Alaska North Slope oil field is believed to contain around 8 billion barrels (Wilson 1983:78).
\end{footnotes}
official\textsuperscript{22} argued "that we would have to find an awful lot of oil to support commercial production"\textsuperscript{23} (cited in \textit{International Herald Tribune}, 31 December 1981).\textsuperscript{24}

The environmental risks of Antarctic minerals activity must be also be considered and should be a vital factor in assessing minerals exploitation.\textsuperscript{25} Land-based support facilities would compete with wildlife and scientific stations for space on the limited ice-free coastal areas. Increased human activity would cause further disturbance to wildlife, and compound the problems of local pollution and waste disposal which arise from scientific activity. The "construction and maintenance of ... a small town could bring environmental problems not yet experienced with previous human activities" (Thomson 1982:8).

The greatest area of concern is the potential for, and environmental impact of, oil contamination. A major oil spill could result from a tanker accident, accident to a drill rig or production pipeline, blowouts during drilling or leakage from or damage to storage tanks.\textsuperscript{26} Accidents are likely to occur not only because of the physical obstacles and navigational hazards described above but also because the potential for human error increases in the stressful and rigorous Antarctic environment.

Biological decomposition of oil is slow in the cold temperatures of the Antarctic.\textsuperscript{27} Antarctic wildlife, much of which lives on or near the sea, could be affected directly and indirectly by oil spills. Oil contamination could also affect phytoplankton and krill stocks and thus impact on the Antarctic food chain. Scientific research in the Antarctic, which relies on an unpolluted environment for the conduct of baselines studies and for monitoring global ecological change, would also be adversely affected.

\textsuperscript{22} John Garrett who served on the US State Department's Antarctic Advisory Committee.

\textsuperscript{23} Various in-depth studies carried out on the economic potential of minerals exploitation have made similar pessimistic predictions. See, for example, Potter (1969), Elliot (1977).

\textsuperscript{24} In the late 1950s Lawrence Gould, chief scientist and second-in-command on the first Byrd expedition in 1928 (Quigg 1983:29), suggested that "clearly there is no present and no probable immediate future for exploitation of mineral resources" (cited in Potter 1969:3). Gould restated this belief at the US Congressional Hearings on ratification of the Antarctic Treaty in 1960 when, in his capacity as Chair of the National Academy of Sciences Committee on Polar Research, he said "My profession is geology and I would not give a nickel for all the mineral resources I know in Antarctica".

\textsuperscript{25} See Zumberge (1982:134-144) for a concise summary of the environmental impacts of minerals exploration and exploitation in the Antarctic. Zumberge is, nevertheless, conservative in his assessment of the need to restrict minerals activity.

\textsuperscript{26} Joyner (1985:181) suggests that Treaty parties would also be bound by other international obligations on marine pollution.

\textsuperscript{27} If the spread of oil could not be contained before the winter pack ice advanced, nothing could be done during the months when the continent is inaccessible and its surrounding waters covered by ice. Indeed, the technology to clean up an Antarctic ice spill may not even exist. Polluted ice could reduce the reflectivity of the ice-sheet which might have impacts on local temperatures, thus affecting biological communities.
Interest in minerals

These operational, economic and environmental concerns did not forestall interest in mineral resources by the Treaty parties and by industry.28 Antarctic scientific programs have included geological research with a focus on expanding knowledge about mineral occurrences.29 The mining industry has also exhibited interest in scientific research of this nature as well as a more direct interest in undertaking exploratory ventures,30 an interest which the British suggested was "intrinsically speculative reflecting the need of prospecting companies to keep occupied rather than a world need for minerals" (ANT/17, 1972).31 However none of the investigation to date yet constitutes a systematic search for mineral deposits of the order that would provide adequate information upon which to commence extensive exploration.

Potential access to mineral resources was one reason for the increase in accessions to the Antarctic Treaty in the 1980s.32 China's accession to the Treaty in 1983 and its

28. One of the earliest interests expressed was from the whaling company Messrs Chr. Salveson which, in 1912, gained a lease from the British Colonial Office to explore for minerals in Grahamland (Antarctic Peninsula) (Thomson and Swithinbank 1985:32).
29. A 1970 US Presidential directive included the prediction and assessment of resources in a discussion of scientific research needs in the Antarctic (Quigg 1983:88). President Nixon set up a White House sponsored group to examine Antarctic oil potential (Observer News Service 1982). In 1975 the Soviets established a new Antarctic station (Druzhnaya) with a view to conducting extensive mineral geological research in the area west of the Transantarctic Mountains (Pallone 1978:547). A committee of Australian scientists recommended in the mid-1970s that the Australian government establish a planning committee to coordinate the search for minerals in Antarctica (Anon 1977:22). West German research has had a strong geological emphasis. Scientists aboard the research ships Meteor and Polarstern have reported locating evidence of hydrocarbon potential. In the summer of 1986/87 part of the Brazilian scientific program involved a 5000 kilometre seismic and drilling survey in the Bransfield Strait, carried out in conjunction with the Antarctic Special Unit of the Exploration Division of Petrobras, the Brazilian oil and gas company (Wallace 1988a:23). In 1984 the US research ship Samuel P Lee conducted hydrocarbon investigations under a US-NZ-Australian resource appraisal plan. The ship was co-sponsored by the Circum-Pacific Council for Energy and Mineral Resources whose chairman was a Texas oilman and energy advisor to US President Reagan.
30. Texaco approached the US government in 1970 for an exploration licence, but was turned down because the US government considered that it had no authority to issue licences. Several unsuccessful attempts were made by oil companies in the 1970s to form international consortium to conduct seismic surveys in Antarctic waters (Quigg 1983:195-6). Gulf Oil was reported to have a seismic survey ship in the South Georgia region in 1979-80 (Bell 1982:24). In 1980-82 the Japanese research ship Kajurei-Maru was despatched by the Japan National Oil Corporation as part of a Japanese scientific survey of possible oil deposits in the Bellingshausen Sea (International Herald Tribune, 25 November 1980). In 1981-82 the Institute Francois du Petrol examined parts of the East Antarctic coast (Shapley 1988:320). British Petroleum also established a department for Antarctic mineral resource assessment (Tucker 1983).
31. The 1973 Nansen Meeting noted that almost all the inquiries received by one Treaty government (unnamed) were from companies registered in a country which had not acceded to the Antarctic Treaty (also unnamed). This could possibly have been West Germany which did not accede to the Treaty until 1979, gaining consultative party status in March 1981.
32. There were nine accessions to the Antarctic Treaty in the 1960s and 1970s only one of which, Poland, became a consultative party in that time. In the 1980s there were seventeen accessions. Twelve states were granted consultative party status in the 1980s, three of which had acceded to the Treaty in the 1970s, the rest in the 1980s.
subsequent application for consultative party status was in part, the *Peoples' Daily* noted, because "according to preliminary exploration, the Antarctic is rich in petroleum, gas, rare metals" (cited in *Financial Times*, 12 May 1983). South Korea, which acceded to the Treaty in 1986 also observed (incorrectly) in an official report, that "the Antarctic, man's last remaining treasure trove of rich natural resources, abounds in minerals deposits" (House 1988:112).

**Outside the "club": Third World interest**

Interest from non-Treaty parties in the Antarctic and particularly in the minerals issue, began to take shape in the 1970s, albeit in a rather nebulous fashion, when calls for a new international economic order (NIEO) were most salient. This interest was further shaped during the negotiations for the third UN Convention on the Law of the Sea and continued, after UNCLOS, in a series of UN resolutions directed specifically at the Antarctic Treaty system.

While the demands for a new international economic order were directed particularly at the liberal financial and trading institutions of the Bretton Woods era those parts of the world argued to be global commons, and therefore not open to exclusive appropriation by any state or group of states, were also the subject of growing interest. In 1975, the Executive Director of UNEP sponsored a program, which was resisted by the consultative parties, which sought to extend the Antarctic Treaty with particular attention to both environmental and resource issues.

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33. The NIEO was supported and given shape by the Group of 77, which was formed at the first UN Conference on Trade and Development (UNCTAD) in 1964 and consolidated in the 1973 Non-Aligned Movement meeting in Algiers. The NIEO called specifically for a restructuring of the post-war economic order, and particularly the General Agreement on Tariffs and Trade (GATT), in order that less developed countries would not be disadvantaged and would benefit positively from the international order. The NIEO was given concrete expression in the Declaration of the Establishment of a New International Economic Order adopted at the Sixth Special Session of the UN General Assembly in May 1974 and the Charter of Economic Rights and Duties adopted later that year at UNGA's 29th session. See Pirages (1978:53-59) for a short summary of the NIEO principles and demands.

34. During a 1971 UN debate on the Indian Ocean as a Zone of Peace, Sri Lanka (then Ceylon) suggested that areas beyond national jurisdiction, including Antarctica, were part of the international domain and should be subject to international regulation and responsibility. In the same year an annex on the natural resources of Antarctica was included in an information document prepared for the ECOSOC Committee on Natural Resources (see Orrego Vicuña 1988:473).

35. This proposal included a suggestion that a group of experts be convened to elaborate criteria for the exploration and exploitation of Antarctic resources. The Director suggested that consultations be held with interested governments (including, but not exclusively, the Treaty Parties) and cabled the 8th consultative meeting to this effect. The Treaty Parties responded with recommendation VIII-13 which set out details of the special legal and political status of the Antarctic and their obligations and responsibilities on environmental protection in the region.
The Antarctic was not a specific concern during the UNCLOS negotiations, which began in 1973. However the negotiations within UNCLOS on a regime for the deep seabed had implications for the Antarctic in at least three ways. First, whether the International Seabed Authority would have, or could be argued to have, jurisdiction over the Southern Ocean seabed within the Antarctic Treaty area. Second, the G-77 sought to have the common heritage principle, by which resources beyond national jurisdiction were deemed the property of the whole international community to be managed accordingly (and particularly for the benefit of developing countries), given substance in the seabed regime. Developing countries argued that the resources of the Antarctic were, similarly, the common heritage of humankind. This argument was first raised by Malta's Ambassador to the UN, Arvid Pardo, in 1967. At the 1975 General Assembly session Sri Lanka's UN representative, who was also the President of UNCLOS, argued in support of the internationalisation of the Antarctic. Third, UNCLOS enshrined the right of coastal states to establish an exclusive economic zone beyond its territorial sea, up to 200 miles from its coast (see Oxman 1983:153) and this had implications for the territorial claims in the Antarctic and for the exercise of coastal state jurisdiction under an Antarctic minerals regime.

At the signing of UNCLOS in 1982 (the year the consultative parties began formal negotiations for a minerals convention) the Malaysian delegate argued that it was time to focus attention on "that other area of common interest ... Antarctica" (in Beck 1984:169-70). That is what the developing countries, led by Malaysia, did. The Seventh Summit Meeting of the Non-Aligned Movement in 1983 called for a comprehensive study of the Antarctic issue and a resolution to this effect was introduced into, and adopted by, the 39th UN General Assembly session that year. The 'Question of Antarctica' has been on the General Assembly agenda each year since then. During the minerals negotiations UN resolutions included demands that the

36. Orrego Vicuña (1988:475) suggests that attempts were made to include it on the agenda of the seabed component of UNCLOS but that it was resisted by the consultative parties. Barnes (1982b:244) cites the President of UNCLOS as privately saying that it was left out because of the additional strain its introduction would have caused.

37. In 1977, Libya and Algeria proposed that the Antarctic be placed under the International Authority which would be established by the Law of the Sea convention. In 1984, Pakistan and the Philippines made a similar suggestion during the General Assembly debate on the Antarctic. Some states wanted the General Assembly to establish an ad hoc committee on Antarctica, to investigate whether it should be formally declared the common heritage of humankind. The Secretary General's lengthy report on the Antarctic was distributed in 1985. India had attempted to have Antarctica inscribed on the General Assembly agenda in 1956 and 1958 to ensure that the continent would be utilised for peaceful purposes and the welfare of the whole world (Beck 1984:168) while also suggesting that the claims need not be relinquished. The 1956 attempt was thwarted by opposition from Argentina, Chile and the UK and by 1958 the pre-conference negotiations for the Antarctic Treaty were underway.

39. As well as being on the UN agenda, the question of Antarctic has also been discussed in a number of Third World fora including the Non-Aligned Movement, the Organisation of African
consultative parties defer their deliberations until the whole international community could participate in decisions about the exploitation of Antarctic resources. In response, the Treaty parties have adopted the formal position of not participating in UN votes or debates on Antarctic matters (as opposed to not attending, or abstaining).

The Treaty parties reject the assertion that the Antarctic (and its mineral resources) are subject to the common heritage principle. The claimants deny that the Antarctic is beyond national jurisdiction. The non-claimants suggest that it is an area which is susceptible to national appropriation (unlike the seabed or outer space) and is therefore not a global commons. Further, the Treaty parties collectively assert that the Antarctic is already subject to a legal regime which maintains peace and stability in the region and which functions, they suggest, better than any universal regime under the United Nations could. They also charged that the common heritage principle under UNCLOS, if applied to the Antarctic, would be inherently exploitative rather than protective of the Antarctic environment.

The inscription of the minerals issue on the consultative agenda, coupled with statements by some Treaty parties and industry sources on the extent of minerals in the Antarctic, created expectations of economic benefits and did nothing to dispel the perception held by non-Treaty parties that the consultative parties were seeking to appropriate the (alleged) wealth of the Antarctic for themselves. Statements to the contrary by the consultative parties had little impact. The Treaty habit of conducting discussions and negotiations behind closed doors, and making little effort to respond to outside criticism, contributed to the impression of exclusive appropriation. In this context it was difficult for scientific evidence and advice to be assessed properly and incorporated into political discussions.

Unity, the League of Arab States, the Organisation of the Islamic Conference, the Organisation of Eastern Caribbean States and the Caribbean Community and Common Market.

Annual resolutions also called for the Secretary-General to update his report on the Antarctic and for a Secretariat representative to be invited to consultative meetings. Resolutions also called for the consultative parties to expel the apartheid regime of South Africa from the Antarctic Treaty.

A number of Eastern Bloc Treaty states have voted in favour of the resolution against South African participation. Likewise, some non-Treaty parties have joined in the non-participation roll call, including Afghanistan, Albania, Colombia, Costa Rica, Ecuador, Greece, Guatemala, Israel, Laos, Nicaragua and Vietnam. The Latin American states may well have been influenced by Argentina, an active member of the Non-Aligned Movement. Colombia, Ecuador and Guatemala have since become signatories to the Antarctic Treaty. Until recently, Australia spoke on behalf of the informal New York group of Treaty parties. Initially it was intended that the 'spokespersonship' would rotate alphabetically through the consultative parties but some, further down the alphabet, were reluctant to take on this task because (in the case of Brazil, for example) they did not want to alienate Third World colleagues, or because of a lack of expertise or experience. Australia's Ambassador to the UN, Richard Woolcott, also accumulated a great deal of experience and ability in speaking for the Treaty Parties. The mantle, however, has now been passed on to Germany.
The consultative parties later admitted that they had contributed to these erroneous assumptions by not explaining adequately the reasons for their negotiations or in putting speculation on resource potential to rest. However it is doubtful whether better communication would have resulted in the challenges from either non-Treaty states or NGOs being withdrawn. Further, while it is the case that the reasons for inscribing the minerals issue on the consultative agenda were much more complex than simply to facilitate minerals exploitation, the consultative parties were concerned to protect the Treaty system from instability and to strengthen their authority, and collective right, to make decisions about all Antarctic issues.

The 1970s: principles and objectives

In the 1970s the consultative parties sought to establish the principles upon which a minerals regime would be based. Their debates were characterised by the usual degree of secrecy, by consultative party control of the process and by the general lack of involvement of other organisations. The scientific community provided information on the scientific, technical and environmental aspects of minerals activity and contributed to SCAR reports and consultative working groups, but made no collective judgement on whether or not such activity should occur. Industry groups were also involved in at least some delegations to consultative meetings although their interests were based on an ‘in principle’ interest in mineral resources rather than on any substantive and immediate economic interests. In the 1970s non-governmental organisations were only beginning to focus on the Antarctic as an environmental issue and had little impact on these early debates.

In defining the minerals ‘issue’ in the 1970s the consultative parties sought first to clarify the legal position under the Antarctic Treaty with respect to the exploitation of mineral resources and the regulation of that activity. They then moved to reach a consensus on whether minerals activity would be banned or permitted, in principle at least. It was only then that the more specific principles and objectives of a minerals regime were addressed in detail.

Approaches from commercial enterprises interested in the possible mineral potential of the Antarctic presented the consultative parties with a dilemma which took some time to resolve. Nothing in the Antarctic Treaty expressly prohibited or permitted minerals activity in the Antarctic. The general principles and objectives of the Antarctic Treaty were the only guide for consultative parties in their responses to inquiries from

42. See, for example, Beeby (1986:269).
commercial operators. Should those operators choose to explore, no rules or procedures were in place to regulate their activities.

If the consultative parties did nothing, there was some concern that exploration licences might be granted unilaterally by Treaty parties or that unregulated minerals activity was possible. They feared, in a worst case scenario, that conflict and a weakening of the Treaty system might result. The minerals issue was perceived as one which "in the future could undermine the foundations of [the] Antarctic brotherhood [sic] which has cost us so much and of which we are proud" (Final Report 1972:37). Unilateral action by a non-claimant in a claimed area, by a claimant in its own area, or by one of the claimants to the area of overlapping claims could, the Parties thought, lead to confrontation between them. Unregulated commercial activity, especially if it involved non-Treaty states not bound by the other provisions of the Treaty, might result in confrontation between competing operators. Unregulated activity was also more likely to result in severe impact on the Antarctic environment. In such a situation, especially if exploitable minerals were discovered, the consultative parties were concerned that it would be difficult for them to reassert their authority over Antarctic matters or to negotiate some kind of regulatory mechanism in the face of entrenched economic interests.

Nevertheless, moving to negotiate a regulatory instrument would require the consultative parties to consider contentious issues which they had deliberately kept off the consultative agenda. Regulating minerals activity is an exercise of territorial sovereignty. The differences between the Treaty parties on the questions of sovereignty and related issues of jurisdiction would therefore have to be addressed.

In the final analysis, the consultative parties' collective judgement was that the spectre of conflict raised by doing nothing was worse than that raised if they moved to meet this challenge. It was less likely that the Antarctic "would become the scene or object or international discord" (in the words of the Antarctic Treaty) and less likely that the Treaty system, which protected their individual and collective interests, would be undermined. The consultative parties addressed the question of minerals activity for fear that if they did not the Treaty system would be challenged and undermined. The

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43. This comment was made by Oscar Pinochet, in his opening statement on behalf of the Chilean delegation at ATCM-VII in 1972. France suggested that "the search for a solution to this problem must be subordinated to the solution of the problem of how to avoid rivalries the consequences of which would inevitably be borne by the powers in possession of Antarctic territory" (ANT/2, 1972). Argentina, urging caution in dealing with this issue, asked "should we ... let ourselves be carried away by the interests of economic concern ... to the detriment of the purpose of maintaining peace and avoiding conflict" (ANT/37, 1972).

44. This is based on the assumption that a claimant would not undertake minerals activity outside its claimed territory.
logic of this was summarised by the British (FCO 1988:5-6): the absence of a consensus on a permanent moratorium, they suggested, necessarily carried with it the need to negotiate a minerals regime. There was no guarantee that, even in the absence of rules and security of title to resources, risks would not be taken by operators. If such risks were taken, the Antarctic Treaty system would not survive. Consequently, the risks to the consultative parties attendant upon doing nothing were unacceptable. Therefore a minerals regime had to be negotiated. Such a regime would not, however, prejudice whether minerals activity in Antarctica would, or would not, take place.

The consultative parties were not unaware of the potential for adverse environmental impact as a result of mineral exploitation and the need to exercise their responsibility for the protection of the environment.45 However their concerns at this early stage were with the political and legal aspects of the issue. The potential for environmental damage did not translate into a philosophical debate about whether the Antarctic should be declared ‘off limits’ to mineral resource exploitation.

The internal differences raised by the minerals question reinforced the need for consensus which characterised the Treaty regime. Whatever was agreed upon had to have the support of all consultative parties in order that conflict could be avoided. There was consensus on the need to keep any negotiations which might be undertaken within the Antarctic Treaty forum. Caution and the need for consensus were keywords. The incrementalism that characterised Antarctic decision-making generally was particularly in evidence in the consultative discussions on the minerals question in the 1970s. It took just over a decade for the consultative parties to progress to a point where they agreed to convene a special consultative meeting to negotiate a minerals convention.

The minerals issue was on the agenda of every consultative meeting from 1972 to 1981. A recommendation on this issue was adopted at each of those meetings. The principles and objectives adopted through those recommendations reflected the normative concerns of the Antarctic regime which focussed on political stability, the need for consensus and maintenance of the compromise on sovereignty. A number of groups of experts were convened at consultative and preparatory meetings. Political and legal issues were always dealt with independently of scientific, technical and environmental issues.

45. This principle was explicitly adopted at ATCM-VI in 1970 under recommendation VI-4.
The following table sets out the tortuous eleven year process which led to the convening of formal negotiations for a minerals convention. The discussion which follows focuses on those parts of that process which were important in defining the principles and objectives and advancing the parties towards the final agreement.

<table>
<thead>
<tr>
<th>Year</th>
<th>Meeting/action</th>
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<tbody>
<tr>
<td>1970</td>
<td>ATCM-VI. Informal discussion</td>
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<tr>
<td>1972</td>
<td>ATCM-VII. Recommendation VII-6 adopted</td>
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<tr>
<td>1973</td>
<td>Nansen Foundation Meeting. Working Group on Legal and Political Questions; Working Group on Scientific and Technical Questions</td>
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<tr>
<td>1975</td>
<td>ATCM-VIII. Recommendation VIII-14 adopted.</td>
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<tr>
<td>1979</td>
<td>Preparatory Meetings for ATCM-X. Group of Ecological, Technological and Other Related Experts on Minerals Exploration and Exploitation (held in accordance with recommendation IX-1); preparatory meeting on legal and political aspects of mineral exploitation.</td>
</tr>
<tr>
<td>1980</td>
<td>Preparatory Meeting, Washington DC, December</td>
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<tr>
<td>1981</td>
<td>Report of the SCAR Group of Specialists on Antarctic Environmental Implications of Possible Mineral Exploration and Exploitation (AEIMEE)</td>
</tr>
<tr>
<td>1981</td>
<td>ATCM-XI. Claimant caucus meeting; no information on working groups; recommendation XI-1 adopted.</td>
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ATCM VII, 1972

The minerals issue was first raised, by New Zealand, at the preparatory meetings for ATCM-VI in 1970. An informal and off-the-record discussion was held at the sixth

46. ATCM-VII took place just after the UN Conference on the Human Environment in Stockholm which put environmental concerns firmly on the international agenda.

47. R B Thomson (of the New Zealand Department of Scientific and Industrial Research) was reported as saying that expected diamond and platinum finds would lead NZ to raise the subject of exploitation (Christian Science Monitor, 6-8 June 1970). New Zealand had also received an application to prospect and develop off the Ross Sea (Colson 1980:884). The issue was dropped at the third preparatory meeting which nevertheless confirmed a consensus understanding that without prejudice to the position of members concerned on territorial issues, no unilateral action should be taken with respect to the problem of mineral prospecting in Antarctica (Doc ANT/2, 1970). The US and UK delegations raised the question again as a possible agenda item, at the fifth preparatory meeting.
consultative meeting. There was, as Wyndham notes (1980:192) "not even a chairman ...!" for this.

A more substantive debate on minerals discussion at the seventh consultative meeting related particularly to the question of urgency which, as Beeby argues (1983b:192) always had more to do with political than economic factors. Chile characterised the minerals issue as a grave problem "which could put an end to the Antarctic Treaty, bringing to light once more the troubles over sovereignty, creating problems of jurisdiction and opening up rivalry and discord" (ANT/44, 1972) and cautioned against any unseemly pressure to authorise commercial exploration.

Others cautioned against delay. The UK delegation, for example, noted that "the subject raises problems certain to multiply ... which cannot be evaded indefinitely without becoming increasingly difficult to solve" (ANT/17, 1972).49

Delegates discussed the possibility of a moratorium on minerals activity to prevent any activity which would "prejudice continuing deliberations" (ANT/48, 1972).50 As Oxman observes (1978:295-6) the "demands by territorial claimants for a moratorium pending consent by each of them to an exploitation regime may be more closely related to sovereignty considerations than to environmental concerns". Various time frames were favoured.51

In spite of lengthy discussion the consultative parties could go no further than to recite a number of general principles which applied to their deliberations on this issue and recommend that it be considered again at the following ATCM. Those principles related to the use of the Antarctic for peaceful purposes, the special responsibility of the consultative parties to protect the Antarctic environment and ensure that no-one engaged in activities contrary to the Treaty and an oblique reference to the "special

48. This issue was addressed under 'Any Other Business'. No mention of this discussion was made in the final report of the meeting.
49. One participant (Edvard Hambro, who had headed Norway’s delegation to the 1972 Meeting and would be chairman of the 1975 ATCM) expressed his irritation with the "great hesitation and reluctance in this field. This unwillingness to face the problem" he said "cannot go on much longer" (Hambro 1974:222).
50. The British cautioned against unilateral action by any Treaty party which could "damage the working of the Treaty" (ANT/17, 1972). They also believed that the problem could be approached without going into the jurisdictional question.
51. See Wallace (1988a:6). Chile favoured an indefinite moratorium, France (ANT/2, 1972) suggested at least 10 to 15 years, a position also supported by Argentina and the USSR. The United States was opposed to any prohibition on minerals activity. The draft recommendation tabled by the UK suggested that there be a moratorium until such time as any agreed measures might become effective and it was thought that world interests would not be harmed by such a moratorium.
situation" of the Antarctic (regarding the territorial issue).\textsuperscript{52} Orrego Vicuña (1988:48) called it a "timid attempt to spell out the legal foundations of the competence which was beginning to be exercised on the matter".

\textit{Nansen Meeting, 1973}

An informal conference on Antarctic resources was convened at the Nansen Foundation in Oslo in 1973 to facilitate an "unofficial discussion ... of problems arising in connection with the growing interest in exploration of Antarctic mineral resources and potential exploitation of such resources" (Nansen 1973:1).\textsuperscript{53} Two working groups were convened at the Nansen meeting, one to consider legal and political questions, and the other to focus on scientific and technical aspects. Experts from all twelve consultative parties attended in their personal capacities.\textsuperscript{54}

Minerals activity was accepted as a peaceful purpose under article I of the Antarctic Treaty and therefore a legitimate issue for the Treaty agenda. A collective approach by the consultative parties was favoured over unilateral action.\textsuperscript{55} There were, however, differing opinions on whether minerals activity was implicitly permitted or prohibited under the Antarctic Treaty.\textsuperscript{56} Differences on the degree of urgency with which decisions had to be made were not resolved.

The Scientific and Technical Working Group concluded that unless the Treaty Parties decided to prohibit minerals exploration and exploitation altogether, there was some urgency in negotiating regulatory mechanisms. The group suggested that the "present relatively undisturbed state of the Antarctic environment rendered its continued protection a matter of greater rather than lesser importance" (Nansen 1973:9). The severe environmental hazards of extracting Antarctic oil and gas were argued to be so great as to be out of proportion to the small gain in energy in world terms. Some participants expressed the "philosophically attractive" view that if the prospect of a world energy crisis was as bleak as some portrayed it then the world's scientific

\begin{itemize}
\item \textsuperscript{52} This recommendation also referred to technological developments and the need for further study and deliberation.
\item \textsuperscript{53} The invitation from the Nansen Foundation to convene this meeting had been confirmed by the Norwegian delegation at ATCM-VII.
\item \textsuperscript{54} The meeting lasted from 30 May to 9 June 1973.
\item \textsuperscript{55} The Nansen meeting rejected the idea of either a condominium or the common heritage approach (see Shapley 1985:158-160).
\item \textsuperscript{56} Some participants in the Legal and Political Working Group argued that, as minerals exploitation was not expressly \textit{permitted}, it could not proceed. Others suggested that as it was not expressly \textit{prohibited}, it could proceed but that it might well be contrary to the purposes and objectives of the Treaty unless all consultative parties consented to any activity. Others suggested that such activity could be undertaken, without multilateral consent, as long as it was consistent with the objectives of the Treaty.
\end{itemize}
capacity would be better applied to the development of alternative energy sources rather than a search for Antarctic oil (Nansen 1973:13-14).

While the Nansen Meeting was not a formal part of the consultative process, the report, which summarised the views expressed but made no recommendations, was circulated to consultative party governments in advance of the 8th consultative meeting, which was also scheduled for Oslo in 1975.57

**ATCM-VIII, 1975**

The question of mineral resources was a dominant agenda item at ATCM-VIII with the potential for political instability again being emphasised.58

The consultative parties accepted that a formal instrument was essential and determined that it was within their competence to make decisions on minerals activity. They had not yet decided whether to permit or prohibit minerals activities. New Zealand pressed for a permanent moratorium on minerals activity (and for the Antarctic to be declared a World Park) on environmental grounds.59 There was some support for this suggestion, or at least for the moratorium component of it, but the US in particular was strongly opposed.60 Indeed, the United States applied some pressure to its Treaty partners to make progress by suggesting that without an agreement "those countries who do not recognise claims to sovereignty would surely have to assert the right to commence mineral resource activities at their will, subject only to the applicable provisions of the Antarctic Treaty" (Mitchell 1977b:96).61 Nevertheless, this was not so much the action of a hegemon, as of one state with issue-specific power (among many) operating in a unanimity system to protect its interests.

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57. At least ten of the 29 Nansen participants were on delegations to that consultative meeting.
58. Belgium reminded delegates that this subject "by its nature, could either destroy the spirit of the Treaty or develop and strengthen it by extending cooperation to new fields" (Final Report 1975:52). The British raised the spectre of an unregulated scramble bringing "large numbers of men [sic] swarming into the continent" (Final Report, 1975:61). The Argentinian delegation exhorted the meeting to "take up resolutely and calmly the challenge implicit in these controversial issues" (Final Report 1975:50).
59. New Zealand, at this time, had a Labour government which had taken a strong internationalist and independent foreign policy line. ASOC suggests (1989g:6) that the New Zealand proposal also suggested UN involvement in the administration of the Antarctic, and that claimants give up their claims. There was some informal support for the New Zealand suggestion for a permanent moratorium from Argentina and Chile (Wallace 1988a:6). This may have been motivated as much by concerns about sovereignty as about environmental protection and would certainly have not included support for UN involvement or a relinquishing of claims.
60. A senior US Department of State official explained later that this was because the US felt that a moratorium was not so much a delay to permit rational consideration as a decision not to examine the issue at all (Quigg 1983:194).
61. The US did support a multilateral solution in spite of attempts within the US administration, from the Federal Energy Administration and the Department of the Interior to push for US policy to support unilateral resource exploitation (see Pallone 1978:555).
In the absence of a consensus, no moratorium was adopted. However the Parties urged states and persons to refrain from actions of commercial exploration and exploitation while, acting as Consultative Parties, they seek timely agreed solutions to the problems raised by the possible presence of valuable mineral resources in the Antarctic Treaty Area (Final Report 1975:9-10).62

Recommendation VIII-14 adopted at this meeting was marked by a degree of caution and uncertainty. The consultative parties were simply urged to "seek to develop an approach" to the problems raised by the possible presence of minerals in the Antarctic. The body of the recommendation focussed on the need for further study of the technical and environmental aspects of minerals activity in the face of inadequate data.63 The Scientific Committee on Antarctic Research was invited to make an assessment of possible environmental impacts if minerals activity "were to occur" (my emphasis).64 The item was referred to the agenda for ATCM-IX.

Paris special preparatory meeting, 1976

In accordance with recommendation VIII-14 a special preparatory meeting was held in Paris in July 1976.65 The consultative parties were by now beginning to address the difficult questions of the form and content of an agreement. The Paris meeting set about clearly defining for the first time the substantive issues that would need to be addressed in a minerals regime.

No state was openly talking about engaging in exploitation. Nevertheless, as the problems were raised in earnest, delegations began to adopt negotiating positions based primarily on perceptions of their political and economic interests. Mitchell (1977b:96-

62. This was included in the Final Report of ATCM-VIII. It is not clear whether the reference to "states and persons" applies to consultative states or whether it is designed primarily to discourage non-Treaty states. This sentiment was not included in the lengthy recommendation (VIII-14) adopted at this consultative meeting. Recommendation VIII-14 refers to the "need for restraint" but it does not specify by whom or exactly what this means. Recommendation VIII-14 also refers to "possible action by others" indicating that it is most likely intended to discourage states other than consultative parties.

63. Representatives also drew attention to their awareness of developments in polar mineral technology but also that more information was needed on the environmental effects of minerals activities, and on the geological structures of the Antarctic.

64. The degree of importance that the consultative parties attached to this exercise may be measured by the suggestion in this recommendation that "if possible and appropriate, Governments may wish to assist their National Antarctic Committees in this undertaking by appropriate means" (para 3(i)). SCAR functioned on a limited financial base while being required to deal with more complex and extensive requests from the consultative parties. SCAR is also asked to continue to coordinate geological and geophysical research to provide fundamental scientific data.

65. No public report was made at its conclusion and no communique or statement was issued. Two working groups were established, one to consider scientific and technical aspects and a second on legal and political aspects.
7) suggests that the Paris meeting was a difficult one and that it proved impossible at that stage to convene another formal meeting specifically on the minerals issue.

The claimant states were adamant that they should benefit from any resource exploitation to the maximum extent (Talboys 1978:10) and that they should have some control over access to resources in their territory. The US, on the other hand, took the position that they "would be unwilling to take any steps which directly reduced the freedom of American companies to go where they wanted in the Antarctic and do whatever appeared to be commercially attractive" (cited in Mitchell 1980:17). Mitchell (1977b:99) suggests that the claimants displayed some willingness to compromise but that the United States would not.

The question of whether minerals activity would be permitted was still not settled. The Soviet Union in particular continued to advocate a long-term moratorium. A number of countries, including Australia, the Soviet Union, Argentina and Chile (see Mitchell 1977b:97), also raised concerns about the environmental impact of minerals activity.

In the light of these divisions, agreement was reached at Paris only upon the most general of principles upon which a regime might be based although it was those principles which were to guide all subsequent discussions. These principles addressed general aspects of the internal and external accommodation. The consultative parties would continue to play an active and responsible role in decision-making; the Antarctic Treaty would be maintained in its entirety; protection of the environment should be a basic consideration and any regime should not prejudice the interests of all mankind (Report of the Working Group on Legal and Political Aspects 1976). No direct mention was made of the sovereignty issue in these principles.

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66. At the Paris preparatory meeting, New Zealand also proposed a possible solution to the "ownership" problem. Minerals activity would be prohibited in certain areas for environmental reasons. Applicants wishing to explore in other areas would submit a proposal to a Regulatory Committee consisting of the twelve consultative parties. This proposal would contain details of proposed activities and an environmental impact statement, and should demonstrate that such activity would not substantially or materially damage the Antarctic environment. It would require the unanimous approval of all consultative parties, although operators might come to an informal arrangement (on payment of royalties for example) with the relevant claimant (or claimants) to forestall a veto. See Mitchell 1977b:101). New Zealand also suggested in a discussion paper that the consultative parties should recognise the need for the proceeds of resource exploitation should be shared on a just and equitable basis with the international community (Bell 1982:26).

67. The US tabled a paper which provided an informal assessment of mineral resources in the Antarctic which helped to focus the discussion of the technical group (Colson 1980:891).

68. The USSR did not have the technology to engage in minerals exploitation and a moratorium would have been one way of preventing the US gaining a exploitation foothold.

69. Australia (RPS-11, 1976) suggested that the present Agreed Measures were not sufficient to protect the environment from the effects of resource exploitation. The USSR also expressed concern about the environmental effects of an oil spill on krill fisheries.
SCAR's report\footnote{70}{SCAR's report\footnote{70}{SCAR's report/EAMREA

The Paris meeting considered SCAR's initial response to recommendation VIII-14\footnote{70}{SCAR's report/EAMREA

and asked SCAR to undertake a more detailed assessment of the environmental impact of mineral resource activity.\footnote{71}{SCAR's report took the inevitability of environmental impact as its starting point and explored "in a preliminary way the possible effects on the ecosystem of ... one or more of the extractive industries in Antarctica" (SCAR/EAMREA 1979:2-3). This report provided the consultative parties with an assessment of localised and widespread environmental impacts of both on and off-shore exploitation, and in terms of short and long term effects. Local impacts, it suggested, might be severe and irreversible. However, because each of the areas involved would be small in relation to the total area of coastline and exposed areas it suggested that the overall effects might not be significant in terms of the Antarctic as a whole. Large-scale effects were thought likely to be more serious than the sum total of local effects. SCAR's report makes no judgements, however, about the desirability or otherwise of minerals activity.

ATCM-IX, 1977\footnote{72}{Discussion at this meeting signalled the intention of the consultative parties to begin a more concerted process towards an agreement. In a lengthy recommendation (IX-1) the consultative parties endorsed the Paris principles as the basis for a minerals regime. They added a requirement that the provisions and principles of article IV of the Antarctic Treaty (on sovereignty) should not be affected. This recommendation recalled again the general principles of the Antarctic Treaty which were applicable to the minerals issue.\footnote{73}{70. The SCAR secretariat prepared a short paper entitled "Antarctic Resources - effects of mineral exploitation". Appended to this was a statement by the SCAR Working Group on Geology entitled "Mineral occurrences and mineral exploration in Antarctica".  

71. SCAR established a Working Group of Specialists on the Environmental Impact Assessment of Mineral Resource Exploration and Exploitation in Antarctica (EAMREA) and its report was distributed to consultative governments in 1977. This was not a formal environmental impact assessment. It was, rather, a general analysis of how the environment might be affected generally if minerals activity were to proceed.  

72. Reports from the Paris special preparatory meeting and EAMREA were available to delegations at ATCM-IX in 1977. This meeting established a working party on the legal and political aspects of Antarctic minerals resources. This working party established its own drafting committee which met twice before submitting a draft recommendation. With the exception of three proposed paragraphs (content unknown, although the content of at least one paragraph was apparently also being addressed by the working party on marine living resources) on which agreement had not been reached). Two delegations objected to the paragraphs (see ANT/IX/85, 1977).  

73. These included the consultative parties' special responsibilities to ensure that international discord did not result from any activities (including mineral activities) in the Antarctic or result in danger to the Antarctic environment, disruption to scientific investigation or be otherwise contrary to the principles or purposes of the Antarctic Treaty.}
These general principles established the rationale and justification for the operative paragraphs of the recommendation. The consultative parties are also to urge their nationals and other States to refrain from all exploration and exploitation of Antarctic mineral resources while making progress towards the timely adoption of an agreed regime... They will thus endeavour to ensure that pending the timely adoption of agreed solutions pertaining to exploration and exploitation of mineral resources no activity shall be conducted to explore or exploit such resources.

This paragraph is generally taken to enact the principle of voluntary restraint which established a conditional moratorium. Triggs argues (1984a:535) that this article is "vague and unclear [with] no mandatory injunction". It is not clear what the Parties could do to prevent non-Treaty states from undertaking minerals activity. Further, even with respect to their own nationals, the consultative parties are merely urged rather than required to enforce compliance (Bush 1982:347). However the consultative parties considered it to be an effective constraint upon their own activity.

A Group of Experts convened at this meeting to address technical and environmental aspects of mineral resource exploitation concluded that "discussion of the technical aspects ... showed that the question of the impact of these activities on the environment has been studied inadequately and that there is an urgent need for a further examination of this problem" (cited in Handbook 1989:3344). They suggested that more knowledge was needed about the Antarctic environment and geology so that adequate protection measures could be established in the event of minerals activity going ahead.

74. The recommendation referred to the SCAR/EAMREA report, the report of the Group of Experts presented at that 9th consultative meeting, and the Paris special preparatory meeting.

75. Bush (1982:347) suggests that it applies to both commercial and non-commercial enterprises.

76. This group had before it a lengthy study on a framework for assessing the environmental impact of possible Antarctic minerals development (Elliot 1977) conducted by the Institute of Polar Studies at Ohio State University for the US State Department. Elliot argued that all resource exploitation would have an impact on the environment but that the scale of the impact would depend on the nature of the resource being extracted, the degree of processing undertaken and the location of the activity. This report observed again that "there are no known exploitable mineral deposits" (Elliot 1977:III-1). As with other reports it identified gaps in the data. He concluded that mineral resource activity could result in severe local impacts on both the continental and marine environments, with possibly irreversible changes to the continental environment (Elliot 1977:xiv-xv). "There is no question that any resource exploitation will cause severe, and in many cases permanent, local impact on the environment because of the extremely slow rate of recovery that can be expected" (Elliot 1977:VII-I). It suggested that "even the most regulated activity will still be attended by some risks" (Elliot 1977:xx).

77. They suggested that there "would need to be a system providing immediate warning of an accident leading to significant pollution and monitoring of the dispersion and effects of the pollutants released, and of the effectiveness of any measures for containment or recovery. This would be particularly difficult under Antarctic conditions" (Handbook 1987:3346).
This report was stronger in its warning of environmental damage and the unacceptability of such risks than SCAR's EAMREA report.78

The consultative parties recognised the inadequacy of scientific data on harmful environmental impacts and noted that *unregulated* minerals activities could adversely effect the environment. Recommendation IX-1 called for, *inter alia*, further study on the environmental implications of mineral resource activities (and suggested convening *yet another* group of experts on this topic).

However, in spite of recognising this lack of knowledge (which had been noted by all the scientific and technical reports so far) and the difficulties this could bring to the task of monitoring environmental impact of minerals activity, the consultative parties continued to press ahead in their negotiations.

Two more meetings of experts were convened prior to ATCM-X. In March 1979 the Rockefeller Foundation sponsored a workshop at the Bellagio Centre in Italy on oil and other minerals in the Antarctic with special attention to the environmental implications of possible mineral exploration and exploitation.79 In conjunction with the preparatory meeting for ATCM-X and in accordance with recommendation IX-1 a Group of Ecological, Technological and Other Related Experts on Minerals Exploration and Exploitation in Antarctica, met in Washington in June 1979.80

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78. There are references throughout the report to the lack of knowledge on many aspects likely to be important in the event of minerals activity. For example, there was insufficient knowledge to permit a reliable estimation of the impact of oil spills on the ecosystem. The report also drew attention to the need for a sufficient environmental data base. Several members of the SCAR group of experts (EAMREA) contributed to this Working Group.

79. The report of this meeting, known as the Bellagio Report, was published by SCAR (Holdgate and Tinker 1979). It noted that the unique scientific nature of Antarctica, as well as its unique political nature, represented "major assets which might be affected by mineral development" (Holdgate and Tinker 1979:5). This meeting brought together experts from the SCAR/EAMREA group and the Group of Experts from ATCM-IX (1977) as well as other participants.

80. This working group was charged with developing scientific programs aimed at improving predictions of the impact of exploration and exploitation techniques, and developing measures for preventing damage to the environment and for its rehabilitation. The report of that Group of Experts suggested that "sharply focussed programs primarily devoted to the marine environment" were called for and listed several areas of research on which to focus (see Final Report 1970:103). It was appended to the final report of ATCM X. A preparatory meeting on the legal and political aspects of minerals issues was also held.
Most of the opening statements at ATCM-X referred to the challenges presented by the question of mineral resource activity. Themes that had been articulated at earlier meetings were raised again: the need to protect the Antarctic environment and avoid environmentally unacceptable activities, to deal with the question of jurisdiction and differences between consultative parties on territorial sovereignty, and the need to establish regulatory mechanisms.

Several of the claimants continued to argue that any regime should guarantee protection of their interests and an appropriate economic return. Argentina, stressing the "political realities" of the Antarctic, advised delegates that it could not "give its sovereign consent to any agreement which [did] not take [these realities] into consideration" (Final Report 1979:70). The NZ delegation again suggested that a regime should ensure that some benefits were offered to the international community at large (Final Report 1979:78).

Recommendation X-1 moved the Parties further towards the formal negotiation of a minerals convention. It elaborated the principles (agreed to at earlier meetings) upon which it should be based and the types of rules and procedures that should be included. The Parties agreed that a minerals agreement should include means for assessing the possible impact of mineral resource activities, determining whether such activities would be acceptable, and elaborating procedures to govern the ecological, technological, political, legal and economic aspects of mineral activities. Rules relating to the protection of the environment and rules for ensuring compliance were also to be devised. The issue was put onto the agenda of ATCM-XI with the suggestion that a special meeting "to consider a regime" be held prior to this.

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81. ATCM X also adopted a recommendation on hydrocarbon contamination of the Antarctic marine environment (recommendation X-7). Chile observed, in a paper tabled for that topic (ANT/X/23, 1979) that damage to the ecosystem would be greater because of the scant oil degradation in the Antarctic environment, noting also that distance makes it impossible to take rapid steps to combat the spill.

82. Two working groups on minerals were again convened at this consultative meeting, one which concentrated on the legal and political aspects and one which attended to scientific and environmental aspects. The report of the legal and political working group was appended to the final report. While this is a brief report it notes that "representatives were mindful of the developments likely to result from the Third United Nations Conference on the Law of the Sea" (Final Report 1979:101). The report also notes an exchange of views on the differing positions on sovereignty, but suggests that while these differences are fundamental all representatives believed an accommodation could be found. Both groups prepared draft recommendations which were then combined to provide the basis of recommendation X-1.

83. The preambular paragraphs focus particularly on protection of the Antarctic ecosystem and the need for further scientific information.

84. SCAR was asked to carry out further work on retrieving and analysing relevant information, and developing new programs to improve information required to assess environmental impacts. Consultative governments were again urged to support national Antarctic programs and committees in this.
Governments were urged to take note of the progress being made towards timely adoption of a regime to reinforce that the conditions for maintaining the voluntary moratorium were being met. It is doubtful, however, whether this could be called timely progress. It had already been on the agenda for seven years with little progress being made. The Parties had still not begun to negotiate a regime, only to continue to debate how they might approach the task.


Recommendation X-1 asked SCAR to devise scientific programs which would assist in improving predictions of the environmental impact of activities and technologies associated with mineral resource exploration and exploitation. In response, SCAR established a Group of Specialists on Antarctic Environmental Implications of Possible Mineral Exploration and Exploitation (AEIMEE). The first AEIMEE report, tabled at ATCM-XI, stressed the need for a scientific data base to assist in decision-making on minerals activity and for both basic and applied research to produce that data. A second AEIMEE report, focussing on off-shore hydrocarbon development, was produced in 1983.

**ATCM-XI, 1981**

The Final Report of this meeting notes only that there was a "full discussion of the subject at different levels" (in Bush 1982:437). Divisions between the claimant and non-claimant states were marked. The claimant delegations met together each morning in an effort to reach a common and unified position (Quigg 1983:199). Delegates were aware of the looming conclusion of the Law of the Sea negotiations and the potential for Third World states to turn their full attention to the Antarctic.

Recommendation XI-1 adopted at this meeting finally established the formal negotiations for a "regime on Antarctic mineral resources" which was to be "concluded as a matter of urgency". It recommended that a special consultative meeting be

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85. Recommendation X-7 on oil contamination also asked for SCAR's contribution and advice.
86. In 1986 SCAR published this report and a second AEIMEE report from 1983.
87. This reports examined a number of problems associated with this. It considered the possibility of retrieving and analysing existing data, of adopting present scientific programs and the urgency of establishing new programs so that these problems could be dealt with. See SCAR/AEIMEE (1986:15) for a summary of results.
88. A special meeting on Antarctic minerals was held in Washington in December 1980. The Chair, in presenting a personal report of the meeting, drew attention to the need for an internal accommodation on sovereignty and an external accommodation with the international community (see Brennan 1983b:219 and Beeby 1983b:194).
89. The draft final report (ANT/XI/34, 1981) indicates that Plenary decided that the question of minerals exploration and exploitation in Antarctica should be subject to informal discussions between the Chair of the meeting and heads of delegations.
90. Recommendation XI-1 is set out in full in appendix 7.
convened to determine the form of a regime (including whether an international convention was necessary) and to establish a schedule for negotiations.

Paragraph 5 set out the principles upon which such a regime should be based. As well as those elaborated at the Paris preparatory meeting in 1976 a regime was also to ensure that

the provisions of article IV of the Antarctic Treaty should not be affected by the regime. It should ensure that the principles embodied in Article IV are safeguarded in application to the area covered by the Antarctic Treaty.91

Paragraph 6 reinforced the importance of article IV in stating that any agreement should be acceptable and be without prejudice to those states which have previously asserted rights of or claims to territorial sovereignty in Antarctica as well as to those states which neither recognise such rights of or claims to territorial sovereignty nor ... assert such rights or claims.

With respect to the specific rules which were to be included in a minerals regime, recommendation XI-1 repeated the provisions of recommendation X-1 (see above). The regime was to apply to all minerals activity on the continent and offshore areas (without encroaching on the deep seabed) and include provisions to protect the consultative parties’ responsibilities on the environment. It also specified that a regime should include procedures for adherence by parties other than consultative parties and provisions for cooperative arrangements with other organisations. The voluntary moratorium on minerals exploration was to continue as long as timely progress was being made.

The 1970s revisited

In the 1970s, the consultative parties edged only slowly towards a minerals agreement, focussing on the internal accommodation (particularly between claimants and non-claimants at this stage). They were guided by their understanding of the political imperatives of the Treaty system which encouraged them to avoid conflict and maintain consensus at all times. They moved to settle the broad shape of the agreement in the normal consultative process, as one of a number of agenda items, before feeling confident enough to convene a special consultative meeting committed to formal and directed negotiations in which they would bargain over their national political and economic interests.

91. This principle was also included in recommendation IX-1 adopted in 1979.
The 1980s: the formal negotiations

This part of the chapter chronicles the process of the formal negotiations. In these negotiations the consultative parties sought to establish an institutional arrangement that would meet their individual national interests without undermining their collective interests. While the key points of difference among the Parties were identified there was no agreement, or even a clear idea, on how to overcome them.

The issues addressed and the compromises reached during those negotiations are not dealt with in any detail here. Their complexity does not lend itself to a chronological analysis. The particular coalitions of state and non-state actors which were brought to bear on the negotiations, and the resolution of their interests in the Minerals Convention, are the subject of the next chapter.

The Convention on the Regulation of Antarctic Mineral Resource Activities was negotiated at the Fourth Special Consultative Meeting which met for its first session in 1982. Over a period of six years, twelve formal negotiating sessions and three informal intersessional meetings were held. Fourteen consultative parties began negotiating the convention in July 1982. There were twenty consultative parties when the Convention was finally adopted in June 1988.

The negotiations were dominated by the same bureaucratic elite involved in the normal consultative process. Foreign ministry officials (especially from legal divisions) were prominent. A large number of delegations included representatives from resource ministries, although only a few included mining industry representatives. There were few scientists involved and even fewer officials from environment ministries. Andersen (1991:96) suggests that continuity in negotiating teams was an asset in seeking to advance particular interests. Consultative party delegations which changed personnel frequently, as well as the new consultative parties, "undoubtedly found the negotiations complicated" (Andersen 1991:96).

92. The discussion of the negotiations here draws on secondary source material (some of it nevertheless written by participants in the negotiations) and on NGO reports. Primary sources from the negotiations were not available when research for this thesis was undertaken. The consultative parties did not decide until October 1991 (at ATCM-XVI) that documents from SCM-IV would no longer be confidential.

93. The fourteen were: Argentina, Australia, Belgium, Chile, France, the Federal Republic of Germany, Japan, New Zealand, Norway, Poland, South Africa, the Soviet Union, the United Kingdom and the USA. They were joined by Brazil and India from January 1984, by China and Uruguay from April 1986, and by the German Democratic Republic and Italy from January 1988.

94. Australia and the United States seem to have had the most complete coverage of domestic interests, including NGOs, environment ministries, industry representatives, resource and finance ministries as well as representatives from national Antarctic operators.
Within the forum of the special consultative meeting, the negotiations were conducted to a great extent in an informal and flexible manner. Little time was spent in plenary session. Much of the discussion and debate, and working out of differences, took place in standing and ad hoc working groups. The negotiations were held behind closed doors. No observers were invited and no interim reports were issued.

There was a considerable amount of coffee break and corridor diplomacy. Andersen (1991:104) describes the process thus:


during the minerals negotiations friendships, mutual respect and trust, as well as insight into one another’s personalities, contributed much to the final outcome. Informal gatherings, talks over coffee, as well as working lunches and dinners, were often instrumental in breaking an apparent deadlock.

The personal diplomacy and commitment of the Chair of the SCM, New Zealand diplomat Christopher Beeby, was crucial to the conduct of the negotiations. He consulted widely with the convenors of the working groups and with Heads of Delegations. Rather than adopt a single negotiating text, he prepared subsequent versions of an informal draft which was presented to delegates as his personal report.95 While these documents were confidential, non-governmental organisations made them public "in order that the world is able to participate in a more informed manner" (ASOC 1984b:1).

Although never formally specified it was clear that the negotiations would have to proceed on the basis of consensus. During the SCM negotiations this search for consensus was given explicit expression through the mechanism of Beeby’s personal report. This assisted the search for compromise because the parties could move, however slowly, towards an agreement without making a formal commitment.

It was also important, from the perspective of reaching an agreement on the internal accommodation, that the negotiations were conducted within a limited membership forum. As Oxman observes (1986:246), in the context of the Antarctic ‘club’, "the states concerned may well make concessions to each other that they might never consider making in a universal negotiation".

Non-governmental organisations

NGOs were active during the SCM, especially the latter sessions, through the coordinating activities of the Antarctic and Southern Ocean Coalition and Greenpeace

95. These reports were known formally as MR/17 and subsequent revisions I to V/Corr.1. Informally they were referred to as Beeby I to VII. Beeby VII was presented as a formal draft convention.
International (itself a member of ASOC). The values and ideas that the NGOs brought to the debate on minerals and the extent to which they were, or weren’t, acknowledged is discussed in chapter six.

They monitored the formal sessions and liaised closely with NGOs representatives on national delegations. Only three consultative party delegations included NGO representatives. The US did so from the first negotiating session in 1982. Australia adopted this practice from the July 1983 meeting and New Zealand from May 1984.

As well as lobbying delegates they produced a series of detailed information and policy papers on specific issues under debate. They also produced sophisticated analyses of the Beeby texts and lengthy reports on the negotiating sessions. They drew attention to environmental weaknesses in the texts and suggested detailed improvements. NGOs relied on their own legal and scientific experts in compiling critical analysis and suggestions for improvement to the environmental provisions of the draft conventions.

They held press conferences, produced press releases and published editions of the environmental newspaper *ECO* which were available to delegates as well as to the media. In doing so they sought to impose a degree of transparency and accountability, to counter the secrecy of the negotiations, especially with respect to the consultative parties’ exercise of their responsibility for environmental protection.

What is of interest is that the NGOs continued to be given access to delegates despite their trenchant public criticism and the fact that they released the confidential Beeby drafts and had drawn attention in other fora to consultative party violations of environmental protection measures.

*Negotiating sessions*

Delegates to the 11th consultative meeting accepted an invitation from New Zealand to convene the first session of the Fourth Special Consultative Meeting. At that session in Wellington, delegates drew up and approved a Schema for an Instrument on Antarctic Mineral Resources "for the guidance of the subsequent discussion and as an aid in negotiation, without prejudice to any decision on the format and structure of the

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96. This access was normally coordinated through the secretariat for each meeting.
97. The Danish (NCP) delegation also included an NGO representative from February/March 1985 when NCPs were first able to attend the SCM.
98. See, especially, the entry under ASOC in the bibliography to this thesis.
99. They were usually granted access to delegates at coffee breaks. They hosted dinners, had informal meetings with delegates and were sometimes invited to receptions held by consultative party embassies.
100. Table 2, attached, sets out the process and outcomes of the negotiations in summary form.
<table>
<thead>
<tr>
<th>Session</th>
<th>Action and Outcome</th>
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<td>3 Bonn, West Germany 11-22 July 1983</td>
<td>Environmental Contact Group.</td>
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<tr>
<td>4 Washington DC, USA 18-27 January 1984</td>
<td>Beeby II produced.</td>
</tr>
<tr>
<td>5 Tokyo, Japan 23-21 May 1984</td>
<td>Working Group on objectives and principles of the regime; Working Group on prospecting; Working Group on legal issues and dispute settlement.</td>
</tr>
<tr>
<td>8 Hobart, Australia 14-25 April 1986</td>
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<td>9 Tokyo, Japan 27 October-12 November 1986</td>
<td>Legal Issues Working Group; Exploration and Development Working Group; Confidentiality of Data Working Group; Key Issues Group; Informal group on environmental issues.</td>
</tr>
<tr>
<td>10 Montevideo 11-20 May 1987</td>
<td>Working Group on Key Issues; Working Group on Legal Issues; Working Group on Exploration and Development; Informal group on function of the Advisory Committee; budgetary and financial provisions; confidentiality of data; area of application.</td>
</tr>
<tr>
<td>11 Wellington, New Zealand 18-29 January 1988</td>
<td>Working Group of the Whole (article-by-article review); Key Issues Group; Drafting Committee; Informal working groups on area of application; financial matters; anti-subsidy provisions</td>
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<tr>
<td>12.1 Wellington, New Zealand 2-19 May 1988</td>
<td>Outstanding Key Issues Working Group; Working Group on Matters of Less-than-key importance; Drafting Committee. Beeby VI (Draft Convention) produced.</td>
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"regime" (in Bush 1982:450).101 This provided a reasonably comprehensive framework (but no detail) and it gave some form to the principles set out in recommendation XI-1. As well as the usual headings in an international agreement (preamble, definitions, objectives and principles for example) it listed those matters likely to be most difficult: financial questions, applicable law and jurisdiction, and provisions to ensure the regime was acceptable and without prejudice to the consultative parties.

This first session reached an understanding that it would be almost impossible to negotiate a detailed mining and environmental code which would set out rules and procedures to cover all possible problems and activities. This was because of the internal differences, especially over sovereignty, and the lack of knowledge about mineral resources and future technologies and activities. While political and legal differences were uppermost, the consultative parties agreed that any agreement had to establish a "climate of confidence ... [ensuring] security of title for the operator, the protection of investment and certainty of regulation" (Beeby 1983b:194).

The consultative parties met again in Wellington in January of 1983 to continue their discussions.102 At the conclusion of that session Beeby tabled his first informal personal report (known colloquially as Beeby I).103

According to Beeby (1985:22-23) the focus of debate at these first two sessions was on where the powers required to regulate mineral activity should be located. Non-claimants favoured collective and non-discriminatory regulation. Claimants advocated regulation by states (preferably the claimants themselves over their own territory) acting individually, even if they did so in accordance with general guidelines. The Beeby text was offered as a means of avoiding a deadlock on this by switching attention to the institutions and procedures of the regime.

Beeby I set out draft articles based on the discussion to date. The objectives of the regime were set out in line with recommendation XI-1. An indicative list of environmental principles was included. The provisions of article IV on the claims were reproduced, with the inclusion of a reference to coastal state jurisdiction in recognition of the different juridical positions with respect to the continental shelf and Exclusive

101. Beeby (1983b:193) says that the possibility of incorporating a minerals regime into a consultative recommendation was not totally excluded at this meeting. The other possibilities which were considered were a protocol to the Treaty or a separate convention.

102. At the Wellington meeting a number of informal groups were established to consider the technical definitions of the area of applicability of the regime, the minerals that would be covered by the regime, and the stages of minerals activity. A third informal group on environmental aspects met briefly in preparation for the forthcoming Bonn meeting.

103. The Beeby drafts, as they addressed the crucial issues in the negotiations, are discussed more fully in chapter six.
Economic Zones. This draft also reflected the intention of the consultative parties to tie the regime closely to the Antarctic Treaty.

There was some agreement on the institutional structure by this stage (a Commission, an Advisory Committee and an Executive Secretariat) although the functions and membership of those institutions and the relationship between them proved to be contentious throughout the negotiations. The Parties also agreed upon a three-stage approach to minerals activities - prospecting, exploration and development - although no definitions were yet settled upon. Beeby I provided the basis for discussions at the next two sessions.

In anticipation of further discussion on environmental matters at the third session in Bonn, the Parties were urged to include on their delegations people with expertise in technical and environmental issues and people familiar both with administering environmental laws and with procedures for translating environmental principles into reality (Kimball 1983a:15). This doesn’t seem to have happened.104

Only modest progress was made at the Bonn meeting.105 The Chair referred to the difficulty of negotiations at this session saying "we have discussed a number of very abstract and complicated models on which we were not in agreement" (The Guardian 23 July 1983).

The fourth session convened in Washington in January 1984.106 "Sources close to the talks" were reported as saying that little of substance was agreed to and no conclusions were reached (The Guardian 18 February 1984). All delegations with the exception of France were prepared to agree that all areas south of 60°S would remain closed to mineral development unless a decision was taken to open them. France wanted the reverse (CAN #5, 1984). Following this meeting Beeby, who was to chair all the remaining negotiating sessions, prepared a second version of his personal report (Beeby

104. The Environmental Contact Group anticipated at the Wellington meeting met chaired by the UK's John Heap.

105. Although Chris Beeby, as head of the New Zealand delegation, had chaired the first two sessions in Wellington, the Bonn meeting was chaired by the head of the West German delegation, Ernst Jung. Francioni (1986:178) refers to a West German draft text of 15 May 1984. It is not clear whether this was offered as the next stage in the negotiating process, as an alternative to Beeby II, or simply as one of many documents tabled containing suggested draft provisions. For some reason Chris Beeby did not chair the Bonn meeting. It was chaired by Ernst Jung from West Germany. This was the first negotiating session outside New Zealand and it is likely that the consultative parties thought at first to adopt the practice of consultative meetings in appointing chairpersons from the host country.

106. The Environmental Contact Group did not meet at this session.
although several delegations apparently did not receive it until shortly before the Tokyo negotiating session in May 1984.

A full reading of the second Beeby draft was not completed at Tokyo. The Tokyo meeting decided that non-consultative parties (NCPs) would be invited to future sessions as observers. NCPs therefore attended the following session held in Rio de Janeiro in February 1985.

Much of the negotiation and the search for consensus was by this stage being conducted in informal meetings. At the Tokyo meeting, working groups addressed the objectives and principles of the regime, prospecting and, for the first time, legal issues and dispute settlement. This last group addressed in detail the question of compliance and enforcement, as well as liability, compensation for damages, procedures for withdrawal from and amendment to the regime. Beeby was reported (Financial Times, 13 March 1985) as saying that progress had been made but that the toughest meetings were yet to come as the real issues separating the claimants from non-claimants were approached.

The Treaty parties met again in Paris from 23 September to 4 October 1985. Beeby continued to consult informally on key issues - the composition and decision-making procedures of the institutions to be set up by the regime, international participation in benefits from the regime, and the internal accommodation between claimants and non-claimants (Kimball 1985f:2-3).

The eighth session of the SCM was held in Hobart, Australia, in April 1986. Again Beeby conducted important negotiations at Head of Delegations meetings and a number of small private meetings from which NCPs were generally excluded. Following this session, he produced a third version of his personal report (Beeby III).

107. NGOs felt that the second draft contained some welcome additions, but that other aspects were disappointing (ASOC 1984b:1)
108. There is not a great deal of information available on this meeting. It was held at the Ministry of Foreign Affairs which was declared out of bounds to NGOs.
109. They would be permitted to speak, receive copies of documents and submit information papers and attend all plenary and formal committee and working group meetings but could not participate in the decision-making process.
110. A decision was made at the 12th ATCM in 1983 to invite NCPs to future consultative meetings. However the consultative meeting took the view that the question of NCP attendance at the 4th SCM was a matter for that forum to decide. Some commented on the difficulty of trying to figure out the underlying aspects of the negotiations (Kimball 1985b:7). It is likely that at this stage all relevant documentation was not automatically made available to NCPs (IIED 1986:4).
111. One working group was set up to consider legal issues (focussing on liability and dispute settlement), another to consider guidelines for operators. The prospecting working group from the Rio session met in Paris as the Exploration and Development working group.
112. The Legal Issues group met again, but the working groups on environment, and on exploration and development met only informally because, according to ASOC, "no competent or willing chairers could be found" for them (Antarctic News #4, 1986:3).
Later in the year Beeby convened an informal intersessional meeting in Whangaroa, New Zealand, to discuss Beeby III. According to an NGO report only the US, USSR, UK, France, West Germany, Argentina and New Zealand were invited to participate (Antarctic News #4, 1986:6). A claimant caucus was held a few weeks later in San Diego.

The Parties met again formally in Tokyo in October/November 1986. Beeby convened a key issues group. After the Tokyo meeting Beeby called a second informal intersessional meeting in Whangaroa in March 1987. Fourteen governments were represented. Following this meeting his new report, Beeby IV, was circulated.

Negotiations continued in Montevideo in May 1987. Beeby IV was modified considerably in the working groups (Antarctica Project 1987b). At this meeting the Head of the Chilean Delegation, Fernando Zegers, suggested during an informal meeting that Antarctica could be designated an Antarctic Treaty Park if no more progress were possible in resolving certain key issues (ECO XLVII(6) 1988:1). While this was hailed by NGOs as a "clever new development of the World Park idea" (Antarctic News #6, 1987:2), it may have been a suggestion borne as much out of frustration with slow progress as out of environmental concern. A third intersessional meeting attended by 15 nations was held in November 1987, this time in Auckland, New Zealand. Following this, Beeby V became the basis for negotiations held in Wellington at the beginning of 1988. In December 1987, the US government made Beeby V public "so that those interested in or potentially affected by the future agreement may review and analyse it" (Kimball 1988a:1).

113. The Soviet Union was initially opposed to Beeby III although it is not clear on what grounds.
114. Several working groups, both formal and informal, met. The Legal Issues groups continued to deal with questions of dispute settlement, liability, compliance, inspection and monitoring. The Exploration and Development group was convened again to consider the membership and decision-making rules in institutions and the functions of these bodies. A confidentiality of data group was convened and a small informal group of New Zealand, Australia, USA, Chile, Argentina and the UK met to consider environmental provisions.
115. A "Statement of Concern" signed by 32 prominent New Zealanders was sent to the Whangaroa meeting, calling for Antarctica to be administered as a "region of wilderness, peace and scientific cooperation ... to be held in perpetuity as part of the common heritage of humankind" (Antarctic News # 5, 1987:14).
116. Neither Belgium nor South Africa attended any of the informal intersessional meetings.
117. The Working Groups on Key Issues, Legal Issues, and Exploration and Development all met. Several smaller informal sessions were held on the functions of the Advisory Committee, on budgetary and financial provisions, on confidentiality of data, and on the area of application of the regime.
118. See chapter six for a discussion of the changes in the Beeby drafts.
119. The analysis in chapter six indicates that the NGOs believed Beeby V was a major concession to mining interests.
At the January 1988 meeting in Wellington, delegates committed themselves to holding only one more negotiating session at which the convention would be concluded, even though there were many outstanding issues. NGOs expressed their concern that this would result in hasty compromise decisions.

The January session\textsuperscript{120} convened a working group of the whole, which conducted an article-by-article review of Beeby V except for those articles being considered by the Key Issues group. The Key Issues group discussed provisions on liability, dispute settlement, judicial review of decisions taken by institutions, inspection, compliance and approval procedures. Membership of the Key Issues group changed depending on the issue under discussion. A drafting committee was also established.\textsuperscript{121} A number of small informal groups also met to consider the area of application, financial matters and anti-subsidy provisions.\textsuperscript{122}

The final session convened at the beginning of May 1988 again in Wellington. All twenty consultative parties and thirteen of the 18 NCPs attended.\textsuperscript{123} The first part of the session (2 to 19 May) divided into three groups: an Outstanding Key Issues group chaired by Beeby, a group to focus on matters of less-than-key importance,\textsuperscript{124} and the Drafting Committee.\textsuperscript{125} NCPs were generally excluded from the Key Issues group which met in small informal discussions followed by larger groups in the afternoons, to deal with a long list of still unresolved issues. Those issues included decision-making in the Commission and Regulatory Committees, composition of the Regulatory Committees, dispute settlement, liability, financial issues, participation, definition of sponsoring state, operator and the area of applicability, compliance, entry into force, the composition of the Commission and the Special Meeting of Parties, anti-subsidy provisions and languages of the text (ASOC 1988n:2).

\textsuperscript{120} This session was not attended by India or Uruguay (ATCPs) nor by seven of the NCPs.

\textsuperscript{121} The drafting committee, charged with ensuring that versions in all four official Treaty languages, plus Chinese, were consistent with each other, was more contentious than originally anticipated. West Germany insisted on being represented. Other delegations argued that if there was a possibility of a German text, then their languages should also be represented. The Beeby VI draft left open the possibility that authentic texts might also be agreed to in German, Japanese, Norwegian and Portuguese. This committee continued its work at an intersessional meeting in Washington DC (March 14-29).

\textsuperscript{122} A report in \textit{ECO} (XLVII(6) 1988:1) suggests that the US proposed a series of new draft articles which would completely reorient the power structures within the Convention, but gives no further details.

\textsuperscript{123} Hungary, North Korea, Spain, Cuba and Austria were absent.

\textsuperscript{124} This working group met each morning. It also considered some issues not resolved in the article-by-article review at the January meeting.

\textsuperscript{125} The Drafting Committee met every afternoon to tighten up the language and ensure consistency between the four official languages.
Delegates took a break between 19 and 22 May. In the four day break, Beeby consolidated a new negotiating text which was presented as a Draft Convention rather than a personal report.\textsuperscript{126}

At the beginning of the second part of the session, which convened again on 23 May, delegations met in plenary to discuss the draft convention. Beeby apparently stressed the necessity for delegations to forego their preferred positions in order to find "tolerable common ground" if agreement was to be reached (ASOC 1988n:3). After the plenary the three working groups from the first part of the session met again with the Key Issues group. The drafting group meeting late into the night. An all-night session was held on 30 May, attended by twelve consultative parties only (ASOC 1988n:3 - the twelve are not named). The following morning a second version of the draft convention was distributed.\textsuperscript{127} A third plenary was convened with most delegations apparently satisfied with the Convention before them. ASOC suggests (ASOC 1988n:4), in its report of this meeting, that India and China remained dissatisfied with the compromise on decision-making and would have preferred consensus as the rule, while Australia continued to lobby for the inclusion of an anti-subsidy provision.

The Final Act of the Special Consultative Meeting, with the Convention appended, was distributed to delegations shortly before the final plenary on 2 June 1988. It was signed at a special ceremony after the formal close of the SCM.\textsuperscript{128} Christopher Beeby hailed it as "an historic occasion which I believe will go down in Antarctic history as the most important political development regarding the regulation of Antarctica since the Antarctic Treaty itself" (SCM-IV 1988b:1)

The Convention, which is described and analysed in the next chapter, was the product of an institutional bargaining process. To recall chapter one, Young suggests (1990b) that the exercise of leadership is an important determinant of the success of this process. This crucial leadership role, in the minerals negotiations, was taken by Beeby.

\textit{Beeby and leadership}

Beeby falls neatly into the category of entrepreneurial leader described by Young (1990b:16-25). In preparing subsequent versions of what was, informally at least, a single negotiating text, and maintaining contact with all delegations through his informal key issues contact group, he sought to devise options to overcome bargaining difficulties and to line up support for those options (as Young 1990b:18-19) describes

\begin{itemize}
  \item \textsuperscript{126} In effect this was the 6th Beeby draft.
  \item \textsuperscript{127} Beeby VII - MR/17 Rev V/Corr.1
  \item \textsuperscript{128} The drafting committee met again in Sydney, Australia, in September 1988 to develop the Chinese text provided for in article 67.
\end{itemize}
the role of an entrepreneurial leader). He represented the "common memory base" (Andersen 1991:103) and provided continuity in the negotiations.

Young (1990b:20) suggests that the work of an entrepreneurial leader is facilitated by that person being an agent of a powerful state in the bargaining process although he does acknowledge that this is not a necessary condition for the successful exercise of this type of leadership. In the case of the minerals negotiations, New Zealand possessed no more issue-specific power (as a claimant and consultative party) than a number of other states involved in the negotiations. Indeed, it is possible to argue that New Zealand's issue-specific power in the negotiations may have been augmented by Beeby's role as Chair of the negotiations rather than the other way around. Beeby was clearly respected as a diplomat and one who had been involved in Antarctic affairs for many years.

Young also argues (1990b:22) that entrepreneurial leaders are strictly self-interested actors and that they act for personal gain rather than some sense of responsibility or obligation to the community (although he offers this as a source of comfort, suggesting that such actors are likely to be more predictable in their actions). This is a proposition which, when applied to any particular individual engaged in leadership, is almost impossible to test and it is the case with Beeby.

Conclusion

As Bilder notes (1982:199), the consultative parties had a "strong mutual interest in reaching an agreed and orderly solution to the issue of mineral resources". In first addressing this issue in the early 1970s the parties responded to external interests (which were generated by technological developments) which raised the spectre of conflict over the exercise of sovereignty, of a potential weakening of the Treaty system and consultative party authority over Antarctic decision-making as well as environmental damage. Thus the demand for cooperation, for a regime on minerals, was in response to pressures outside the Treaty system.

This was also, in Stein's typology (1983), a dilemma of common aversion. The consultative parties were jointly agreed on the outcome they wished to avoid (conflict and the demise of the Treaty system) but there was no common agreement on the

129. Young does not specifically define a powerful state in this context but his general argument about leadership would lead to an assumption that it is a state which is in a position to exercise structural leadership within an institutional bargaining process.

130. The delegation list from the final negotiating sessions shows that as Chair of the SCM Beeby was not, formally, a member of the New Zealand delegation.

131. Young also notes (1991:297) that the achievement of success may also constitute a form of payment for entrepreneurial leaders.
outcome they preferred. Individually, each state had different preferences set by its political (especially territorial) and economic interests.

Decisions, in as much as they applied to the technical aspects of minerals activity, were based on a degree of scientific uncertainty and the Parties sought to improve their scientific knowledge by commissioning reports from scientific experts. Indeed, the paucity of knowledge on Antarctic minerals and the impact of minerals activity on the environment was a major theme in the debates of the 1970s. However, once the formal negotiations began in the 1980s, this problem was not addressed again in such detail. SCAR, for example, as the primary source of knowledge in the Treaty system, had no input into the minerals negotiations.132

Once the in-principle decision was made that minerals activity in Antarctic was a legitimate activity and would be permitted, debates in the 1970s focussed on how to define the collective interests of the consultative parties. The principles adopted ensured that those collective interests would be met: the Treaty system would be maintained and consultative party authority over Antarctic decision-making would be extended. However, in spite of agreement on principles, there was little insight into the terms of the constitutional contract that would regulate minerals activity. In other words, as Young suggests (1990b:4) in his analysis of the process of institutional bargaining "the range of feasible options and the outcomes associated with these options [were not] well-defined at the outset".

The institutional bargaining process in the 1980s was characterised, within the formal Special Consultative Meeting, by informality and flexibility. The Parties sought to maintain consensus and to avoid public dissension over the differences between them. There is no doubt that the negotiations were difficult. They were advanced, albeit slowly, through Beeby's exercise of entrepreneurial leadership and, in particular, his informal and personal report which gave shape to the constitutional contract. In doing so, he sought to ensure that the participants would be reluctant to abandon what had already been agreed upon when the tough issues were debated.

The negotiations for the minerals convention in the 1980s sought to define and reconcile individual interests within the confines of those collective interests. Differences derived from divisions on legal and political grounds (on sovereignty and jurisdiction) and economic grounds (especially the interests of mining states and developing states). It was those divisions, not environmental concerns, which gave rise

132. It was, for example, not invited as an observer to the negotiations and was not asked to provide any further reports on the scientific, technical or environmental aspects of minerals activity or to comment on the proposed rules in the convention.
to the key issues which remained unresolved until the end of the negotiations. In this respect, the hierarchy of values that characterised the Antarctic regime generally also applied here. Environmental concerns, while not dismissed, were fitted into the solutions to political and, to a lesser extent, economic concerns. Those individual interests, and their reconciliation in the minerals convention, are the subject of the next chapter.
Chapter six
THE ANTARCTIC MINERALS CONVENTION (CRAMRA)

Introduction
The consultative parties perceived the minerals issue primarily as a political rather than an economic problem. In particular, it raised the problem of sovereignty and the territorial claims directly. Their collective interest in avoiding conflict among them and maintaining the Treaty system provided the imperative for the negotiations and overcame their reluctance to address this issue.

They reached agreement as early as the 1976 Paris preparatory meeting on the principles and objectives which would shape the convention and cooperation among them on this issue. It was in the negotiating sessions of the Fourth Special Consultative Meeting, described in chapter five, that the Parties tackled the difficult, indeed some thought impossible, task of satisfying the competing interests of the Treaty parties in giving effect to those principles and objectives which were determined primarily by the political imperatives of the Treaty system. They sought to ensure that any minerals agreement would not result in conflict, would strengthen their authority over Antarctic decisions and would not undermine the compromise on territorial sovereignty. Within this framework of political values they also sought to protect the Antarctic environment.

This chapter describes the main procedural and institutional features of the Minerals Convention. It then provides an analysis of that agreement which focuses on three aspects. First, it examines the competing national interests of the Treaty parties and the nature of the final consensus on the internal accommodation among those interests. Second, in doing so, it shows how the Convention conformed to the fundamental normative and procedural dimensions of the Treaty regime and how both the existing hierarchy of values and sovereignty norms were maintained. Finally the chapter also explores how that hierarchy of values shaped the environmental principles and rules adopted.

The Convention
The Convention agreed to by the twenty consultative parties in June 1988 was titled in full The Convention on the Regulation of Antarctic Mineral Resource Activities. It is

1. The Convention is included at appendix 8.
2. Treaty parties have acknowledged that this is not the most auspicious title for a convention which, they argue, does not presuppose minerals activity and was not negotiated for the purpose of encouraging such activity. It is most often referred to as the Minerals Convention, the Wellington Convention, or by its less revealing acronym CRAMRA (pronounced as it is spelled). At the Rio meeting in 1985, the head of the Swedish delegation (at that stage a non-
a framework convention which establishes principles, prescribes general rules and procedures and creates institutions for the purpose of regulating Antarctic mineral resource activities should they be considered acceptable.

The Convention is a compromise document. It is a pragmatic, although complicated, agreement. In providing general guidelines only, it leaves the detail to be "hammered out on a case-by-case basis" (Beeby 1985:23) because of the difficulties of incorporating all the details of an internal accommodation in the text. Much of the administrative machinery is established only when, and if, any party wishes to explore for minerals. Kimball (1987c:13-14) describes the decision-making process as a threshold-cascade one. The broad-brush principles within the regime are to govern every decision taken and every measure adopted. Those guidelines must translate into a "cascade of ever more detailed requirements" once the threshold decision to open an area is made.3

Only signatories to the Antarctic Treaty (both ATCPs and NCPs) may become parties to the Convention. The Convention establishes a Commission,4 and a Scientific Technical and Environmental Advisory Committee, and provides for a regulatory committee to be established for each area identified for exploration and development. It also establishes an Executive Secretariat and makes provision for a Special Meeting of Parties.

Membership of the Commission is restricted to Parties to the Convention who were also Antarctic Treaty Consultative Parties on 25 November 1988, the date on which the Convention was opened for signature.5 Any other Party to the Convention which is engaged in research in the Treaty area of direct relevance to decisions about minerals activities (most likely to be any new or aspiring consultative party) and any other Party which is sponsoring exploration and development6 may also become a member of the Commission. Any Party to the Convention which meets none of these conditions is granted observer status to the Commission, which is also available to any Antarctic Treaty Party which is not a party to the Convention.

consultative party) suggested the title "The Antarctic Protection regime ... in relation to Mineral Resources" (SCM-IV 1985:5).

3. Although this is argued to make environmental protection more stringent, it was also an approach favoured by mining interests. The American Petroleum Institute ([n.d.]) supported a framework regime which provided for a series of increasingly specific steps. It was only in this fashion, the Institute suggested, that private enterprise would be likely to consider the Antarctic as a viable area of economic endeavour.

4. Article 20(5) provides that the Commission may decide to establish a permanent headquarters in New Zealand.

5. By this date the number had increased to 22 with the addition of Spain and Sweden to the ranks of the consultative parties.

6. In the case of a Sponsoring State which does not meet any of the other criteria, its membership on the Commission holds only while the management scheme regulating that activity is in force.
The Commission is charged, *inter alia*, with facilitating and promoting the collection and exchange of scientific, technical and other information necessary to predict, detect and assess possible environmental impact, and with adopting measures for the protection of the environment as well as on prospecting activities. It also has an important role in identifying an area for possible exploration for, and development of mineral resources (described further below).

Membership of the Advisory Committee, established under article 23, is open to all Parties to the Convention. Observer status on the Advisory Committee is granted to any non-Convention state which is a party to the Antarctic Treaty or to CCAMLR. The Advisory Committee provides a forum for consultation and cooperation among the Parties but has no decision-making powers. The Commission and regulatory committees must take "full account" of the Advisory Committee's advice.

Minerals activity may only be undertaken in accordance with the rules of the Convention. The Convention recognises three stages of minerals activity - prospecting, exploration and development - and establishes broad guidelines and procedures in respect of all three. Prospecting, that is the conduct of activities aimed at identifying areas of mineral resource potential, must be conducted in accordance with the Convention but does not require prior authorisation by any institution. Nevertheless, nine months notification of an intention to prospect must be provided by any state which sponsors prospecting. Detailed information must be provided on the proposed activity, including an assessment of environmental and other impacts and the measures which will be taken to avoid harmful consequences or undue interference with other uses in the Antarctic. Prospecting confers no rights to any mineral resources.

The Antarctic is closed to all minerals activities (except prospecting) until a consensus decision is taken by the Commission to identify an area for possible exploration and development activities. Any Party may request such an identification which must include, *inter alia*, a detailed assessment of the environmental impact of likely minerals activity in that area. This consensus requirement thus entrenches an effective veto for any member of the Commission.

The decision to open an area must be made on the basis of information which is adequate to enable informed judgements to be made. This must include a confident assessment that such activities will not cause significant environmental impacts, that technology and procedures are available to provide for safe operations and limited

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7. Article 21 includes 25 sub-paragraphs which list the functions of the Commission.
8. That state must be a Party to the Convention.
environmental impact, and that the capacity exists to monitor key environmental parameters and to respond effectively to accidents (article 4).

If consensus is reached, the Commission will identify the area for the possible exploration and development of specified mineral resources. This is, in effect, an 'in principle' decision that minerals activity may (but not necessarily will) proceed in a particular area. In reaching its decision, the Commission must take into account the advice of the Advisory Committee and the conclusions of, and views expressed at, a Special Meeting of the Parties (at which all Parties to the Convention, including Antarctic Treaty NCPs, are represented).

For each area identified for possible exploration and development, a ten member regulatory committee is established. Membership of each regulatory committee is determined by the Commission according to a complex formula. Under this formula, four committee members must be claimant states, including the claimant(s) to the area being opened. The remaining six (non-claimant) members must include the US and the USSR. Three of the ten must be developing countries. Membership should also include those parties which have contributed substantial scientific, technical and environmental information relevant to the identification of the area. The membership rules also provide for any state with a direct interest in the activities of the regulatory committee with respect to its area of competence to be a member of the committee (in addition to the ten) while that direct interest remains. Any Party may attend meetings of a regulatory committee as an observer.

9. If the same area is to be open for exploration of different minerals to those already specified, the application procedure to the Commission must be repeated, although the same regulatory committee will be responsible for establishing any management scheme.

10. In Beeby I (art XXIX) a separate regulatory committee was to be convened in respect of each exploration application. Beeby II adopted a US suggestion that one regulatory committee be established for each area identified for possibly activities. The US initially proposed (at ATCM-XI in 1981) that the Antarctic could be divided into four quadrants, an idea subsequently dropped at the January 1983 meeting of the SCM (CAN #5, 1984). The suggestion was that 8 of the then 14 consultative parties would sit on each panel, although none would sit on more than two. Each panel would set up terms for the operation of would-be oil producing groups under the guidelines of a minerals commission which would comprise all fourteen countries (cited in Dawn, 22 November 1983).

11. Developing countries, a term which is not defined, is normally taken to include the claimants Chile and Argentina. This means that if the area to be opened is outside the area of the overlapping claims, at least one of these two is nevertheless likely to be included on the regulatory committee.

12. If this is the Party which submitted notification of an area for identification, then it will be a member until such time as an application for an exploration permit is lodged or, if it is a party lodging an exploration permit, while that application is considered, or while the management scheme for which it is the sponsoring state of an operator is in force. The addition of extra members with a direct interest in the area was added at the suggestion of Japan and West Germany (Antarctica Project 1987b:3).
The regulatory committee adapts the Commission's guidelines and identifies general requirements for exploration and development in its designated area. Any Party which wishes to sponsor minerals activities in that area can then apply to the regulatory committee for an exploration permit. Exploration activities are those aimed at identifying and evaluating specific mineral resource occurrences or deposits. The application must contain a detailed description of the Operator, its proposed activities, including environmental and other impact assessment, its capacity to respond to accidents, to comply with general guidelines and its technical competence and financial capacity.

The regulatory committee will then meet to elaborate a management scheme for the proposed activity. It may decline the exploration application if it considers that the proposed activities are not consistent with the Convention. The management scheme, which is effectively a contract between the committee and the Operator, is drawn up by a sub-committee of the regulatory committee and sets out specific terms and conditions. If it is approved by a two-thirds majority of the committee (which must include a clear majority of both claimants and non-claimants) an exploration permit is issued. It is the function of the regulatory committee to monitor compliance with the management scheme and the Convention and to monitor effects on the Antarctic environment.

If an Operator wishes to proceed to development of mineral resources (defined as activities aimed at exploitation of specific resource deposits) the Sponsoring State must lodge an application to this effect. This application must contain updated information as appropriate, including detailed environmental assessment. The regulatory committee considers whether the planned development would cause previously unforeseen impacts. If modification to the management scheme is not needed, or if modifications are approved, then a development permit is issued. There is no specific procedure for declining a development application, although the Convention contains a general procedure for the modification, cancellation or suspension of the management scheme.

The Convention also sets out general principles on compliance, monitoring and liability. Each Party is required to take appropriate measures within its competence to ensure compliance. Regulatory Committees are required to monitor Operator compliance with management schemes and, one assumes, may use the results of this as grounds for modifying, suspending or cancelling a management scheme or permit.13

13. The regulatory committee is required to inform, as appropriate, the Commission and Advisory Committee (article 52(3)) of its actions in this respect. The Commission is required to consider these reports (article 21(1)(u)) but it is not clear what it can do with them. Presumably they can be used as the basis for a member of the Commission to raise concerns about the consistency of operations with the Convention, in accordance with article 49.
Inspections under the Convention may be conducted unilaterally by the consultative parties in accordance with the rules and procedures of article VII of the Antarctic Treaty. The inspection procedures established by the Antarctic Treaty are extended to include all stations, installations and equipment relating to mineral resource activities (article 11). Inspectors may also be designated by any member of the Commission, by the Commission itself or the relevant regulatory committee. Procedures for inspection in an area must be in place before exploration or development can proceed in that area.\textsuperscript{14}

Detailed dispute settlement procedures are elaborated (articles 56-59) and an Arbitral Tribunal is established under an annex to the Convention. Article 8 sets out rules and procedures for response action and liability. Operators are to be strictly liable for damage to the environment and loss of or impairment to established uses in the Antarctic. The Convention also provides for residual state liability. Liability is exempted in the case of unforeseen natural disasters and acts or armed conflict (including terrorism). Further rules and procedures on liability are to be elaborated in a separate Protocol which may establish limits to liability. The Protocol must be in force, for the Party making the application, before an application for an exploration or development permit can be made.

The Convention was opened for signature on 25 November 1988 for one year by those consultative parties which had participated in the final negotiating session, plus any other state which had achieved consultative party status by that date. After that period any other signatory state to the Antarctic Treaty could accede to the Convention. Under the provisions of the Convention, it would enter into force after sixteen of the consultative parties which had participated in the final session had ratified the agreement.\textsuperscript{15} However, under the rules of the Convention and the interpretation included in the Final Act, that sixteen had to include all seven claimant states, as well as the United States and the Soviet Union, and represent five developing and eleven developed countries.\textsuperscript{16} The Final Act of the SCM provided that the voluntary moratorium on minerals activities, as these activities were defined in the Convention (thus including prospecting), would continue pending the Convention’s entry into force.

The Minerals Convention was an integral part of the Antarctic Treaty system. As noted above and in chapter five, a primary purpose of the minerals negotiations in elaborating

\textsuperscript{14} Reports from inspectors are to be transmitted to the Commission and to the appropriate regulatory committee (article 12).
\textsuperscript{15} It was acknowledged that this process could take some time.
\textsuperscript{16} There were differences of opinion in the negotiations on whether a high majority of ratifications would be sufficient to effect entry into force or whether full concurrence was necessary (Kimball 1987c:12).
Maintaining the Antarctic Treaty

The Paris principles, subsequently incorporated into recommendation XI-1 which formally established the Special Consultative Meeting, required that under a minerals regime the Antarctic Treaty be retained in its entirety. Experience within the Treaty system generally had shown that cooperation under the norms and rules of the Antarctic regime, which was centred on the Treaty, and adherence to particular normative behaviour, such as the search for consensus, recognition of the sovereignty compromise, reliance on limited enforcement rules and an 'arm's length' attitude to outside interest, served to maintain the Treaty and protect both collective and individual national interests.

The rules of the Convention therefore had to be consistent with the Antarctic Treaty and with the consultative recommendations adopted in accordance with it, including respect for environmental protection rules. This meant also that minerals activity should not result in the Antarctic becoming the scene or object of international discord and that scientific cooperation and investigation should not be compromised by minerals activity.

This principle was explicitly included in the Convention. The preamble refers to the special legal and political status of the Antarctic and the special responsibility of the Antarctic Treaty Consultative Parties to ensure that all activities in the Antarctic are consistent with the purposes and principles of the Antarctic Treaty.

It notes that "a regime governing Antarctic mineral resource activities will further strengthen the Antarctic Treaty system". The Convention is to be "an integral part of the Antarctic Treaty system" (article 2(1)) and mineral resource activities must be conducted "in a manner consistent with all the components of the Antarctic Treaty system" (article 2(2)). Antarctic mineral resource activities, should they occur, must be compatible with scientific investigation in Antarctica and other legitimate uses of Antarctica (article 15). This reflects the intention of the Treaty parties not only to balance competing uses in the Antarctic, but also to ensure that minerals activity, in principle at least, did not take precedence over other activities in the Antarctic.17

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17. Article 10 specifies further that there must be consistency with the other components of the Antarctic Treaty system.
The internal accommodation: states interests
The fundamental differences in the negotiations arose between the claimants\(^{18}\) and the non-claimants on the exercise of sovereignty and jurisdiction and the ownership of resources. The claimants wanted regulation based on individual authority and a recognition of their special status. The non-claimants envisaged no special role for the claimants.

Other cleavages cut across this division. Throughout the negotiations the divisions between the claimants and the pro-development states became increasingly entrenched. The likely mining non-claimant states (the US, West Germany and Japan) argued for non-discriminatory access to mineral resources and for regulatory rules and procedures that facilitated minerals activity. They were joined, to some extent, by the UK and France who were also potential mining states but who also had claimant interests to protect. The developing non-claimant consultative states (China, India, Uruguay and Brazil) wanted access to technology (in which they were joined by the USSR) and a share in the benefits from exploitation. Countries with established mining industries, such as Australia and South Africa, were, to some extent, supportive of non-discriminatory access but were also concerned about competition with their own industries (although in Australia’s case this was moderated by its claimant interests). They also sought provisions to prevent resource poor countries subsidising minerals activity.

The non-consultative parties also brought particular interests to bear on the negotiations, particularly in ensuring that, if they acceded to the Convention, they were guaranteed some role in its institutions and decision-making processes.

Environmental interests further contributed to the complexity of the negotiations. Some states, such as Australia, New Zealand, Argentina and Chile, took a much stronger view on the need for stringent environmental protection provisions than the pro-development states. As Orrego Vicuña notes (1988:186) the countries of the southern hemisphere "have a particularly keen awareness of the environmental factor".

Contentious issues arising from these cleavages included the nature of the institutional structure and relationships, financial provisions, enforcement and compliance rules, dispute resolution and liability and environmental regulations. Specific questions to be resolved included who would authorise minerals activity, under what authority would appropriate control over resource activity be exercised, and how would payment of taxes and royalties be settled.

\(^{18}\) To recall, the states which claim territory in the Antarctic are Argentina, Australia, Britain, Chile, France, New Zealand and Norway.
The internal accommodation: the compromise over sovereignty

The differing positions on the validity of the territorial claims and the exercise of sovereignty and jurisdiction were a central part of the legal and political dialogue within the Treaty system. The territorial dispute remained "the single most difficult problem confronting Treaty parties in their attempts to devise management regimes for the area" (Mitchell 1980:17).

It was one of the main difficulties foreseen by the consultative parties in their attempts to negotiate a minerals regime. The British Foreign Office observed (cited in Beck 1986b:136) that "[t]he divide between Claimants and non-claimant[s] ... regarding the role to be played by States asserting sovereignty is at the heart of the negotiations for a minerals regime. It is the principal cause of the difficulties encountered in the negotiations so far".

Recommendation XI-1 specified not only that the provisions of article IV of the Antarctic Treaty should not affected by a minerals regime but that the principles embodied in that article also had to be safeguarded. Those principles were not explicit in article IV but were, as chapter two has explained, a foundational principle of the Antarctic regime. They had come to be interpreted as requiring differences on the territorial question to be put to one side, the compromise on sovereignty maintained and that no state would seek to advance its position on sovereignty to a logical conclusion.

The demands that these provisions and principles be safeguarded were easier to specify than to meet. It seemed doubtful that the ambiguity of article IV of the Antarctic Treaty could be reproduced in a minerals convention which had to address directly the question of ownership of non-renewable resources. It was also doubtful whether, in the institutions and procedures of the regime, the interests of both claimant and non-claimants could be met. As Beeby noted (1982:6), "neither the claimant states nor the non-claimants could reasonably expect that the Special Consultative Meeting [would] endorse a solution either founded exclusively on the existence of the sovereignty claims ... or [one which] ignores the fact of those claims".

The Convention manages to step around the difficult sovereignty question. Like the Antarctic Treaty and subsequent instruments negotiated by the consultative parties, it does not solve the matter, but reproduces the creative ambiguity of article IV. It reproduces the general statement of principles in asserting that
a regime for Antarctic mineral resource activities must be consistent with article IV of the Antarctic Treaty and in accordance therewith be without prejudice and acceptable to those states which assert rights of or claims to territorial sovereignty in Antarctica, and those states which neither recognise nor assert such rights or claims, including those States which assert a basis of claim to territorial sovereignty in Antarctica.

However statements of principle were not enough. The crux of the minerals negotiations were the specific mechanisms of representation and process in which claimant and non-claimant interests would have to be reconciled. The generally held view among the Treaty parties was that the key to finding an accommodation between claimants and non-claimants would be found "largely within the institutional structure of the regime" (Beeby 1985:21-22). Thus the negotiations raised the question, as noted above, of the relative role for the claimant and non-claimant states on the institutions of the Convention and on specific issues such as who would issue licences and what the distribution of taxes and royalties would be.

The claimants' relative numerical power continued to decline within the Treaty system as more states acceded to the Treaty and as the number of consultative parties grew. Yet they still maintained issue-specific power in a consensus-based system and were able to function as a relatively cohesive coalition. Their position was that unilateral control over activities in their territory, including exploitation of resources, was a sovereign right. While they would not achieve this in the Convention, as they had not achieved it in the Treaty system generally, they were not prepared to forego some acknowledgement of their status especially in the institutions and decision-making procedures. The non-claimants would not acquiesce to the exercise of claimant control over resources and were reluctant to agree to any special privileges for the claimant states. However it was more difficult for the non-claimants to maintain unity generally within the negotiations because, apart from the specific issue of the exercise of sovereignty and jurisdiction, they were a diverse group with competing interests. Andersen (1991:105) suggests, however, that they were able to maintain a degree of cohesion on this aspect of the internal accommodation.

Claimant authority over regulatory mechanisms
Of particular concern to the claimants was their position on the important regulatory committees. Their goal during the negotiations was to retain as much power as possible in these organs because it was here that detailed rules for minerals activity were set and individual applications decided upon. Because of the smaller size of the regulatory committees, claimant power vis-a-vis the non-claimants was stronger than in the
Commission. In the regulatory committees the claimants would be able to bargain for financial concessions and for influence over management schemes.

The size of the regulatory committee was determined by political considerations. There was, as Andersen notes (1991:100) a practical need for a body smaller than the Commission to undertake regulatory tasks and to establish contracts. However this could easily have been accomplished by a small group of three or four states. The demands of the claimants meant that the regulatory committees would have to include at least three claimants. The demand for political balance ensured that non-claimant numbers would be similar. Initial proposals for regulatory committee membership envisaged a split of four claimants and four non-claimants. The number was increased to ten to accommodate the subsequent demands, including developing states and mining interests (Andersen 1991:100).

The claimants were accorded a degree of influence on the regulatory committees. Each 10 member committee must include four claimants (article 29(2)(c)(i)) including the claimant (or claimants) in the identified area (article 29(2)(a)). Early Beeby drafts proposed that four of what was then to be an eight member regulatory committee would be claimants. There was some concern expressed that giving claimants equal weight to non-claimants could lead to side deals between claimants and mining companies when the management scheme was elaborated, on royalties for example, that could possibly give substance to their claims (see Antarctica Project 1984a).

The claimant to the area for which a regulatory committee has competence is able to nominate the other claimant members of the committee. This rule was adopted after the claimants submitted a written demand at the Montevideo meeting. By contrast, non-claimants members of the Commission may only "present views" to the Commission chair when the other four non-claimants, besides the superpowers who sit on every regulatory committee, are selected. However, while the claimants have a guaranteed position on the regulatory committees, this may not be "interpreted as affecting article IV of the Antarctic Treaty" (article 29(7)). In other words, it does not amount to any

19. Non-claimant miner states opposed the concentration of claimant decision-making in the regulatory committees (Antarctic News #7, 1988:2). However, both claimants and pro-mining non-claimants wanted as much power to reside in the RC as possible, without significant review by the Commission, a position opposed by the USSR, Poland, developing states and many NCPs (Antarctica Project 1987b:4).

20. This was because of the area of overlapping claims. All of the three overlapping claimants (Argentina, Britain or Chile) would have demanded some say over this area.

21. In their declarations made on signing the Convention, Argentina, Britain and Chile signalled their willingness to work together and consult with respect to any minerals activity in their commonly claimed area (Beck 1991:249-50).

22. Both clauses indicate that these members are to be identified by reference to article 9(b) which also refers to claims (inter alia) to exercise coastal state jurisdiction.
recognition of claimant sovereignty over territory or resources and cannot be used by the claimants as evidence of such. This ensures that participation in regulatory activity, or specific minerals activity, cannot be used to support or deny a claim.  

In the determination of regulatory committee membership, it is the superpowers rather than the claimants or non-claimants who have benefited most. Under the rules of article 29 they are members of every regulatory committee. This was, in part, because both maintain a basis of claim to the Antarctic and because they are the two states with the largest presence in the Antarctic. In this context, they were able to argue for a 'permanent presence' on the regulatory committees.  

As well as seeking a central role on the regulatory committees, the claimants would ideally have liked a veto over all regulatory committee decisions. This proposition was anathema to the non-claimants. The rules governing decision-making in the regulatory committees on issues of substance require a two-thirds majority which must include a clear majority of both claimants and non-claimants. In the drafts up to and including Beeby V regulatory committee decision-making was to be by a simple majority, but with a veto provision for both the claimant(s) and the sponsoring state. This was dropped in Beeby VI.  

This chambered voting system means that neither claimants nor non-claimants have an absolute veto. However, neither can each group be 'out-voted'. In this respect they are treated equally. However, this provision modifies the accepted norm in the Treaty and consultative process where claimant (and non-claimant) interests are protected by consensus. It does so to the potential disadvantage of the claimants some of whom at least wished to maintain an absolute veto over decision-making. In this context, there is no rule that the claimant majority must include the claimant to the area over which the regulatory committee has competence and no procedure for a Party to declare itself not bound by regulatory committee decisions against its wishes. It is therefore technically possible for the required majority of three of the four claimants not to include the

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23. A non-claimant cannot use its membership of a regulatory committee or its conduct of minerals activity either on the continental shelf or the continent proper, to argue that the relevant claimant is relinquishing its sovereign rights to control access to its resources. Neither can a claimant use the argument in reverse.

24. Given that both states maintain that their activities in the Antarctic provide them with a basis of territorial claim, this participation in all regulatory committees could raise some interesting theoretical legal debates about the strength of their possible claims if the Treaty should ever collapse. They were referred to as the two members which "at the time of entry into force of the Antarctic Treaty, maintained the largest presence in Antarctica" a reference which was inserted in Beeby III and later dropped.

25. It would also have been difficult to include one of the superpowers and exclude the other from this guaranteed position on all regulatory committees.

26. In other words, three out of the four claimants and four out of the six non-claimants.

27. As in the opt-out clause in CCAMLR, for example.
relevant claimant. It is unlikely, however, that any claimant would refuse to support another claimant in respect of its territory. Such a refusal would carry the implication of interference in the exercise of territorial rights as well as raising the prospect of a reciprocal withdrawal of support at some time in the future. Thus claimant solidarity in this respect rests on diffuse reciprocity.

The claimant states also argued that they should prepare any management schemes for activity in their area, a proposal that was included in Beeby I.28 The pro-mining states would have preferred that the management scheme be drawn up by the Operator and the Sponsoring State and submitted to the regulatory committee with the application for an exploration permit. In an attempt to forestall suggestions that regulatory committees should automatically include any relevant mining states, which the claimants perceived as an erosion of their power, they modified their preferred position and proposed that a technical subcommittee of the regulatory committee should discharge be responsible for the management scheme.29 The rules adopted provide that regulatory committees must have recourse to the Sponsoring State and the relevant claimants and, as may be required, one or two additional members of the regulatory committee in preparing the management scheme (article 46). Given that the management scheme has to be accepted by a majority of the claimant states it makes sense to have them involved in its preparation. The decision to issue a development permit, however, is made by the whole regulatory committee (article 54).

Claimants and economic rights
Claimant concerns about their rights to economic benefits, such as royalties and taxes, were also an important part of the internal accommodation. During the negotiations they advanced proposals for revenue-sharing as well as for control over inspectors and other aspects of compliance. They wanted at least a 50 percent levy on any taxes on royalties and taxes upon other revenue to accrue to them (Triggs 1988:208). The non-claimant states argued that the Sponsoring State should have the right to tax any revenues. In determining the disposition of surplus revenue the Commission must ensure that the interests of the members of Regulatory Committees having the most direct interest in the matter in relation to the areas in question are respected in any disposition of that surplus (article 35(7)(b); my emphasis).

While this does not refer specifically to the claimants it can be interpreted in this light. However it can also be interpreted to refer to any state which is sponsoring minerals

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28. Developing countries opposed this provision, concerned that they would have almost no influence over the management scheme.
29. This tactic was not successful, however, in preventing automatic membership for relevant mining states, although this does apply only while that state is sponsoring specific activities.
activity in that area. The claimants were therefore unsuccessful in securing explicit reference in the Convention to their right to a share of revenues from minerals activities but do not specifically cede taxing rights to 'foreign' governments.  

**Claimants and jurisdiction**

Another difficult question with implications for the accommodation between claimants and non-claimants was the question of jurisdiction in the area covered by each regulatory committee. In other words, whose laws would apply to private enterprises and their employees engaged in minerals activity. The claimants would have preferred claimant law. West Germany (a likely mining state) argued that the law of the sponsoring state should apply. At the January 1988 meeting the USSR, Poland and the US suggested a compromise to the effect that if jurisdictional disputes arose, then the parties should consult. The Convention effectively adopts this approach and thus leaves the question unanswered. The management scheme is required to include reference to the applicable law only "to the extent necessary" (article 47(q)). This follows the Treaty system practice of avoiding difficult questions or leaving them to be dealt with at a later date. It is likely that applicable jurisdiction would follow the unstated practice of the Treaty by which nationals are subject to the law of their own state, or to the law of the sponsoring state in the case of a joint venture or where the operator is not from the sponsoring state.

**Claimants and non-claimants revisited**

The Convention manages skilfully to maintain the compromise between the claimants and non-claimants. Neither group attained its preferred outcome but that was unlikely from the beginning.

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30. Argentina and Chile made explicit declarations on signing the Convention on economic benefits as understood in article 35. Argentina identified the claimants as those with "the most direct interest" (Beck 1991:249). Chile expressed its understanding that nothing in the Convention impeded or affected agreements which the claimants might negotiate "to give effect to the economic benefits to which they were entitled (Beck 1991:249). Paul Keating, then Treasurer of Australia, suggested in a letter to the Minister of Foreign Affairs that the UK and France had conceded at Wellington instead of continuing with Australia to press for a specific revenue share to be specified in the Convention. Their decision, he said, reflected the favourable outcome in respect of equity participation (that is, no formal requirement for Third World participation in consortia) and their position as major potential explorers and developers in Antarctica (P Keating [letter] 1988).

31. As chapter two indicated, the question of jurisdiction for anyone other than inspectors was effectively sidestepped in the Treaty so that all states could continue to exercise jurisdiction on their own grounds.

32. Jurisdictional disputes are specifically excluded from the formal dispute settlement procedures established in the Convention. The Convention echoes the provisions of the Antarctic Treaty in providing simply for the disputing parties to consult together with a view to reaching a mutually acceptable solution on disputes over jurisdiction (article 7(3)).
The claimants made concessions on their preferred position on control over resources and possibly, in so doing, over the strength of their claims to territory. As Triggs (1985:204) suggests, with respect to the inclusion in the Convention of the article IV provisions, "it is doubtful that any such provision could protect the claimant states against a conclusion that their sovereignty in Antarctica, if it exists, has been diminished, were they to ratify a minerals regime which gives access to third states to resources within their claimant territory".

Claimant concessions were, primarily, to the likely mining non-claimants, rather than to the non-claimants generally although a clear answer to the question of whether either group lost or gained disproportionately is elusive. The Convention leaves much of the detail of the compromise between claimants and non-claimants still to be hammered out on a case-by-case basis once minerals activity begins. The decision-making procedures established under the Convention, especially in the regulatory committees, ensure that both claimants and non-claimants (especially mining non-claimants) have the opportunity to continue to press their particular interests.

Area of applicability
As well as the specific questions of influence in the institutions of the Convention and authority over resource activity, the sovereignty issue was also an important factor in determining the area of applicability of the Convention. The Parties had to confront the disputed status of the continental shelf (where much of the hydrocarbon potential was thought to lie) and the rights of the claimants, as coastal states, to declare Exclusive Economic Zones.

The continental shelf is contiguous with land and is thus, in international law, part of the territory of a coastal state, rather than part of the deep seabed which lies beyond national jurisdiction. For the claimants, therefore, the Antarctic continental shelf was territory under their national jurisdiction. The non-claimant position denies the exercise of national, and therefore coastal state, jurisdiction in the Antarctic. However, under the Law of the Sea Convention, resources in the deep seabed and subsoil thereof beyond national jurisdiction are part of the global commons. Thus if no national jurisdiction is judged to exist in the Antarctic, then the continental shelf, technically, shares the legal status of the deep seabed. The logical outcome of this could well be that the authority of the International SeaBed Authority (ISBA) established by UNCLOS to manage deep seabed resources for the benefit of the international community could

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33. The Law of the Sea Convention is not yet in force and so it might be disputed to what extent it creates customary international law with respect to the deep seabed and the common heritage principle. Nevertheless, with respect to the Antarctic, the dispute was not whether the deep seabed was a global commons, but where the deep seabed stopped with respect to a continent argued by much of the international community to be beyond national jurisdiction.
extend to the land margins of the Antarctic continent. The non-claimants shared the claimant opposition to this proposition, but were reluctant to agree to anything that appeared to give legitimacy to the exercise of coastal state jurisdiction in the Antarctic.

In defining the area of applicability the general principles of the Convention apply to the Antarctic Treaty area (article 5(1)). On the area in which authority over regulatory activity may be exercised, the consultative parties adopted a legal cleverness which avoids any direct mention of coastal state jurisdiction over the continental shelf but which nevertheless provides that the Parties jointly exercise regulatory control over offshore areas. Article 5(2) specifies that

> the Convention shall regulate Antarctic mineral resource activities which take place on the continent of Antarctica and all Antarctic islands, including all ice shelves, south of 60°South latitude and in the seabed and subsoil of adjacent offshore areas up to the deep seabed (my emphasis).\(^{34}\)

Adjacent offshore areas are therefore distinguished from the deep seabed. The deep seabed is defined in article 5(3) as

> the seabed and subsoil beyond the geographic extent of the continental shelf as the term continental shelf is defined in accordance with international law (my emphasis).\(^{35}\)

Thus, when these articles are read together, the continental shelf (which is not part of the deep seabed) can be equated with adjacent offshore areas over which the Parties assert regulatory control (but do so without any reference to coastal state jurisdiction). While the continental shelf is not explicitly defined in article 5(2) as part of the continent (in the way that ice-shelves are) neither is it excluded from regulatory coverage.\(^{36}\) The Convention also effectively ensures that decisions on regulating the continental shelf stem from the authority of the Commission which comprises the consultative parties acting collectively.

Under international law coastal state rights to the continental shelf are inherent (Triggs 1987b:90). No formal declaration of sovereignty is required. Therefore any assertion by a claimant that it is exercising jurisdiction over the continental shelf of its territory

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34. The Final Act noted that the area of regulation does not extend to the continental shelf of islands situated north of 60°South.
35. The Final Act noted that the geographic extent of the continental shelf would be determined by reference to paragraphs 1 to 7 of article 76 of UNCLOS.
36. The continent is thus, to some extent, implicitly defined by what it is not (that is, it is not deep seabed) rather than what it is. Nevertheless these articles do not provide any justification for the Treaty Parties collective right to exercise jurisdiction (or regulatory control) over "adjacent offshore areas".
would technically not contravene article IV(2) of the Antarctic Treaty which forbids any extension of claim (although it may well be taken to contravene the spirit of the compromise).  

The situation on the exercise of coastal state jurisdiction, and enlarging of a claim, differs with respect to EEZs. Under international law a coastal state must declare its jurisdiction over an EEZ. In the Antarctic, such a declaration by a claimant could well be interpreted as an enlargement of a claim. The Convention makes no reference to this matter and thus continues the Treaty practice of avoiding difficult jurisdictional questions.

The compromise on sovereignty is effectively maintained. However the solution in the Convention does focus on the exercise of joint regulatory authority, and thus has the potential to contribute to the erosion of the claimant position which emphasises individual regulatory authority.

The internal accommodation: institutions, rules and interests
As observed above, the cleavages between the claimants and non-claimants over the exercise of sovereignty, while fundamental, were not the only competing interests that had to be addressed. Others included the relationship between the consultative parties and the non-consultative parties, and developing and developed states. The task of elaborating an institutional compromise which would meet both the collective and individual interests of the negotiating parties was difficult. Further, whatever compromise was acceptable to all parties also had to embody rules and procedures that would function satisfactorily once the Convention came into effect.

The focus of this settling of competing interests was in the membership rules and the decision-making rules. The normative and procedural dimensions of the Antarctic regime favoured control in consultative party hands, an effectively restricted membership and consensus decision-making. With the exception of consensus decision-making the parties adhered to these unwritten rules of the Antarctic regime in elaborating the Minerals Convention.

Membership rules
Membership rules were important with respect both to accession to the Convention and to participation within the institutions of the Convention as each state, or group of

37. It does, however, raise the issue of whether claimants will be recognised as such on regulatory committees when the area under control is an offshore area. However most of the claims extend in their delimitation to (or beyond) 60°South, thus including the continental shelf.
38. Such actions would have extended the area under national (coastal state) jurisdiction.
states, sought relative power to protect its interests. The general membership rules give priority to the Antarctic Treaty Parties and thus serve to tie the Convention to the Antarctic Treaty. Specific rules on participation within the Convention give priority to the consultative parties. There was a general uncompromising opposition by the consultative parties to non-consultative party (NCP) wishes for a share in decision-making.

The NCPs were unsuccessful in their quest for a substantial role within the Convention. This was because they had no formal role in the minerals negotiations and thus had limited bargaining power. As noted in chapter five, they were generally excluded from contact groups where the key issues were thrashed out. Further, the negotiating process was well underway by the time they were invited to attend the special consultative meeting.

While the Convention provides, in principle, that participation in mineral resource activities should be open to all states which have an interest in such activities and are prepared to subscribe to a regime governing them, only states which are already Antarctic Treaty parties may accede to the Convention and participate in its institutions. Thus subscribing to a regime governing minerals activity requires also subscribing to the Antarctic Treaty. From the consultative party point of view, which is that the Minerals Convention is an integral part of the Antarctic Treaty system, this was logical and acceptable. It is also a way of maintaining 'ownership' of the Antarctic issue. From the point of view of non-Treaty states there is something of an internal contradiction in a convention that purports to be open to all but which puts restrictions on that openness.

Further, while no state may sign the Convention unless it is already an Antarctic Treaty signatory, any state which has signed the Antarctic Treaty but has not subsequently signed the Convention, nevertheless has the right to participate to some extent in the institutions of the Convention.

The institutional membership rules mirror the Antarctic Treaty. Original signatories to the Convention automatically meet the requirements for permanent Commission membership, whereas others may hold membership only while they meet an activities criteria. Although the Minerals Convention is separate from the Antarctic Treaty, institutional, and thus decision-making, power resides directly with the Antarctic Treaty Consultative Parties.

Each Party to the Convention which was a consultative party on the day the Convention opened for signature (25 November 1988) automatically qualifies for Commission
membership. Any other Party to the Convention which is actively engaged in research that is directly relevant to decisions about Antarctic minerals resource activities may become a member of the Commission (article 19(2)(6)).\(^{39}\) Where that Party is a consultative party,\(^{40}\) then it is deemed to have met the requirements for Commission membership unless more than one-third of existing Commission members object.\(^{41}\) Any Party to the Convention which sponsors exploration or development and which does not fall into either of the two categories above (most likely a NCP)\(^{42}\) may be a member of the Commission only while the appropriate management scheme is in force and only if its membership is accepted by all Commission members.\(^{43}\) In other words, non-consultative parties are treated differently from consultative parties in the institutions of the Convention.

Any party to the Convention which is a non-consultative party to the Antarctic Treaty must, in applying for Commission membership, declare its intention to abide by recommendations made under the Antarctic Treaty.\(^{44}\) This serves to tie participation in the institutions of the Convention to the Antarctic Treaty and widen adherence to its principles and rules. Any Convention Party which meets none of the criteria for Commission membership activities may become an observer to the Commission. So too, however, may any Antarctic Treaty party which is not a party to CRAMRA.

Membership of the powerful regulatory committees is determined by the Commission (which is dominated by the consultative parties). Given the complicated formula established for regulatory committee membership,\(^{45}\) NCPs are unlikely to sit on a regulatory committee unless they are sponsoring minerals activities.

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39. This refers to Treaty parties which were not ATCPs on 25 November 1988 - in other words a state which attains consultative party status after that date, or a non-consultative party.

40. In which case it would have attained that status after 25 November 1988. It is more likely that a state in this category would be a new ATCP rather than a NCP given that consultative party status under the Treaty requires certain activities criterion, particularly scientific research, to be met. It may also apply to a state in the process of applying for consultative party status.

41. In earlier Beeby drafts this category of membership was specifically defined as "each other Party ... during such time as it is an Antarctic Treaty Consultative Party".

42. That is, it was neither an ATCP on 25 November 1988, nor is it engaged in activity relevant to decisions on mineral resource activity.

43. These categories of membership were effectively established in Beeby I although the relevant article went through a series of redraftings which distinguished between those Parties which were ATCPs at the time the Convention was adopted, and those which attained that status subsequently.

44. Under Treaty practice, NCPs are not bound by consultative meeting recommendations unless they specifically declare themselves bound.

45. Each 10 member regulatory committee must include four claimant states (including the claimant(s) to the area over which the committee has competence), both the US and the USSR, as well as four other non-claimants. Of those 10, three must be developing states. States which sponsor mining in the area must also be represented.
Membership of the Advisory Committee (which is not a decision-making body) is open to all Parties to the Convention. However, the meeting schedule and rules of procedure of the Advisory Committee are subject to approval by the Commission and are, therefore, under the control of the consultative parties. The consultative parties also rejected a proposal at the Tokyo 1987 meeting that the Advisory Committee, to which NCPs belong, should be able to declare a management scheme unacceptable. Thus the authority of the institutions in which the NCPs participate as of right was diluted during the negotiations.

The Special Meeting of Parties to which many ATCPs were completely opposed, has an advisory role only with respect to the decision to identify an area. The NCPs wanted a substantial role for the SMP and were supported by China and the USSR in this. At the Rio meeting (March 1985) Beeby proposed that the decision to open an area should be made not only on the basis of a consensus among consultative parties but also a majority of NCPs, with the decision taken not by the Commission but by the Special Meeting of Parties. The ATCPs were apparently "extremely hostile" to the idea and moved to block any power-sharing. The creation of the SMP was itself a concession to NCPs, but the only one they were successful in achieving. Unless they are sponsoring minerals activity, NCPs are unlikely to be members of either of the decision-making institutions of the Convention. They therefore have little effective power in the minerals regime.

The primacy of the Antarctic Treaty Consultative Parties on the Commission, which takes the decision to open an area, and on the regulatory committees (responsible for the management scheme and the development of specific guidelines and the issuance of exploration and development permits) means that mineral resource activities continue to be under the effective control of the consultative parties. Thus their interests and their values, and their 'ownership' of Antarctic issues, prevail. The consultative parties justified their right to make exclusive decisions on the minerals issue, vis-a-vis the NCPs and non-Treaty parties, by reference to their scientific and diplomatic experience in the Antarctic and their obligations under the Treaty to maintain peace and stability in the region and to protect the Antarctic environment.

**Decision-making rules**

Consensus decision-making under the Antarctic Treaty ensured that any measures adopted were not contrary to the interests of any one state or group of states. Where

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46. That is both consultative parties and non-consultative parties.
47. Observer status is granted to any non-Party which is nevertheless a signatory to the Antarctic Treaty or CCAMLR.
48. This was included in Beeby IV but was dropped in Beeby V.
49. This includes all parties to the Convention. The SMP is not a formal decision-making body.
that ruled was modified, as in CCAMLR for example (see chapter four), decisions likely to affect fundamental political or economic interests were still subject to consensus. There was a similar need to ensure that fundamental interests could be protected under CRAMRA and that the decision-making rules would be workable.

There were differences of opinion during the negotiations on whether the unanimity rule should apply to decision-making under the Convention. The Soviet Union for example favoured a broad consensus approach to decision-making as well as opposing unfettered power for the regulatory committees. Australia and the US argued that the possibility of a veto by any one state should be avoided (Triggs 1984a:542), although they probably did so for different reasons. On the one hand, the claimants (including Australia) were concerned that under a consensus rule they could be denied access to resources in the areas of their claims. Pro-development states such as the United States feared that a consensus rule would provide an opportunity for proposals to be blocked on environmental grounds. A US Department of State official explained that the "consensus requirement was particularly difficult for the United States to accept since it ... has an interest in access to mineral resources (if they exist)" (Scully [letter] 1989).

From a procedural perspective, a requirement for consensus in such a complex decision-making process as that established under CRAMRA might well have resulted in paralysis. Early Beeby drafts provided for a two-thirds majority within the Commission even on the decision to open an area and on financial issues. A proposal was made at the final negotiating session for a qualified majority rule to apply to the identification of an area for exploration and development (ECO XLVIII(6), 1988).

Consensus is not adopted as the general rule in either of the decision-making institutions of the Convention. Consensus, which is defined as "the absence of a formal objection" (article 22(5)), is required only in the Commission and only for the important threshold decision to identify an area for possible exploration and development, for the adoption of the budget and for decisions on budgetary and

50. A proposal was made at the Rio meeting that the decision to open an area should be made by the SMP under a consensus rule (see text above).

51. There is, however, nothing in the rules to prevent the Parties seeking to attain a consensus. The Advisory Committee is not a decision-making institution. The only reference to voting procedures in the Advisory Committee is to a two-thirds majority required to adopt rules of procedure, which are subject to the Commission's approval anyway. In presenting its reports to the Commission and any regulatory committee, the Advisory Committee is required to reflect the conclusions reached as well as all the views expressed. Similar guidelines apply to the Special Meeting of Parties.

52. If the Chair of the Commission determines that an objection is likely with respect to the decision to open an area for minerals activity, then he (or she) shall consult with members of the Commission and convene those members most directly interested to seek to reconcile those differences and produce a generally acceptable proposal.
related matters. Matters of substance in the Commission (including whether a matter is one of substance) require a two-thirds majority of those present and voting. A simple majority rule applies to procedural issues within the Commission.

Although decision-making in the regulatory committees does not require a consensus the rules ensure that neither claimants nor non-claimants can dominate. On substantive issues a chambered voting system applies (described above). A two-thirds majority is required but decisions to approve a management scheme or to issue a development permit must include three of the four claimants and four of the six non-claimants on the regulatory committee. Decisions on revising the guidelines or general requirements applicable to the area for which the regulatory committee is responsible must be approved by at least two claimants and at least three non-claimants.

As noted above, there were economic as well as political interests to be taken into account in settling the internal accommodation. In this respect, the interests of the likely mining states were set against those of the claimants (discussed above) and against the interests of developing states within the Treaty system.

The interests of the mining states
The likely mining states (Japan, West Germany, the US and the claimants France and the UK), and mining industry interests generally, were keen that the Convention facilitate minerals activity and, particularly, non-discriminatory access to mineral resources. In this respect their interests differed markedly from the claimant and the developing states. They were also keen to ensure security of ownership of any resources found or extracted, security of investment and protection against arbitrary interference with minerals activity.

As noted above, in the discussion on claimant interests, the potential mining states were successful in arguing that any regulatory committee should include states sponsoring or conducting minerals activity in the area of competence. Thus they had a guaranteed role in decision-making. The terms and conditions of management schemes guarantee title over resources to the relevant Operator as a result of exploration or development (but not prospecting). Operators are also permitted to retain commercially sensitive and valuable data. There are no formal requirement for joint ventures with, or technology transfer to, developing states.

However the mining states do not have the right, which they sought, to draft management schemes prior to their presentation to regulatory committees. Further,

53. In early Beeby drafts this was to be a simply majority.
54. These rules do not prevent a regulatory committee from endeavouring to reach a consensus.
exploration and development permits may be cancelled in the event of likely (or actual) environmental damage.

The interest of states with established minerals industries in seeking anti-subsidy provisions in the Convention was not met. Australia was particularly active, but unsuccessful, in arguing for Beeby III provisions which required the conduct of minerals activity in an "economically rational manner" to be retained. The Final Act contains a rather general, and probably unenforceable, suggestion which notes that "unfair economic practices including certain forms of subsidies could cause adverse effects to the interests of Parties ... and that such effects should be addressed in the context of the relevant multilateral agreements" (SCM IV 1988c:2-3). Those agreements are not specified but the reference is doubtless to the General Agreement on Tariffs and Trade.55

The interests of the developing states

As well as settling the balance between the interests of the claimants and non-claimants and the relative power of the consultative and non-consultative parties, the interests of the developing countries within the Treaty system had to be given some weight. Some attention to the interests of developing states within the Convention would provide the consultative parties with an argument (not altogether water-tight) to deflect criticism that they were a group of western industrialised states monopolising decision-making on, and the resources of, the Antarctic.

The relative strength of the less-developed consultative parties grew as the negotiations progressed. The ranks of the ATCPs swelled to include Brazil and India from 1983 and China and Uruguay from 1985.56 The developing countries established their own power base within the negotiations and eventually became a group to be reckoned with (Andersen 1991:106).

Their interests primarily lay in participation in resource exploitation and some distribution of benefits as well as a say in decision-making.57 These interests were in

55. Parties to the Convention are to determine how such multilateral agreements will apply to Antarctic mineral resource activities.

56. Argentina and Chile were also taken to fall within the 'developing country' definition, even though the term is not defined. However their interests were dominated by their claimant status. Developing countries who were NCPs at the time included Cuba, Ecuador, Papua New Guinea and Peru. No African or Middle-Eastern countries are signatories to the Antarctic Treaty, and those Asian countries which are would no longer be considered developing (with the possible exception of North Korea).

57. At the plenary session of ATCM-XIII (1985) Peru (a NCP) observed that "as a traditional mining country, Peru is particularly concerned that the future regime for ... Antarctic resources should take into account the interests of mineral producing developing countries" (Final Report 1985:195). Peru also referred to the need to safeguard the regional ecology.
conflict with those of the technically advanced states, particularly the likely mining states, who were determined not to be required to share technology or to enter into mandatory joint ventures with less developed states.58

There are references throughout the Convention to the interests of developing countries which are party to the Convention but nothing on developing countries which are not signatories.59 International participation in Antarctic mineral resource activities by interested Parties to the Convention, in particular developing countries (whether ATCPs or NCPs), is to be encouraged although exactly how is not specified. At least three members of each regulatory committee must be developing countries.60 Brazil, China, India and Uruguay tabled this proposal at the Montevideo meeting to secure some balanced representation on the regulatory committees and a role in decision-making. The Final Act also noted that it was desirable that the two-third majority for regulatory committee decisions should include at least one developing country.61

Some recognition is given to the difficulty of participation in Antarctic activity faced by developing countries. In disposing of surplus revenue (from fees, levies, and other payments) the Commission is required, *inter alia*, to promote participation in scientific research in Antarctica (especially related to the environment and resources) by all Parties but in particular by developing country Parties.62 However this does not specifically facilitate participation in minerals activities.

Developing country ATCPs, supported by the Netherlands and East Germany, joined the NCPs in advocating a stronger role for the Advisory Committee which they saw as an important source of advice and assistance in areas in which they did not have expertise.

58. The American Petroleum Institute expressed its views forcefully. "With the debacle of UNCLOS III fresh in our collective minds, the spectre of creating formalised institutions that would encourage joint ventures with developing countries should be anathema" (API, [n.d.]).
59. For a developing country to become a party to the Convention, it must also become a signatory to the Antarctic Treaty.
60. They may be claimant or non-claimant members. It was initially included in the drafts as one or two developing countries from among the claimants, and one or two from among the non-claimants. The final number adopted was argued (SCM-IV 1988c:5) to reflect the balance between developed and developing countries at the time. The Final Act recognised that if the balance was altered significantly there would be a case for an amendment to the membership provision.
61. The entry into force requirements of the Convention require ratification from five developing countries who participated as ATCPs in the final session of the SCM. As this is normally taken to include Argentina and Chile (whose signatures were also required as claimant states) the others who meet this criteria would be Brazil, China, India or Uruguay.
62. In 1984 Chile suggested that a fund be established under the Minerals Convention to facilitate developing nations participation in Antarctic science (Kimball 1985a:10).
The developing countries also argued that, in the authorisation of minerals operations, priority should be given to those operations which included opportunities for international participation and developing state involvement. In dealing with competing applications for exploration permits regulatory committees are required, all other things being equal, to give priority to applicants with the broadest participation including developing countries. It may therefore be in the interests of the likely mining countries to involve developing countries in some way. The Commission is also to elaborate joint ventures and other participatory opportunities with particular relevance to developing countries which are party to the regime. While developing states got very little from the Convention in terms of assistance for minerals activity, their guaranteed position on regulatory committees would enable them to continue to advance their interests.

**The external accommodation**

In spite of claims to the contrary, the external accommodation was not high on the agenda of concerns. The two major aspects of this related to the interests of non-Treaty parties (discussed earlier in this chapter) and some role for international organisations including non-governmental environmental organisations. NGOs interests in the environmental dimension of the minerals convention are discussed later in this chapter.

*The interests of all 'mankind'*

The consultative parties adopted the principle, echoing the Antarctic Treaty, that "in dealing with the question of mineral resources [they] should not prejudice the interests of all mankind [sic]". The Convention pays some lip-service to these interests but makes no concrete moves in this direction.

The interests of humankind, which the consultative parties sought not to prejudice, have never been clearly specified. In the 1960s and 1970s the consultative parties argued that the interests of the international community with respect to the Antarctic were met, first, by the peace and stability which the Antarctic Treaty (and, by implication, the consultative parties) had brought to the region and, second, by advances in scientific knowledge (which was to be made freely available) as a result of scientific cooperation.

The exploitation of minerals resources, more so than marine resources, raised the question of access by non-Treaty states to the benefits of resource activity in an area they argued to be a global commons (see chapter five). Non-Treaty states charged that...

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63. Other states stressed that financial soundness, technological expertise and a commitment to environmental protection should be determining factors (Newman 1987:432).

64. In Beeby III and IV procedures for dealing with competing applications for exploration permits were to be decided on a first come, first served basis.
Antarctic resources were thus the common heritage of humankind and that any decisions about their management should be made by the whole international community, not a self-selected, predominantly industrialised part of it. Indeed, as chapter five has suggested, it was the minerals issue more than any other which mobilised this external attention. That interest arose in the context of the demands for a New International Economic Order in the 1970s and the negotiation of the third UN Convention on the Law of the Sea with its related exposition of the common heritage principle.

This argument was not favoured by the consultative parties who were, nevertheless, aware of the need to make some concession to these interests to provide an argument on which to base the legitimacy of the Convention and their right to negotiate it. The Convention notes that

the Antarctic Treaty system has proved effective in promoting international harmony in furtherance of the purposes and principles of the Charter of the United Nations ... 

it is in the interest of all mankind [sic] that the Antarctic Treaty shall continue forever to be used exclusively for peaceful purposes ... [and]

the effective regulation of Antarctic mineral resource activities is in the interests of the international community as a whole

Beyond these general principles, there were differences of opinion among the consultative parties on how to manage the external accommodation. In particular there was debate on whether an open participation regime should be established or whether joint ventures or a fund to assist with scientific work should be actively encouraged.

The need to "take into account the interests of the international community as a whole" is included in the specific objectives and principles of the regime (article 2(3)(g)). Yet there is no concession, beyond these general principles, to the demands of non-Treaty states. While participation in Antarctic mineral resource activities "should be open to all states which have an interest in such activities", accession to the Convention is, as already noted, limited to signatories of the Antarctic Treaty (article 61). The question of developing state participation was dealt with as part of the internal accommodation. There is nothing in the Convention on the general sharing of benefits with the international community. Woolcott argues (1985b:23) that the idea of revenue-sharing with the international community was premature because development of mineral
resources was so far away. However, neither the claimants nor the potential mining states were likely to relinquish any economic benefits of resource exploitation.65

*International organisations*

Both non-Treaty states and NGOs criticised the secrecy of the Treaty system and called for procedures to encourage greater input from the international community and improved transparency and public accountability on the part of the consultative parties.

The general practice of the ATCPs was to discourage close working relationships with other organisations unless such cooperation was essential to the conduct of activities in Antarctica and only where that interest was limited to scientific and technical issues.66 However, as Kimball argues, (1983a:7) "[t]he ATCPs ... can no longer ignore those who insist upon public accountability in this area, because otherwise they undermine their own credibility as responsibly exercising obligations to protect the Antarctic environment".

The usual approach was modified to a degree in CRAMRA, in line with a slowly changing attitude among consultative parties to their relationships with organisations outside the Treaty system and on the opening up of the Treaty system.67 They provided for limited participation by international organisation in the procedures of the Convention and some degree of transparency although a great deal of this is discretionary.

The views of interested international organisations may be considered by the Advisory Committee on matters before it. The Committee may establish procedures to transmit relevant information to such organisations although this process is subject to review by the Commission. Information and advice from other scientists and experts or scientific organisations may also be sought by the Advisory Committee on an ad hoc basis.

NGOs wanted procedures for the participation of interested conservation organisations in the processes of the Convention. The Commission shall, as appropriate, cooperate with the International Union for the Conservation of Nature and Natural Resources (IUCN) and "with other relevant international organisations, including non-governmental organisations". These organisations may be accorded observer status on

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65. On 8 June 1988, at the request of Malaysia, the UN circulated a statement from 19 states expressing "their utmost regret and deep concern" about the adoption of the Minerals Convention (Beck 1989c:25).

66. As in the case of the World Meteorological Organisation for example,

67. Those changes were discussed in chapter two. The IUCN was invited to ATCM-XIII as an observer. The Antarctic and Southern Ocean Coalition was granted observer status to CCAMLR in 1988 after many years of lobbying.
the Commission and the Advisory Committee (and, by default, to the Special Meeting of Parties). The Commission may also enter into agreements with such organisations. SCAR thought it that it should be given observer status on the Commission and the Advisory Committee (Final Report 1989:190). While SCAR is not specifically mentioned by name in this context, it is identified (article 34) as a component of the Treaty system with which the parties to the Convention should cooperate. Generally, there was little formal role for SCAR in the institutions and procedures of the Convention.

Article 34 also establishes that the Commission shall cooperate with the United Nations, its relevant specialised agencies and "as appropriate, any international organisation which may have competence in respect of mineral resources in areas adjacent to those covered by this Convention". This is an oblique reference to the International SeaBed Authority established under the Third UN Convention on the Law of the Sea.

However these provisions in the Convention are vague and susceptible to interpretation. Granting observer status is the prerogative of the consultative parties in accordance with the rules of the Convention. It is they who will interpret what "as appropriate" means. Further, the reference to non-governmental organisations is not specifically directed towards environmental interest groups. Rather, it enables working relationships to be established with organisations such as SCAR, SCOR and the IUCN.

On the whole, however, like the NCPs and non-Treaty states, international organisations were marginalised in the Convention.

**Transparency and accountability**

The rules on public availability of information under the Convention are more extensive than those adopted for the consultative process. The Commission is required to give advance public notice of matters on which it has requested advice from the Advisory Committee. This would include the decision to open an area for potential exploration and development. The Advisory Committee is also required to give advance public notice of meetings and matters before it in order to permit the receipt and consideration of views from international organisations.

The Commission must also ensure that a publicly available record is maintained of its meetings and decisions, and of information, notifications and reports submitted to it including, therefore, Environmental Impact Assessments (EIAs) and regulatory

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68. It is unclear what role has been ascribed to observers, but under the consultative process, observers (whether NCPs or other invited observers) have been able to speak at meetings although they do not participate in formal decision-making.
committee monitoring reports. The Advisory Committee must also make public reports of its meetings and decisions but they must first be circulated to all Parties and observers. Regulatory committees are similarly obliged to ensure that a record is available of all their decisions and management schemes in force. However commercially sensitive data is exempted from this requirement. This includes the results of prospecting, which is often little different from scientific geological research.69

However there are no guidelines on the content of reports of meetings.70 These rules also do not require that any documents tabled at meetings be made public. Generally these transparency rules relate to the transmittal of information but not to procedures for public input. Further, the requirements are most limited with respect to the regulatory committees, which is where major decisions on exploration and development, as well as compliance, are taken. This has implications for public debate on environmental issues, as discussed below.

Protection of the environment under the Minerals Convention

Non-governmental environmental organisations

The environmental protection dimension of the negotiations was monitored closely by non-governmental organisations who, as described in chapter three, were active in challenging and exposing the environmental record of the Treaty system. They challenged the assumptions upon which the negotiation of the minerals convention were based. They suggested that the principle of environmental protection was inherently incompatible with the objectives of regulating minerals activity and that any impact on the environment was unacceptable. As Schofield argued (1976:20) "[L]ost somewhere in all the rhetoric ... is the very first question that ought to be asked about the possible exploitation of Antarctica's mineral resources: not how, when or by whom, but whether to exploit them at all" (emphasis in original). NGOs argued that it was not possible to reconcile the two objectives of minerals activity and environmental protection.

This position shared by some in the system. Hambro (1974:223) argued "It is quite clear that any mining ... activity on a grand scale will give rise to pollution and will endanger the ecology of the continent and thereby be in contradiction with one of the underlying aims of the treaty system and in violation of several recommendations already adopted". Not all consultative parties accepted this view. The British Foreign Office argued that it did not accept "that environmental risks of Antarctic mining are

69. Geological research under the rules of the Antarctic Treaty, on the other hand, must be exchanged among the consultative parties at least (although this was not always fully observed in practice).

70. The Final Reports of consultative meetings, for example, are summaries of debates but do not provide detailed minutes.
intrinsically unacceptable" (FCO 1989b:2) although it did suggest that they could be unacceptable in any particular case.

NGOs also argued that exploitation of mineral resources, even under the auspices of an international agreement, threatened to "exacerbate tensions between claimants and non-claimants, undermine the spirit of cooperation in scientific research and destabilise the security of the region" (ASOC 1989b:6).

The NGOs adopted a dual strategy during the negotiations. Generally they opposed the negotiation of a minerals convention, arguing instead that the Antarctic should be permanently off-limits to minerals activity and should be declared a World Park. However, activists who were close to the meetings, or who were on national delegations, lobbied within the Treaty system for stringent environmental protection mechanisms in the event (which seemed most likely at that stage) that the Convention was successfully negotiated and implemented.

As well as directing their attention to the negotiations themselves, NGOs also sought to influence the national policy decisions on minerals activity by lobbying at a domestic level, especially in those countries where they had access to the policy process, and by drawing public attention to the negotiations. Support was provided through transnational networks for national NGOs to keep them advised of the progress of the negotiations and to provide lobbying assistance.

A convention for protection or development?
The key dimensions of the internal accommodation were political and legal ones which sought to satisfy the interests of the Treaty parties in the institutional bargaining process. It was the solutions to these accommodations which gave shape to the Convention. However the consultative parties justified their negotiation of the Minerals Convention in part on the need to ensure that the fragile Antarctic environment would be protected if minerals activity went ahead, and their special ability and knowledge to undertake this task. Beeby emphasised that "the objective of the Antarctic countries during the course of [the] negotiations ... had always been to preserve and strengthen the ATS and to ensure that the unique and fragile environment should not be damaged by mining activity" (SCM-IV 1988a:1; my emphasis).

The consultative parties argued that the growing interest in the mineral resources of the Antarctic would (if they took no action) result in an unregulated scramble which could have dire environmental consequences. The Convention, they suggested, was necessary to prevent this. NGOs disagreed with the logic of an 'unregulated scramble'. They suggested that mining interests would be reluctant to undertake exploratory activities in
the absence of any certainty of their rights to exploit any minerals found. Crabbe (1985:367) argues that "no private or government enterprise would be willing to commit vast sums of money for exploitation or development prior to the establishment of international agreements on minerals rights". Quilty suggests (1986-87:117) that the absence of a regime "allowing for secure tenure of title ... [is a] severe hindrance to commercial minerals exploitation". Wallace (1988a:9) cites the argument of a US oil consultant that "Antarctica does have the potential for large hydrocarbon reserves and the technical expertise is available. The sole hindrance is jurisdiction - from whom do we get a drilling permit" (my emphasis).

Whether intended or not, the practical effect of the Convention would be to provide a secure tenure of title over resources discovered to operators. If the Convention was based on the premise that minerals activity might occur at some stage, then it is doubtful that it could have avoided providing such rights for operators. Indeed, Beeby argued (1985:21) that a convention would "need to ensure that, if mining does take place ... those who undertake it have security of title [and] have their investment protected". In this respect, NGOs argued that the Convention was a precondition for development and were concerned that, once in place, mining industry interests would want to put it to the test.

The question of environmental protection principles and rules in the Minerals Convention was part of the internal accommodation to the extent that it set pro-development interests against environmental protection interests. It was also part of the external accommodation in its response to NGO arguments and public concerns. Two caveats must, however, be noted. First, positions among the consultative parties on protection of the environment were not cut and dried. All states were agreed that environmental protection rules were necessary - they differed on the extent of those rules. Second, as set out below, the Convention does indeed contain extensive and, in theory at least, strong provisions which are designed to factor environmental concerns into the decision-making process under the Convention.

However there are two areas of concern in this respect which relate to the question of regime efficiency and the record of compliance raised in chapter three. First, were the environmental rules adequate? Second, were the rules on monitoring, compliance and

71. NGOs argued that their argument on property rights was vindicated after they obtained, through the US Freedom of Information rules, a partially declassified 1975 National Security Council memo to the US President. With respect to economic interests in non-living resources, it suggests that US interests are to "facilitate an increase in the global supply of resources through (i) defining property rights to Antarctica [sic] mineral resources; (ii) ensuring reasonably conditions of investment consistent with US interests..." (Antarctic News #9, 1989:4) although those interests are also stated to include environmental protection.

72. Quilty is a scientist with the Australian Antarctic Division.
enforcement were likely to ensure adequate implementation? On the first, the traditional Antarctic hierarchy of values which places political concerns, in the end, above environmental ones in the negotiations. Environmental rules and principles were watered down in the search for compromise on political issues. In the second case, the dominance of sovereignty norms once again placed limits on what states would accept in terms of monitoring and enforcement institutions and rules. Thus their ability to ensure compliance must be questioned.

**Principles, rules and procedures**

Recommendation XI-1 (which formally established the minerals negotiations) determined that any agreement on minerals activity had to include rules for the protection of the Antarctic environment and means for assessing the possible impact of mineral resource activities on the Antarctic environment in order to provide for informed decision-making.

There are extensive environmental principles and rules in the Convention which impose obligations on the Parties. The preambular paragraphs of the Convention refer to the unique ecological, scientific and wilderness value of Antarctica and the importance of Antarctica to the global environment ...

and note that

Antarctic mineral resource activities *could* adversely affect the Antarctic environment or dependent or associated ecosystems [and that] the protection of the Antarctic environment and dependent and associated ecosystems must be a basic consideration in decisions taken on possible Antarctic mineral resource activities (my emphasis).

Damage to the Antarctic environment or dependent or associated ecosystems is defined as

any impact on the living or non-living components of that environment or those ecosystems, including harm to the atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention (article 1(15)).

Therefore, in spite of an obligation to protect the environment, this article introduces the principle of acceptability of impact.

The general principles of the Convention (article 2) acknowledge the special responsibility of the consultative parties for the protection of the environment and the need to:
(a) protect the Antarctic environment;
(b) respect Antarctica's significance for, and influence on, the global environment;

... 
(d) respect Antarctica's scientific value and aesthetic and wilderness qualities; [and]
(e) ensure the safety of operations in Antarctica.

The Convention sets out more specific norms with respect to environmental protection in the event that minerals activity proceeds. No minerals activity may occur unless adequate information is available to enable informed judgements to be made about its possible environmental impact (article 4). Resource activity must not cause:

(a) significant adverse effects on air and water quality;
(b) significant changes in atmospheric, terrestrial or marine environments;
(c) significant changes in the distribution, abundance or productivity of populations of species of fauna or flora;73
(d) further jeopardy to endangered or threatened species, or populations of such species; or
(e) degradation of, or substantial risk to, areas of special biological, scientific, historic, aesthetic or wilderness significance.

Similarly, no activity may take place until it is judged that it would not cause "significant adverse effects on global or regional climate or weather patterns" (article 4(3)). Technology and procedures must be available to ensure compliance with these norms and to ensure safe operations. Operators must demonstrate a capacity to respond effectively to accidents and to monitor key environmental parameters and ecosystem components. Thus environmental protection obligations are linked to a sufficiency of knowledge principle. However this is a problematic concept, as the experience of CCAMLR shows.

Unless otherwise specified, minerals activity is prohibited in any area designated as a Specially Protected Area (SPA) a Site of Special Scientific Interest (SSSI) or in any other protected area. The Commission may prohibit or restrict minerals activities in any area which, for historical, ecological, environmental, scientific or other reasons, it designates a protected area (article 13(2)). It may also designate a buffer zone around any area in which minerals activities are prohibited or restricted. The Commission is required, inter alia, to facilitate and promote the collection and exchange of scientific, technical and other information and research projects necessary to predict, detect and assess the possible environmental impact of resource activities, and to adopt measures

73. This principle was included in Beeby I, dropped in Beeby II and then reinstated. This reinstatement seems to have been on the insistence of Australia which tabled a paper at the Tokyo session proposing comprehensive principles including the protection of endangered species.
for the protection of the Antarctic environment and associated and dependent ecosystems. It is also required to keep the conduct of minerals activities under review with a view to safeguarding the protection of the Antarctic environment in the interests of all humankind.

The rules and procedures adopted generally embody a precautionary approach. Any request for the Commission to identify an area for possible exploration and development must include a detailed environmental impact assessment (article 39(2)(e)). The same applies to applications for an exploration permit, which can be declined by the regulatory committee if it believes that consistency with the Convention, including its environmental provisions, cannot be ensured.

There were lengthy debates about the need for summary dispute settlement in emergency circumstances where, for example, environmental damage seemed imminent. Article 6(3) of the Annex to the Convention (which sets out procedures for convening an Arbitral Tribunal) establishes such a procedure for disputes relating to environmental protection measures, compliance, response action to environmental damage, inspection, non-discrimination, other uses of Antarctica, and prospecting. The Convention provides also that these matters may not be excluded from any of the disputes resolution procedures.

In his June 1988 press statement Beeby called these the "most stringent safeguards ever negotiated in an international treaty" (SCM-IV 1988b:2). He argued that the approval process was a rigorous one. Because minerals activity is prohibited until specifically permitted, supporters of the Convention argue that the burden of proof is on potential operators to show that activities will not unduly damage the environment, rather than on those interested in protecting the environment to prove that it will. This, in fact, reverses the major premiss of CCAMLR which permits harvesting of marine resources unless scientific evidence shows that conservation measures should be put in place.

Supporters of the Convention argued not only that these were stringent protection measures, but also that they were the best that could have been achieved given the competing interests that had to be met. The IUCN suggested (1987b) that any attempt to impose a rigid regime which would promote conservation interests to such an extent that minerals activity would be unlikely, would be unacceptable to most of the Treaty parties. This pragmatic approach was adopted by the consultative parties who argued that the Convention was "the best deal for Antarctica and the Antarctic environment that
[was] attainable in an imperfect world. Tougher environmental provisions were just not negotiable" (C Keating [letter] 1988).74

This raises the fundamental question of whether the best that could be achieved, given political constraints, was good enough to ensure protection of the environment especially on a localised basis. As chapter three shows, there was a growing tendency in the 1980s for this question to be answered in the negative not only by NGOs but, as chapter seven will show, by politicians and by an increasingly environmentally conscious public.

NGO concerns

Environmental organisations argued that the Convention was essentially a pro-mining document which lacked adequate environmental protection mechanisms. A Greenpeace USA spokesperson argued that "[a]lthough the text’s environmental provisions appear to be substantial, in practical terms there are major loopholes that will enable miners to escape the consequences of the inevitable environmental damage" (in Anon 1988h:12). It was, NGOs argued, a "fundamentally flawed document from the standpoint of environmental protection, as well as public review and accountability" (ASOC 1988n:7).

They argued that terms like "adequate"75 and "significant" with respect to environmental information were vague and open to interpretation. They suggested that there were insufficient details on the content of EIAs or processes to be followed in carrying them out.

Although a consensus is required in the Commission for an area to be identified, NGOs were concerned that pressure could be brought to bear on any state attempting to exercise a veto on environmental grounds, especially given the reconciliation process written into article 22(5).76 Although NCP mining states may have Commission membership,77 there is no provision for environmentally minded NCPs to have full membership to balance mining interests.

74. Keating was a New Zealand Ministry of External Relations officer.
75. The American Petroleum Institute, in an undated paper, argued that this was an "undefined and possibly undefinable concept" and perceived the "apparent fixation" on adequate information as a "thinely veiled attempt" to place all of Antarctica off-limits to minerals resource activities.
76. This article provides that, if the Chair of the Commission determines that there is likely to be an objection to the identification of an area for minerals activities, he or she shall convene the members most directly interested with a view to reconciling the differences and producing a generally acceptable proposal.
77. Consultative parties which sponsor minerals activities have automatic Commission membership by virtue of their consultative party status.
NGOs were particularly concerned that, even though prospecting notifications required an environmental impact assessment\textsuperscript{78} and a description of the measures which would be adopted to avoid harmful interference, no prior authorisation of prospecting activity was required. Article 38 does provide for steps to be taken if a member of the Commission is concerned about prospecting activity, but this is a reactive approach.\textsuperscript{79}

It was the composition and role of the regulatory committees that concerned NGOs most from an environmental viewpoint. They maintained that the complex membership formula, which was a response to political interests, would mean that "[n]ations in the regulatory committees will trade environmental protection for political and economic gain" (Antarctic News #8 1988:1). NGOs were worried that management schemes, which were to include specific terms and conditions for the protection of the environment and for timely response action, would be compromised by political tradeoffs in the regulatory committees.

They feared that this could result in different rules being established for different management schemes which apply to the same area. NGOs pointed to the difficulties of setting environmental rules for any specific area when the ecosystem should be dealt with as a whole. NGOs were also concerned that, once a management scheme had been established, and an exploration permit issued, progress to a development permit was almost automatic with few opportunities for independent reassessment of the project.\textsuperscript{80}

The environmental NGOs monitoring the minerals negotiations argued, in their analysis and lobby documents, for a number of changes to the Convention which they suggested were essential to improve its environmental protection mechanisms (see ASOC 1988g). They argued that provisions were essential for a negative decision at the development permit stage. They advocated a stronger role for the Advisory Committee and provision for the Commission to review regulatory committee decisions. NGOs argued that there should be an independent Antarctic Environment Protection Agency which, if necessary, would be responsible for monitoring, enforcement and judgements of environmental acceptability of any activity within a minerals regime. The criteria for environmental protection procedures should, they argued, be more clearly spelled out and better compliance, enforcement and liability rules were necessary. Finally, they demanded improved opportunities for public participation.

\textsuperscript{78} The American Petroleum Institute considered this provisions to be "wholly unnecessary" (API [n.d.]).

\textsuperscript{79} While the prospecting party is required to adhere to certain rules it is not clear what can be done to stop prospecting which is in contravention of those rules.

\textsuperscript{80} Procedures are established in the Convention for the Commission to review the decision of the regulatory committees but in doing so they may not perform the function of the regulatory committee and may only request the Committee to reconsider its decision.
While NGOs argued that the Convention was a fatally flawed document as far as its environment protection rules were concerned, mining industry comment on the Convention was also unfavourable. The Director of the US Bureau of Mines commented that "there is nothing in this Convention to encourage industry to expend any money to prospect, explore or develop resources. The Convention is anti-mineral development ... and will only serve as a deterrent ... [I]t is not a workable convention under which minerals will be developed" (Ary [n.d.]). This view was shared, at least early on, by the American Petroleum Institute ([n.d.]) which referred to the "excessively anti-development bent that currently permeates the draft regime".81

Environmental rules and institutional bargaining

Earlier chapters in this thesis have demonstrated that the decision-making process within the Antarctic regime, dominated as it was by the need to settle political differences, was flawed from the perspective of negotiating good environmental rules when judged from the priority of environmental protection. The minerals negotiations followed a similar path. Laws82 observed (1985:54) that "discussions on environmental matters have so far received less attention than the organisational structure of [the] regime". Kimball (1983:15) suggested that concern for the environment coexisted in "tenuous harmony" with other imperatives in the negotiations (such as the sense of urgency to complete the negotiations and the internal accommodation between the claimants and non-claimants).

NGOs similarly argued "providing a political solution to the Treaty partners internal conflicts is an objective that has overridden protection of [the] environment" (cited in Shapley 1985:166). They suggested that the lawyers and diplomats who negotiated the convention had underestimated the natural and scientific values of the Antarctic and overestimated the ability of an unenforced set of rules to modify the hazardous behaviour of oil companies and other operators working at the limits of technology in extreme conditions (ASOC 1984b:3).

The powers of the Commission vis-a-vis the regulatory committees, NGOs argued, had been progressively restricted during the negotiations. They felt that environmental protection interests could be best served if the Commission was given relatively more functions and powers. NGOs also supported larger regulatory committees83 with the power to authorise exploration and development permits returned to the Commission.

81 Although this is an undated paper, these comments appear to be relevant to Beeby II.  
82. Director of the British Antarctic Survey and now President of SCAR.  
83. They suggested a membership of twelve, with eight non-claimants
It certainly was the case that regulatory powers were progressively transferred from the commission to the regulatory committees during the negotiations. In Beeby I and II, it was the Commission, rather than the regulatory committees, which was responsible for authorising permits for exploration and development, and approving (or disapproving) management schemes.

NGOs also argued that the powers of the Advisory Committee, which is the locus for environmental and scientific expertise, had been progressively weakened during the negotiations to the extent that it was given a limited advisory role only with no power to initiate reports even on matters of concern. They felt that a strong and independent Advisory Committee would be able to act as a balance to the politically-appointed regulatory committees.

Again, there is some evidence to support this charge. In Beeby IV, regulatory committees were required to refer any application for an exploration permit to the Advisory Committee for an assessment. The Advisory Committee was to identify the environmental risks, and advise whether the application would (or would not) involve such a risk if approved. If the Advisory Committee advised that a risk would be involved, the regulatory committee was *required* to reject the application, or to refer it to the Commission which could authorise the regulatory committee to proceed subject to such conditions as the Commission saw fit. Applications for development permits were also to be reviewed by the Advisory Committee in Beeby IV (article 51) and the Advisory Committee could send guidelines to the regulatory committee to modify a management scheme if it deemed changes necessary. The regulatory committee was *required* to make those modifications. All these Advisory Committee functions were removed in Beeby V after the third intersessional meeting of the minerals negotiations.

Beeby IV also provided that both the Advisory Committee and the regulatory committee would monitor compliance. In Beeby V this was to be the function of the regulatory committee only. The Advisory Committee’s access to information was also increasingly limited in subsequent drafts. In Beeby V, rather than seeing the whole of an application for exploration, the Advisory Committee was to see only those parts of an application determined *by the regulatory committee* to be relevant. NGOs suggested, with some apparent justification, that Beeby V represented major concessions to mining interests (*ECO* (XLVII(1) 1988:2).

**Accountability, monitoring and compliance**

Not only were the institutional relationships weakened from an environmental protection perspective but the rules on compliance and liability, which adhere to normal Treaty practice, are limited. There is no provision for independent monitoring of
minerals activity and environmental impact. There are few sanctions against non-compliance with either the principles of the Convention or its specific rules and procedures except where that non-compliance results in unacceptable environmental damage (and even then a Party must be willing to raise the issue of violation).

The inspection procedures in the Convention can be used to monitor compliance with environmental protection rules although inspection has proved an ineffective instrument under the Treaty in this regard. The Commission is to consider regulatory committee monitoring reports but there is no specific guidance on what it may then do. Only Parties to the Convention (but not observers) may raise concerns about activities that affect the implementation of the Convention, including environmental impact issues. The Commission may also appoint inspectors who would, one assumes, report directly to the Commission (although that is not the case with CCAMLR). Again there are no specific procedures for action in instances of non-compliance identified by inspections.

A member of either the Commission or a regulatory committee may request (within a one month time limit) a review of the approval of a management scheme or development permit for its consistency with the Convention. The Commission, however, can only request the regulatory committee to reconsider its decision. Only a regulatory committee may suspend, modify or cancel a management scheme (and thus the permits issued in conjunction with it), or impose a monetary penalty, if it determines that activities have resulted, or are likely to result, in environmental impacts beyond those judged acceptable. Thus, if an environmental impact has been judged acceptable under the terms of the Convention, these procedures cannot be invoked. The concern here is also whether a complaint of environmental non-compliance would stand in the face of mining interests on the regulatory committee.

The extent of liability and the issue of residual state liability were contentious issues during the negotiations. Australia, Argentina and Chile had argued that no defences should be permissible (ASOC 1988f) and were supported in this by France, Norway, the USSR and NZ. Japan opposed the suggestion that damage to the environment and dependent ecosystems should be covered by the liability provisions.

The liability rules require timely response action, including prevention, containment, clean up and removal, if an activity results in or threatens to result in damage to the Antarctic environment (article 8(1)). Strict liability for environmental damage was generally agreed upon at Montevideo. However, while operators are to be strictly liable

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84. The Commission may also draw the attention of any party to activities affecting the implementation of the Convention, as well as to any non-Convention state if activities by it or its nationals are in contravention of the Convention.
for damage they are not required to restore the environment to the status quo ante. However an operator is not liable if the damage is caused by an event which, in Antarctic circumstances, could be defined as an unforeseen and exceptional natural disaster, or as a result of armed conflict or an act of terrorism.

A Sponsoring State must accept residual liability if damage, including environmental damage, has occurred because it has not fulfilled its obligations. Article 8 provides that further rules and procedures on liability are to be elaborated, by consensus, in a separate protocol and that minerals activity (except prospecting) cannot proceed until the Protocol is in place. The Protocol must function to enhance the protection of the Antarctic environment and dependent and associated ecosystems but may also allow for defences to liability to be determined.

NGOs argued that these liability provisions were neither strict enough nor detailed enough. They were especially concerned that defences to liability could be established under the Protocol and called for strict and unlimited liability, with no defences possible.

NGOs also argued that there was not enough in the Convention to encourage transparency and accountability. They charged that the confidentiality of data rules established under the Convention (with respect to information deemed commercially sensitive) could prevent information necessary to make informed judgements on environmental impacts from being made public. "Full availability of information", they argued, was "vital to the success of all environmental protection measures ... openness is crucial to organisations outside the Convention wishing to comment on an application" (ECO XLVII(5) 1988:2). There was, in particular they argued, insufficient provision for adequate review of environmental impact statements and management schemes by observers and experienced NGOs.

SCAR also supported early and timely release of data from minerals activity mainly because of the benefits to increasing scientific knowledge (Final Report 1989:190). As noted earlier in the chapter, the institutions of the Convention are required to maintain public records. However, as Kimball (1988b:19-20) notes, incidents which potentially affect the implementation of the Convention are not automatically circulated to observer organisations. Neither are inspection reports. Discussions on monitoring and compliance in the regulatory committees are not open to observer organisations.

85. They did, however, support the financial penalties provisions because, even though it would not cure the damage, they wanted punitive measures to provide some disincentive to irresponsible behaviour.
Thus the rules which were put in place to ensure compliance on environmental protection were constrained by both political and economic interests. As with the Treaty system generally, there was a reluctance to accept independent monitoring or inspection. In this regard alone, the ability of the Convention to protect the Antarctic environment, especially on a localised level, must be questioned.

Conclusion
The Minerals Convention balanced various national interests in a way that enabled each Party to accept that its basic interests had not been compromised, even if it was not the best that could have been hoped for individually. States within the Treaty system were able to use the bargaining process to ensure that some of their demands were incorporated into the Convention. However the focus on the internal accommodation meant that little real attention was paid to the external accommodation, except in terms of broad statements of principle.

The Convention enshrines the fundamental principles of the Antarctic regime. Consultative party authority is guaranteed in the institutions of the Convention, especially in the decision-making bodies, the Commission and the regulatory committees. Regime stability, through a political balancing act, is the focus of the structure of the regulatory committees. As Joyner (1988d:141) notes, both these principles “occupy a higher place in the hypothetical hierarchy of principles than that of environmental protection”.

The Convention introduces new balances of power into the Antarctic regime particularly with respect to the role of developing consultative states and, in this case at least, of the mining interests. In doing so, the power of the claimant states was diminished.

Experience of the Treaty system had convinced the consultative parties, and the bureaucratic elites responsible for Antarctic policy, that environmental issues could only be addressed in the context of a wider agreement on political problems. The belief that the disputes over sovereignty and jurisdiction would limit what could be negotiated on environmental rules, especially with respect to monitoring and compliance, was strong.

Environmental rules adopted in the Minerals Convention were precautionary and, unlike CCAMLR, the Minerals Convention prohibits activity until judgements are made that it can be permitted to proceed. But monitoring and compliance is still based predominantly on sovereignty rules which favour national autonomy, little independent oversight and, more importantly, few sanctions.
Minerals activity, and decisions on its regulation under the Convention, are based on adequacy of knowledge provisions. Yet the procedures for increasing that knowledge, and for according a central role to environmental and scientific experts, are weak. Environmental factors are crucial in the decision to open an area, but once minerals activity begin the progression to development activities becomes harder to stop on environmental grounds.

The Convention rejects the non-development option. Wilson (1986:285) suggests that this is because Antarctic policy is fashioned principally by civil servants in foreign ministries who are not directly answerable to the public. No public, or political, discussion which might challenge conventional wisdom on the acceptability of minerals activity was sought.

From an environmental perspective, this process points to a crucial dilemma. Is it possible for a regulatory mechanism (which is required if minerals activity is judged, in principle at least, to be an acceptable activity) to also function as a conservation and environmental protection regime. The IUCN (1987b) argued that minerals activity "will inevitably detract from the wilderness qualities of Antarctica". The question is, then, how much detraction is acceptable? In the 1970s minerals activity and environmental protection were thought compatible. In the 1980s, NGOs argued that this was an unacceptable premiss but the consultative parties, already eleven years into their discussions on the minerals question and now formally negotiating a convention, did not listen. They should have done so. The internal accommodation of the Minerals Convention did not hold, and it did not hold because the answer to the question of acceptability had changed.
Chapter 7
COMPREHENSIVE ENVIRONMENTAL PROTECTION: FROM CRAMRA TO MADRID

Introduction
The Minerals Convention was the compromise product of eighteen years of debate and negotiation. Once opened for signature on 25 November 1988, its ratification and entry into force seemed assured.\(^1\) While there is always a possibility in international politics that a ratification process might fail at the state level if the necessary domestic support is not forthcoming, such an involuntary defection, to use Putnam's term (1988:438), seemed unlikely in this case.\(^2\) The Antarctic was not high on the agendas of parliaments or politicians. Nor had it generally been an issue of high public salience. Further, given the strength of the normative commitment to consensus within the Treaty system, the diplomats who negotiated the Minerals Convention had no reason to fear that any consultative government would voluntarily and unilaterally abandon the outcome of their deliberations.

They were mistaken. This agreement among states began to unravel quickly. The internal accommodation did not hold.\(^3\) By May 1989 two key consultative parties, Australia and France, had withdrawn their support for the Convention, a defection which was met with strident outrage from their Treaty partners. Australia and France sought to replace CRAMRA with a comprehensive environmental protection convention (which would include a ban on mining) and to have the Antarctic declared a wilderness reserve. The issue of environmental protection in the Antarctic took on a new importance as the consultative parties took sides on whether or not to ban minerals activity (an option they had rejected in the 1970s and the 1980s) and argued over how best to improve the complex and fragmented environmental sub-regime within the Treaty system. By October 1991 they had negotiated a new, legally-binding agreement on environmental protection - the Madrid Protocol - which, as well as prohibiting minerals activity, established comprehensive environmental principles and standards against which human activity in the Antarctic would be judged.

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1. Chris Beeby noted that it would probably be some years before the Convention was ratified by the requisite number of states given that most would need to pass domestic implementing legislation of some sort (Anon 1988i:15).
2. See the discussion on defection in chapter one.
3. Indeed, within days of the Minerals Convention being adopted, a bill was introduced into the Belgian Parliament to prohibit Belgian nationals or companies from undertaking any minerals activity in the Antarctic. Belgium, which was a consultative party and had participated in the negotiations, did not sign the Convention. While its ratification was not crucial to the entry into force provisions its action signalled concern on the part of a long-standing Treaty party.
Domestic debate on national Antarctic policies, in response to NGO campaigns, was an important feature of this process of change in the Antarctic regime. In this way, the values and ideas on environmental protection advocated by non-governmental organisations were brought inside the Treaty system. Traditional Antarctic decision-makers - diplomats, lawyers and scientists - were, to a great extent, marginalised by these events and their attempts to reclaim the issue were only partly successful.

This chapter examines the rejection of the Minerals Convention, first by Australia and France and then by other Treaty parties, and the subsequent negotiation of the Madrid Protocol on Environmental Protection.

From consensus to defection
The British government was the first of the consultative parties to begin ratification procedures. Its Antarctic Minerals Bill was introduced into the House of Lords in April 1989. Although there was bipartisan support for the bill, Labour speakers suggested that it would be preferable if all countries were “to agree to leave Antarctica alone and not to prospect and mine for minerals there” (House of Lords 1989a:933). Lord Alsa made the critical observation that "the conservationists would have the support of the vast majority of the public if the issue was put to them" (House of Lords 1989a:934). However in Britain, and in most other consultative states, the issue had not been put to public debate by Antarctic decision-makers. That task was taken up by non-governmental organisations and Lord Alsa’s prediction was to prove correct not just in Britain but elsewhere.

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4. The purpose of the Bill was to enable the United Kingdom to ratify CRAMRA. The bill prohibited exploration and development activities while permitting prospecting activities authorised by the UK government or any other contracting party to the convention. If, under the Convention, it was determined that exploration and development were to be permitted, then the Government would return to the Parliament with another bill to authorise those activities. Lord Glenarthur, in introducing the legislation, noted that “it has been our objective throughout the negotiation[s] ... to ensure that the UK ... should have the largest possible share of any benefits from minerals activity in the British Antarctic territory” (House of Lords 1989a:929).

5. Lord Alsa (who was at pains to point out that he had been to the Antarctic) suggested that the Labour peers accepted the bill "without enthusiasm ... as a recognition of man’s inability to leave anything in the world free of exploitation" (House of Lords 1989a:934).
After June 1988 and the adoption of CRAMRA, NGOs reassessed their strategy:

[It would be wrong to assume that NGOs had 'lost' the battle even though we opposed [the Convention's] negotiation ... One strategy for the future will be to try to prevent some of [the ATCPs] from signing and ratifying the Convention, or at least to severely delay them, which will have the effect of preventing the Convention from coming into force (ASOC 1988o:10)

Their strategy was targeted at the key consultative states - the seven claimants and the USA and USSR - as well as Italy and West Germany. There were three, inter-related, components to the NGO non-ratification campaign which was executed at a national level but co-ordinated transnationally: politics, the public and the media.

In support of their campaign, and to mobilise public awareness and put pressure on politicians, NGOs encouraged letter-writing campaigns; they launched a number of successful international petitions which opposed ratification; they called for a ban on minerals activity and continued to advocate World Park status for the Antarctic. To reinforce their public activity they lobbied politicians, presented evidence to legislative committees and targeted the media in order to get their message across to a wider audience. In doing so, national NGOs (including Greenpeace offices and organisations with a broad environmental interest) exchanged information, advice and strategies through the coordinating offices of ASOC and Greenpeace International.

The anti-ratification campaign was actively supported by high profile individuals such as French oceanographer Jacques Cousteau and British naturalist Sir Peter Scott. Cousteau, in particular, lobbied politicians and state leaders, publicly and privately, in a

6. Non-ratification by any one of the claimants or the superpowers would result in CRAMRA not coming into force. In the case of Argentina and Chile, NGOs relied on arguments relating to loss of sovereignty. In both France and the UK, the campaign rested on environmental grounds although in both cases they recognised the task would be difficult. In New Zealand and Australia, NGOs mobilised public awareness both of the Antarctic and of environmental concerns. They were also heartened by the fact that Australia had been the last state to hold out on signing the Final Act of the minerals negotiations and key governmental sources had indicated that the government was divided on whether to sign. In the US, NGOs hoped to use the lengthy congressional hearing process to delay ratification. The USSR, although it was likely to be difficult to influence, was concerned about the US gaining an upper-hand in minerals exploitation technology which the USSR could not match. With respect to Norway, the NGOs planned to focus on Prime Minister Brundtland's chairing of the World Commission on Environment and Development and its subsequent report. The Antarctic campaign was popular in West Germany which had a strong public environmental awareness which had translated into parliamentary representation. The Antarctic issue was also popular in Italy where the NGOs thought environmental arguments could be successful. (See Greenpeace 1988e).

7. Within three months the Cousteau Foundation petition had attracted a million signatures, a record for a petition in France. By April 1990 this total had reached 1.8 million. The Greenpeace Antarctic Declaration had been signed by 1.4 million people by May 1989, and the World Park petition circulated by members of ASOC attracted over 1 million signatures (ASOC 1989b:2).

8. For example, the Australian Conservation Foundation in Australia and the Sierra Club in the United States.
way that ASOC representatives could not and attracted considerable media coverage in so doing.

Two events early in 1989 focussed public attention on the environmental consequences of oil spills in polar regions. On 28 January, an Argentinian resupply vessel, the *Bahia Paraiso* went aground off the Antarctic Peninsula, spilling approximately 150,000 gallons of oil. US officials described the spill, which affected wildlife and scientific research at the nearby US Palmer station, as the first big environmental threat to the Antarctic (Darby 1989). On 24 March the *Exxon Valdez* went aground in Prince William Sound in Alaska, spilling 10.8 million gallons of oil. The world wide media coverage of the devastating ecological consequences of the spill and the limited success of the lengthy and expensive clean-up attempt, created a powerful visual and public image with which NGOs could challenge the adequacy of CRAMRA.

On 20 April 1989 the French government called for the Antarctic minerals negotiations to be re-opened. Prime Minister Rocard argued that in the light of the consequences of the *Exxon Valdez* accident, the environmental protection provisions in the Convention seemed inadequate (Reuters 1989a). He announced that France would "not ratify the treaty [sic] in its present state" (AFP 1989a).

The French announcement was the first sign of the consensus on CRAMRA breaking down. Its significance lay in the fact that, as a claimant state, France’s ratification of CRAMRA was essential to effect entry into force. Nevertheless, it was unusual that it should have come from this quarter - France was a likely mining state, its environmental record in the Antarctic was not a good one and it had not taken a strong environmental line during the minerals negotiations.

9. British (and US) maps clearly showed the channel as containing "dangerous ledges and pinnacles" (Manheim 1989). Yet this is an area also claimed by Argentina and the captain chose to take his vessel through the channel in spite of warnings from US officials. The Argentinians tried to downplay the environmental significance of the spill, and its lack of technology to respond to the emergency. Tourists on board had to be rescued by personnel from the nearby US Palmer Station.

10. While the United States moved brought equipment from the US to clean up the spill, in order to protect scientific research at Palmer and wildlife in the vicinity, the operation was difficult. In February 1989 the British ship *Endurance* sustained some damage when it hit an iceberg near Deception Island but was able to navigate to Esperanza Bay at the tip of the Peninsula. The same month, a Peruvian research vessel, the *Humboldt*, ran aground and leaked oil in Fildes Bay on King George Island (see Redgwell 1990a:474n).

11. See, for example, ASOC (1989a).

12. Early in May, Rocard told Australian Foreign Minister Senator Evans in New Caledonia that France would not sign the convention and would seek renegotiation.

13. See, for example, references in chapter three to the construction of the airstrip at the French Antarctic base, Dumont d'Urville, which contravened several provisions of the Agreed Measures on the protection of fauna and flora.
The future of CRAMRA was put further in doubt when, on 22 May, the Australian government announced that it was now committed to a position that no mining at all should take place in and around the continent and that it would therefore not sign the Minerals Convention. This decision followed intense public, parliamentary and cabinet debate (discussed in further detail below). The government argued that while

the recently concluded Convention on the Regulation of Antarctic Mineral Resource Activities is very much better than no protective regime of any kind ... we believe that it is both desirable and possible to seek stronger protection for what remains the world's last great wilderness (Hawke et al 1989:1).14

Australia, they said, would pursue instead the "urgent negotiation of a comprehensive environmental protection convention within the framework of the Antarctic Treaty system" and, specifically, the "prospects for the establishment of an Antarctic Wilderness Reserve". They acknowledged that this was "a significant change of approach in the management of Antarctica" and that achieving consensus was "unlikely to be easy".

The implication in the Australian announcement was that non-signature meant non-ratification.15 Because ratifications from all seven claimant states (that is, including Australia and France) as well as the USA and the USSR were required for the Convention to enter into force the Minerals Convention was dead unless the Australian government could be persuaded to change its mind.16

Thus, less than twelve months after the adoption of the Minerals Convention, therefore, and only six months after it was opened for signature, consensus had broken down and the internal accommodation was falling apart. Australia's actions amounted to a

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14. This statement was made jointly by the Prime Minister, and the Ministers for Foreign Affairs and the Environment, Senators Evans and Richardson, both of whom had previously supported the Minerals Convention.

15. One report suggests that a cabinet submission tabled by Senator Evans included a recommendation that, as well as announcing that it would not sign the Convention and would pursue the implementation of a world park, the Australian government should also make it clear that it did not exclude the possibility of ultimately acceding to the convention if the alternatives could not be attained and there was no other way to protect the Antarctic environment (Houweling 1989:1).

16. Australia's announcement that it would not sign was not of itself legally significant: a key state could still accede to the Convention after the period for signature had passed to meet the requirements for entry into force. Blay and Tsamenyi (1989) argue that Australia's actions did not amount to a veto of the Convention. They suggest that this would only prevent the institutions of the Convention being created with respect to the Australian Antarctic Territory. This is not a view shared by other commentators, nor by the consultative parties themselves who would doubtless have seized upon this argument if applicable. See, for example, Wolfe (1990:2).
voluntary defection from both the consensus on CRAMRA and from the fundamental
norm in the Treaty system that a consensus, once reached, should be maintained.

The Australian decision took everyone, including environmental organisations who had
campaigned against ratification, by surprise. Response to the announcement from other
consultative governments was swift and negative. The New Zealand Minister of
Foreign Affairs, Russell Marshall, argued that "Australia will have a good deal to
answer for if it fails" (cited in Anon 1989j:20). A former director of the Australian
Antarctic Division predicted that "if Australia refuses to sign, she will be utterly
discredited among the treaty nations and will be branded as naive, ignorant and
obstructive" (Law 1989:12).

Hostility to the Australian decision (and, to a lesser extent, the French) was grounded in
anger that both states had defected from the consensus rule. The British Parliament was
told that

the Antarctic treaty has succeeded ... because ... no member has pushed
its interest beyond the point where it can be tolerated by others. The
treaty system has also depended on an implicit assumption that once an
agreement has been reached by consensus, all parties to that consensus
will confirm and implement the agreement. The Australian move has
gone against both of those tenets... (House of Commons 1989:217-
218).17

Australia, as the consultative parties saw it, had threatened the fundamental norms and
practices of the Treaty system. For this reason, Eggar argued,

Australia's Antarctic partners have a right to ask for its reasons for
inflicting damage on the consensus machinery of the Antarctic treaty
system. They have a right to ask why it has taken a path that could result
in a collapse of that treaty (House of Commons 1989:218).

Australian diplomat John Burgess (1990:2) acknowledged that the concern which
greeted the Australian and French announcements was as much about the way of doing
things as the substance of the announcements. They had reneged on an agreement that
had taken six difficult years to negotiate. Rather than seeking to address differences
within the confines of the Treaty system, Australia and France had 'gone public' with
their concerns.

Environmental organisations, on the other hand, were overjoyed. The Director of the
Australian Conservation Foundation, Philip Toyne, called it a "rare and visionary"
action (Anon 1989k:1). Sir Peter Scott, son of the Antarctic explorer, told the
Australian Prime Minister that

17. This point was made by Tim Eggar, Parliamentary Under-secretary of State for Foreign and
Commonwealth Affairs during the House of Commons debate on the Antarctic Minerals Bill.
Australia's magnificent stance ... may well at one brilliant stroke have ensured the future of the last virtually pristine continent on earth. This wonderful initiative gives us all new hope for the future of the planet (cited in Phillips 1989a:8).18

The French government now moved to align itself more closely with Australia. After receiving a commissioned report from Captain Cousteau, President Mitterand announced that he was "very taken with the idea of turning [Antarctica] into a vast peaceful nature reserve" (cited in Ambassade de France 1989b).19 He said that he would "ask the French Government to study it and see whether, along with countries who share our concern, this idea can be put into effect without delay" (Ambassade de France 1989a). The French government referred the matter to the Parliamentary Committee for the Evaluation of Scientific and Technological Options which held a special public hearing in September 1989.

In August 1989 the French and Australian Prime Ministers issued a joint statement on environmental issues which noted that

In the light of their shared concerns about the Antarctic Minerals Convention and other factors affecting the environment in the Antarctic, the Prime Ministers of Australia and France have today agreed on a joint initiative to promote the protection of the environment in the Antarctic ... [M]ining in Antarctica is not compatible with protection of the fragile Antarctic environment ... the two countries will be proposing that the Treaty Parties negotiate a Comprehensive Environment Protection Convention which will turn the Antarctic into a wilderness reserve ... (Hawke and Rocard 1989:1).20

Thus not only had both states defected from the norms of the regime, but their new policy initiative (which represented, in effect, redefined national interests) sought to depart from the traditional ad hoc and sectoral approach to environmental decision-making in the Treaty system. In placing environmental concerns before economic ones and, indeed, political ones Australia and France were advocating a reordering of the hierarchy of values in the regime. Their task was to persuade their Treaty partners to support this new approach.

18. The son of another great British Antarctic explorer, Shackleton, was not so supportive. Lord Shackleton, while expressing his hope that minerals activity never happened in the Antarctic said that "undermining the consensus ... when no consensus is in sight would ... lead to tensions and instabilities that might well not be contained" (Shackleton 1989).

19. The report was presented to him on 10 June 1989 and his announcement favouring the World Park proposal was made at a "Planet Earth" international seminar at the Elysee three days later.

20. The question of the Antarctic was only one of the matters discussed, although it took up about half the joint statement.
The Australian/French initiative

There were three parts to the Australian and French initiative: first, a ban on minerals (effectively seeking to replace CRAMRA); second, that the Antarctic should be declared a wilderness reserve (although just what that meant was not yet spelled out); and third, that a comprehensive approach to environmental protection could only be achieved in a wide-ranging new convention. In the context of environmental politics over the life of the Treaty system, these were revolutionary proposals. Their Treaty partners were resistant on all three counts.

A ban on minerals activity

In advocating a ban on minerals activity, Australia and France sought to redefine an institutional goal of the Antarctic regime and to challenge the premiss that minerals activity was acceptable in the Antarctic. While hastening to say that no-one was proposing to go to the Antarctic to mine in the short or even medium-term governments were reluctant to rule out the possibility that they might want to do so at some stage in the future.21 The US and the UK were particularly opposed to a ban. The US argued that "the effort to substitute a total ban on mineral resource activity is not negotiable. The US will not agree to such action" (Scully [letter] 1989).

Supporters of the Minerals Convention suggested that it provided an effective prohibition on minerals activity which could only be lifted if all consultative parties agreed and that, because consensus was required to open an area for mineral activity, Australia or France had a power of veto to enforce a prohibition.22 Australia suggested that it was "logical nonsense" to sign a convention which regulated minerals activity intending to use an effective power of veto to oppose mining (Hope 1989)23 and that to do so would be an act of bad faith.24

Critics of the proposal also argued that a ban would crumble as soon as there was economic pressure to mine and that, when it did, there would then be no regulatory agreement to stand in its place. Australia and France argued that a ban on minerals

21. President Bush wrote to Hawke indicating that the United States believed mining in Antarctica should not be ruled out for all time (Kitney 1989:5). Greenpeace US obtained papers which showed that a Houston-based oil exploration company was seeking backers for a seismic survey with a view to identifying possible hydrocarbon targets (Ward 1989:25).

22. Further, the effective veto under the Minerals Convention applied only to the identification of an area for possible exploration and development: it did not apply to specific activities and neither did it cover prospecting.

23. It is also debatable whether, as claimants, either Australia or France would have wanted to use their veto over activity in the territory of another claimant.

24. Also, the veto can only be used if the proposed activities are inconsistent with the Convention. Given that the Minerals Convention accepts some environmental impact, any harm is therefore not "significant harm" so it is doubtful whether Australia or France could use the argument of any environmental impact as a reason for exercising their veto.
activity under a comprehensive convention should not be inherently more unstable than the ban on military activity, nuclear explosions or disposal of radioactive waste under the Antarctic Treaty. If the other Treaty parties were prepared to advocate a de facto ban under the Minerals Convention by use of the veto why, they asked, were they not prepared to accept a ban in specific terms (Brown 1990a:7).25

The other consultative parties argued further that if CRAMRA’s entry into force was unlikely, then the voluntary moratorium on minerals activity (confirmed by the Final Act of the Special Consultative Meeting) was null and void. Eggar suggested that any state which did not ratify the Convention "would, by its actions have destroyed the existing voluntary moratorium ... [and] would bear a heavy responsibility for the consequences of its decision" (House of Commons 1989:216). Without an agreed instrument to regulate minerals activities, critics argued, there was no protection for the Antarctic environment in the event of unilateral exploration.26 However the argument in chapter six has shown that unilateral minerals activity was unlikely in the face of legal uncertainty.

Wilderness Reserve
The Australian/French proposal for a wilderness reserve was dismissed by its critics as little different from the World Park proposal advocated by non-governmental organisations. This proposal dates to the 1972 Second World Conference on National Parks27 and was raised in a series of international congresses over the following two decades including the Third World Parks Congress in 1982,28 UNEP’s Session of Special Character in 1982,29 and the Fourth World Wilderness Congress in 1987.30 In 1989, the UN adopted a resolution calling for the first time for the protection of

25. A senior state department official told me that the US would be prepared to accept a de facto ban under the Minerals Convention because the convention nevertheless accorded with US philosophy of guaranteeing open and non-discriminatory access.
26. R Tucker Scully, of the State Department, said in a television interview that he thought the upshot of the Australian/French proposal would be a "stalemate with no rules" with the possibility of mineral resource activities taking place "leading to environmental and political damage" (Reuters 1990).
27. This conference called for the Antarctic to be designated a World Park under the auspices of the United Nations. The then Executive Director of UNEP, Maurice Strong, promoted the concept suggesting that "the surest course might well be to make the whole Antarctic region into a truly international park ... which would permit continuation of its exclusive use as the site of important scientific research" (cited in Quigg 1983:180).
28. The wording of the resolution adopted did not specifically call for a world park. Kimball (1988d:38) suggests that this was because a number of participants thought it unrealistic and were concerned that, in the face of anticipated hostile reaction from the Treaty parties, it would affect their ability to influence Antarctic policies.
29. NGOs attending the special session adopted a resolution calling for the Antarctic to be declared a World Park. A position paper was circulated to NGO delegations calling upon the forum to recommend to the UN Secretary General that a special conference on the Antarctic be convened (ASOC 1982:2).
30. See ECO (XLV(2) October 1987:4).
Antarctica as a nature reserve or world park and urging a ban on prospecting and mining.

The status of Antarctica, with particular reference to the preservation of its environmental values, was also debated at IUCN general assemblies in the 1980s. While the recommendations adopted there did not specifically call for the designation of a world park, they did advocate full protection of the Antarctic environment.31

The concept of a world park was refined by Antarctic NGOs and linked to their advocacy of a comprehensive approach to environmental protection in the Antarctic.32 The Antarctic, as a world park, would remain a zone of peace and scientific investigation and cooperation. Wilderness values would be paramount. Environmentally damaging activities, including minerals exploitation, would be prohibited.33 NGOs developed detailed proposals, in the form of policy papers and draft conventions, to give effect to this concept. Core elements included environmental impact assessment, the establishment of an Antarctic Environment Protection Agency, legally binding compliance mechanisms and participation by the public and by public interest groups.34

The world park proposal was not well received by the consultative parties.35 They argued that it was politically unrealistic and ill-defined and that it would restrict (or even prohibit) scientific research. They continued to interpret it as a first step in the internationalisation of the Antarctic (and thus the erosion of their primacy over

31. The 1981 IUCN General Assembly strongly recommended that the ATCPs foster measures which would maintain the intrinsic values of the Antarctic environment, ensure that all activities were compatible with those values and "ascrb to the Antarctic environment as a whole a design which connotes worldwide in its unique character and values" (IUCN 1981b). The 16th General Assembly in 1984 restated these concerns and called for minerals activity to be prohibited "until such time as full consideration has been given to protecting the Antarctic environment completely and the environmental risks have been fully ascertained and safeguards developed to avoid adverse environmental effects" (IUCN 1984a). These resolutions were affirmed as a statement of IUCN policy at the 17th Assembly in 1988. IUCN urged the consultative parties to "adopt and implement a coherent system for the protection of areas in the Antarctic where such action would contribute [to] the protection of the Antarctic as a wilderness area" (IUCN 1989a).

32. In other words, world park status required a comprehensive approach to environmental protection, and a comprehensive approach to environmental protection included the designation of the Antarctic as a world park.

33. Proposals for a world park envisaged, however, that tourism, if properly regulated, would not be incompatible with protection of the environment.

34. The first detailed proposals were put before the Australian government in 1984 and were then distributed to the consultative parties at ATCM XIII in 1985. See, for example, ASOC 1986c, 1988c, 1989b, 1990a, 1990e; Ecofund 1986; Greenpeace 1986b.

35. As noted in chapter five, New Zealand tentatively made this suggestion in 1975 during the early stages of debates about how to manage the minerals issue. There was little support for the idea then.
Antarctic decision-making). They opposed the Australian/French proposal on similar grounds.

**Comprehensive protection**

In seeking to improve on the increasingly unsatisfactory and unwieldy sectoral approach to environmental protection, the Australian and French initiative required a rethinking of the traditional approach to environmental decision-making within the Treaty system (described in chapter three).

Australia and France proposed a legally binding agreement which would contain general environmental principles and standards against which all activity in the Antarctic would be judged. They elaborated an institutional framework, including a new Antarctic Environment Commission which would be vested with decision-making powers, and improved monitoring and compliance mechanisms.

The consultative parties agreed at a preparatory meeting in early May (prior to the Australian announcement on CRAMRA) that the issue of comprehensive environmental protection measures would be on the agenda for ATCM-XV. However, while they agreed that environmental protection measures should be improved, they were reluctant to agree to the very approach that was required to achieve it. There was general opposition to a new convention. They were particularly opposed to any independent decision-making authority with responsibility for monitoring and compliance. The British also argued that too strict rules might unacceptably restrict the pursuit of scientific knowledge. The suggestion that a comprehensive convention should incorporate a ban on minerals activity and designate Antarctica a wilderness reserve meant, in the context of the rejection of CRAMRA, that it was received with more hostility than might otherwise have been the case. It was characterised as a politically expedient alternative to the Minerals Convention, rather than an initiative on improving environmental protection its own right.

As discussed in chapter three, debates about the adequacy of the environmental sub-regime and demands for comprehensive protection took place, on the whole, outside the Treaty consultative process. ASOC and Greenpeace International proposals for comprehensive protection measures are discussed, in brief, above. The International Union for the Conservation of Nature also called for a new international instrument to

36. The claimants, in particular Argentina and Chile, resisted any such suggestions.
37. The Australian announcement on 22 May explicitly recognised, as noted above, that this was a "significant change of approach" (Hawke et al 1989:1).
38. The British referred to a "blinkered concern for the minor effects that [the] pursuit of knowledge is having on the Antarctic environment" which could, they implied, undermine the Treaty system itself (Preparatory Meeting for ATCM XV, Statement of UK Delegation).
provide for comprehensive protection of the Antarctic environment in its Antarctic Conservation Strategy (IUCN 1991). This detailed strategy included recommendations for stronger legal obligations on environmental protection within the Treaty system, a strengthened institutional framework and a prohibition on minerals activity. Thus the environmental rationale for an improved approach was well-established.

Environmental grounds for defection
Both Australia and France cited environmental grounds for their opposition to the Minerals Convention and their support for wilderness status for Antarctica. The most outspoken of their critics, particularly the US, UK and (at that stage) New Zealand, refused to accept and, indeed, sought actively to discredit this argument. They did so believing that the reasons for a defection (for the defecting state must make a calculation that the benefits outweigh the costs of its actions) would be found only in tangible and, for the most part, short-term interests.

Opponents suggested that the real reason for Australia's decision, hidden behind the idealism of environmental arguments, could be found in the reality of its sovereignty and economic interests and domestic political concerns. New Zealand's Foreign Minister suggested that the Australian decision was "dictated by political considerations rather than any fine feelings about Antarctica" (cited in Blay and Tsamenyi 1990:195). New Zealand Prime Minister Lange described the Australian decision as a "road-to-Damascus-like experience that tends to put Saul rather in the shade" (Clifton 1989:2).

The Australian Treasurer and the Minister for Resources argued against Australian signature of CRAMRA (in opposition to the Ministers for Foreign Affairs and the Environment) on the grounds, first, that the absence of guaranteed royalty payments in the Minerals Convention undermined Australia's sovereignty over its Antarctic territory and, second, that the absence of anti-subsidy provisions could result in unfair

39. In 1980 the IUCN, with the assistance of UNEP and the World Wildlife Fund, and in collaboration with UNESCO and FAO, prepared a World Conservation Strategy which identified preservation of the living resources of the Antarctic and Southern Ocean as a priority for national and international action. In 1981 the IUCN Council recommended that a conservation strategy for the Antarctic and Southern Ocean be prepared and, in 1983, an IUCN advisory committee on the Antarctic was established.

40. This was a reference to the strong showing by Green Independents (in the context of a forthcoming federal election) in the Tasmanian state elections, following which they held the balance of power in the state legislature. However the Tasmanian state election had been held only a week before the decision against CRAMRA was made whereas there was evidence of dissension in the government on the minerals convention some time prior to that.

41. The Minister for Foreign Affairs and the Environment Minister both supported the Convention on the grounds that it was the best that could be achieved and provided some degree of protection for the environment.
competition to Australia's mining industry.42 Both concerns had helped define Australia's position during the minerals negotiations.

The new policy initiative was also characterised as a "short term appeasement of the Green vote" (Fanshawe 1990). A federal election was due in Australia by September 1990 and polls indicated that environmental issues were likely to be important. This perception was reinforced by the results of the Tasmanian state election early in May 1989, following which the Green Independents held the balance of power in the state parliament.

Nevertheless an explanation which seeks to locate Australia's decision simply in short-term political and economic interests, is limited as the following discussion shows.

**Domestic debate in Australia**

Australia's decision was in part a response to domestic debate which, the liberal tradition of international relations theory suggests, is an important factor in shaping international cooperation.43 On 25 November, when CRAMRA was opened for signature, Australia did not join a number of its Treaty parties in signing the convention. Instead, the Minister for Foreign Affairs tabled the Convention in Parliament for the express purpose of promoting community discussion.44

The tenor of that community discussion over the period to early May indicated that public and parliamentary support for ratification of the Convention was increasingly unlikely. That is, an involuntary defection was possible. Both the Federal Opposition and the Australian Democrats (who held the balance of power in the Senate) opposed signature and ratification of CRAMRA.45 In response to a motion tabled by the Opposition (on 2 May 1989) calling upon the government not to sign and ratify CRAMRA the Foreign Minister, Senator Evans, indicated that the "Government is considering whether we should do just that". This made it clear that the issue was open to the influence of public debate.

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42. The Australian Mining Industry Council was in favour of signature, although it would have preferred an anti-subsidy clause. Its opposition to the Australian government stance was grounded in its belief that no area should be permanently closed off to mining.

43. For a detailed chronology of events in Australia during this time, see Bergin (1991).

44. He said that "in determining its position on the convention, the government will give consideration to, among other things, Australia's principal Antarctic objectives" (Evans 1988). The Treasurer, Paul Keating, had already made clear his opposition to signature of CRAMRA in a letter to the Foreign Minister, Senator Evans, in September 1988 (Keating [letter] 1988).

45. Labor government backbenchers also announced their opposition to mining in the Antarctic (Peake 1989:6).
There was, as Pascoe suggests (1990:106), "a high level of public concern about Antarctica ... which had no precedent in earlier considerations in Australia of Antarctic issues". The Australian environment minister, Senator Graham Richardson (when presented with a plan for a World Park Antarctica by sixteen conservation groups early in May) conceded that public opinion in Australia was increasingly opposed to CRAMRA (Clark 1989:4). That public concern was mobilised by NGOs who conducted an intensive and well-organised campaign in seeking to convince the government not to sign or ratify the Convention. Representatives from ASOC, Greenpeace Australia and the Australian Conservation Foundation lobbied politicians, conducted briefing sessions for the media and legislators and instigated successful letter-writing campaigns and petitions.

Divisions in Cabinet (noted above) were related not just to economic concerns. Treasurer Keating suggested in a letter to the Prime Minister that "Australia ... is in an excellent position to take a leading role in ensuring that the last wilderness is protected for future generations" (Keating [letter] 1989:2). In response to cabinet disagreement, opposition in parliament and public concerns Prime Minister Hawke established a committee to report to Cabinet on what steps would be necessary to establish the Antarctic as a World Park (Houweling 1989:2).

Public and parliamentary opposition to CRAMRA can be located in a growing awareness of the general importance of environmental protection. As Blay and Tsamenyi (1990:198) note, "the success of the Green Independents [in the Tasmanian election] was ... an indicator of community concerns for the protection of the environment". In explaining the Australian decision, Prime Minister Hawke referred to the changing world climate of opinion ... which is a function of the general concern and awareness of the responsibilities of governments in this generation to protect the planet generally and most particularly in regard to the Antarctic (cited in Bergin 1991:231). He suggested that there was an increasing understanding of the absolute fragility of the environment. We don't live in a static world and ... the attitudes of government today, in regard to environmental issues, is markedly different to what it was even twelve months ago (cited in Bergin 1991:231-232).

46. First Secretary in the Australian Embassy in Santiago, Chile.
47. The Prime Minister announced to the Australian Mining Industry Council that Australia was considering not signing the Convention (Blay and Tsamenyi 1990:198).
48. He had also raised this issue in an earlier letter to the Foreign Minister (see Keating [letter] 1988).
49. This committee included officials from the Department of Prime Minister and Cabinet, Treasury, Department of the Arts, Sports, Environment, Tourism and Territories, the Department of Foreign Affairs and Trade, and the Department of Primary Industry and Energy.
The Minerals Convention, the Prime Minister suggested, was "based on the clearly incorrect assumption - current in the 1970s - that mining in Antarctica could be consistent with the preservation of the continent's fragile environment" (Hawke 1990a:18) an assumption that Australia could no longer support. In this way, he linked changes in government policy (and in national objectives and interests) to changing values and ideas.

In exploring the credibility of the environmental rationale for Australia's decision on CRAMRA, attention should also be paid to its record of good-standing on environmental protection issues within the consultative process. Protection of the environment had long been a stated objective of Australia's Antarctic policy which also included economic benefit from resource exploitation. However, as Alan Brown observes (1990a:8), "those goals [were] set in another era ... Little if any critical consideration [was] given at the highest level of government to whether the individual goals [were] compatible with each other". The Australian decision on the Minerals Convention represented a reassessment of those goals and their compatibility with each other. It gave, as Harris argues (1990:17), "explicit priority to environmental protection".

Australian advocacy of an environmental protection agreement was well established in Treaty meetings. Throughout the minerals negotiations Australia had been at the forefront of support for stringent environmental protection measures. Australia first tabled a proposal for an umbrella environmental protection agreement in 1983, an idea which "proved too radical" for its Treaty partners (Rowland 1988:22). The idea still proved too radical in 1989 in spite of changing ideas in the international community about environmental protection and increased evidence (see chapter three) of the

50. Australia's interests and policy objectives in Antarctica can be summarised as follows: to preserve Australian sovereignty over the Australian Antarctic Territory, to maintain Antarctica free from strategic and political confrontation, to protect the Antarctic environment, to take advantage of the special opportunities Antarctica offers for scientific research, to be informed about and able to influence developments in a region geographically proximate to Australia, and to derive any reasonable benefits from the living and non-living resources of Antarctica (Jackson 1989a:6). The last objective was added in the early 1980s (Brook 1984:256, 258) and now includes the caveat "excluding the deriving of such benefits from mining and oil drilling" (Jackson 1989a:6).

51. Alan Brown is a senior officer with the Department of Foreign Affairs and Trade.

52. The question of a possible conflict between this and other policy objectives, such as benefiting from resource exploitation, had been debated in discussions on Australia's Antarctic policy. See Spencer (1984) and Brook (1984).

53. One report suggests that members of the entire Australian delegation at the final ceremony of the minerals negotiations wore World Park badges (ASOC 1989g:4).

54. Rowland also notes (1988:22) that the Australian submission to the UN Secretary-General in 1983 "was notable for containing passages about scenic and wilderness values, of a kind not mentioned in the statements of other countries".
inadequacies of the Treaty system in this regard. Australia argued at the preparatory meeting for ATCM-XV that it saw "merit in a catch-all convention ... subsuming over time existing instruments". Australia had also taken a lead in advocating improved rules on the Code of Conduct for expeditions and the protected area system and in pushing for better conservation measures to be adopted under CCAMLR.

Australian support for wilderness reserve status (or something akin to a world park) for Antarctica was new. Nevertheless, there is some evidence that Australian policymakers were not as stridently opposed to this concept as were others. In the mid-1980s Australia took the view that there were

a number of problems in the proposal to declare Antarctica to be a World Park, not the least of which is uncertainty about the precise content and implications of that concept ... The Australian authorities therefore believe that it would be premature to raise any World Park concept in the Antarctic Treaty forum until there is an agreed, precise and feasible meaning of that concept which recognises the practical realities of Antarctica (Anon 1984a:97; emphasis added).56

In other words, the possibility was not totally ruled out.

Australia’s change in national interests was in response to domestic debate and to new ideas and values (cognitive change) set within this broader context of a well-established commitment to environmental protection in the Antarctic.

France and the Antarctic environment

The French position is a little more puzzling. Indeed, its commitment to environmental principles in the Antarctic was, with some justification, greeted with greater scepticism.57 Rowland (1988:28) lists France as one of the least conservationist of the Treaty parties. As a potential mining state it would have benefited from CRAMRA coming into force, and thus been less adversely affected (as a claimant) than Australia by the lack of specific provisions on royalties and subsidies.

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55. In an informal paper (PREP/WP/14, 1989) designed to provide some direction for the anticipated discussion at ATCM XV, Australia described the present system on environmental protection as "piecemeal ... with many significant gaps" (PREP/WP/14, 1989:1). This paper listed the issues which would need to be addressed, and set out possible objectives and fundamental principles as well as institutional arrangements. The paper also referred to the enormous environmental consequences that could arise from mineral resource activities "[i]f CRAMRA enters into force..." (PREP/WP/14 1989:3) (my emphasis) thus indicating some doubt on the future of the minerals convention.

56. In a speech reported in the Department of Foreign Affairs journal 18 months later, the Minister for Science suggested that it would be "premature to implement" such a proposal until there was an agreed meaning (Jones 1985:841; emphasis added).

57. As noted above the French record of environmental protection in the Antarctic had been criticised by environmental organisations, especially with regard to its construction of an airstrip at Pointe Geologie.
Its alignment with Australia on non-ratification, following its less radical April announcement calling for the negotiations to be reopened, can be located firmly in domestic political explanations rather than characterised as building on a solid foundation of environmental concerns. In France, those domestic politics indicated a growing concern for environmental protection issues. Recent municipal elections had returned a 15 percent green vote, and polls showed that the green vote in the forthcoming European Parliament elections was likely to be higher than that (in the vicinity of 17 percent) (Scott 1989). NGOs conducted an active anti-ratification campaign with the support of Jacques Cousteau who was particularly influential in lobbying the French government, building on his close rapport with government leaders.58

As chapter one indicated, changes in policy may result from changes in government. The new Socialist government in France included members with strong environmental backgrounds. Environment Minister Brice Lalonde was a founder of Les Amis de la Terre, the French Friends of the Earth. The National Assembly also took a much more active role in the debate than previously. Indeed, the Parliamentary Committee which examined France's options on CRAMRA complained that the National Assembly had not been given a proper role in the development of Minerals Convention.59 It supported the exploration of other options besides the minerals convention and recommended legislation to prohibit French nationals from participating in minerals activity (ECO (LXXIV(2) 1989:2/4).

Coalition building after defection
The Australian and French defection from consensus was directed at a particular outcome - the Minerals Convention. It was not a rejection of the consensus norm nor of the value of the Treaty system. Prime Minister Hawke emphasised that they were "not challenging the Treaty System or the operation of the consensus principle that has underpinned its operation" (Hawke 1990a:19).60 Both states stressed their continuing support for the Treaty system as fundamental to their interests in the Antarctic. They sought to find a new consensus among the Treaty parties on a ban on minerals activity and on strengthening environmental protection measures. However, as Blay and Tsamenyi have observed (1990:201)

58. When he made his announcement calling for the minerals negotiations to be re-opened, Michel Rocard said that he had discussed this issue with Cousteau and referred to the Cousteau petition.
59. The President of the National Assembly, M. Fabius, had announced early in April that France should not ratify CRAMRA (Iggulden 1990:103).
60. Australia's Foreign Minister, Senator Evans, also stressed that "our initiative on Antarctica is in no way a repudiation of Australia's long-standing support for the Antarctic Treaty system" (Evans 1990a:5).
If CRAMRA is dead because of the absence of consensus, Australia can hardly expect to gain the consensus it will need to negotiate, let alone implement [their] proposed Convention ... It is a situation that could destroy the consensus approach to negotiations.

While some hoped, indeed assumed, that Australia and France would back down in the face of stringent and apparently unshakeable opposition from other consultative parties, this was not to be the case. Australia and France now sought to have their initiative adopted as an institutional goal within the regime. This process, of translating individual learning into institutional learning, rests (in a non-hegemonic regime) on coalition-building.

Both Prime Ministers took up the issue as a personal crusade. The Australian Prime Minister and his Cabinet colleagues lobbied hard on this issue. Australia and France were supported in their efforts by NGOs, through ASOC and Greenpeace International, who continued their public campaigns in other consultative states and lobbied politicians and Antarctic policy-makers.

The Antarctic issue was taken up in public and parliamentary debate in other Treaty states as it had been in Australia and France. These debates focussed on the general question of principle relating to a ban on minerals activity and the declaration of wilderness reserve status for Antarctic rather than on the more detailed and complicated question of comprehensive environmental protection measures. Consensus for CRAMRA began to erode further as support for the Australian and French proposal grew.

US State Department officials maintained their pro-CRAMRA stance in the belief that Australia would change its mind (Hope 1989). However not all US government agencies shared this view. The Environmental Protection Agency and the Council on Environmental Quality called for a review of US Antarctic policy interests to be held before the Convention was submitted to the Senate for ratification (ECO LXXIV(2) 1989:2). Evidence of congressional concern came with the introduction of a Senate resolution on 26 September which called for full protection for Antarctica and an extension of the moratorium on minerals activities while a new agreement to ban minerals activities was negotiated. NGOs in the US were active in lobbying

61. Hawke included the Antarctic in his list of topics when he spoke to US President Bush in Washington in June 1989. He mentioned it when he addressed the National Press Club in Washington. He raised it at a dinner hosted by the Minister for Industry and Regional Development and the Associate Minister for Foreign Affairs in Paris on 19 June 1989, and at another dinner hosted by the Lord Mayor of London on 21 June.

62. The resolution was introduced by Al Gore, an influential pro-environment Senator. It was co-sponsored by, among others, Senator Claiborne Pell, Chair of the Senate Foreign Relations Committee. A similar resolution opposing the minerals treaty and calling for strong
government agencies, congressional leaders and the President in support of the anti-ratification campaign.63

India, one of the key developing states in the Treaty system, announced its support for the Australian initiative in June (Murdoch 1989:6). In the same month, the Belgian Parliament passed legislation prohibiting Belgian nationals and companies from undertaking any minerals activity in the Antarctic.64 The Foreign Affairs Minister, Mark Eyskens, stated that "the ... Convention is dangerous and it is inappropriate for us to approve it. The best solution is to make Antarctica a world nature reserve" (Pallemaerts [e-mail] 1989). In Britain, bipartisan support for the Antarctic Minerals Bill broke down in the House of Commons where the Labour Party moved, unsuccessfully, that the House decline the second reading of the bill (House of Commons 1989:220).65 In September the Chamber of Deputies of the Italian Parliament passed a (non-binding) resolution opposing the minerals convention and supporting world nature park status for Antarctica. The Under-Secretary for Foreign Affairs informed the Parliament that the Italian Government would support the World Park option at the forthcoming consultative meeting (ECO LXXIV(2) 1989:1).

By this stage, it was clear that not only had the internal accommodation broken down but that those states which opposed Australia and France were having difficulty in maintaining their positions domestically.

ATCM-XV , 9-20 October 1989

Three-and-a-half months after the Australian announcement, the consultative parties met in Paris for the 15th consultative meeting. It provided the first opportunity for them to discuss in a multilateral forum the implications of the Australian and French decision

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63. On 23 June 1989, nine major environmental organisations in the United States (The Antarctica Project, the Sierra Club, Greenpeace USA, the Environment Defense Fund, the Environmental Policy Institute, Friends of the Earth, National Audubon Society, the Humane Society of the US and the Oceanic Society) delivered a letter to President Bush, urging the administration to respond favourably to the Australian and French decisions (Antarctica Project et.al 1989). A week later representatives of the Antarctica Project (Evelyn Hurwich and James Barnes, both of whom had signed the Bush letter) wrote to the director of the US Environmental Protection Agency, Bill Reilly, urging the agency to "take a leadership role in developing a positive environmental agenda for Antarctica (Hurwich and Barnes [letter] 1989:2)."

64. This Bill was unanimously endorsed by the Committee on Foreign Relations of the House of Representatives on 11 May and was approved in the Senate on 30 June.

65. This was after the visit by Australian Prime Minister Hawke to London. The debates make interesting reading. Essentially they pit the arguments of the Foreign Office against those of Greenpeace UK.
on CRAMRA and the proposals for a wilderness reserve. Opening statements were, on the whole, restrained. Some referred to the problems of a lack of consensus or stated their support for the Minerals Convention, but none openly censured Australia or France. Nevertheless, the head of the West German delegation summed up the feelings of many in noting that they

share[d] the concern expressed over the fact that doubts have now been raised from among our ranks ... [we] believe that a divided stand of the Antarctic Treaty States on the Minerals Convention will lead to risks with implications well beyond our circle (Final Report 1989:137)

The agenda was dominated by environmental issues. As well as comprehensive protection measures, delegates were scheduled to discuss waste disposal, marine pollution, environmental impact procedures, the protected area system, the siting of stations, the effects of tourism and non-governmental expeditions and environmental monitoring. These were, as chapter three shows, key issues in the environmental regime. Thirteen of the twenty-two recommendations adopted addressed these issues. Many of them set out detailed rules and procedures for the conduct of human activity in the Antarctic to supplement recommendations already in place and are discussed further below.

The question of minerals activity was not a formal agenda item but, given Australian and French opposition to the Minerals Convention and their pursuit of a prohibition on minerals activity, it was now difficult to separate it from the question of comprehensive measures. Only a few of the consultative parties were convinced by the Australian and French argument that CRAMRA should be set aside. Fifteen had signed it although

66. In an indication of the importance the French government attached to this particular gathering, it was opened by the French Prime Minister, M. Rocard. He told delegates that in his view a comprehensive regime for protecting the Antarctic environment should take the form of a "nature reserve - land of science" (Final Report 1989:117).

67. An open letter was sent to delegates by HH Prince Sadruddin Aga Khan, Professor Arne Naess, David McTaggart (Chair of Greenpeace International) and Charles de Haes (Director General of WWF). They called "on the member states of the Antarctic Treaty, indeed all nations of the world, to take the first unambiguous step toward safeguarding this environment. We ask them to discard the Antarctic Minerals Convention and begin immediate negotiations to forever preserve the Antarctic environment" (ECO LXXIV(1) 1989:1). On 9 October WWF-International came out in support of the Australian/French initiative. At the 1989 Annual General Meeting of Friends of the Earth, held in Washington DC, the 38 member groups unanimously agreed to a resolution calling on the Treaty parties not to ratify CRAMRA. FOE’s position advocated the negotiation of a comprehensive Environmental Protection Convention for Antarctica, a permanent ban on minerals activity, which together would maintain the continent as a wilderness reserve or Antarctic Treaty Park (ECO LXXIV(2) 1989:4)

68. The agenda item on comprehensive measures was discussed in the plenary session, and then by Working Group 1 which was chaired by Chris Beeby. The Chair of Working Group 1 drew up draft principles on comprehensive measures based but, according to the final report, the meeting did not have sufficient time to consider these, although a number of delegations (not specified) expressed reservations about them (Final Report 1989:15).

69. The Meeting also approved a declaration on the ozone layer and climate change.
none had yet ratified it. There was also limited support for wilderness status for the Antarctic or for comprehensive measures to be adopted in the form of a convention or similar agreement.

Working papers on comprehensive measures were submitted by Australia and France, Chile, New Zealand, the United States and Sweden. All accepted that there was a need for improved protection measures. The New Zealand paper was the most detailed of those tabled and set out specific suggestions for improving existing measures relating to environmental protection, including an improved institutional framework, building on existing components of the Treaty system but clearly hoping to head off an instrument of the sort proposed by Australia and France. Suggestions for an improved institutional framework (also proposed by Australia and France) were resisted, according to Kimball (1989f:15), on the grounds, that any new over-arching decision-making body might destabilise the existing compromises in Antarctic agreements.

The United States (XV ATCM/WP/8, 1989) argued that resource activities should continue to be conducted in accordance with existing agreements (including CRAMRA) and was reluctant to agree to any special meeting on comprehensive measures. In line with their earlier announcements, Australia and France advocated the negotiation of a

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70. See list at the end of appendix 8. This fifteen included Finland and the Republic of Korea who were NCPs when they signed and had attained consultative status just prior to ATCM-XV. As well as Australia and France, other consultative parties which had participated in the negotiations and had not yet signed were West Germany, Belgium, Italy and India. Spain, which had attained consultative status after the Convention was adopted but before it was opened for signature had also not signed. The key ratifying states were the other claimants (all of whom had signed) plus the US and USSR (both of whom had signed) along with a number of developing states (five of the sixteen ratifications had to come from developing states). In this category, Brazil, Uruguay, China, as well as Argentina and Chile (who were normally counted by the Treaty parties to fall into this category as well as being claimants) had signed.

71. These working papers were appended to the Final Report of the meeting.

72. This included improved monitoring and compliance mechanisms and improved institutional arrangements, including a secretariat and possibly a Standing Environmental Working Group. It also drew attention to "significant gaps in the system" and noted that "implementation of some of the instruments previously adopted has not always been up to the required or desired standards" (Final Report 1989:214). The working paper (XV ATCM/WP/4, 1989) was produced following the development of that government's White Paper on the Antarctic environment.

73. Chile expressed particular caution on the need for any form of institutional arrangement or on mandatory enforcement mechanisms. Chile also suggested that a "conceptual framework ought to include traditional formulations that govern the Treaty" (Final Report 1989:230). Although these "traditional formulations" were not stated, it is reasonable to assume that this was intended to refer to the protection of the status of sovereignty claims. Their working paper (XV ATCM/WP/7, 1989) argued that the measures already in place "configure a wide and profound framework of environmental protection that has no equal in the international community" while acknowledging that this needed improvement "in the light of the increasing human activity in Antarctica" (Final Report 1989:228). The delegation was of the opinion that such improvement could be best met by the adoption of Approved Measures.

74. The Swedish delegation proposed the outline of a draft recommendation (XV ATCM/WP/14, 1989) which sought to elucidate the common ground of the other proposals. Nevertheless it was very general in its content.
new convention and the declaration of the Antarctic as a "nature reserve - land of science".\textsuperscript{75} Their proposal received support from Belgium, Italy, Greece, India, and Spain.\textsuperscript{76}

There was difficulty in taking the discussion further. The consultative parties agreed, however, to convene a special consultative meeting in 1990 to "explore and discuss all proposals relating to the comprehensive protection of the Antarctic environment" (recommendation XV-1).\textsuperscript{77} This meeting would "undertake as a priority objective the further elaboration, maintenance and effective implementation of a comprehensive system for the protection of the Antarctic environment", including a review of existing measures to consider if and to what extent institutional arrangements might be necessary and the form, or forms, of legal or other measures required. The recommendation made no concessions to the Australian/French initiative but it was an acknowledgement that the issue would not fade away. It provided an opportunity for them to argue their case further.\textsuperscript{78}

The decision to convene a special meeting on environmental protection did not prevent delegates adopting a number of recommendations on the other environmental issues on the agenda. Indeed, by doing so, the consultative parties strengthened a number of the rules that were to be reviewed at the special consultative meeting, possibly in the hope that such a review would find no need for a new and comprehensive convention.

Recommendation XV-3 sets out detailed agreed practices on waste disposal.\textsuperscript{79} Governments must take measures to ensure compliance with the waste disposal rules by

\textsuperscript{75} Australia and France made suggestions on appropriate principles and procedural and institutional requirements, including an environmental commission with decision-making powers, a scientific and technical committee, an arbitration body and an inspection and monitoring corps. There is no specific mention of minerals activity being banned.

\textsuperscript{76} The Australian/French paper was also commended by Austria, Bulgaria, Poland and Sweden (Grutzner 1989:13). In a letter to the New Zealand Prime Minister, the convenor of ASOC in New Zealand suggested that Chile had been on the brink of publicly supporting Australia, but that disagreement between the two over the extradition from Australia to Sweden of a Chilean emigre wanted by the Chilean government caused Chile to break off talks with Australia (Wallace [letter] 1989). There is, however, no evidence in the Chilean proposal to indicate that it was close to advocating a wilderness reserve or a ban on minerals activity.

\textsuperscript{77} This recommendation is included, in full, at appendix 9.

\textsuperscript{78} The idea of a special consultative meeting on this issue was first suggested by the UK at the preparatory meeting, prior to the joint Australian/French announcement. The British move was interpreted by NGOs at that stage as a means of diverting attention away from the issue so that it would not be on the agenda of ATCM XV although they later supported the idea as support for the Australian/French initiative grew. Agreement to hold a SCM on comprehensive measures was reached only on the understanding that a meeting would also be held to discuss proposals for the liability protocol (though not to negotiate the protocol) required under article 8 of the Minerals Convention. At least some of the consultative parties were therefore still hopeful that CRAMRA could be resurrected.

\textsuperscript{79} As chapter three noted, SCAR's report on Waste Disposal was finally available to delegates. Governments may adopt, on an individual basis, rules more stringent than those in the
all those subject to their jurisdiction, including private operations. The Final Report includes a detailed statement of further work to be undertaken by the consultative parties with respect to improving waste disposal practices.

The consultative parties adopted their first detailed recommendation on marine pollution (XV-4). It requires governments to take measures to prohibit discharges and disposal from vessels and to ensure that vessels comply with the relevant provisions of specified international conventions.

There was considerable debate on how best to implement the EIA procedures adopted at ATCM-XIV. The view was generally held that these procedures should apply to all human activities, including tourism and non-governmental expeditions, but there was no agreement on how to extend those obligations beyond official expeditions. No recommendation was adopted on tourism but the meeting agreed, as noted in chapter three, that a comprehensive review was required and that it should be undertaken by the forthcoming special consultative meeting.

The Meeting took a number of steps forward in extending the protected area system. Management plans were now to be required for Specially Protected Areas (recommendations XV-8 and XV-9). The Meeting also approved two new categories recommendation. For any state, rules for Antarctica should be no less stringent than those applied to nationals and vessels elsewhere.

80. There is an emphasis on retrograding wastes, that is returning them to the country of origin. The Meeting reaffirmed its agreement to encourage the implementation of new waste disposal technology.

81. This statement addresses issues such as appropriate technologies, the dumping of wastes at sea, national waste management plans, waste disposal standards for vessels and the storage and handling of wastes.

82. The Meeting suggested that consultative parties who were signatories to the International Convention for the Prevention of Pollution from Ships (1973) and its Protocol of 1978 (MARPOL 73/78) consider formally proposing that the Treaty area be designated a special area under its provisions. This was approved by the Marine Environment Protection Committee (MEPC) of the IMO on 15 November 1990. The Meeting also agreed that the issues of dumping at sea and liability for marine damage warranted further attention.

83. The UK took the lead on this issue and circulated a draft recommendation which included a list of activities which would most likely invoke the preparation of a Comprehensive Environmental Evaluation in accordance with recommendation XIV-2.

84. Delegates compiled a number of issues relating to EIA which could usefully be considered by the Council of Managers of National Antarctic Programs in its forthcoming workshop. COMNAP is affiliated to SCAR and replaces the SCAR Working Group on Logistics.

85. As noted, there was agreement that EIA and waste disposal requirements should apply to non-governmental activities (including tourism) as well as to official expeditions.

86. As chapter three has noted, these steps followed the preparation of a report by SCAR on protected areas and debate at several consultative meetings on the need to improve the system.

87. The meeting also approved three new Sites of Special Scientific Interest and redesignated one SPA as an SSSI in order to facilitate research and monitoring under CCAMLR on the understanding that when that research was finished the site would revert to its original designation.
of protected areas to supplement the categories of SPAs, SSSIs and historic monuments (which protected areas of ecological, scientific and historic value respectively). A category of Specially Reserved Areas was created to protect values not already covered by existing criteria, including scenic, aesthetic and wilderness values (recommendation XV-10). The category of Multiple-Use Planning Area (MPA) sought to minimise the risk of activities interfering with each other and of cumulative impacts by encouraging cooperative planning and coordination of activities in areas so designated (recommendation XV-11).

Thus in the specific measures adopted, as well as the convening of a special meeting on environmental protection, this consultative meeting was important in the development of the environmental regime within the Treaty system.

Between ATCM-XV and SCM-XI

The twelve months between the consultative meeting and the scheduled SCM were a period of intense diplomatic activity and public debate as Australia and France maintained their formal diplomatic efforts to build a coalition of support for their policy stance.89

In support of Australian and French leadership on this issue, NGOs maintained their active national and transnational campaigns.90 In Britain, where the Foreign Office was still adamantly opposed to a minerals ban and a new instrument for environmental protection, a public campaign against mining in Antarctica was mobilised by the "unlikely coalition of Greenpeace, the WWF and the National Federation of Women’s Institutes" (Porritt 1990). A petition circulated in Germany by members of the World-Wide Fund for Nature, demanding full protection for the Antarctic and a permanent ban on minerals activity (ECO LXXVII(3) 1990:2) collected over 300,000 signatures. The Antarctica Project spearheaded a collective endeavour by ASOC members to research and draft a model Antarctic protection convention. Jacques Cousteau continued his high level informal diplomacy.92

88. SRAs can also be used to protect areas of outstanding geological, glaciological and geomorphological value.

89. Senator Evans met with US Secretary of State James Baker in October for the Australian-US Ministerial talks and discussed the Australian/French initiative. In September 1990 Evans and the Australian Ambassador for the Environment, Sir Ninian Stephens, visited a number of Latin American countries (Argentina, Chile, Brazil, Uruguay and Peru) during which time the initiative was also discussed.

90. Because of the Australian commitment, Greenpeace Australia’s Antarctic campaign focussed attention on other Antarctic Treaty nations (Goldsworthy 1991:7).

91. They circulated a petition and targeted the Conservative Party conference in October.

92. In February 1990, Jacques Cousteau visited Australia where he discussed the Australian/French initiative with the Prime Minister and other senior ministers. During his visit he was presented with an Honorary Companion of the Order of Australia. The Prime Minister’s press release on Cousteau’s visit noted that he was "remembered with particular gratitude by the people of
When the year-long signature period for the minerals convention passed in November 1989 only nineteen states had signed. Significantly West Germany, which had been one of the strongest pro-mining nations during the negotiations, allowed the signature date to pass without making a decision. With the exception of the UK, none of the signatory states had begun ratification processes.

Politicians in a number of Treaty states, including those most opposed to Australia and France, responded to the pressures of public campaigns and NGO lobbying, and urged a reassessment of national policy (and thus national Antarctic interests) upon Antarctic bureaucrats. The Antarctic bureaucrats, who had dominated decision-making at a national and international level for so long, were reluctant to respond. As a result they were increasingly marginalised in the political debates. Their resistance stemmed from their ‘ownership’ of the Antarctic issue and its decision-making processes and their continued belief that the regime could not function in any other way.

**New Zealand**

Australia and France received further support when, on 26 February 1990 the Prime Minister of New Zealand, Geoffrey Palmer announced that his government would set aside consideration of the ratification of CRAMRA and would explore the possibility of a "long-term legally binding moratorium on mining activity in Antarctica" (Palmer 1990a:2). He suggested that the debate about the Minerals Convention was "diverting attention from the wider environmental protection issues" in the Antarctic (Palmer 1990a:1). Palmer also suggested (1990a:2) that the Antarctic community had to "recognise that the time has come to move constructively in the direction of the Australian and New Zealand proposals on environmental protection measures". The Antarctic community had, to date, been reluctant to do so.

When pressed the following day by the Leader of the Opposition on whether the announcement meant the government might reinstate the Minerals Convention as its
preferred option if it did not make progress in some other form, Palmer replied "No, it does not" (Hansard 27 February 1990:147). On 6 July Palmer announced that his government would promote a new protocol to the Antarctic Treaty and a moratorium on mining. On 4 August he announced to a conference of environment and conservation organisations that New Zealand would now support a permanent ban on mining.

New Zealand’s decision was significant. Through Beeby it had invested considerable diplomatic energy in the negotiation of CRAMRA. As a claimant state its ratification was required to effect entry into force. Thus three of the nine key states had now put the Convention aside. It was a further blow to the US and UK arguments that Australia and France were isolated within the Treaty system. It was an important victory both for Australia and France, and for the NGO campaign in New Zealand.

USA

In the US, official State Department policy which supported CRAMRA and opposed the Australian/French proposals was under challenge in Congress amid a growing concern over the administration’s unwillingness to consider seriously alternatives to CRAMRA. Between February and May five legislative initiatives on the Antarctic,...

97. The debate on this issue in the New Zealand House of Representatives was interesting. It was sought by the Opposition under Standing Orders as a matter of urgent public importance. Both the Government and the Opposition opposed mining in Antarctica and both now supported comprehensive environmental protection measures. The lengthy debate consisted, to a great extent, of political point scoring about who was the most environmentally sound and trustworthy. The Opposition characterised the Government decision as a "remarkable political ... backdown" (Hansard 27 February 1990:157). The Government countered by claiming that the Opposition, when in government in the early 1980s, had diminished environmental concerns in the priorities of the New Zealand delegation to SCM IV (the minerals negotiations).

98. The National Party’s policy on the environment (New Zealand National Party 1990) announced on 13 July 1990, advocated a total ban on minerals activity, and support for the World Park concept. On 3 August, the New Zealand leader of the Opposition, in an address to the Environment and Conservation Organisations of New Zealand prior to the elections to be held there in November, declared that his party supported a regime where mining can never be allowed to take place in Antarctica. He said that a National Government would "in conjunction with Australia actively promote the concept of a world wildlife park for Antarctica". New Zealand would advocate the implementation of a single convention for Antarctica, a key feature of which would be a total ban on mineral activities "now and in the future" (Bolger 1990:5).

99. The New Zealand government had always maintained its opposition to minerals activity in the Antarctic, but had previously argued that a permanent ban was not achievable.

100. The Minerals Convention is sometimes referred to as the Wellington Convention.

101. The seven claimants and the US and USSR.

102. Bob Hawke, welcomed the New Zealand government’s decision, suggesting that it would "give even greater impetus to Australia’s efforts with France to create an Antarctic wilderness reserve" (Hawke 1990a:108). Hawke had discussed the matter with Palmer during his visit to New Zealand in January of that year.

103. On 9 November 1989 senior Representatives (the Chair of the US House of Representatives Committee on Interior and Insular Affairs, Morris Udall, together with the Chairs of his five subcommittees) wrote to President Bush expressing their concern over "the apparent unwillingness of the Department of State to at least consider alternatives other than ...
on minerals activity and environmental protection, were introduced into the House of Representatives and the Senate. They sought to prevent US nationals and corporations from participating in minerals activity and to require the Bush administration to initiate negotiations with other consultative parties for an international agreement banning all minerals activities. They also advocated world park status for the Antarctic.\textsuperscript{104}

Non-governmental organisations maintained a high profile during these debates and gave evidence at a number of hearings.\textsuperscript{105} Jacques Cousteau visited the US during this period and aligned himself closely with the senators and representatives who were leading the congressional debate.\textsuperscript{106}

In October 1990 the joint House and Senate resolutions (introduced earlier in the year by Senator Gore and Congressman Owens) were adopted. Legislation on the Antarctic was also passed by Congress\textsuperscript{107} and US President Bush signed the Antarctic Protection Act into law on 16 November. US citizens or companies are prohibited from engaging in, financing or providing assistance to any Antarctic minerals activities, pending Congressional approval of a new agreement among ATCPs banning minerals activities. It expresses the sense of Congress that the Secretary of State should negotiate one or more new international agreements to permanently conserve and protect the Antarctic environment, prohibit or ban mineral activities, grant CRAMRA" and requested that the President "direct the Department of State to consider Australia's proposal for an Antarctic Environment Protection Convention in lieu of the CRAMRA" (Udall et al 1989 [letter]:2). Congressman Vento expressed a similar concern when he introduced his bill to the House. Almost two months later, on 3 January 1990, Udall and his colleagues received a response from Janet Mullins, an Assistant Secretary in the Legislative Affairs division of the Department of State. She suggested that suggested that the majority of ATCPs supported the Minerals Convention and considered it a key element in comprehensive environmental measures (Mullins 1990 [letter]).

\textsuperscript{104} Congressman Conte (with co-sponsors Walter Jones (D-NC) and Representative Wayne Owens (D-Utah) introduced the Antarctic Protection and Conservation Act 1990 (HR 3977) on 8 February. This bill stated that "the Convention on the Regulation of Antarctic Mineral Resource Activities is not adequate to provide the necessary level of protection for the fragile environment of Antarctica and could actually stimulate movement toward commercial exploitation" (article 2(5)). Companion legislation was introduced into the Senate by John Kerry (S 2575 - the Antarctic Protection Act). On 4 April 1990 Congressman Vento introduced his draft Antarctica World Park and Protection Act of 1990 (HR 4514) (see \textit{Congressional Record} 4 April 1990: E990). In May Senator Gore introduced the Antarctic Environmental Protection Act 1990 (S 2571) (see \textit{Congressional Record} 3 May 1990: S5658-S5659) which was designed to amend the Antarctic Conservation Act of 1978. Identical legislation was introduced into the House of Representatives by Congressman Jones.

\textsuperscript{105} So did the Australian government through its embassy in Washington.

\textsuperscript{106} Conte was joined by Cousteau at his press conference on the introduction of his bill. In May, Senator Gore chaired an Interparliamentary Conference on the Global Environment, attended by over 200 legislators from 42 nations. Senator Kerry, with the help of Captain Cousteau, co-chaired the Conference's Working Group on Oceans and Water Resources, which discussed the future of Antarctica at length.

\textsuperscript{107} The Conte bill passed in the House of Representatives and the companion legislation introduced by Senator Kerry was also passed in the Senate.
special protective status to the Antarctic. Any treaty or agreement on the Antarctic submitted to the Senate for advice and consent was required to be consistent with this legislation. CRAMRA clearly did not meet these criteria. This was a further blow to the Department of State's position on the Australian and French proposals. The US position was now one of a potential involuntary defection.

The Environmental Protection Agency wrote to the State Department requesting that the instructions to the US delegation to the forthcoming SCM be changed to reflect the substance of the new legislation (*ECO* LXXVII(3) 1990:4). In response to this activity the State Department indicated, noncommittally, that it was "prepared to consider means of addressing the concerns which have been raised over the Convention" (Bohlen 1990:11). The Australian Foreign Minister reported, after a ministerial visit to the US, that the US would support the negotiation of a new legal instrument within the Treaty system to provide comprehensive environmental protection, and that they were prepared to consider an indefinite ban on minerals activity (Evans 1990c). This was nothing approaching a commitment to a permanent ban, and "indefinite" was undefined, but even a willingness to discuss something previously argued to be not negotiable was a sizeable victory for Australia and France. This shift in policy was an imposed response to congressional and community concerns.

**Other treaty states**

Statements by politicians and legislative actions in other states further undermined CRAMRA and contributed to the growing coalition of support for Australia and France.

On 19 January 1990, President Gorbachev announced at a World Forum on Environment and Development in Moscow that "the USSR is ready to participate in the survival of the Antarctic, of this world reserve, which is our common natural laboratory" (Anon 1990h:4). "Our children", he, "will never forgive us for not having protected this extraordinary ecosystem" (Barnes 1990d:8). Soviet Prime Minister, Nikolai Ryzhkov reiterated this during a visit to Australia in February.108 While nothing was said about the status of CRAMRA, the Australian government took these statements as evidence of Soviet support for their initiative. As chapter five showed, the Soviets had long favoured a moratorium on mining in the Antarctic in part because of their lack of funds and appropriate technology vis-a-vis the US. They were also keen to establish their environmental credentials in the post-cold war international order.

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108. He told guests at a parliamentary dinner that the Soviet Union was "prepared to collaborate with Australia and other countries in implementing ... initiatives that cover the survival of the Antarctic - a global preserve and a common nature laboratory" (Ryzhkov 1990).
The Spanish Minister of Education and Science told the Senate (in February 1990) that
the Spanish government "cannot help but view with sympathy ... the declaration of
Antarctica as a world park". Later in the year (September 20) the Senate
unanimously adopted a motion (tabled in July by the Parliamentary Socialist Group)
that the government should support measures which would give the greatest possible
protection to the Antarctic, and should not adhere to CRAMRA but support Antarctica
becoming a nature reserve and land of science.

The German Foreign Minister Hans-Dietrich Genscher, spoke out in support of an
Antarctic World Park in mid-November. India reiterated its "continuing support for the
Australian and French initiative" (Evans 1990b:5) during a visit there by the Australian
Minister for Foreign Affairs.

Australia took further unilateral action in support of its no mining stance. On August
17, the Foreign and Environment Ministers announced that the government would
introduce legislation to "ban all mining in the Antarctic to the extent of Australia's legal
capacity to apply such a ban" (Evans and Kelly 1990:570). The legislation was
designed to prohibit mining by Australians and non-Australians alike in the Australian
Antarctic Territory, and by Australians anywhere in the Antarctic region. Thus
Australia was giving formal effect to its redefined national interests and policy goals.

Outside the system

Debates about the status of Antarctica and minerals activity were not confined to the
Treaty states. In early December 1990, the IUCN held its 18th General Assembly in
Australia and adopted a resolution on the Antarctic which stated that "any exploitation
of minerals would adversely affect the values of the Antarctic environment" (ASOC
1990f:13). The Assembly recommended that:

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109. See Spain, Senate (1990). In response to a second question on minerals, the somewhat non-
committal answer was that the "Spanish Government will do all that it can in order to achieve
the very best conservation of that part of the territory of our planet"


111. Because of the problem of applicable jurisdiction in the Antarctic, Australia would not have
been in a position to prevent non-Australians from carrying out activities in the Antarctic. This
reference may have been inserted so that, should the Australian/French initiative fail and
CRAMRA or something similar enter into force, the Australian government would then have
been obliged to oppose any part of the AAT being identified for exploration or development
activities thus, supposedly, preventing such activities by non-Australians. (An officer of the
Australian Department of Foreign Affairs and Trade (DFAT) told me that this provision was
inserted into the legislation at the insistence of the Department responsible for the Environment
and Territories (DASETT) to the embarrassment of DFAT).

112. The resolution was submitted by the Australian Conservation Foundation, Greenpeace
the ATCPs and all other interested governments and non-government bodies:
(a) Work towards the adoption of a comprehensive environmental protection regime for Antarctica embodied in legally binding agreements;
(b) Incorporate in these agreements a permanent exclusion of mineral prospecting, exploration and exploitation in Antarctica; ... (IUCN 1990:2).

The IUCN Director-General was called upon to communicate this resolution immediately to the consultative parties then meeting in Chile for the first session of the special consultative meeting.113 This resolution, which gave further effective support to the Australian/French initiative, was important. A number of consultative parties were state members of IUCN. It was perceived by them as a legitimate and credible conservation organisation which represented international opinion. It had been granted observer status to various institutions within the Treaty system and had worked closely with SCAR and the consultative parties on Antarctic conservation issues.

The UN General Assembly agenda again adopted a resolution (sponsored by Malaysia) on the Antarctic. While it welcomed the increased support for the establishment of a world park and for the banning of minerals activities it also, predictably, expressed the view that any move to elaborate a comprehensive convention should be done with the full participation of the international community, within the context of the UN system, including the forthcoming United Nations Conference on Environment and Development (in Brazil, June 1992).114 However, the UN resolution can be taken as a signal that the protection of the environment, and consultative party stewardship of that environment, would be the new focus for debate and challenge to the Treaty system.

The making of the Madrid Protocol: Special Consultative Meeting XI
This special consultative meeting on comprehensive environmental protection was the first time the consultative parties had met in a session devoted exclusively to environmental issues. Four sessions were held between November 1990 and October 1991. Over this period of less than a year the consultative parties moved from division to consensus on a new environmental agreement, the Madrid Protocol, which included an effective prohibition on minerals activity.

The Antarctic and Southern Ocean Coalition was granted official observer status.115 NGOs were also represented on the delegations of Chile and France, as well as the usual

113. The United Kingdom, the US and Norway indicated that, had a vote been necessary (the resolution was agreed to by consensus) they would have abstained on the grounds that they did not want to pre-empt the results of the Chile meeting (ASOC 1990f:2).
114. The Secretary General was requested to undertake a comprehensive study on the establishment of a UN sponsored station in Antarctica.
115. Jim Barnes from the Antarctic Project and Friends of the Earth, Maj de Poorter from Greenpeace International and Andrea Figari from Greenpeace Argentina were the official ASOC representatives. They were able to attend the plenary and working group meetings, but not the
ones of Australia, USA, Denmark and New Zealand. SCAR was present as an observer but it was not asked to provide advice on the issues under discussion. The Meeting divided into two working groups, supplemented by Heads of Delegation meetings. Working Group 1 focussed on the issues to be considered in elaborating a comprehensive system. Working Group 2 reviewed existing environmental protection measures with a view to improving their content.

Debate over the form and content of comprehensive measures focussed initially on four proposals tabled at the first session and then progressed on the basis of an informal text drafted by Rolf Trolle Andersen, head of the Norwegian delegation. There were a number of contentious issues during the negotiations. There was disagreement over whether a new agreement was needed or whether existing measures could be updated and expanded. There were two major points of contention on the minerals issue. The first was that of a ban on minerals activity and whether, if it could be agreed to, it should be expressed as a moratorium or a prohibition. A moratorium implied that, after a given time period, mining would occur. Prohibition, on the other hand, rested on the principle that mining would not occur. There was also disagreement on whether there should be a requirement for consensus to lift a ban (fundamental to a prohibition) or, as favoured by the US and the UK, consensus to extend any restriction.

The need for new institutional arrangements was also disputed, especially with regard to a standing committee for environmental protection (especially whether such a committee would have independent decision-making powers) and an independent inspectorate. On the issue of environmental impact assessment there was disagreement on how to give effect to the requirement that all activities should be subject to prior assessment and whether this should incorporate a collective review mechanism.

Viña del Mar

The first session was held in Viña del Mar, Chile, from 19 November to 6 December 1990. Four proposals were tabled: the draft convention proposed by Australia and France, who were now formally joined by Belgium and Italy (the Group of Four); a draft protocol submitted by New Zealand; an outline proposal for a protocol

Head of Delegation sessions. They were able to speak, but only after the Treaty party delegations had spoken on any particular subject.

116. Another twenty people from ten countries worked as lobbyists outside the meeting.
117. At ATCM-XV delegates had also agreed to hold a meeting on the Liability Protocol to be negotiated under the Minerals Convention. By the time the Chile meeting was convened there was agreement that there was little purpose in holding a lengthy meeting given the almost certain demise of CRAMRA. The meeting lasted about half a day, and was attended by only about half the delegations (ASOC 1991c). There was, nevertheless, substantial support for the useful parts of article 8 of CRAMRA on liability, which could be used in a new environmental protection convention (ECO LXXVII(5) 1990:2).
(Argentina, Norway, the UK, the US and Uruguay) which was supplemented by a draft UK protocol and a draft protocol and annexes from the US, and an outline working paper tabled by India.118

Australia and France maintained their stance against mining and in favour of a new comprehensive convention.119 The Group of Four (G4) proposal sought to establish environmental principles and a system of regulation, monitoring and enforcement which would be applicable to all activities in the Antarctic.120 Under this agreement activities would be subject to environmental impact procedures and would be categorised according to the risk of environmental harm as low risk, high risk or prohibited.121 Minerals activities would be in the latter category. The Convention would establish an executive Standing Committee for the Protection of the Environment (which would prepare, apply and monitor decisions taken by the consultative parties), a secretariat, a Scientific and Technical Advisory Committee and an Inspectorate.

New Zealand's proposed environment protection protocol to the Antarctic Treaty also included a prohibition on all minerals activities. Environmental assessment procedures would be required in some form for all activities and all non-negligible impacts on the Antarctic environment were to be avoided. A secretariat, Advisory Committee for Environmental Protection and an Inspectorate would be established although decision-making would remain in the hands of the consultative parties. The draft protocol updated and strengthened many existing recommendations in a legally binding form.

As expected, the United Kingdom and the United States delegations were not prepared to accept a permanent ban on minerals activity or wilderness reserve status for the Antarctic. They continued to support CRAMRA and argued that the question of minerals activity should be dealt with separately from a comprehensive environmental protection convention. John Heap told the meeting that

118. The main proposals were introduced in a plenary session in order to encourage debate to gauge the thinking of delegations.

119. Australian Prime Minister Hawke announced that any agreement that did not include an effective and comprehensive ban on mining would be unacceptable and that any new arrangements for the protection of the Antarctic environment had to be comprehensive (Hawke 1990d:4). French Prime Minister Rocard reaffirmed, in a press conference held jointly with Cousteau on 22 November, "that the protection of Antarctica is a priority for France". It was, he said, "totally unacceptable to open Antarctica up to any minerals activities. In Viña del Mar the Antarctic Treaty parties must negotiate the right tools to protect Antarctica" (ECO LXXVII(3) 1990:4).

120. Earlier in the year, in March, Australia and France circulated a revised proposal for a possible instrument on environmental protection. Prior to the SCM the Four circulated an indicative draft instrument in the form of a separate convention.

121. The draft convention proposed that collective authorisation would be required for certain high risk categories and the consensus process would be used to identify which activities would be exempt from collective authorisation and subject only to assessment by national authorities in accordance with the convention (Kimball 1991b:6).
The UK continues to believe that the minerals convention ... provides the only mechanism on offer that has the capacity to defuse an otherwise explosive political issue and regulate minerals activities in a way that meets all reasonable environmental demands (Anon 1990n), thus suggesting, by implication, that the environmental demands of the Four and the NGOs were unreasonable. The Australian Foreign Minister, Senator Evans, observed that he could "make no secret of ... the Government's regret that the United Kingdom ... has so far failed to recognise [the] ground swell of national and international opinion". He expressed his hope also "that the United States will move to a more flexible position which reflects the growing domestic mood in that country" (Senate Hansard 4 December 1990).

The proposal co-sponsored by Argentina, Norway, the UK, US and Uruguay, and the supporting draft protocol and annexes circulated by the UK and the US, made little advance on the existing state of affairs. There was no provision for inspection or enforcement procedures. Several draft annexes were also circulated which, in the main, reproduced existing measures. This proposal was supported by Japan (a likely mining state) as well as by the USSR which had previously indicated some support for the Australian and French position.

The atmosphere in Working Group one, which considered these proposals, was generally described as tense. The head of the Belgian delegation said that "the climate here is not good" (Anon 1990o). He suggested that the G-4 proposal had "not been seriously discussed at all ... We have the impression we must buy the so-called American protocol" (Anon 1990o). Working Group 2, on the other hand, made steady progress in its review of existing measures on environmental protection. It drew on those measures and on the proposals included in the draft New Zealand protocol, the annexes submitted by the US and a working paper on EIS tabled by the Group of Four. Items under discussion included marine pollution, waste disposal, the Agreed Measures, environmental impact assessment, the protected area system, regulation of tourism and non-governmental expeditions, and environmental monitoring.

Nevertheless, this group's efforts ultimately relied on agreement in Working Group 1 on the form and content of a comprehensive agreement. That was not forthcoming. To prevent a potential deadlock, Rolf Anderson prepared an informal draft text for a

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122. The British hoped that "once the nations had agreed environmental guidelines we can talk about the minerals issue". They argued that there would be no consensus on a world park (Hamer 1990:5).

123. The US and UK proposals were also supported by Argentina, Norway, Uruguay, Brazil and South Africa (ASOC 1991c).
protocol to the Treaty in consultation with heads of delegations. Delegates were prepared to use this draft as the basis for further discussions, although it was not accorded the formal status of a negotiating text.

The Andersen protocol contained draft articles (many of them incomplete) on environmental principles, scientific cooperation, environmental impact assessment, compliance, inspection, response action, liability, requirements for annual reporting, and provisions for dispute settlement and established a Committee for Environmental Protection. It declared the Antarctic a "natural reserve, devoted to science" (article 1). Article 6 proclaimed a ban on minerals activity although it did so in a way that made it clear there was still disagreement. The Andersen text also provided for a series of annexes on the specific environmental issues under consideration by working group 2.

The Australian Minister for Foreign Affairs called the conditional acceptance of a restraint on minerals activities within the context of a comprehensive regime "a major shift compared to the hostility to those concepts" in 1989 (Evans 1990d:3969). The meeting agreed that the current restraint on mineral resource activities would continue. Thus the question of a voluntary restraint on minerals activity now appeared to be no longer linked to the entry into force of CRAMRA.

From Viña to Madrid
Events in the months following the Viña meeting showed that the US and UK, in particular, were prepared to make few concessions on the unfinished articles of the Andersen text. Early in 1991 the US government circulated a diplomatic note to all consultative parties confirming its position on Antarctic mineral resources activities,

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124. Two earlier drafts were offered by a "senior member of the New Zealand delegation" but were rejected by delegations (Anon 1990o).

125. The New Zealand delegation considered that "in broad terms, it is a satisfactory document" (Anon 1990p). The Australian delegation characterised it as an important step forward, as basis for further negotiations. Environmentalists, although criticising a number of deficiencies in the Andersen draft, agreed that it would enable further discussion. They were concerned that the draft was less than comprehensive (compared with the G4 and New Zealand proposals) but acknowledged that it was an improvement on the US and UK suggestions. For a detailed discussion of the Andersen text see Kimball (1991b). For a critique see Wallace (1991).

126. A draft article establishing a secretariat was removed at the insistence of Argentinian delegation which argued that the SCM did not have the mandate to make decisions that would affect the full consultative process, although it agreed that the question of a secretariat and more frequent meetings of the consultative parties could be discussed at the Bonn 16th consultative meeting.

127. The article read "Any activities relating to minerals resources other than scientific research shall be prohibited ..." (ellipses included). Initially the wording had been enclosed in square brackets, an indication of serious reservations on the part of some delegates. The ellipses (...) included in the Anderson draft indicated that further elaboration was expected.
arguing for a fixed term moratorium, with consensus required to extend it. This was, in effect, no concession at all to a ban on minerals activity, given that even the US government acknowledged that mining was unlikely to proceed for at least thirty years.

The Four continued to mobilise support from other Treaty nations. At least eight 'likeminded' countries were now identified - India, New Zealand, Finland, Denmark, Greece, Austria, Romania, and Ecuador. New Zealand (as a claimant state) and India (as a developing state) had issue-specific power in the Treaty system. The others were non-consultative parties (or new consultative parties) who had gained little from CRAMRA and were increasingly irritated with US and UK attempts to dominate the system. This coalition signalled the emergence of a pro-environment 'caucus' within the Treaty system. It showed that Australia and France were no longer isolated and also provided NGOs with a weapon in their domestic campaigns in states which had not yet changed their position.

At the end of January 1991 the Four met in Paris to consider their response to the Anderson draft. They were joined on the second day of their meeting by the eight likeminded states. All twelve met again in Rome at the end of March 1991 to consolidate amendments to the Anderson draft which were to be circulated to other Treaty parties prior to the forthcoming Madrid session of the SCM. They proposed that the provisions on compliance be strengthened and suggested amendments on inspection, response action and liability. The key elements of environmental impact assessment procedures were to be part of the instrument proper, rather than set out in an annex, in order to strengthen their application to all activities. The form of the final agreement was left open.

On 25 March 1991, the British government announced that following a review of Antarctic policy it would support a temporary moratorium on mining so that consensus could be achieved, but that it would leave the elaboration of further details for debate at

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128. Australian discussions with the US elicited an unfavourable response to a permanent prohibition from the State Department and from the Departments for Energy and for the Interior.

129. The Environmental Protection Agency and the Marine Mammal Commission supported a ban on minerals activity, in opposition to the Departments of the Interior, Energy and State.

130. Finland gained consultative party status on 9 October 1989 and Ecuador on 19 November 1990.

131. For the first half day, Australia and France met alone, and were joined by Belgium and Italy in the afternoon.

132. Sweden was also identified as a supporter of the G4 approach, and it was agreed that they would be invited to further meetings of this group.

133. While the Four favoured a convention, they agreed that substance was more important than the form in which it was expressed although they opposed any instrument which focussed on sectoral regulation without providing for integration of environmental protection measures and creating a legally binding regime.
the April session of the SCM. This was, however, a limited concession of the order offered by the US and Opposition leaders in the UK criticised the government for not going far enough.\footnote{Gerald Kaufman, British Labour Party shadow Foreign Minister argued that a "moratorium was a compromise which leaves open the option to mine at some future date". It was, he said, "not acceptable to the Labour Party" \textit{(ECO LXXX(I) 1991:1)}. The Leader of the Liberal Democrats wrote a public letter to Prime Minister Major opposing the British delegation's position.}

However, in another significant victory for the pro-ban and wilderness reserve coalition, two more influential Treaty states, both supporters of CRAMRA and likely mining states, changed their position. Japan announced on 23 April that it would support a prohibition on minerals activity. Japan apparently told the US at the November meeting in Chile that it had not realised how strong opposition to Antarctic mining had become and that it would have to review its position in the light of this (MacKenzie 1990:4). The German Minister of Industry Juergen Moellemann announced that his government would now support nothing less than a permanent ban on mining in Antarctica.\footnote{While Foreign Minister Genscher announced his support for the declaration of an Antarctic World Park some time prior to this, the final decision on the minerals issue lay with the Ministry of Industry. The Industry Minister had received tens of thousands of post-cards urging that Germany support an anti-mining position.} In redefining their policy goals, both were responding to public debate and to the growing strength of the pro-ban coalition.

\textit{The Madrid session of SCM XI}

The second session of SCM XI was held in Madrid from 22 to 30 April 1991.\footnote{This followed the preparatory meeting (15 to 19 April) to set the agenda for the sixteenth consultative meeting to be held in Bonn later in the year. A number of issues being dealt with by Working Group 2 of the Special Consultative Meeting were inscribed on the agenda, including human impact on the Antarctic environment (a standing item), the effects of tourism and non-governmental expedition, and the Antarctic Protected Area system.} Working Group 1 instigated an article-by-article reading of the Andersen text.\footnote{Towards the end of the session (27 April) a drafting group was established under Working Group 1.} There was still no final agreement on a number of key issues - minerals, impact assessment, the environmental committee, compliance and the liability and response action provisions. Several delegations opposed anything more than an advisory role for the Environmental Protection Committee suggested in the Anderson draft. They preferred the traditional Antarctic approach of voluntary compliance on a national basis, with few formalised institutions, even though this had proved inadequate as a mechanism for ensuring implementation of environmental rules.

The G4 and 'likeminded' countries continued to support a prohibition on minerals activity.\footnote{Some favoured a specified time frame (between 30 and 60 years): others preferred an unqualified period.} They were agreed that consensus should be required to remove any
prohibition, with no provisions for a compulsory review. The likeminded group was joined by the (now united) Germany and by Switzerland, a new signatory to the Treaty. A further group of states, the Netherlands, Japan, Chile and India, accepted the major G4 principles, but wanted the protocol to require a minerals regime to be in place if the prohibition was lifted. This group also favoured a non-compulsory review provision.

The third major bloc, dominated by the US and the UK, and including South Africa, China, Uruguay, South Korea and Argentina, supported a fixed-term moratorium, which would lapse unless consensus could be reached to extend it. Most wanted a compulsory review process, and the requirement for a minerals regime to be in place when the ban was lifted. The US and the UK argued that their willingness to accept a formal restraint on minerals activity and a comprehensive agreement was evidence of their flexibility and desire for consensus and that Australia and France should respond in kind. The short-term moratorium was, however, a limited concession. Neither the US nor the UK had formally abandoned CRAMRA or willingly accepted an alternative agreement. Rather they had been forced into this negotiating position in the face of growing support for Australia and France from key states in the Treaty system.

Working Group 2 continued work on the issues it had addressed at the Chile meeting. The draft annexes on marine pollution, waste disposal and protection of fauna and flora were almost finished. The draft annex on EIA was problematic in part because it raised questions about the role of the proposed Committee for Environmental Protection, and whether it would be advisory or have a substantive decision-making role. Some of the newer consultative parties, such as India, were worried also that EIA procedures would increase the already high costs of Antarctic research. Others, especially the UK, argued that it would place a restriction on the freedom of scientific research.

Andersen and the Chair of the SCM undertook lengthy informal consultations to produce a second version of the draft text. As a result there was a consensus by the end of the session on a draft Protocol to the Treaty which could be referred to governments. Under this proposed Protocol (the key aspects of which are discussed below) the Antarctic would be a natural reserve devoted to science and minerals activity would be prohibited. This provision could be amended at a review conference (after fifty years) by a majority of all Parties including a majority of all consultative parties. However for

139. The issue of dogs in the Antarctic, and whether they should be able to remain there, caused some debate. Only three countries continued to use dogs - Australia, Argentina and the UK. The UK presented scientific evidence of canine distemper antibodies in seals. Measures on tourism and protected areas were likely to be referred to the Bonn meeting for further discussion. NGOs were not completely satisfied with the content of the annexes, although they agreed that they were a substantial improvement on existing measures. There was also some discussion about adopting the draft annexes prepared by working group 2 as recommendations at the forthcoming consultative meeting in Bonn in October, until the new instrument came into force.
such an amendment to enter into force ratification was required from three-quarters of the consultative parties, including all 26 parties who were consultative parties at the time the protocol was adopted. The G4 coalition conceded a reference to a minerals regime being in place if the ban were to be lifted. The requirement for something other than consensus to lift the ban enabled the US and the UK to agree to the provisions, albeit reluctantly.

The Australian government warmly welcomed "the significant progress made by Antarctic Treaty Parties ... in negotiating a legal instrument to protect the Antarctic environment" (Hawke 1991a:6880). The Protocol, as it then stood, was characterised as a "fitting culmination to the intensive diplomatic campaign pursued by Australia and France" (Hawke 1991a).

It was still not clear, however, that this was a solid consensus. Government approval was still required before it could be formally adopted in the SCM. Delegates agreed to return to Madrid for a final meeting from 17 June. On 10 May, the British Prime Minister indicated that his government would support the Madrid agreement. In doing so he overrode the objections of the Foreign Office, and the departments of Energy, and Trade and Industry and removed a potential obstacle to adoption of the new agreement.

However, early in June the United States advised its Treaty partners that it still had difficulties with the consensus requirement for lifting the prohibition on minerals activity. It proposed that only a three-quarters ratification majority be required. The US also suggested that a state should be able to withdraw from the minerals ban within three years if that required majority was not forthcoming. At a drafting committee

140. Article 24(1) also provided for amendment to the articles of the Protocol (including, therefore, article 6 prohibiting mining) at any time in accordance with article XII(1)(a) and (b) of the Treaty which, in effect, required consensus to enter into force.

141. The Australian Mining Industry Council described the initiative and Australian support as a "political stunt" earning a swift rebuke from the Minister for Resources who said that on this issue "AMIC's comments are ill-informed and out of touch with national and international sentiment" (Griffiths 1991:6910).

142. A drafting committee was scheduled to convene from 10 to 14 June to consider the Protocol and the four annexes so far agreed to on environmental impact assessment, conservation of Antarctic fauna and flora, waste disposal and management, and marine pollution. The drafting committee was unable to reach agreement on a definitive version of the marine pollution annex. An ad hoc contact group drew up an informal paper for circulation to the meeting. It was anticipated that the protocol would be opened for signature on 23 June 1991, the 30th anniversary of entry into force of the Antarctic Treaty. The 30th anniversary had particular significance for the Treaty nations. Under article XII of the Treaty, from that date a conference could be called by any consultative party to review the operation of the Treaty (see chapter two).

143. Major's announcement was made in the House of Commons in answer to a written question.

144. Italy argued that this was in contravention of the Vienna Convention on the Law of Treaties by permitting a state to abandon some of its obligations while remaining a full and functioning member of the Protocol (ASOC 1991g).
meeting in June the US delegation formally advised that it could not sign the protocol in the form agreed to at the April meeting.145

The Madrid session reconvened on 17 June. Delegations were angry over the US announcement because they perceived the Madrid agreement as a package deal in which they had made concessions so that an agreement could be reached. The session Chair, Carlos Blasco, suggested a compromise plan. A three-quarter majority would be required both to adopt an amendment lifting the ban and for its subsequent entry into force (based on ratifications) but the withdrawal provisions would apply to the protocol as a whole, not just the minerals prohibition as proposed by the US. This appeared to be an acceptable compromise and delegations were asked to forward it to their respective governments for consideration.

On the final working day of the Madrid session, however, the United States delegation indicated that its government still had reservations about the agreement, and wanted more time to consider alternative proposals. The head of the US delegation said that this should not be taken to indicate "whether the final decision will be negative or positive" (Anon 1991g:6). As a result, the signing ceremony scheduled for 23 June was cancelled. The US hold-out on the Protocol was based on its opposition, of long-standing, to anything that closed off the Antarctic to future minerals activity.

The US announcement was not well received. Diplomats privately acknowledged that they were intensely disappointed at the outcome. The head of the Australian delegation was reported as saying that "it would be inappropriate for me to display irritation at this moment" (Anon 1991h:6). New Zealand Prime Minister, Jim Bolger said that he would be taking the issue up with the US ambassador to New Zealand.146 Prime Minister Hawke wrote to President Bush urging him to sign the agreement. Legislators from Japan, the European Community, and the Soviet Union (as well as from the US) sent Bush a letter from a meeting in Tokyo (see Austin 1991). The strength of the coalition in favour of the Protocol was by now such that the US could not translate its preferences into institutional action. In response to domestic and international pressure President Bush announced on 3 July that the United States would sign the compromise protocol agreed to at the June meeting.

145. On 19 June Australia led a group of 15 nations in expressing their opposition in a closed session to the US decision (Hunt 1991:6). They were hopeful, although not overly optimistic, that an agreement could still be reached.

146. This was a strong position for the new National Government to take, given that it had been working to improve New Zealand’s relations with the US after they had reached a low point during the six years of the Labour administration which had banned nuclear capable vessels from New Zealand ports (a ban which the National government had not reversed).
The Protocol on Environmental Protection to the Antarctic Treaty was signed at the final session of SCM-XI in Madrid on 4 October 1991. Twenty-three of the twenty-six consultative parties and eight of the non-consultative parties signed. The Protocol is open for signature until 3 October 1992. The constraint on minerals activity, under the voluntary moratorium which dates to 1977, will continue until the Protocol formally comes into effect. That will happen when all twenty-six consultative parties at the time of its adoption have ratified it.

The Protocol on Environmental Protection to the Antarctic Treaty

The Protocol adopted at Madrid is a relatively short document of 27 articles with an arbitration schedule and four annexes (on the conservation of fauna and flora, environmental impact assessment, waste disposal and management and marine pollution) attached. Its purpose is to supplement the Antarctic Treaty, not to modify or amend it.

The Antarctic is designated a "natural reserve, devoted to peace and science" (article 1). The Parties "commit themselves to the comprehensive protection of the Antarctic environment and dependent and associated ecosystems" (article 2). The protection of the environment and "the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of research, in particular research essential to understanding the global environment" are to be "fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area".

Any activity relating to mineral resources, except for scientific research, is prohibited. The Protocol may be amended in accordance with the provisions of the Antarctic Treaty at any time (thus effectively requiring a consensus decision) or through the mechanism of a review conference after fifty years. Adoption of a review conference amendment requires a majority of all Parties, including three-quarters of the twenty-six consultative parties at the time the Protocol was adopted, with entry into force subsequently requiring ratification by three-quarters of the consultative parties including all twenty-six original signatories. In effect, this entrenches a fifty-year ban on mining and makes its lifting an unlikely occurrence.

The environmental principles (article 3) are similar to those in the Minerals Convention. Adverse environmental impact must be limited. Activities must be planned and

147. Japan, the Republic of Korea and India were the three consultative parties which did not sign on that day. The eight non-consultative parties were Austria, Canada, Columbia, Switzerland, the Democratic Republic of Korea, Greece, Hungary and Romania.

148. A copy of the Protocol, as adopted in Madrid, is to be found at appendix 10.

149. If the required number of ratifications are not forthcoming within three years of the adoption of an amendment, a state may withdraw from the Protocol (not just the minerals ban) within a further two years.
conducted on the basis of information sufficient to allow prior assessment and informed judgments to be made about their likely impact. Significant or adverse impacts (although the terms are not more closely defined) must be avoided.\textsuperscript{150}

Judgements on potential impact must take account of the scope of the activity, its cumulative impacts, and possible effects on any other activity. They must also consider whether the technology and procedures are available for the conduct of environmentally safe operations, whether the capacity exists to monitor key environmental parameters and ecosystem components to identify and provide for early warning of adverse effects, and whether the capacity exists to respond promptly and effectively to accidents. Activities must be modified, suspended or cancelled if they result in, or threaten to result in, impacts which are inconsistent with the principles of the protocol.

Environmental impact assessment is mandatory for activities conducted pursuant to scientific research programmes, tourism, expeditionary and station activity (both governmental and non-governmental) including logistic support.\textsuperscript{151} The Parties must also establish contingency plans for responding to incidents with potentially adverse impacts (article 15). Annex I sets out further procedures for environmental evaluation and subsequent monitoring of activities.

There is, however, no oversight of the preliminary stages of the evaluation process - the judgement as to whether the impact is likely to be minor or transitory, or otherwise, is left to the individual national operator. Nor are there any procedures to ensure consistency of assessment procedures between parties although there is some guidance on what an evaluation should contain.\textsuperscript{152}

The Protocol establishes a new regime institution - the Committee for Environmental Protection (article 11).\textsuperscript{153} The Committee is "to provide advice and formulate

\textsuperscript{150} Article 3(2)(b) requires that activities shall be planned and conducted to avoid adverse effects on climate or weather patterns, significant adverse effects on air or water quality, significant changes in the atmospheric, terrestrial, glacial or marine environments, detrimental changes in the distribution, abundance or productivity of species or populations of species of fauna and flora, further jeopardy to endangered or threatened species and degradation of, or substantial risk to, areas of biological, scientific, historic, aesthetic or wilderness significance.

151. The Protocol requires assessment to be undertaken for all governmental and non-governmental activities for which advance notice is required under article VII(5) of the Antarctic Treaty. As well as stations and expeditions, this includes the introduction of military personnel and equipment. The Protocol also establishes provisions for parties to share the use of scientific stations and other facilities. This may make it easier for NCPs to undertake scientific research. In this respect it is worth noting that the Netherlands was awarded consultative party status on the basis of its collaborative scientific work - it had not established a scientific station of its own.

152. Cooperation on the preparation of assessments is encouraged.

153. There is nothing in the Protocol to suggest that the representatives on the Committee should have any particular environmental expertise. Any Contracting Party to the Protocol may be a member of the Committee.
recommendations to the Parties in connection with the implementation of [the] Protocol ... for consideration at Consultative Meetings". The task of formulating recommendations was a concession to those Parties which wanted a more activist role for the Committee. However all decision-making rests with the consultative meeting, not the Committee, and thus the authority of the consultative parties is maintained. Because any measures developed pursuant to the Protocol are to be adopted at consultative meetings, the consensus rule applies. Any amendment to the annexes, however, will be deemed effective one year after the close of the consultative meeting at which it was adopted, unless one (or more) of the consultative parties notifies that it wants an extension of time or is unable to approve the measure. Thus consensus is protected but flexibility is allowed.

The Committee may consult with SCAR and the Scientific Committee of CCAMLR as well as with "other relevant scientific, environmental and technical organisations" and, with the approval of consultative meetings, invite as observers "relevant scientific, environmental and technical organisations which can contribute to its work" (article 11(4)).

The Protocol adheres to sovereignty norms in addressing questions of monitoring and compliance. The Parties must take "appropriate measures within [their] competence" to ensure compliance with the provisions of the protocol. Regular and effective monitoring is encouraged but there is no centralised responsibility for this. Inspections continue to be conducted under the terms of the Antarctic Treaty, on an individual or collective basis. There is no provision for an independent inspectorate although inspection may be authorised by a consultative meeting in accordance with procedures established by the consultative process, thus opening the way for improved and possibly centralised inspection procedures.

The Protocol establishes binding and compulsory dispute settlement procedures with respect to the prohibition on minerals activity, environmental impact assessment, emergency response action, the annexes (unless they provide otherwise) and compliance with those particular provisions. Any party, including a non-consultative

154. Under article 12 the Committee is to provide advice, inter alia, on measures taken pursuant to the Protocol and the need for updating and strengthening them, as well as the need for additional measures, environmental impact assessment, ways of limiting environmental impacts, the Protected Area System, inspection procedures, information collection and exchange, the state of the Antarctic environment and the need for scientific research.

155. An annex may include rules which provide for different amendment procedures for that annex.

156. However in neither case do the provisions name other organisations, in contrast with the Minerals Convention which referred explicitly to the IUCN. Neither does it include the terminology "including non-governmental organisations" adopted in the Minerals Convention.

157. The rules and procedures are almost identical to those agreed to in the Minerals Convention.
party, can therefore raise the issue of a violation of the Protocol under these procedures. Article 6(3) of the arbitration schedule provides for emergency provisional measures to be prescribed in a case of emergency. There are no provisions on liability: rules and procedures are to be elaborated in an annex at a later date.

The Protocol includes much improved transparency requirements. Reports of Committee meetings, inspection reports, annual reports on steps taken to implement the Protocol and its provisions, waste management plans, comprehensive environmental evaluations and annual lists of initial environmental evaluations must be made publicly available. Under the fifth annex adopted at ATCM-XVI in Bonn (see below) permits issued for entry into protected areas and management plans for protected areas were added to this list. While publicly available does not always mean easily available (especially in the absence of a secretariat) improved transparency contributes to improved accountability.

The annexes to the Protocol improved existing measures on environmental protection. The annex on fauna and flora updated the Agreed Measures, although the provisions on Specially Protected Areas were removed to be incorporated into an annex (adopted at Bonn) on the protected area system. Permits for taking native fauna and flora are still to be issued by national authorities. The annex on waste disposal (which is to apply to non-governmental activities as well) strengthens existing management provisions and expands the list of materials which must be removed from the Antarctic. The Committee may review waste management plans and may offer comments. The annex is to be reviewed regularly to take into account new waste management technology.

The marine pollution annex sets out much more specific detail than the recommendation adopted at ATCM XV and includes details on prohibited practices. A potential flaw is the provision for sovereign immunity. Article 11 stipulates that the annex "shall not apply to any warship, naval auxiliary or other ship owned or operated by a state and used ... only on government non-commercial service" which covers many

158. The Protocol does not specify, as the Minerals Convention did, that the dispute settlement procedures are applicable only to disputes between States. Nevertheless, given that the procedure adopted is dependent on a States declaration of preferred method of resolution, made when ratifying the Protocol, one assumes that non-state actors cannot raise questions of violations.

159. The annex on fauna and flora (which updates the Agreed Measures of 1964) requires that dogs be removed from the Antarctic by 1 April 1994. This requirement caused much public debate and opposition in Australia.

160. Nevertheless, it still permits the discharge of sewage and domestic liquid waste into the sea, in accordance with certain guidelines, and still permits incineration of materials.
of the vessels used by parties active in the Antarctic. Parties must, however, ensure that such ships act in a manner consistent, as far as is reasonable and practicable, with the Annex, and the provisions of the annex are to be taken into account when new ships are built.

The Protocol’s efficacy ‘on the ground’ will depend on the commitment of the individual Treaty states to comply with its rules and, more importantly, to take action in the event of violations. NGOs will continue to have an important role in creating an atmosphere which encourages and, if necessary, imposes accountability.

**ATCM-XVI, October 1991**

Immediately following the final session of SCM-XI and the signing of the Protocol the consultative parties met for the 16th consultative meeting in Bonn. Opening speeches were self-congratulatory on the adoption of the Madrid Protocol. Only Britain referred openly to the dissension caused over CRAMRA. Eleven of the thirteen recommendations adopted related to the agenda of environmental issues under the Protocol and delegates agreed to convene meetings of experts on other Protocol issues.

Efforts to establish the Committee for Environmental Protection prior to entry into force of the Protocol were blocked although the meeting stressed the importance of early ratification and entry into force. Delegates agreed that, as far as possible,
consultative parties would apply the provisions of the Protocol in the interim.\textsuperscript{167} There was still no consensus on establishing a secretariat, an essential move if the CEP is to carry out its responsibilities and if the Protocol is to function successfully.\textsuperscript{168} However, to improve the application of the Protocol, the Parties agreed to conduct a review of existing recommendations to identify those which are spent and those which have been superseded or affected by the Protocol and its annexes. The Meeting also decided that, to facilitate decision-making under the Protocol, consultative meetings would be held annually.\textsuperscript{169}

Under recommendation XV-10 the meeting adopted an extensive annex to the Protocol on the Antarctic Protected Area system.\textsuperscript{170} It establishes two categories of protected area - Antarctic SPAs (for which a permit for entry is required) and Antarctic SMAs.\textsuperscript{171} Proposals for areas, which must include a management plan (and a code of conduct for SMAs), may be put submitted to a consultative meeting by any Party, the Committee for Environmental Protection, SCAR or CCAMLR. This annex was essential to improve the protection of the Antarctic because, as chapter three argued, the existing system of protected areas had become complicated and unwieldy.

The debate on the tourism issue was described as "tense and somewhat bitter" (Greenpeace 1991d:11). Debate revolved around whether a specific annex on non-governmental activities was necessary, given that the Protocol and its annexes apply to all human activities in the Antarctic including ‘non-official’ activities. Opposing views were taken by France, who remained strongly committed to a new annex, and the US,

\textsuperscript{167} There was little advance on negotiating a liability annex to the Protocol in the face of United States concern that to do so could delay ratification. The next consultative meeting will decide how to address matters regarding the liability annex required under the Protocol.

\textsuperscript{168} The question of a secretariat was blocked again by Argentina. There is some suggestion that Argentina might accept a secretariat if it is located in Buenos Aires or Santiago. The Meeting agreed that the next consultative meeting would begin drafting the Rules of Procedure for the CEP.

\textsuperscript{169} This was in part a response to the EIA requirements under the Protocol which require that CEEs must be submitted at least twelve months in advance of the proposed activity for consideration by a consultative meeting. With the move to annual meetings, preparatory meetings will no longer be held.

\textsuperscript{170} The United States tabled two proposals to adopt one MPA and one SRA which had been reviewed and endorsed by SCAR. The US recognised that these categories, adopted at the fifteenth Meeting, had now been replaced by categories created by the new Annex. The Meeting agreed, in the light of this, that the Parties would voluntarily comply with the provisions of the Management Plans tabled by the US until the Protocol came into effect.

\textsuperscript{171} The new category of Antarctic Specially Protected Area includes all existing SPAs, Sites of Special Scientific Interest and subsumes the category of Specially Reserved Area established at ATCM-XV. The new category of Antarctic Specially Managed Area subsumes the ATCM-XV category of Multiple-Use Planning Area. Historic Sites and Monuments may fall into either of the new categories. ASPAs may be located within ASMA. Both categories may include marine as well as terrestrial sites.
who argued that no further regulation was necessary. The meeting agreed, following a suggestion from Japan, to convene an informal group of experts to consider this question once more.

An assessment of the Protocol
Two themes are important in an analysis of the events described in this chapter. The first places the Protocol in the context of the Treaty system and the environmental sub-regime. The second focuses on the process underlying those events.

The Protocol is, of course, a compromise agreement. The ban on minerals activity is, in effect, a moratorium and not a permanent prohibition. If the numbers can be found, it can be lifted after a period of fifty years.

In its institutional framework the Protocol moves only a little way from the sovereignty norms which characterised the resource conventions and the measures on environmental protection. It does, nevertheless, extend and develop the environmental sub-regime and to this extent it marks a qualitative change in the approach to environmental issues in the Antarctic regime. It is comprehensive to the extent that it establishes general environmental principles which must be applied to all activities in the Antarctic. It is a legally binding agreement. Its provisions are mandatory rather than hortatory. The provisions for prior environmental assessment (which are entrenched in the body of the Protocol), the dispute settlement procedures and the improved transparency rules contribute to the integrated and comprehensive nature of the agreement. The annexes and measures agreed to under the terms of the Protocol will continue to be dealt with on an issue-by-issue basis but in conformity with the principles of the Protocol. Updating of measures will likely be achieved by amending annexes thus avoiding the confusing and unwieldy proliferation of recommendations.

While sovereignty norms underpin the Protocol, the way is opened for a move towards interdependence norms, especially if a secretariat is established and the CEP is politically supported by the consultative parties. The influence of interdependence norms, in this context, can be located in the rules that require prior assessment, the

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172. Non-governmental organisations support, in general, the US position. They suggest that only one subset of non-governmental activity requires specific rules and regulations - that of large-scale commercial tourism, especially with respect to compliance and liability, and on the obligations of the Contracting Parties with respect to regulation of tourist activities in the Antarctic. The recently formed International Association of Antarctic Tourist Operators (IAATO) has adopted a Voluntary Code of Conduct.

173. The US, argues that this does not foreclose the options of future generations (Anon 1991i) and does not interpret the provisions as a permanent ban. As noted in the text, the protocol does provide that it can be modified or amended under the terms of article XII of the Antarctic Treaty, but this requires consensus and is probably unlikely to happen.
potential for a greater role for the CEP and the potential for inspection, which remains the main compliance mechanism, on a collective basis. The acceptance of legally binding environmental rules and principles, and submission to a compulsory dispute settlement procedure, also represent the slow incursion of interdependence norms into the Treaty system.

The Protocol represents changing ideas and values on how protection of the environment can best be achieved. In this context it represents a re-ordering of the hierarchy of values within the Treaty system. The move from CRAMRA to the Protocol required economic interests to be put to one side, albeit not always willingly. Political interests still dominate (although the initial defection showed that the collective political values could be questioned), but the acceptance of an overarching instrument, imposing 'top-down' principles and rules, signals that environmental interests are no longer subordinate. To this extent the Protocol represents a reassessment, individually and collectively, of the way the Treaty states perceive their national interests where these are defined as the ends and means of policy. The means by which the policy goal of environmental protection can be attained is rethought as is the priority of that goal itself.174

**Institutional learning**

The process of turning around the opposition to a ban on mining and then negotiating a new and quite different agreement (that is, a change in the regime), was a process of institutional learning. It rested on coalition building (following defection) and leadership. Australia and France sought, as structural leaders, to translate their power resources within the Treaty system into bargaining leverage in support of their policy proposals. As Young (1991:291) argues, this process is in part a matter of forming effective coalitions and taking appropriate measures to prevent the emergence of blocking or counter coalitions. The Australian Foreign Minister has characterised this as the exercise of 'middle-power' diplomacy which "exploit[s] networks of support and influence rather than hierarchical gradations of power" (Evans and Grant 1991:326). The formal negotiations were also characterised by Andersen's exercise of entrepreneurial leadership in his brokerage of the various interests of the consultative parties in subsequent drafts of the Protocol.

It is also useful to consider the role of intellectual leadership here. In this regard, Young (1991:298-302) focuses on the generation of new ideas and "intellectual capital". The source of those new ideas on environmental protection were the non-governmental

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174. Nevertheless, as the Swedish delegation noted at Bonn, the Protocol "is not an end in itself, and it must not become an end to our efforts" (Final Report 1991:196).
organisations.\textsuperscript{175} Those ideas and values, which the NGOs had advocated over a period of time, were taken up first by Australia and France and then, through their coalition-building (supported by NGOs), by the regime.

In this process of institutional learning and regime change there was also a change in the balance of power among actors both within and at the edges of the Antarctic Treaty system.

\textit{Transgovernmental elites}

The first round of battles over the minerals convention and environmental protection took place behind closed doors during the minerals negotiations where the transgovernmental elite was most powerful. The second round was a more public debate. As Burgess notes (1990:7) with respect to the Australian decision, the "community that had been so influential in previous Antarctic decisions" was bypassed. This pattern was repeated elsewhere as this chapter has shown. Traditional Antarctic decision-makers - lawyers, diplomats and scientists - were marginalised when they either ignored or failed to respond to critical voices and changing public opinion. The bureaucratic elite were so well socialised into the norms and procedures of the Treaty system that they became a barrier to change.

\textit{Non-state actors}

Non-governmental organisations played a crucial role in this change in the Treaty system. They sought not only to mobilise public opinion but also to "present [their] case to the highest levels of government" (ASOC 1989m).

Although it is easier to describe activity (as in this chapter) than to ascribe influence, the impact of NGOs on the Treaty system was explicitly recognised by the formal actors within the system.\textsuperscript{176} Australian Prime Minister Hawke argued (1990d:2) that the "world-wide environment movement ... has played a large part in this success".

NGO success in overturning CRAMRA (when they had not been able to prevent its negotiation) was in part due to their ability to encourage public debate and exploit domestic politics to pressure political leaders. It was also due to their increased experience and credibility in the system and to the transnational organisation of the

\textsuperscript{175} It is also possible to focus here on individuals who had sufficiently high profiles to carry that intellectual leadership forward. In this respect we can look to Prime Ministers Hawke and Rocard and to non-governmental representatives such as Jacques Cousteau and Sir Peter Scott. Cousteau "played an instrumental role in lobbying world leaders" to accept the Australian and French proposals (Anon 1990f:4-5).

\textsuperscript{176} As Pascoe (an Australian embassy official in Chile) noted (1990:106) "Greenpeace and the ACF had a particular influence in the Australian context. In France ... the role of non-governmental organisations [was] symbolised by the report on Antarctica of the Cousteau Foundation".
campaign. They were thus able, as chapter one suggests is required, to deliver both consensus in the community and technical assistance (knowledge and policy proposals) in support of their goals. In this way, they also contributed to the democratisation of foreign policy debates and international decision-making.

The impact of public debate was also recognised. In opening the 16th consultative meeting, the German Minister of State at the Foreign Office noted that "one factor proved to be particularly helpful in ensuring the continuation of work on the Protocol ... public opinion" (Final Report 1991:150). Australian Foreign Minister Senator Evans suggests that "entrenched bureaucratic opposition" was overwhelmed by the "weight of public opinion" (1990a:4).

Not all, it should be noted, were supportive of the NGO role or welcoming of its influence. At least some within the scientific community were bitterly opposed to the growing strength of Antarctic NGOs in the regime.

The scientific community
The scientific community was split over the Australia/French proposal. In particular, there was a difference in attitude between the institutional component of the scientific community and Antarctic scientists outside this group. A number of scientists in Treaty states supported a ban on minerals activity and the declaration of the Antarctic a wilderness reserve. Others, particularly those in executive positions within SCAR or with close ties to the diplomatic processes of the Treaty system, adopted a similar line to the diplomats and bureaucrats who argued against Australia and France.

SCAR was not supportive of the Madrid Protocol nor of the process by which it had come about. Indeed, it had almost no involvement in these debates in contrast with its input into the development of the environmental rules described in chapter three. In a

177. The head of the Belgian delegation observed, at the Viña del Mar meeting that, when the Minerals Convention was adopted, "we had not seen the wave of environmental concern that has come upon us and we must change our attitudes and reach results as rapidly as possible" (Anon 1990r). Cook Waller observes (1989:662) that "the one consideration most responsible for eroding state support for the ... minerals regime [was] growing international concern for the Antarctic environment".


179. Nearly 250 scientists in Britain (including some working for the British Antarctic Survey) signed a Greenpeace petition urging support for the Australian/French initiative (ECO LXXVII(5) 1990:4). There was support for a petition organised was signed by scientists in New Zealand. A Greenpeace publication (Patel and Mayer 1991) including articles by a number of leading Antarctic scientists supporting comprehensive environmental protection and wilderness reserve status for the Antarctic.

180. Some scientists chose to misrepresent the World Park proposal as one which involved "the total banning of all human activity" (Drewry 1991).
wide-ranging speech at the sixteenth consultative meeting, Richard Laws (President of SCAR and formerly director of the British Antarctic Survey) argued against strict environmental assessment rules (on the grounds that they threatened freedom of scientific investigation)181 and warned the consultative parties, in effect, that they could no longer take SCAR for granted.182 Laws recognised NGOs as a new factor in the Treaty system, but one which he did not welcome. He suggested that it was their "disproportionate influence" which was responsible for the diminution of SCAR's role.183 In this respect, the scientific community and NGOs were in competition for influence and power within the Treaty system.

**Conclusion**

The Protocol was not negotiated in a policy vacuum. It built upon existing environmental measures, described in chapter three, which arose through the process of incremental change. That change was, however, constrained by the normative and procedural values of the Treaty system. As also argued in chapter three, the values on protection of the Antarctic environment (which underpinned environmental protection rules in the Treaty system and the negotiation of the Minerals Convention) were increasingly questioned in the 1980s and were found wanting.

The Madrid Protocol arose through a process of radical change manifested, initially, in a defection by two key states from a substantive agreement (CRAMRA) and from the political norms of the Treaty system. That defection was the result of a rethinking by both states of their national interests in terms of priorities and policy goals. Thus it was a process of learning in response to changing ideas about environmental protection (which arose primarily outside the formal boundaries of the Treaty system) and, connected with this, community concern about the environmental impact of minerals activity in the Antarctic. In this way, the process of change emphasises the linkages between domestic political debate and international cooperation.

The learning process was repeated in other states and gave way to institutional learning. In this way, defection led not to a spiral of conflict but to an orderly change in which

181. Laws suggested that "excessive regulation and direction could lead to unproductive use of scientific capacity and funds" (Final Report 1991:235).

182. In this regard, he suggested that if the consultative parties failed to give reasonable weight to the views of SCAR (as opposed to those of the NGOs) and if the funding to undertake the tasks requested of it was not forthcoming, then SCAR might have to "concentrate on primary science and withdraw from giving advice on applied or management problems" (Final Report 1991:236).

183. He told the meeting that "Antarctic scientists are generally concerned that governments may respond positively to public relations pressure campaigns of some environmental NGOs with quite different objectives to those of scientists" (Final Report 1991:236). John Heap argued (1991b:123) that scientists were the real constituents of the Antarctic and that it was their views which should be taken into account when new rules were devised. He referred also to the "inflated media-hyped campaign about damage to the Antarctic environment".
the minerals convention was overturned. The defection was effective, in the first instance, in generating an institutional response because Australia and France possessed issue-specific power in the Treaty system and over the entry into force of CRAMRA. The success of institutional change rested on the exercise of structural leadership by Australia and France and, especially, by the building of a coalition of support. That process was supported (at the state and inter-state level) by non-governmental organisations. Whereas NGOs were influential actors (as a source of new ideas and in generating support for those ideas), the scientific community did not function in this process as an epistemic community (in policy advocacy) nor even successfully in support of its own interests in the regime. NGOs were a source of knowledge in competition with the scientific community and the transgovernmental elite which had dominated decision-making.

The Protocol does not signal a normative transformation of the Antarctic regime, but rather an internal re-ordering of its principles and norms. It has, however, changed the terms of the debate about the Antarctic continent. In this respect, it is possible to assert (as ASOC does (1991c)) that the Antarctic Treaty governments are now debating the NGO agenda.
Chapter eight
CONCLUSION

This thesis had three purposes. First, to explain the development of, and change in the Antarctic Treaty system with a particular focus on environmental issues, including the effect of minerals activity.

Second, to examine what this case study of environmental politics in the Antarctic tells us about the place of environmental issues on the international agenda.

Third, to consider what the Antarctic case and more generally international environmental politics might usefully have to say about the theory of international relations.

Given these purposes, I address here three related sets of conclusions. First, I set out conclusions concerning the political analysis of the Antarctic Treaty system. Second, this chapter reaches conclusions about the theory of cooperation and change (discussed in chapter one of this thesis) specifically related to the case study of the Antarctic. Finally, there is a set of conclusions concerning the value of the case study and its related theory as applied to the general problem of the environment in international politics.

In summing up the political analysis of the Antarctic Treaty system there is no need here to review in any detail the evidence and analysis of the preceding chapters. I concentrate, rather, on two questions. What are the distinguishing features of the construction and maintenance of the Antarctic regime, and its attention to environmental issues, with respect particularly to the role of states (the internal accommodation) and ideas of interstate cooperation? Second, what are the distinguishing features of change in the Treaty system, particularly relating to the minerals regime? This involves an examination not only of the role of states, but also of the role of non-governmental organisations and the scientific community.

The demand among states with Antarctic interests (particularly the seven claimant states - Argentina, Australia, Britain, Chile, France, New Zealand and Norway - and the United States) for a cooperative regime on the Antarctic arose in response to the scientific interest and political actions of states outside the Antarctic ‘in-group’. The Antarctic Treaty system was thus constructed, in effect, as an externally imposed security regime. It had limited objectives: it was designed primarily to prevent conflict among states over territorial claims and to limit the potential for tension between the
superpowers in the Antarctic. Its secondary focus was to encourage and facilitate scientific research and cooperation.

As a product of institutional bargaining, the Antarctic Treaty established the basis for a negotiated regime, not a hegemonic one. Although both the international hegemons, the US and the USSR, were participants in the regime they were not able to translate this into issue-specific power in the Antarctic regime. In this regard they had no more structural capabilities than the other Antarctic states, especially the claimants.

This bargain between states did not solve the security problem arising from the disputes over the territorial claims, because the problem could not be solved. Rather it established a form of regime which froze the issue. Thus the bargain which emerged sought to maintain the status quo and to entrench the internal accommodation between claimants and non-claimants. The Antarctic regime was thus characterised by a hierarchy of values that favoured political interests over other interests.

There are a number of distinguishing features in the Antarctic Treaty which have given shape to the regime. The values implicit in the Treaty rested on the exercise of sovereignty norms rather than on interdependence norms. Notwithstanding that the Antarctic Treaty represented a limited commitment to cooperation, nothing with the potential to undermine the exercise of their sovereignty by the claimant states or, more generally, the primacy of national autonomy over the conduct of Antarctic activities was acceptable. Thus no centralised institution was established and only weak compliance rules were adopted.

The Treaty entrenches the authority, first, of the original signatories and second, of states which undertake scientific research in the Antarctic. Thus, the Antarctic regime which developed under the Treaty was both an open and closed one. Any state could accede, but only a few (the twelve original signatories and those states which subsequently met a scientific activities criterion) were able to participate in decision-making. In this way the Treaty privileges the conduct of science as a source of consultative party expertise and decision-making authority in the interests of maintaining the political settlement. The politics of science thus became an integral part of the development and maintenance of the Treaty regime. Through this the Antarctic scientific community was constituted as an interested actor in the Antarctic regime.

The Antarctic Treaty met the individual national interests of the original signatories in a way that unilateral action, which had been the hallmark of Antarctic politics in the 1940s and early 1950s, could no longer do in the 1960s and beyond. Thus it became in
their collective interests to maintain the Treaty. The protection of individual national interests within the Antarctic Treaty and regime was met by the adoption and maintenance of consensus or mutual veto as the basis for decision-making.

The Antarctic regime was consolidated in the 1960s and 1970s at a time when Antarctic issues were of low salience both nationally and internationally. The consensus norm, and the reciprocal exercise of individual restraint on the issue of the exercise of territorial sovereignty (in order to maintain the sovereignty compromise), underpinned the internal strength of the regime.

The development of a small but influential transgovernmental bureaucratic elite was an important factor in this. This network of individuals, socialised into the norms of the Treaty, became very influential in defining national Antarctic policies in congruence with the Treaty system. In their decision-making they gave practical expression to, and thus reinforced, the importance of the political values of the Treaty system. As the Antarctic regime developed, the overlapping of individuals among its component parts (the consultative meetings, the institutions of the Convention for the Conservation of Antarctic Marine Living Resources and the Scientific Committee on Antarctic Research) provided a coordinating mechanism which further reinforced the regime's norms.

While the Antarctic regime was negotiated as a regime of common aversion (in which actors wish to avoid a particular outcome), it had to function for quite a different purpose as an environmental regime and thus as a regime of common interests (in which the actors have a common interest in ensuring a particular outcome). In the Antarctic regime, protection of the Antarctic environment, through the management of human activity there, became the main focus of decision-making.

The environmental sub-regime was developed though a process of incremental change. The environmental agenda grew, in an ad hoc fashion, from the only explicit environmental issue mentioned in the Treaty - the conservation and preservation of living resources - to encompass protected areas, the conduct of scientific expeditions, waste disposal, environmental impact assessment, the impact of tourism and non-governmental activities and the regulation of minerals activities. Rules and procedures on these issues were adopted in a series of consultative recommendations and in separate conventions.

However, in addressing these environmental issues, the Treaty parties were guided by the sovereignty norms and political values inherent in the agreement among them which privileged political concerns over environmental ones. There were three distinguishing
features of the environmental sub-regime. First, the emphasis on political concerns and, particularly, the need for consensus to maintain the political compromise meant that the decision-making process (which was ad hoc, sectoral and resistant to compliance mechanisms and centralisation) was ultimately flawed in its ability and potential to make good environmental rules. Further, environmental protection did not take precedence over scientific activity, nor over economic interests in the exploitation of living or non-living resources.

Second, as a result of this, the environmental sub-regime thus constructed was ad hoc and incomplete. Institutional compliance rules were avoided and no overarching environmental objectives were set in place. Although statements of principle on environmental protection were adopted, these were not linked in any formal way to the rules and procedures adopted. Decision-making was frequently slow and increasingly unable to keep pace with changes ‘on the ground’ with respect to adverse environmental impacts in the Antarctic.

Finally, the rules adopted were inadequately implemented. Thus localised environmental damage occurred in the Antarctic because scientific stations and national Antarctic operators did not always observe the rules. These violations, however, were not considered destabilising to the Antarctic regime. States were reluctant, moreover, to rock the political boat by raising the issue of these violations in formal Antarctic Treaty meetings.

The Treaty parties sought to extend the scope of the Treaty without relinquishing any authority over Antarctic issues. To the extent that the development of the environmental regime can be described as learning (that is, a redefinition of interests in response to new knowledge), it falls into the category of single-loop learning. New instrumental policies were adopted but the ends remained unquestioned - in this case that environmental protection would be balanced against other uses of the Antarctic and against political and economic interests, and that the existing ad hoc approach was adequate to the task.

As well as the Antarctic Treaty states, non-state actors became important in the development of the environmental sub-regime and the debates about its adequacy. The scientific community, through the non-governmental organisation, the Scientific Committe on Antarctic Research (SCAR), provided advice and information to the Treaty parties (in response to particular requests) on environmental issues. While SCAR provided an institutional focus for the development of an epistemic community, it did not function as such. Scientists sought to avoid an advocacy role. The knowledge
they brought to the Antarctic regime was an important factor in environmental decision-making but the political concerns of the Antarctic regime dominated.

In the 1960s and 1970s, little external attention was paid to the environmental rules adopted under the Antarctic regime. However, in the 1980s, these environmental rules came under close critical scrutiny from non-governmental environmental organisations which functioned at a national and transnational level. They challenged both the adequacy of the rules and the Treaty parties’ record of implementation. In doing so they brought to the debate on environmental protection in the Antarctic new ideas and values about the intrinsic value of the environment and about the kinds of rules and procedures that were needed to protect that environment. They sought to influence Antarctic decision-making directly (at the international level) and indirectly through the mobilisation of public opinion and domestic political pressure.

They argued for a reordering of the hierarchy of values (so that environmental interests would take precedence) and for the kinds of rules and procedures that were more representative of interdependence norms. In this regard, they criticised the ad hoc nature of the Antarctic regime and called for a comprehensive approach and for centralised and independent institutions, both of which had been rejected by the Treaty parties as incompatible with the political constraints of the regime.

The Treaty parties must be given credit for inscribing environmental issues on the Antarctic agenda and for attempting to deal with the question of environmental protection. However, in developing the environmental sub-regime they did not respond adequately to new scientific knowledge, provided by the scientific community, about the Antarctic environment and the impact of human activity on that environment.

Nor did the Treaty parties respond adequately to changes in values and ideas in the international system about the protection of the environment which were forthcoming from non-governmental organisations. The reason they did not do so was because the Treaty system continued to function as a security regime in which political values were paramount. Actors within the system continued to see decisions on environmental protection as being constrained by those political concerns. Their ‘ownership’ of the Antarctic issue, which they had consolidated in the 1960s and 1970s, had made them reluctant to listen to other voices.

It was the issue of the exploitation of minerals resources in the Antarctic which focussed most sharply the differences between the values within the Treaty system and the values espoused by non-governmental organisations. It was also the issue which provided, in the final analysis, the catalyst for change.
The minerals regime, or at least the agreement on which it would be based - the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) - was a product of institutional bargaining over a period of six years (following a decade of negotiation and debate on the fundamental principles and objectives which would apply to the regulation of minerals activity in the Antarctic). Its central value was that controlled minerals exploitation could be made compatible with environmental protection.

The exercise of entrepreneurial leadership by Christopher Beeby was a particularly important feature of those formal negotiations in the 1980s. In the institutional bargaining process he sought to maintain consensus, and advance the negotiations, through the tabling of his personal report which effectively functioned as an informal negotiating text.

In this bargaining process, a complex matrix of states' interests had to be internally accommodated within the overarching collective interest which required the maintenance of the Treaty system and the political compromise on the territorial claims and the exercise of sovereignty which underpins it. As well as the claimant versus non-claimant camps, the Treaty parties were also divided between the likely mining states and the claimants, between developed and developing states and between the pro-development states and those parties more inclined to restrict (or even prevent) development in the interests of environmental protection.

At the same time, the external accommodation with non-Treaty states and non-governmental organisations assumed a greater importance than it had done on other environmental issues. Non-Treaty states challenged the negotiation of the convention on the grounds of its exclusivity. Non-governmental organisations challenged it on the grounds of the Treaty parties' past poor record of environmental protection and implementation and on the broader philosophical grounds that environmental protection and minerals activity were inherently incompatible.

The Antarctic Minerals Convention, which was adopted by consensus in 1988, did include extensive environmental principles and procedures which would identify potential environmental impact. However it was the compromise on sovereignty, rather than environmental protection, which dominated the negotiations. Further, the economic interests in minerals exploitation were set against environmental concerns. Thus the hierarchy of values (political, economic and environmental in that order) was maintained. On the whole, in spite of the complex institutional framework established by the Convention, little concession was made to interdependence norms.
The strength of the consensus norms of the Treaty system was such that, once adopted, the Minerals Convention was considered secure and its ratification and entry into force only a matter of time.

However, this did not happen. The Minerals Convention (and the consensus among the Treaty states which it represented) was overturned. This process rested on an initial defection by two states with issue-specific power in the Antarctic regime, Australia and France. Not only did Australia and France defect from a formal agreement to which they had been party, but they also broke the central and fundamental norm of the Treaty - that consensus must be maintained in the collective interests of all parties. This defection, and the changes which it generated, was thus a process of radical change rather than incremental change.

In refusing to sign the Minerals Convention, Australia and France redefined their national interests in that they rethought and reordered their policy objectives. That is, they no longer counted potential benefit from minerals activity as important among these. Second, with respect to environmental protection, they argued that this goal could no longer be achieved within a minerals convention. It was thus a process of double loop learning. They recognised new ends as well as new means to accomplish them. Both argued their case for defection expressly on environmental grounds: ideas and values had changed since the minerals negotiations commenced and minerals activity could no longer be argued to be compatible with environmental protection. Thus the process, at this stage, was one of individual learning in response to new knowledge and ideas.

In rejecting the Minerals Convention and its major premiss (that at some stage minerals activity could be compatible with protection of the environment) Australia and France argued for minerals activity to be banned and a new agreement to be negotiated which would include comprehensive environmental protection principles and objectives against which all human activity in the Antarctic would be judged. Further they envisaged that such an agreement would replace the existing ad hoc collection of environmental rules and measures. Thus they envisaged a reformulation of the hierarchy of values (such that environmental concerns were no longer subordinate to political and economic ones) and a move towards interdependence norms which would encourage the adoption of centralised institutions with a degree (although still limited) of oversight and compliance powers.

Opposition to the Australian and French actions from other Treaty parties was grounded in anger that they had defected from, and thus brought into question the strength of, a
fundamental norm in the Treaty system - the importance of cleaving to a consensus. Further, their proposals on comprehensive protection were out of line with the traditional, and accepted, approach to Antarctic decision-making.

How then was individual learning translated into institutional learning, especially when Australia and France's Treaty partners were stridently critical of their action and opposed to their environmental initiative? There are a number of factors which are crucial to an explanation of how the minerals convention was turned around. Non-governmental organisations and the new ideas and values they brought to the debate were a crucial factor in this process. NGOs mobilised national and international public debate as well as domestic electoral pressure to influence political leaders who had previously not taken much interest in Antarctic issues. Thus they brought not only new ideas but the political power to put those ideas on the agenda. In this way, we can point to a second feature of this process - as the salience of the Antarctic issue grew the transgovernmental elites who 'owned' the Antarctic issue were marginalised in the decision-making process.

The scientific community was an ambivalent actor in this process. The 'bureaucratic' scientists - those who were part of the international diplomatic process of consultative meetings and who were involved in the administration of SCAR or of national Antarctic programs - continued to be supportive of the diplomatic actors in the Treaty regime. On the other hand, scientists outside this small group were increasingly active in expressing their opposition to minerals activity and in support of the Australian and French initiatives. The bureaucratic scientists perceived their interest in freedom of scientific research as inextricably linked with the continuation of the Treaty system as it had functioned in the past. They perceived themselves as the natural constituents of Antarctic decision-making and the owners of the truth about scientific information. Thus, for them, NGOs were a competing, and often unwelcome source of information and knowledge.

The institutional bargaining process which led to the adoption of the Madrid Protocol, which enshrined a comprehensive environmental regime, was distinguished by several features. First, Australia and France engaged in successful coalition building within the Treaty system. In doing so they were effectively acting as structural leaders in the Treaty regime and they were able to do so because they possessed issue-specific power in the Antarctic regime. Second, they were supported in this by national and transnational non-governmental organisations and by high profile individuals who exercised an intellectual leadership of sorts. Third, the process by which states were brought around focused first, on the moving of the debate onto national political agendas where politicians responded to domestic pressure as well as to growing
evidence of changing international opinions and second, as a consequence, the marginalisation of traditional Antarctic elites.

The US hold-out against the Madrid Protocol at the last minute was just that - the action of a hold-out state rather than a hegemon. It may well have been trying to function as a hegemon in translating overall power into structural power within the Antarctic Treaty system, but in a negotiated regime which still functioned on the basis of unanimity, it had no more issue-specific power or bargaining leverage than any number of other states and it was unable to construct a coalition of support. It was on this that its influence over the shape of the final Madrid Protocol rested and, in the final analysis, that influence was small.

The question remains to be addressed as to how much of a change the Madrid Protocol really was. It was, in practical terms, quite a revolutionary change. It provides a contractarian bargain which is specifically constructed as a regime of common interests. It incorporates an effective ban on minerals activity (and thus an institutional policy objective - mining - has been redefined). It incorporates comprehensive principles on environmental protection and a formal requirement for environmental impact assessment. It also establishes an integrated set of environmental protection rules to replace the ad hoc, discrete and unwieldy set of recommendations which had been adopted over the previous thirty years.

In doing so it represents a partial reordering of the hierarchy of values in the Treaty system. Environmental interests have taken precedence over economic ones. To a degree, the decision-making limits imposed on the regime by collective political interests have been re-examined. There has been some movement away from sovereignty norms (which were part of those political constraints) and towards interdependence norms if, in the context of the Treaty system, we identify these in the legally binding nature of the Protocol and the adoption of stronger compliance rules than were present in earlier measures. In this regard, the Protocol also establishes an institutional framework which provides some centralised oversight of environmental protection procedures.

This shift from sovereignty norms to interdependence norms and a reordering of the hierarchy of values can be described as a cognitive change - that is, it occurred as part of the learning process whereby individually and institutionally, Antarctic states responded to new ideas and values on environmental protection and redefined their national interests (defined as policy objectives and the means to achieve them) accordingly.
It represents more than a confrontation between development and conservation. It focusses attention on an important dichotomy in international relations - between that which is perceived as realistic and that which is thought utopian and therefore unattainable in the real world. Thus it represents a redefining of what is possible. It also represents a reconstitution of the concept of national self-interest in such a way that the shadow of the future, or long-term interests (normally assumed to be heavily discounted in policy calculations) assumes a greater value in the equation. The shift also represents a shift in the balances of power: within the Treaty 'club' and from Treaty elites to non-governmental organisations and domestic arenas.

However, the Protocol did not change the fundamental security settlement on the territorial claims - indeed there was no requirement for it to do so especially as the ban on minerals, once agreed to, excised the previously contentious issue of ownership of resources. In that respect it was an easier agreement to negotiate than the minerals convention.

There are some judgements which cannot be made. It remains to be seen, for example, whether the opening up of the Treaty system to interdependence norms will ensure improved environmental protection and whether that process will continue. What is likely, however, in this regard is that the influence of non-governmental organisations in imposing accountability and transparency will be strengthened.

Further, it is not possible at this stage to judge the impact on the consensus norm in the Antarctic regime. We do not know whether the defection from consensus has engendered a sense of mistrust, or undermined the strength of what is the constitutive norm in the Antarctic regime. In short, will these first defections engender others?

We also cannot judge whether this cognitive change in the Treaty system will give way to a normative change, that is a radical transformation of norms, values and practices. However we can say that this new dimension in Antarctic politics represents a new (although not yet widespread) dimension in international politics - a belief that states (and their citizens) have an ethical responsibility to protect the environment in the interests of all peoples, including future generations.

It is apparent that the analytical framework developed from liberal insights into regimes, cooperation and change is for the most part a good fit with the analysis of the Antarctic Treaty system in this thesis. In the major arguments of these theories the propositions which follow are confirmed in this case study. With respect to interstate cooperation and the construction of negotiated regimes, the theory emphasises the processes of institutional bargaining and the exercise of leadership. These were indeed
present and decisive in the construction and development of the Antarctic regime although the exercise of leadership is not always easily identified.

With respect to the maintenance of regimes, the propositions in the theory suggest that states cooperate over time in recognition of long-term interests and the realisation of joint gains. National interests come to be defined in a way that is congruent with the norms and rules of a regime and thus the value of the regime is reinforced. The Antarctic case study supports this contention. It also supports the argument that the exercise of diffuse reciprocity is an important factor in ensuring compliance with the broad principles and norms of a regime. Further the theory focusses attention on the importance of transgovernmental elites in ensuring compliance through socialisation into the regime and this was a central feature of the Antarctic regime. The theory also posits a role for transnational groups in developing and maintaining a regime - in the Antarctic case SCAR contributed to this process.

The theory is less insightful in its propositions on the process of change especially when conventional power-based explanations are of limited utility as is the case in the Antarctic and in environmental politics generally. This is because the process of change requires a deeper exploration of causality than does stability and thus requires more complex models.

Nevertheless, in examining both incremental and radical change in the Antarctic regime, liberal theory has some relevant observations. First, that change may occur in the absence of a state acting as an hegemon. Second, that defection is not necessarily the result of free-riding or cheating but can be used to overcome institutional inertia. Third, that the concept of individual and institutional learning in response to new knowledge provides a useful analytical tool for exploring change. Fourth, that understanding the processes of change requires a rethinking of the traditional separation in international relations between domestic and international policy arenas and an investigation of the nexus between the two in both an empirical and theoretical way. Fifth, that the role of non-state actors - both the environmental movement and the scientific community - is an important component in advancing (or hindering) the process of change. In this respect, the proposition that NGOs must develop consensus in the world community, and deliver technical assistance (knowledge) for their goals is also supported.

In exploring both the nature of cooperation on environmental issues and the processes of change with respect to environmental values and rules, the theoretical and indeed the empirical literature needs to incorporate more fully the role of non-state actors. This applies to the role of the scientific community, and especially the utility of the concept
of epistemic community and the conditions under which such a community arises and acts. It applies also to the role and influence of transnational non-governmental organisations. In this exploration, the potential for conflict or collaboration between these two groups (the scientists and the non-governmental organisations), and the differing types of knowledge they bring to the debate, is also important. That is, the concept of knowledge and the role and influence of the ‘owners’ of that knowledge must itself be investigated further.

The final part of this conclusion turns to those overarching questions about the environment as an issue in international politics. There are three related questions which are raised here. First, how and why are environmental regimes formed and how do they change? Second, in that regard, how have environmental issues been managed on the international agenda? Third, is a transformation of the international system required to take effective care of international environmental problems?

The Antarctic case study, as noted in the introduction to this thesis, is one which contributes to this wider research agenda, particularly with respect to the management and protection of global environmental commons. It does not, however, provide definitive answers on this but rather raises propositions which must be tested further against other case studies of international environmental politics. It can nevertheless be said that the liberal tradition of international relations theory provides an appropriate model to explore further these questions in international politics.

The following observations can be made with respect to the questions posed above. New environmental regimes are in part a product of the learning process. That is they are formed in response to new or reassessed scientific knowledge about adverse environmental impacts which result from technological changes and increased human activity. They arise because of a perception that the issue cannot be managed successfully by independent state decision-making and that some form of cooperation among states is required. In that respect, they are most often ‘threat’ induced and reactive rather than precautionary.

Environmental regimes are likely to arise through the process of institutional bargaining rather than being imposed by a state acting as a hegemon. This does not, of course, preclude a state attempting to exercise this role, nor restrict the exercise of structural leadership by a state in the bargaining process.

Because of the dominance of political and economic values over environmental ones, and the greater relative weight given to sovereignty rather than interdependence norms, (even when there is agreement that international cooperation is necessary) inter-state
practice on the environment has, for the most part, been inadequate. The regimes so constructed do not focus sufficiently on the long-term nor can they adequately ensure compliance, both of which are necessary conditions for successful management of transboundary environmental problems.

This case study suggests that the process of change thus required in environmental regimes is likely to come about through a process of learning when states respond to new knowledge and redefine their national and collective interests (policy goals and objectives). In this respect, change is most often incremental. In redefining national interests, which may then translate into regime change, states also respond to domestic power shifts and to pressure from other states.

In this respect, the Antarctic case study also emphasises the importance of coalition bargaining and leadership in mobilising change. It also suggests that states exercising leadership and forming coalitions in this respect need not be hegemons. It may well point to a role for so-called ‘middle powers’ in this process.

Non-state actors, this case study suggests, are an integral part of the construction of environmental regimes and of change in those regimes. The scientific community is a source of knowledge and information in defining and offering possible solutions to environmental problems. In environmental regimes, the scientific community may function as a disinterested actor or as an epistemic community by taking an active role in policy advocacy and encouraging compliance.

This case study points also to a role for non-governmental environmental organisations as central actors in environmental politics, especially in the process of change, through their introduction into the debate of new ideas and values, their mobilisation of public and electoral pressure and in providing new and different channels of communication between states and peoples.

The case study would also suggest that incremental processes, which focus on rules and procedures, can go some way towards improving inter-state environmental practice. However, in the long-run what is needed for successful management of environmental problems and the ensuring of ecological security, is a normative or radical change in which states are willing to concede to interdependence norms and the hierarchy of values is reordered so that environmental values are privileged over economic and political ones. This involves, further, a recognition of the role of non-state actors (especially non-governmental environmental organisations and the scientific community) in the international system and a rethinking of the place of states vis-a-vis those actors.
Appendix 1

THE ANTARCTIC TREATY AREA
TERRITORIAL CLAIMS

Source: Prescott (1981:84)

Note: The Norwegian claim is undefined at its northern and southern reaches.

The sector between 90°W and 150°W is unclaimed.
Appendix 2

THE ANTARCTIC TREATY

The Governments of Argentina, Australia, Belgium, Chile, the French Republic, Japan, New Zealand, Norway, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America,

Recognising that it is in the interest of all mankind that Antarctica shall continue for ever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord;

Acknowledging the substantial contributions to scientific knowledge resulting from international cooperation in scientific investigation in Antarctica;

Convinced that the establishment of a firm foundation for the continuation and development of such cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year accords with the interests of science and the progress of all mankind;

Convinced also that a treaty ensuring the use of Antarctica for peaceful purposes only and the continuance of international harmony in Antarctica will further the purposes and principles embodied in the Charter of the United Nations;

Have agreed as follows:

Article I

1. Antarctica shall be used for peaceful purposes only. There shall be prohibited, inter alia, any measure of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapon.

2. The present Treaty shall not prevent the use of military personnel for scientific research or for any other peaceful purpose.

Article II

Freedom of scientific investigation in Antarctica and co-operation toward that end, as applied during the International Geophysical Year, shall continue, subject to the provisions of the present Treaty.

Article III

1. In order to promote international cooperation in scientific investigation in Antarctica, as provided for in Article II of the present Treaty, the Contracting Parties agree that, to the greatest extent feasible and practicable:
   (a) information regarding plans for scientific programs in Antarctica shall be exchanged to permit maximum economy of and efficiency of operations;
   (b) scientific personnel shall be exchanged in Antarctica between expeditions and stations;
   (c) scientific observations and results from Antarctica shall be exchanged and made freely available.

2. In implementing this Article, every encouragement shall be given to the establishment of co-operative working relations with those Specialized Agencies of the United Nations and other international organisations having a scientific or technical interest in Antarctica.

Article IV

1. Nothing in the present Treaty shall be interpreted as:
   (a) a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica;
   (b) a renunciation or diminution by any Contracting Party of any basis of claim to territorial sovereignty in Antarctica which it may have whether as a result of its activities or those of its nationals in Antarctica, or otherwise;
   (c) prejudicing the position of any Contracting Party as regards its recognition or non-recognition of any other State's rights of or claim or basis of claim to territorial sovereignty in Antarctica.

2. No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim, to
Article V

1. Any nuclear explosions in Antarctica and the disposal thereof of radioactive waste material shall be prohibited.

2. In the event of the conclusion of international agreements concerning the use of nuclear energy, including nuclear explosions and the disposal of radioactive waste material, to which all of the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX of the Treaty are parties, the rules established under such agreements shall apply in Antarctica.

Article VI

The provisions of the present Treaty shall apply to the area south of 60° South Latitude, including all ice shelves, but nothing in the present Treaty shall prejudice or in any way affect the rights, or the exercise of the rights, of any State under international law with regard to the high seas within that area.

Article VII

1. In order to promote the objectives and ensure the observance of the provisions of the present Treaty, each Contracting Party whose representatives are entitled to participate in the meetings referred to in Article IX of the Treaty shall have the right to designate observers to carry out any inspection provided for by the present Article. Observers shall be nationals of the Contracting Parties which designate them. The names of observers shall be communicated to every other Contracting Party having the right to designate observers, and like notice shall be given of the termination of their appointment.

2. Each observer designated in accordance with the provisions of paragraph 1 of this Article shall have complete freedom of access at any time to any or all areas of Antarctica.

3. All areas of Antarctica, including all stations, installations and equipment within those areas, and all ships and aircraft at points of discharging or embarking cargoes or personnel in Antarctica, shall be open at all times to inspection by any observers designated in accordance with paragraph 1 of this Article.

4. Aerial observation may be carried out at any time over any or all areas of Antarctica by any of the Contracting Parties having the right to designate observers.

5. Each Contracting Party shall, at the time when the present Treaty enters into force for it, inform the other Contracting Parties, and thereafter shall give them notice in advance, of (a) all expeditions to and within Antarctica, on the part of its ships or nationals, and all expeditions to Antarctica organised in or proceeding from its territory; (b) all stations in Antarctica occupied by its nationals; and (c) any military personnel or equipment intended to be introduced by it into Antarctica subject to the conditions prescribed in paragraph 2 of Article I of the present Treaty.

Article VIII

1. In order to facilitate the exercise of their functions under the present Treaty, and without prejudice to the respective positions of the Contracting Parties relating to jurisdiction over all other persons in Antarctica, observers designated under paragraph 1 of Article VII and scientific personnel exchanged under subparagraph 1(b) of Article II of the Treaty, and members of the staffs accompanying any such persons, shall be subject only to the jurisdiction of the Contracting Party of which they are nationals in respect of all acts or omissions occurring while they are in Antarctica for the purposes of exercising their functions.

2. Without prejudice to the provisions of paragraph 1 of this Article, and pending the adoption of measures in pursuance of subparagraph 1(e) of Article IX, the Contracting Parties concerned in any case of dispute with regard to the exercise of jurisdiction in Antarctica shall immediately consult together with a view to reaching a mutually acceptable solution.

Article IX

1. Representatives of the Contracting Parties named in the preamble to the present Treaty shall meet at the City of Canberra within two months after the date of entry into force of the Treaty, and thereafter at suitable intervals and places, for the purpose of exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating and considering, and recommending to their Governments, measures
in furtherance of the principles and objectives of the Treaty, including measures regarding:

(a) use of Antarctica for peaceful purposes only;
(b) facilitation of scientific research in Antarctica;
(c) facilitation of international scientific cooperation in Antarctica;
(d) facilitation of the exercise of the rights of inspection provided for in Article VII of the Treaty;
(e) questions relating to the exercise of jurisdiction in Antarctica;
(f) preservation and conservation of living resources in Antarctica.

2. Each Contracting Party which has become a party to the present Treaty by accession under Article XIII shall be entitled to appoint representatives to participate in the meetings referred to in paragraph 1 of the present Article, during such times as that Contracting Party demonstrates in interest in Antarctica by conducting substantial research activity there, such as the establishment of a scientific station or the despatch of a scientific expedition.

3. Reports from the observers referred to in Article VII of the present Treaty shall be transmitted to the representatives of the Contracting Parties participating in the meetings referred to in paragraph 1 of the present Article.

4. The measures referred to in paragraph 1 of this Article shall become effective when approved by all the Contracting Parties whose representatives were entitled to participate in the meetings held to consider those measures.

5. Any or all of the rights established in the present Treaty may be exercised as from date of entry into force of the Treaty whether or not any measures facilitating the exercise of such rights have been proposed, considered or approved as provided in this Article.

Article X

Each of the Contracting Parties undertakes to exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any activity in Antarctica contrary to the principles or purposes of the present Treaty.

Article XI

1. If any dispute arises between two or more of the Contracting Parties concerning the interpretation or application of the present Treaty, those Contracting Parties shall consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means of their own choice.

2. Any dispute of this character not so resolved shall, with the consent, in each case, of all parties to the dispute, be referred to the International Court of Justice for settlement; but failure to reach agreement on reference to the International Court of Justice shall not absolve the parties to the dispute from the responsibility of continuing to seek to resolve it by any of the various peaceful means referred to in paragraph 1 of this Article.

Article XII

1(a) The present Treaty may be modified or amended at any time by unanimous agreement of the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX. Any such modification or amendment shall enter into force when the depositary Government has received notice from all such Contracting Parties that they have ratified it.

(b) Such modification or amendment shall thereafter enter into force as to any other Contracting Party when notice of ratification by it has been received by the depositary Government. Any such Contracting Party from which no notice of ratification is received within a period of two years from the date of entry into force of the modification or amendment in accordance with the provision of subparagraph 1(a) of this Article shall be deemed to have withdrawn from the present Treaty on the date of the expiration of such period.

2(a) If after the expiration of thirty years from the date of entry into force of the present Treaty, any of the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX so requests by a communication to the depositary Government, a Conference of all the Contracting Parties shall be held as soon
as practicable to review the operation of the Treaty.

(b) Any modification or amendment to the present Treaty which is approved at such a Conference by a majority of the Contracting Parties there represented, including a majority of those whose representatives are entitled to participate in the meetings provided for under Article IX, shall be communicated by the depositary Government to all Contracting Parties immediately after the termination of the Conference and shall enter into force in accordance with the provisions of paragraph 1 of the present Article.

c) If any such modification or amendment has not entered into force in accordance with the provisions of sub-paragraph 1(a) of this Article within a period of two years after the date of its communication to all the Contracting Parties, any Contracting Party may at any time after the expiration of that period give notice to the depositary Government of its withdrawal from the present Treaty; and such withdrawal shall take effect two years after the receipt of the notice by the depositary Government.

5. Upon the deposit of instruments of ratification by all the signatory States, the present Treaty shall enter into force for those States and for States which have deposited instruments of accession. Thereafter the Treaty shall enter into force for any acceding State upon the deposit of its instruments of accession.

6. The present Treaty shall be registered by the depositary Government pursuant to Article 102 of the Charter of the United Nations.

Article XIII

1. The present Treaty shall be subject to ratification by the signatory States. It shall be open for accession by any State which is a Member of the United Nations, or any other State which may be invited to accede to the Treaty with the consent of all the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX of the Treaty.

2. Ratification of or accession to the present Treaty shall be effected by each State in accordance with its constitutional processes.

3. Instruments of ratification and instruments of accession shall be deposited with the Government of the United States of America, hereby designated as the depositary Government.

4. The depositary Government shall inform all signatory and acceding States of the date of each deposit of an instrument of ratification or accession, and the date of entry into force of the Treaty and of any modification or amendment thereto.

Article XIV

The present Treaty, done in the English, French, Russian and Spanish languages, each version being equally authentic, shall be deposited in the archives of the Government of the United States of America, which shall transmit duly certified copies thereof to the Governments of the signatory and acceding States.
# Appendix 3

## CONTRACTING PARTIES TO THE ANTARCTIC TREATY

(as at February 1992)

<table>
<thead>
<tr>
<th>State</th>
<th>Status*</th>
<th>Date of Ratification</th>
<th>Date of CP Status¹</th>
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<td>Japan</td>
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<td></td>
</tr>
<tr>
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<td>OS/CP</td>
<td>18 August 1960</td>
<td></td>
</tr>
<tr>
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<td>OS/CP/CL</td>
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<td></td>
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<td>OS/CP/CL</td>
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<td>31 July 1991</td>
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</table>

* OS: Original Signatory  
CL: Claimant State  
AS: Acceding State  
NCP: Non-consultative Party  
CP: Consultative Party

1. Original Signatories have automatic consultative party status.
2. Papua New Guinea’s succession to the Antarctic Treaty followed its independence from Australia.
Appendix 4

ANTARCTIC TREATY CONSULTATIVE MEETINGS

<table>
<thead>
<tr>
<th></th>
<th>Dates</th>
<th>Location</th>
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<tr>
<td>1</td>
<td>10 - 25 July 1961</td>
<td>Canberra</td>
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<td>2</td>
<td>18 - 28 July 1962</td>
<td>Buenos Aires</td>
</tr>
<tr>
<td>3</td>
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</tr>
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<td>4</td>
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<td>18 - 29 November 1968</td>
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<td>6</td>
<td>19 - 31 October 1970</td>
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<td>7</td>
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<td>9</td>
<td>19 September - 7 October 1977</td>
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<td>10</td>
<td>17 September - 5 October 1979</td>
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<td>11</td>
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<td>16</td>
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## Appendix 5

### SPECIAL ANTARCTIC TREATY CONSULTATIVE MEETINGS

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<tr>
<td>1</td>
<td>25, 27 and 29 July 1977</td>
<td>London</td>
<td>To consider application for Consultative Party status from Poland</td>
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<td>2</td>
<td>1 27 February - 10 March 1978</td>
<td>Canberra</td>
<td>Negotiation of the Convention on the Conservation of Antarctic Marine Living</td>
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<td></td>
<td>2 17-28 July 1978</td>
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<td>Resources</td>
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<td></td>
<td>3 5-6 May 1980</td>
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<td></td>
<td>(Final Conference: 7 - 20 May 1980)</td>
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<td>3</td>
<td>3 March 1981</td>
<td>Buenos Aires</td>
<td>To consider application for Consultative Party status from the Federal Republic of Germany</td>
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<td></td>
<td>2 11-22 July 1983</td>
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<td>Activities</td>
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<td>3 17-28 January 1984</td>
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<td></td>
<td>4 18-27 January 1984</td>
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<td>6 26 February - 12 March 1985</td>
<td>Rio de Janiero</td>
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<td>12 2 May - 2 June 1988</td>
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<td>5</td>
<td>12 September 1983</td>
<td>Canberra</td>
<td>To consider applications for Consultative Party status from Brazil and India</td>
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<tr>
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<td>7 October 1985</td>
<td>Brussels</td>
<td>To consider applications for Consultative Party status from the People’s Republic of China and Uruguay</td>
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<td>5 October 1987</td>
<td>Rio de Janiero</td>
<td>To consider applications for Consultative Party status from the German Democratic Republic and Italy</td>
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<td>8</td>
<td>20-21 September 1988</td>
<td>Paris</td>
<td>To consider applications for Consultative Party status from Spain and Sweden</td>
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<tr>
<td>9</td>
<td>9 October 1989</td>
<td>Paris</td>
<td>To consider applications for Consultative Party status from Ecuador, Finland, the Republic of Korea, the Netherlands and Peru (consideration of applications from Ecuador and the Netherlands was deferred at this meeting)</td>
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<tr>
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<td>19 November 1990</td>
<td>Viña del Mar</td>
<td>To consider deferred applications for Consultative Party status from the Netherlands and Peru</td>
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<tr>
<td>11</td>
<td>1 19 November - 6 December 1990</td>
<td>Viña del Mar</td>
<td>For the exploration and discussion of all proposals relating to the comprehensive protection of the Antarctic environment and its dependent and associated ecosystems (in accordance with recommendation XV-1).</td>
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<td>2.1 22-30 April 1991</td>
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<td>2.2 17-22 June 1991</td>
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Appendix 6

ANTARCTIC TREATY CONSULTATIVE RECOMMENDATIONS

First Consultative Meeting, Canberra, 10-24 July 1961

I- I Exchange of information on scientific programmes
II Exchange of scientific personnel
III Exchange of scientific data
IV SCAR
V International organisations
VI Exchange of information on operations
VII Exchange of information on logistic problems
VIII Conservation of Antarctic fauna and flora
IX Historic sites
X Assistance in emergency
XI Telecommunications
XII Postal services
XIII Exchange of information on nuclear equipment and techniques
XIV Administrative arrangements for consultative meetings
XV Second Consultative Meeting
XIV Preparations for consultative meetings

Second Consultative Meeting, Buenos Aires, 18-28 July 1962

II- I Exchange of scientific data
II Conservation of Antarctic fauna and flora
III Telecommunications
IV Exchange of information on operations
V Symposium on logistic problems
VI Modifications of reported activities
VII Shipment of scientific materials
VIII International Year of the Quiet Sun (1964-65)
IX Consultative meeting recommendations
X Third Consultative Meeting

Third Consultative Meeting, Brussels, 2-13 June 1964

III- I Information on facilities for the landing of aircraft
II Notification of unoccupied refuges
III Logistics
IV Next meeting
V Telecommunications
VI Questions concerning meetings of specialists
VII Acceptance of approved recommendations
VIII Agreed Measures for the conservation of Antarctic fauna and flora
IX Interim guidelines for the conservation of fauna and flora
X Interest of SCAR in the conservation of Antarctic fauna and flora
XI Pelagic sealing and the taking of fauna on pack ice
Fourth Consultative Meeting, Santiago, 3-18 November 1966

IV- 1-15 Specially Protected Areas (incorporated in consolidated text of Agreed Measures)
15-17 Specially Protected Species (incorporated in consolidated text of Agreed Measures)
18 Cooperation in implementing article VI of the Agreed Measures for the conservation of Antarctic fauna and flora
19 Implementation of Article XII(1)(d) of the Agreed Measures
20 Interim guidelines for the conservation of fauna and flora
21 Interim guidelines for the voluntary regulation of Antarctic pelagic sealing
22 Interest of SCAR in Antarctic pelagic sealing
23 Date of exchange of information
24 Meetings of experts
25 Meeting on logistics
26 Telecommunications
27 Effects of Antarctic tourism
28 Next meeting

Fifth Consultative Meeting, Paris, 18-29 November 1968

V- 1 Commemorative stamp issue
2 Measures for improving Antarctic telecommunications
3 Southern ocean
4 Historic monuments
5 Specially Protected Area (Fildes Peninsula)
6 Modification of the Agreed Measures
7 Concerning the proposals of SCAR for the revision of Interim Guidelines for the voluntary regulation fo Antarctic Pelagic Sealing
8 Examination of a Draft Convention for the Regulation of Antarctic Pelagic Sealing
9 Sixth Consultative Meeting

Sixth Consultative Meeting, Tokyo, 19-31 October 1970

VI 1 Antarctic telecommunications
2 Exchange of information on telecommunications facilities
3 Antarctic meteorology
4 Man’s impact on the Antarctic environment
5 Use of radio-isotopes in the Antarctic
6 Coordination of Antarctic scientific investigations involving the use of radio-isotopes
7 Effects of tourists and non-government expeditions on the Antarctic Treaty area
8 Permits for entry to Specially Protected Areas
9 Data on conservation of fauna and flora
10 Specially Protected Area (Coppermine Peninsula)
11 New islands
12 Scientific research rockets
13 Exchanges of information on oceanographic research
14 Historic monuments
15 Seventh Consultative Meeting

Seventh Consultative Meeting, Wellington, 30 October - 10 November 1972

VII- 1 Man’s impact on the Antarctic environment
2 Review of Specially Protected Areas
3 Sites of Special Scientific Interest
4 Effects of tourists and non-governmental expeditions in the Antarctic Treaty Area
5 Importation of laboratory animals and plants
6 Antarctic resources: effects of mineral exploration
7 Antarctic telecommunications
Eighth Consultative Meeting, Oslo, 9-20 June 1975

VIII- 1 Specially Protected Area (Litchfield Island)
2 Review of Specially Protected Areas
3 Sites of Special Scientific Interest
4 Sites of Special Scientific Interest: interim guidelines (Management Plans)
5 Permits for entry to Specially Protected Areas
6 Annual exchange of information
7 Cooperation in transport
8 Activities of states that are not consultative parties
9 Effects of tourists and non-governmental expeditions in the Antarctic Treaty Area
10 Antarctic marine living resources
11 Man's impact on the Antarctic environment
12 Disposal of nuclear wastes
13 The Antarctic environment
14 Resources: effects of mineral exploitation

Ninth Consultative Meeting, London, 19 September - 7 October 1977

IX- 1 Antarctic mineral resources
2 Antarctic marine living resources
3 Improvement of telecommunications in the Antarctic
4 Cooperation in transport
5 Man's impact on the Antarctic environment
6 Oil contamination of the Antarctic marine environment

Tenth Consultative Meeting, Washington, 17 September - 5 October 1979

X- 1 Antarctic mineral resources
2 Antarctic marine living resources
3 Improvement of telecommunications in the Antarctic and the collection and distribution of Antarctic meteorological data
4 Man's impact on the Antarctic environment: collection of geological specimens
5 Man's impact on the Antarctic environment: Site of Special Scientific Interest: interim guidelines
6 Man's impact on the Antarctic environment: Sites of Special Scientific Interest
7 Oil contamination of the Antarctic marine environment
8 Effects of tourists and non-governmental expeditions in the Antarctic Treaty Area
9 Twentieth Anniversary of the Antarctic Treaty

Eleventh Consultative Meeting, Buenos Aires, 23 June - 7 July 1981

XI- 1 Antarctic mineral resources
2 Antarctic marine living resources
3 Air disaster on Mount Erebus
Twelfth Consultative Meeting, Canberra, 13-27 September 1983

XII  1  Collection and distribution of Antarctic meteorological data
     2  Antarctic telecommunications
     3  Man's impact on the Antarctic environment
     4  Man's impact on the Antarctic environment: code of conduct on waste disposal
     5  Extension of the expiry date of the designation of Sites 1-8 as Sites of Special Scientific Interests
     6  Operation of the Antarctic Treaty system
     7  Historic sites and monuments
     8  SCAR assistance to consultative parties

Thirteenth Consultative Meeting, Brussels, 8-18 October 1985

XIII  1  Operation of the Antarctic Treaty system: information
      2  Operation of the Antarctic Treaty system: overview
      3  Exchange of information in accordance with the Antarctic Treaty: annual exchanges
      4  Man's impact on the Antarctic environment: code of conduct for Antarctic expeditions and station activities: waste disposal
      5  Man's impact on the Antarctic environment: additional protective arrangements
      6  Facilitation of scientific research: siting of stations
      7  Facilitation of scientific research: Sites of Special Scientific Interest: interim guidelines: extension of designation
      8  Facilitation of scientific research: Sites of Special Scientific Interest: interim guidelines: additional Sites
      9  Facilitation of scientific research: Sites of Special Scientific Interest: interim guidelines: SSSI No 1: Cape Royds (Amendment to management plan)
     10  Specially Protected Areas: North Coronation Island, South Orkney Islands
     11  Specially Protected Areas: Lagotellerie Island, Marguerite Bay
     12  Specially Protected Areas: "New College Valley", Caughly Beach, Cape Bird, Ross Island
     13  Specially Protected Area No 7: Cape Hallett, Victoria Land, extension of boundaries
     14  Specially Protected Areas: interim guidelines
     15  Matters relating to the appointment of observers at consultative meetings
     16  Historic sites and monuments

Fourteenth Consultative Meeting, Rio de Janiero, 5-16 October 1987

XIV-  1  Operation of Antarctic Treaty system: public availability of the documents of Consultative Meetings
      2  Man's impact on the Antarctic environment: environmental impact assessment
      3  Man's impact on the Antarctic environment: safeguards for scientific drilling
      4  Facilitation of scientific research: Sites of Special Scientific Interest: interim guidelines: extension of designation
      5  Facilitation of scientific research: Sites of Special Scientific Interest: interim guidelines: additional sites
      6  Marine Sites of Special Scientific Interest
      7  Antarctic meteorology and telecommunications
      8  Historic sites and monuments
      9  Air safety in Antarctica
     10  Marine meteorological and sea ice information services for navigation in the Treaty Area of the Southern Ocean
Fifteenth Consultative Meeting, Paris, 9-20 October 1989

XV- 1 Comprehensive Measures for the protection of the Antarctic environment and dependent and associated ecosystems
2 Comprehensive Measures for the protection of the Antarctic environment and dependent and associated ecosystems
3 Human impact on the Antarctic environment: waste disposal
4 Human impact on the Antarctic environment: prevention, control and response to marine pollution
5 Human impact on the Antarctic environment: environmental monitoring in Antarctica
6 Antarctic Protected Area system: new Sites of Special Scientific Interest
7 Antarctic Protected Area system: Redesignation of Special Protected Area, No 11 Cape Shirreff, as Site of Special Scientific Interest No 32
8 Antarctic Protected Area system: Agreed Measures for the Conservation of Antarctic Fauna and Flora: amendment to Article VIII (Management Plans for Specially Protected Areas)
9 Antarctic Protected Area system: Development of improved descriptions and management plans for Specially Protected Areas
10 Antarctic Protected Area system: establishment of Specially Reserved Areas (SRAs)
11 Antarctic Protected Area system: establishment of Multiple-Use Planning Areas (MRAs)
12 Antarctic Protected Area system: new historic sites and monuments
13 Antarctic Protected Area system: historic sites and monuments (amendment to description of HM 53)
14 Promotion of international scientific cooperation: a declaration
15 Promotion of international scientific cooperation
16 Facilitation of scientific research: comparability and accessibility of Antarctic scientific data
17 Facilitation of scientific research: siting of stations
18 Cooperation in meteorological and sea ice information services for maritime and air navigation in Antarctica
19 Cooperation in the hydrographic charting of Antarctic waters
20 Air safety in Antarctica
21 Use of Antarctic ice
22 Antarctic Treaty Thirtieth Anniversary commemorative stamp issue

Sixteenth Consultative Meeting, Bonn, 7-18 October 1991

XVI- 1 Exchange of information
2 Antarctic Protected Area system: new Sites of Special Scientific Interest
3 Antarctic Protected Area system: new Marine Sites of Special Scientific Interest
4 Antarctic Protected Area system: Specially Protected Area: redesignation of Site of Special Scientific Interest No 30, Avian Island, Marguerite Bay, Antarctic Peninsula as a Specially Protected Area
5 Antarctic Protected Area system: Sites of Special Scientific Interest: interim guidelines: Site of Special Scientific Interest No 6, Byers Peninsula, Livingston Island, South Shetland Islands
6 Specially Protected Areas: revised descriptions and proposed management plans for Specially Protected Areas
7 Antarctic Protected Area system: Sites of Special Scientific Interest: extension of designation
8 Antarctic Protected Area system: Specially Protected Areas, Cryptogram Ridge, Mount Melbourne, Victoria Land
9 Antarctic Protected Area system: Specially Protected Areas, Forlidas Pond and David Valley Ponds
10 Antarctic Protected Area system: review of the system
11 Antarctic Protected Area system: new historic sites and monuments
12 Accessibility of Antarctic geophysical data
13 Tourism and non-governmental activities in the Antarctic Treaty area
The Representatives,

Recalling the provisions of the Antarctic Treaty, which established a regime for international cooperation in Antarctica, with the objective of ensuring that Antarctica should continue forever to be used exclusively for peaceful purposes and should not become the scene or object of international discord;

Convinced that the framework established by the Antarctic Treaty has proved effective in promoting international harmony in furtherance of the purposes and principles of the United Nations Charter, in prohibiting inter alia any measures of a military nature, in ensuring the protection of the Antarctic environment, in preventing any nuclear explosions and the disposal of any radioactive waste material in Antarctica, and in promoting freedom of scientific research in Antarctica, to the benefit of all mankind;

Convinced further of the necessity of maintaining the Antarctic Treaty in its entirety and believing that the early conclusion of a regime for Antarctic mineral resources would further strengthen the Antarctic Treaty framework;

Desiring without prejudice to Article IV of the Antarctic Treaty to negotiate with the full participation of all the consultative parties to the Antarctic Treaty an appropriate set of rules for the exploration and exploitation of Antarctic mineral resources;

Noting the unity between the continent of Antarctica and its adjacent offshore areas;

Mindful of the negotiations that are taking place in the Third United Nations Conference on the Law of the Sea;

Reaffirming their commitment to the early conclusion of a regime for Antarctic mineral resources which would take due account of the respective interests of the Consultative Parties as regards the form and content of the regime, including decision-making procedures, as well as the special characteristics of the Antarctic area;

Recalling further Recommendations VI-4, VII-1, VIII-11, VIII-13, IX-5, IX-6 and X-7;

Recommend to their Governments that:

1. They take note of the progress made toward the timely adoption of a regime for Antarctic mineral resources at the Eleventh Consultative Meeting and related meetings and the importance of this progress.

2. A regime on Antarctic mineral resources should be concluded as a matter of urgency.

3. A Special Consultative Meeting should be convened in order:
   (a) to elaborate a regime;
   (b) to determine the form of the regime including the question as to whether an international instrument such as a convention is necessary;
   (c) to establish a schedule for negotiations, using informal meetings and sessions of the Special Consultative Meeting as appropriate; and
   (d) to take any other steps that may be necessary to facilitate the conclusion of the regime, including a decision as to the procedure for its adoption.

4. The Special Consultative Meeting should base its work on this Recommendation and the relevant Recommendations and Reports of the Eighth, Ninth and Tenth Antarctic Treaty Consultative Meetings.

5. The regime should be based on the following principles:
   (a) the Consultative Parties should continue to play an active and responsible role in dealing with the question of Antarctic mineral resources;
   (b) the Antarctic Treaty must be maintained in its entirety;
   (c) protection of the unique Antarctic environment and of its dependent ecosystems should be a basic consideration;
   (d) the Consultative parties, in dealing with the question of mineral resources in Antarctica, should not prejudice the interests of all mankind in Antarctica;
(e) the provisions of Article IV of the Antarctic Treaty should not be affected by the regime. It should ensure that the principles embodied in Article IV are safeguarded in application to the area covered by the Antarctic Treaty.

6. Any agreement that may be reached on a regime for mineral exploration and exploitation in Antarctica elaborated by the Consultative Parties should be acceptable and be without prejudice to those States which have previously asserted rights of or claims to territorial sovereignty in Antarctica as well as to those States which neither recognize such rights of or claims to territorial sovereignty in Antarctica nor, under the provisions of the Antarctic Treaty, assert such rights or claims.

7. The regime should *inter alia*:
   (i) Include means for:
      (a) assessing the possible impact of mineral resource activities on the Antarctic environment in order to provide for informed decision-making;
      (b) determining whether mineral resource activities will be acceptable;
      (c) governing the ecological, technological, political, legal and economic aspects of those activities in cases where they would be determined acceptable, including
         - the establishment, as an important part of the regime, of rules relating to the protection of the Antarctic environment; and
         - the requirement that mineral resource activities undertaken pursuant to the regime be undertaken in compliance with such rules.
   (ii) Include procedures for adherence by States other than the Consultative Parties, either through the Antarctic Treaty or otherwise, which would:
      (a) ensure that the adhering State is bound by the basic provisions of the Antarctic Treaty, in particular Articles I, IV, V and VI, and by the relevant Recommendations adopted by the Consultative Parties; and
      (b) make entities of that State eligible to participate in mineral resource activities under the regime.

   (iii) Include provisions for co-operative arrangements between the regime and other relevant international organizations.

   (iv) Apply to all mineral resource activities taking place on the Antarctic Continent and its adjacent offshore areas but without encroaching on the deep seabed. The precise limits of the area of application would be determined in the elaboration of the regime.

   (v) Include provisions to ensure that the special responsibilities of the Consultative Parties in respect of the environment in the Antarctic Treaty Area are protected, taking into account responsibilities which may be exercised in the area by other international organizations.

   (vi) Cover commercial exploration (activities related to minerals involving, in general, retention of proprietary data and/or non-scientific exploratory drilling) and exploitation (commercial development and production).

   (vii) Promote the conduct of research necessary to make environmental and resource management decisions that would be required.

8. They promote and co-operate in scientific investigations which would facilitate the effective operation of the regime taking into account, *inter alia*, the relevant parts of the Report of Ecological, Technological and other Related Experts on Mineral Exploration and Exploitation in Antarctica (Washington, June 1979), attached as an annex to the Report of the Tenth Consultative Meeting.

9. With a view to improving predictions of the environmental impacts of activities, events and technologies associated with mineral resource exploration and exploitation should such occur, the continue with the assistance of the Scientific Committee on Antarctic Research, to define programs with the objectives of:
(a) retrieving and analysing relevant information from past observations and research programs;
(b) ensuring in relation to the needs for information identified by the Experts Report, that effective use is made of existing programs;
(c) identifying and developing new programs that should have priority, taking account of the length of time required for results to become available.

10. In elaborating the regime, they take account of the provisions of Recommendation IX-1, paragraph 8.1

1. Paragraph 8 of recommendation IX-1 reads:

[The Representatives ... recommend to their Governments that:] They urge their nationals and other States to refrain from all exploration and exploitation of Antarctic mineral resources while making progress towards the timely adoption of an agreed regime concerning Antarctic mineral resource activities. They will thus endeavour to ensure that, pending the timely adoption of agreed solutions pertaining to exploration and exploitation of mineral resources, no activity shall be conducted to explore or exploit such resources. They will keep these matters under continuing examination.
Appendix 8

CONVENTION ON THE REGULATION OF ANTARCTIC MINERAL RESOURCE ACTIVITIES

Preamble

The States Parties to this Convention, hereinafter referred to as the Parties,

Recalling the provisions of the Antarctic Treaty;

Convinced that the Antarctic Treaty system has proved effective in promoting international harmony in furtherance of the purposes and principles of the Charter of the United Nations, in ensuring the absence of any measures of a military nature and the protection of the Antarctic environment and in promoting freedom of scientific research in Antarctica;

Reaffirming that it is in the interest of all mankind that the Antarctic Treaty area shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord;

Noting the possibility that exploitable mineral resources may exist in Antarctica;

Bearing in mind the special legal and political status of Antarctica and the special responsibility of the Antarctic Treaty Consultative Parties to ensure that all activities in Antarctica are consistent with the purposes and principles of the Antarctic Treaty;

Bearing in mind also that a regime for Antarctic mineral resources must be consistent with Article IV of the Antarctic Treaty and in accordance therewith be without prejudice and acceptable to those States which assert rights of or claims to territorial sovereignty in Antarctica, and those States which neither recognise nor assert such rights or claims, including those States which assert a basis of claim to territorial sovereignty in Antarctica;

Noting the unique ecological, scientific and wilderness value of Antarctica and the importance of Antarctica to the global environment;

Recognising that Antarctic mineral resource activities could adversely affect the Antarctic environment or dependent or associated ecosystems;

Believing that the protection of the Antarctic environment and dependent and associated ecosystems must be a basic consideration in decisions taken on possible Antarctic mineral resource activities;

Concerned to ensure that Antarctic mineral resource activities, should they occur, are compatible with scientific investigation in Antarctica and other legitimate uses of Antarctica;

Believing that a regime governing Antarctic mineral resource activities will further strengthen the Antarctic Treaty system;

Convinced that participation in Antarctic mineral resource activities should be open to all States which have an interest in such activities and subscribe to a regime governing them and that the special situation of developing country Parties to the regime should be taken into account;

Believing that the effective regulation of Antarctic mineral resource activities is in the interest of the international community as a whole;

HAVE AGREED as follows:

CHAPTER I : GENERAL PROVISIONS

Article 1 Definitions

For the purposes of this Convention:

1 "Antarctic Treaty" means the Antarctic Treaty done at Washington on 1 December 1959.

2 "Antarctic Treaty Consultative Parties" means the Contracting Parties to the Antarctic Treaty entitled to appoint representatives to participate in the meetings referred to in Article IX of that Treaty.

3 "Antarctic Treaty area" means the area to which the provisions of the Antarctic Treaty apply in accordance with Article VI of that Treaty.


"Mineral resources" means all non-living natural non-renewable resources, including fossil fuels, metallic and non-metallic minerals.

"Antarctic mineral resource activities" means prospecting, exploration or development, but does not include scientific research activities within the meaning of Article III of the Antarctic Treaty.

"Prospecting" means activities, including logistic support, aimed at identifying areas of mineral resource potential for possible exploration and development, including geological, geochemical and geophysical investigations and field observations, the use of remote sensing techniques and collection of surface, seafloor and sub-ice samples. Such activities do not include dredging and excavations, except for the purpose of obtaining small-scale samples, or drilling, except shallow drilling into rock and sediment to depths not exceeding 25 metres, or such other depth as the Commission may determine for particular circumstances.

"Exploration" means activities, including logistic support, aimed at identifying and evaluating specific mineral resource occurrences or deposits, including exploratory drilling, dredging and other surface or subsurface excavations required to determine the nature and size of mineral resource deposits and the feasibility of their development, but excluding pilot projects or commercial production.

"Development" means activities, including logistic support, which take place following exploration and are aimed at or associated with exploitation of specific mineral resource deposits, including pilot projects, processing, storage and transport activities.

"Operator" means:

(a) a Party; or
(b) an agency or instrumentality of a Party; or
(c) a juridical person established under the law of a Party; or
(d) a joint venture consisting exclusively of any combination of the foregoing.

which is undertaking Antarctic mineral resource activities and for which there is a Sponsoring State.

"Sponsoring State" means the Party with which an Operator has a substantial and genuine link, though being:

(a) in the case of a Party, that Party;
(b) in the case of an agency or instrumentality of a Party, that Party;
(c) in the case of a juridical person other than an agency or instrumentality of a Party, the Party:

(i) under whose law that juridical person is established and to whose law it is subject, without prejudice to any other law which might be applicable, and

(ii) in whose territory the management of that juridical person is located, and

(iii) to whose effective control that juridical person is subject;

(d) in the case of a joint venture not constituting a juridical person:

(i) where the managing member of the joint venture is a Party or an agency or instrumentality of a Party, that Party; or

(ii) in any other case, where in relation to a Party the managing member of the joint venture satisfies the requirements of subparagraph (c) above, that Party.

"Managing member of the joint venture" means that member which the participating members in the joint venture have by agreement designated as having responsibility for central management of the joint venture, including the functions of organising and supervising the activities to be undertaken, and controlling the financial resources involved.

"Effective control" means the ability of the Sponsoring State to ensure the availability of substantial resources of the Operator for purposes connected with the implementation of this Convention, through the location of such resources in the territory of the Sponsoring State or otherwise.

"Damage to the Antarctic ecosystem or dependent or associated ecosystems" means any impact on the living or non-living components of that environment or those ecosystems,
including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention.

16 "Commission" means the Antarctic Mineral Resources Commission established pursuant to Article 18.

17 "Regulatory Committee" means an Antarctic Mineral Resources Regulatory Committee established pursuant to Article 29.

18 "Advisory Committee" means the Scientific, Technical and Environmental Advisory Committee established pursuant to Article 23.

19 "Special Meeting of Parties" means the Meeting referred to in Article 28.

20 "Arbitral Tribunal" means an Arbitral Tribunal constituted as provided for in the Annex, which forms an integral part of this Convention.

Article 2
Objectives and General Principles

1 This Convention is an integral part of the Antarctic Treaty system, comprising the Antarctic Treaty, the measures in effect under that Treaty, and its associated separate legal instruments, the prime purpose of which is the ensure that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord. The Parties provide through this Convention, the principles it establishes, the rules it prescribes, the institutions it creates and the decisions adopted pursuant to it, a means for:

(a) assessing the possible impact on the environment of Antarctic mineral resource activities;
(b) determining whether Antarctic mineral resource activities are acceptable;
(c) governing the conduct of such Antarctic mineral resource activities as may be found acceptable; and
(d) ensuring that any Antarctic mineral resource activities are undertaken in strict conformity with this Convention.

2 In implementing this Convention, the Parties shall ensure that Antarctic mineral resource activities, should they occur, take place in a manner consistent with all the components of the Antarctic Treaty system and the obligations following therefrom.

3 In relation to Antarctic mineral resource activities, should they occur, the Parties acknowledge the special responsibility of the Antarctic Treaty Consultative Parties for the protection of the environment and the need to:

(a) protect the Antarctic environment and dependent and associated ecosystems;
(b) respect Antarctica's significance for, and influence on, the global environment;
(c) respect other legitimate uses of Antarctica;
(d) respect Antarctica's scientific value and aesthetic and wilderness qualities;
(e) ensure the safety of operations in Antarctica;
(f) promote opportunities for fair and effective participation of all Parties; and
(g) take into account the interests of the international community as a whole.

Article 3
Prohibition of Antarctic Mineral Resource Activities Outside this Convention

No Antarctic mineral resource activities shall be conducted except in accordance with this Convention and measures in effect pursuant to it, and, in the case of exploration or development, with a Management Scheme approved pursuant to Article 48 or 54.

Article 4
Principles Concerning Judgments on Antarctic Mineral Resource Activities

1 Decisions about Antarctic mineral resource activities shall be based upon information adequate to enable informed judgments to be made about their possible impacts and no such activities shall take place unless this information is available for decisions relevant to those activities.

2 No Antarctic mineral resource activity shall take place until it is judged, based upon assessment of its possible impacts on the Antarctic environment and on dependent and associated ecosystems, that the activity in question would not cause:

(a) significant adverse effects on air and water quality;
(b) significant changes in atmospheric, terrestrial or marine environments;
(c) significant changes in the distribution, abundance or productivity of populations of species of fauna or flora;
(d) further jeopardy to endangered or threatened species or populations of such species; or
(e) degradation of, or substantial risk to, areas of special biological, scientific, historic, aesthetic or wilderness significance.

3 No Antarctic mineral resource activity shall take place until it is judged, based upon assessment of its possible impacts, that the activity in question would not cause significant adverse effects on global or regional climate or weather patterns.

4 No Antarctic mineral resource activity shall take place until it is judged that:

(a) technology and procedures are available to provide for safe operations and compliance with paragraphs 2 and 3 above;
(b) there exists the capacity to monitor key environmental parameters and ecosystem components so as to identify any adverse effects of such activity and to provide for the modification of operation procedures as may be necessary in the light of the results of monitoring or increased knowledge of the Antarctic environment or dependent or associated ecosystems; and
(c) there exists the capacity to respond effectively to accidents, particularly those with potential environmental effects.

5 The judgements referred to in paragraphs 2, 3 and 4 above shall take into account the cumulative impacts of possible Antarctic mineral resource activities both by themselves and in combination with other such activities and other uses of Antarctica.

**Article 5**

**Area of Application**

1 This Convention shall, subject to paragraphs 2, 3 and 4 below, apply to the Antarctic Treaty area.

2 Without prejudice to the responsibilities of the Antarctic Treaty Consultative Parties under the Antarctic Treaty and measures pursuant to it, the Parties agree that this Convention shall regulate Antarctic mineral resource activities which take place on the continent of Antarctica and all Antarctic islands, including all ice shelves, south of 60° south latitude and in the deep seabed and subsoil of adjacent offshore areas up to the deep seabed.

3 For the purposes of this Convention "deep seabed" means the seabed and subsoil beyond the geographic extent of the continental shelf as the term continental shelf is defined in accordance with international law.

4 Nothing in this Article shall be construed as limiting the application of other Articles of this Convention in so far as they relate to possible impacts outside the area referred to in paragraphs 1 and 2 above, including impacts on dependent or on associated ecosystems.

**Article 6**

**Cooperation and International Participation**

In the implementation of this Convention cooperation within its framework shall be promoted and encouragement given to international participation in Antarctic mineral resource activities by interested Parties which are Antarctic Treaty Consultative Parties and by other interested Parties, in particular, developing countries in either category. Such participation may be realised through the Parties themselves and their Operators.

**Article 7**

**Compliance with this Convention**

1 Each Party shall take appropriate measures within its competence to ensure compliance with this Convention and any measures in effect pursuant to it.

2 If a Party is prevented by the exercise of jurisdiction by another Party from ensuring compliance in accordance with paragraph 1 above, it shall not, to the extent that it is so prevented, bear responsibility for that failure to ensure compliance.

3 If any jurisdictional dispute related to compliance with this Convention or any measure in effect pursuant to it arises between two or more Parties, the Parties concerned shall immediately consult together with a view to reaching a mutually acceptable solution.

4 Each Party shall notify the Executive Secretary, for circulation to all other Parties, of the measures taken pursuant to paragraph 1 above.
5 Each Party shall exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any Antarctic mineral resource activities contrary to the objectives and principles of this Convention.

6 Each Party may, whenever it deems it necessary, draw the attention of the Commission to any activity which in its opinion affects the implementation of the objectives and principles of this Convention.

7 The Commission shall draw the attention of all Parties to any activity which, in the opinion of the Commission, affects the implementation of the objectives and principles of this Convention or the compliance by any Party with its obligations under this Convention and any measures in effect pursuant to it.

8 The Commission shall draw the attention of any State which is not a Party to this Convention to any activity undertaken by that State, its agencies or instrumentalities, natural or juridical persons, ships, aircraft or other means of transportation which, in the opinion of the Commission, affects the implementation of the objectives and principles of this Convention. The Commission shall inform all Parties accordingly.

9 Nothing in this Article shall affect the operation of Article 12(7) of this Convention or Article VIII of the Antarctic Treaty.

**Article 8**

**Response Action and Liability**

1 An Operator undertaking any Antarctic mineral resource activity shall take necessary and timely response action, including prevention, containment, clean up and removal measures, if the activity results in or threatens to result in damage to the Antarctic environment or dependent or associated ecosystems. The Operator, through its Sponsoring State, shall notify the Executive Secretary, for circulation to the relevant institutions of this Convention and to all Parties, of action take pursuant to this paragraph.

2 An Operator shall be strictly liable for:

(a) damage to the Antarctic environment or dependent or associated ecosystems arising from its Antarctic mineral resource activities, including payment in the event that there has been no restoration to the status quo ante;

(b) loss of or impairment to an established use, as referred to in Article 15, or loss of or impairment to an established use of dependent or associated ecosystems, arising directly out of damage described in subparagraph (a) above;

(c) loss of or damage to property of a third party or loss of life or personal injury of a third party arising directly out of damage described in subparagraph (a) above; and

(d) reimbursement of reasonable costs by whomsoever incurred relating to necessary response action, including prevention, containment, clean up and removal measures, and action taken to restore the status quo ante where Antarctic mineral resource activities undertaken by that Operator result in or threaten to result in damage to the Antarctic environment or dependent or associated ecosystems.

3(a) Damage of the kind referred to in paragraph 2 above which would not have occurred or continued if the Sponsoring State had carried out its obligations under this Convention with respect to its Operator shall, in accordance with international law, entail liability of that Sponsoring State. Such liability shall be limited to that portion of liability not satisfied by the Operator or otherwise.

(b) Nothing in subparagraph (a) above shall affect the application of the rules of international law applicable in the event that damage not referred to in that subparagraph would not have occurred or continued if the Sponsoring State had carried out its obligations under this Convention with respect to its Operator.

4 An Operator shall not be liable pursuant to paragraph 2 above if it proves that the damage has been caused directly by, and to the extent that it has been caused directly by:

(a) an event constituting in the circumstances of Antarctica a natural disaster of an exceptional character which could not reasonably have been foreseen; or

(b) armed conflict, should it occur notwithstanding the Antarctic Treaty, or an act of terrorism directed against the activities of the Operator, against which no reasonable precautionary measures could have been effective.
5 Liability of an Operator for any loss of life, personal injury or loss of or damage to property other than that governed by this Article shall be regulated by applicable law and procedures.

6 If an Operator proves that damage has been caused totally or in part by an intentional or grossly negligent act or omission of the party seeking redress, that Operator may be relieved totally or in part from its obligation to pay compensation in respect of the damage suffered by such party.

7(a) Further rules and procedures in respect of the provisions on liability set out in this Article shall be elaborated through a separate Protocol which shall be adopted by consensus by the members of the Commission and shall enter into force according to the procedure provided for in Article 62 of this Convention.

(b) Such rules and procedures shall be designed to enhance the protection of the Antarctic environment and dependent and associated ecosystems.

(c) Such rules and procedures:

(i) may contain provisions for appropriate limits on liability, where such limits can be justified;

(ii) without prejudice to Article 57, shall prescribe means and mechanisms such as a claims tribunal or other fora by which claims against Operators pursuant to this Article may be assessed and adjudicated;

(iii) shall ensure that a means is provided to assist with immediate response action, and to satisfy liability under paragraph 2 above in the event, inter alia, that an Operator liable is financially incapable of meeting its obligation in full, that it exceeds any relevant limits of liability, that there is a defence to liability or that the loss or damage is of undetermined origin. Unless it is determined during the elaboration of the Protocol that there are other effective means of meeting these objectives, the Protocol shall establish a Fund or Funds and make provision in respect of such Fund or Funds, inter alia, for the following:

- financing by Operators or on industry wide bases;
- ensuring the permanent liquidity and mandatory supplementation thereof in the event of insufficiency;
- reimbursement of costs of response action, by whomsoever incurred.

8 Nothing in paragraphs 4, 6 and 7 above or in the Protocol adopted pursuant to paragraph 7 shall affect in any way the provisions of paragraph 1 above.

9 No application for an exploration or development permit shall be made until the Protocol provided for in paragraph 7 above is in force for the Party lodging such application.

10 Each Party, pending the entry into force for it of the Protocol provided for in paragraph 7 above, shall ensure, consistently with Article 7 and in accordance with its legal system, that recourse is available in its national courts for adjudicating liability claims pursuant to paragraphs 2, 4 and 6 above against Operators which are engaged in prospecting. Such recourse shall include the adjudication of claims against any Operator it has sponsored. Each party shall also ensure, in accordance with its legal system, that the Commission has the right to appear as a party in its national courts to pursue relevant liability claims under paragraph 2(a) above.

11 Nothing in this Article or in the Protocol provided for in paragraph 7 above shall be construed as to:

(a) preclude the application of existing rules on liability, and the development in accordance with international law of further such rules, which may have application to either States or Operators; or

(b) affect the right of an Operator incurring liability pursuant to this Article to seek redress from another party which caused or contributed to the damage in question.

12 When compensation has been paid other than under this Convention liability under this Convention shall be offset by the amount of such payment.
Article 9
Protection of Legal Positions under the Antarctic Treaty

Nothing in this Convention and no acts or activities taking place while this Convention is in force shall:

(a) constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in the Antarctic Treaty area or create any rights of sovereignty in the Antarctic Treaty area;

(b) be interpreted as a renunciation or diminution by any Party of, or as prejudicing, any right or claim or basis of claim to territorial sovereignty in Antarctica or to exercise coastal state jurisdiction under international law;

(c) be interpreted as prejudicing the position of any Party as regards its recognition or non-recognition of any such right, claim or basis of claim; or

(d) affect the provision of Article IV(2) of the Antarctic Treaty that no new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the Antarctic Treaty is in force.

Article 10
Consistency with the Other Components of the Antarctic Treaty System

1 Each Party shall ensure that Antarctic mineral resource activities take place in a manner consistent with the components of the Antarctic Treaty system, including the Antarctic Treaty, the Convention for the Conservation of Antarctic Seals and the Convention on the Conservation of Antarctic Marine Living Resources and the measures in effect pursuant to those instruments.

2 The Commission shall consult and cooperate with the Antarctic Treaty Consultative Parties, the Contracting Parties to the Convention for the Conservation of Antarctic Seals, and the Commission for the Conservation of Antarctic Marine Living Resources with a view to ensuring the achievement of the objectives and principles of this Convention and avoiding any interference with the achievement of the objectives and principles of the Antarctic Treaty, the Convention for the Conservation of Antarctic Seals or the Convention on the Conservation of Antarctic Marine Living Resources, or inconsistency between the measures in effect pursuant to those instruments and measures in effect pursuant to this Convention.

Article 11
Inspection under the Antarctic Treaty

All stations, installations and equipment, in the Antarctic Treaty area, relating to Antarctic mineral resource activities, as well as ships and aircraft supporting such activities at points of discharging or embarking cargoes or personnel at such stations and installations, shall be open at all times to inspection by observers designated under Article VII of the Antarctic Treaty for the purposes of that Treaty.

Article 12
Inspection under this Convention

1 In order to promote the objectives and principles and to ensure the observance of this Convention and measures in effect pursuant to it, all stations, installations and equipment relating to Antarctic mineral resource activities in the area in which these activities are regulated by this Convention, as well as ships and aircraft supporting such activities at points of discharging or embarking cargoes or personnel anywhere in that area shall be open at all times to inspection by:

(a) observers designated by any member of the Commission who shall be nationals of that member; and

(b) observers designated by the Commission or relevant Regulatory Committee.

2 Aerial inspection may be carried out at any time over the area in which Antarctic mineral resource activities are regulated by this Convention.

3 The Commission shall maintain an up-to-date list of observers designated pursuant to paragraph 1(a) and (b) above.

4 Reports from the observers shall be transmitted to the Commission and to any Regulatory Committee having competence in the area where the inspection has been carried out.

5 Observers shall avoid interference with the safe and normal operations of stations, installations and equipment visited and shall respect measures adopted by the Commission to protect confidentiality of data and information.
6 Inspections undertaken pursuant to paragraph 1(a) and (b) above shall be compatible and reinforce each other and shall not impose an undue burden on the operation of stations, installations and equipment visited.

7 In order to facilitate the exercise of their functions under this Convention, and without prejudice to the respective positions of the Parties relating to jurisdiction over all other persons in the area in which Antarctic mineral resource activities are regulated by this Convention, observers designated under this Article shall be subject only to the jurisdiction of the Party of which they are nationals in respect of all acts or omissions occurring while they are in that area for the purpose of exercising their functions.

8 No exploration or development shall take place in an area identified pursuant to Article 41 until effective provision has been made for inspection in that area.

Article 13
Protected Areas

1 Antarctic mineral resource activities shall be prohibited in any area designated as a Specially Protected Area or a Site of Special Scientific Interest under Article IX(1) of the Antarctic Treaty. Such activities shall also be prohibited in any other area designated as a protected area in accordance with Article IX(1) of the Antarctic Treaty, except to the extent that the relevant measure provides otherwise. Pending any designation becoming effective in accordance with Article IX(4) of the Antarctic Treaty, no Antarctic mineral resource activities shall take place in any such area which would prejudice the purpose for which it was designated.

2 The Commission shall also prohibit or restrict Antarctic mineral resource activities in any area which, for historic, ecological, environmental, scientific or other reasons, it has designated as a protected area.

3 In exercising its powers under paragraph 2 above or under Article 41 the Commission shall consider whether to restrict or prohibit Antarctic mineral resource activities in any area, in addition to those referred to in paragraph 1 above, protected or set aside pursuant to provisions of other components of the Antarctic Treaty system, to ensure the purposes for which they are designated.

4 In relation to any area in which Antarctic mineral resource activities are prohibited or restricted in accordance with paragraph 1, 2 or 3 above, the Commission shall consider whether, for the purposes of Article 4(2)(e), it would be prudent, additionally, to prohibit or restrict Antarctic mineral resource activities in adjacent areas for the purpose of creating a buffer zone.

5 The Commission shall give effect to Article 10(2) in acting pursuant to paragraphs 2, 3 and 4 above.

6 The Commission shall, where appropriate, bring any decisions it takes pursuant to this Article to the attention of the Antarctic Treaty Consultative Parties, the Contracting Parties to the Convention for the Conservation of Antarctic Seals, the Commission for the Conservation of Antarctic Marine Living Resources and the Scientific Committee on Antarctic Research.

Article 14
Non-Discrimination

In the implementation of this Convention there shall be no discrimination against any Party or its Operators.

Article 15
Respect for Other Uses of Antarctica

1 Decisions about Antarctic mineral resource activities shall take into account the need to respect other established uses of Antarctica, including:

(a) the operation of stations and their associated installations, support facilities and equipment in Antarctica;
(b) scientific investigation in Antarctica and cooperation therein;
(c) the conservation, including rational use, of Antarctic marine living resources;
(d) tourism;
(e) the preservation of historic monuments; and
(f) navigation and aviation,

that are consistent with the Antarctic Treaty system.

2 Antarctic mineral resource activities shall be conducted so as to respect any uses of Antarctica as referred to in paragraph 1 above.
Article 16
Availability and Confidentiality of Data and Information

Data and information obtained from Antarctic mineral resource activities shall, to the greatest extent practicable and feasible, be made freely available, provided that:

(a) as regards data and information of commercial value deriving from prospecting, they may be retained by the Operator in accordance with Article 37;
(b) as regards data and information deriving from exploration or development, the Commission shall adopt measures relating, as appropriate, to their release and to ensure the confidentiality of data and information of commercial value.

Article 17
Notifications and Provisional Exercise of Functions of the Executive Secretary

1 Where in this Convention there is a reference to the provision of information, a notification or a report to any institution provided for in this Convention and that institution has not been established, the information, notification or report shall be provided to the Executive Secretary who shall circulate it as required.

2 Where in this Convention a function is assigned to the Executive Secretary and no Executive Secretary has been appointed under Article 33, that function shall be performed by the Depositary.

CHAPTER II: INSTITUTIONS

Article 18
Commission

1 There is hereby established the Antarctic Mineral Resources Commission.

2 Membership of the Commission shall be as follows:

(a) each Party which was an Antarctic Treaty Consultative Party on the date when this Convention was opened for signature; and
(b) each other Party during such time as it is actively engaged in substantial scientific, technical or environmental research in the area to which this Convention applies directly relevant to decisions about Antarctic mineral resource activities, particularly the assessments and judgments called for in Article 4; and
(c) each other Party sponsoring Antarctic mineral resource exploitation or development during such time as the relevant Management Scheme is in force.

3 A Party seeking to participate in the work of the Commission pursuant to subparagraph (b) or (c) above shall notify the Depositary of the basis upon which it seeks to become a member of the Commission. In the case of a Party which is not an Antarctic Treaty Consultative Party, such notification shall include a declaration of intent to abide by recommendations pursuant to Article IX(1) of the Antarctic Treaty. The Depositary shall communicate to each member of the Commission such notification and accompanying information.

4 The Commission shall consider the notification at its next meeting. In the event that a Party referred to in paragraph 2(b) above submitting a notification pursuant to paragraph 3 above is an Antarctic Treaty Consultative Party, it shall be deemed to have satisfied the requirements for Commission membership unless more than one-third of the members of the Commission object at the meeting at which such notification is considered. Any other Party submitting a notification shall be deemed to have satisfied the requirements for Commission membership if no member of the Commission objects at the meeting at which such notification is considered.

5 Each member of the Commission shall be represented by one representative who may be accompanied by alternate representatives and advisers.

6 Observer status in the Commission shall be open to any Party and to any Contracting Party to the Antarctic Treaty which is not a Party to this Convention.

Article 19
Commission Meetings

1(a) The first meeting of the Commission, held for the purpose of taking organisational, financial and other decisions necessary for the effective functioning of this Convention and its institutions, shall be convened within six months of the entry into force of this Convention.
(b) After the Commission has held the meeting or meetings necessary to take the decisions referred to in subparagraph (a) above, the Commission shall not hold further meetings except in accordance with paragraph 2 or 3 below.

2 Meetings of the Commission shall be held within two months of:

(a) receipt of a notification pursuant to Article 39;
(b) a request by at least six members of the Commission; or
(c) a request by a member of a Regulatory Committee in accordance with Article 49(1).

3 The Commission may establish a regular schedule of meetings if it determines that it is necessary for the effective functioning of this Convention.

4 Unless the Commission decides otherwise, its meetings shall be convened by the Executive Secretary.

Article 20
Commission Procedure

1 The Commission shall elect from among its members a Chairman and two Vice-Chairmen, each of whom shall be a representative of a different Party.

2(a) Until such time as the Commission has established a regular schedule of meetings in accordance with Article 19(3), the Chairman and Vice-Chairmen shall be elected to serve for a period of two years, provided that if no meeting is held during that period they shall continue to serve until the conclusion of the first meeting held thereafter.

(b) When a regular schedule of meetings has been established, the Chairman and Vice-Chairmen shall be elected to serve for a period of two years.

3 The Commission shall adopt its rules of procedure. Such rules may include provisions concerning the number of terms of office which the Chairman and Vice-Chairmen may serve and for the rotation of its functions.

4 The Commission may establish such subsidiary bodies as are necessary for the performance of its functions.

5 The Commission may decide to establish a permanent headquarters which shall be in New Zealand.

6 The Commission shall have legal personality and shall enjoy in the territory of each Party such legal capacity as may be necessary to perform its functions and achieve the objectives of this Convention.

7 The privileges and immunities to be enjoyed by the Commission, the Secretariat and representatives attending meetings in the territory of a Party shall be determined by agreement between the Commission and the Party concerned.

Article 21
Functions of the Commission

1 The functions of the Commission shall be:

(a) to facilitate and promote the collection and exchange of scientific, technical and other information and research projects necessary to predict, detect and assess the possible environmental impact of Antarctic mineral resource activities, including the monitoring of key environmental parameters and ecosystem components;

(b) to designate areas in which Antarctic mineral resource activities shall be prohibited or restricted in accordance with Article 13, and to perform the related functions assigned to it in that Article;

(c) to adopt measures for the protection of the Antarctic environment and dependent and associated ecosystems and for the promotion of safe and effective exploration and development techniques and, as it may deem appropriate, to make available a handbook of such measures;

(d) to determine, in accordance with Article 41, whether or not to identify an area for possible exploration and development, and to perform the related functions assigned to it in Article 41;

(e) to adopt measures relating to prospecting applicable to all relevant Operators:

(i) to determine for particular circumstances maximum drilling depths in accordance with Article 1(8);

(ii) to restrict or prohibit prospecting consistently with Article 13, 37 and 38;
(f) to ensure the effective application of Articles 12(4), 37(7) and (8), 38(2) and 39(2), which require the submission to the Commission of information, notifications and reports;

(g) to give advance public notice of matters upon which it is requesting the advice of the Advisory Committee;

(h) to adopt measures relating to the availability and confidentiality of data and information, including measures pursuant to Article 16;

(i) to elaborate the principle of non-discrimination set forth in Article 14;

(j) to adopt measures with respect to maximum block size;

(k) to perform the functions assigned to it in Article 29;

(l) to review action by Regulatory Committees in accordance with Article 49;

(m) to adopt measures in accordance with Articles 6 and 41(1)(d) related to the promotion of cooperation and to participation in Antarctic mineral resource activities;

(n) to adopt general measures pursuant to Article 51(6);

(o) to take decisions on budgetary matters and adopt financial regulations in accordance with Article 35;

(p) to adopt measures regarding fees payable in connection with notifications submitted pursuant to Articles 37 and 39 and applications lodged pursuant to Articles 44 and 53, the purpose of which fees shall be to cover the administrative costs of handling such notifications and applications;

(q) to adopt measures regarding levies payable by Operators engaged in exploration and development, the principal purpose of which levies shall be to cover the costs of the institutions of this Convention;

(r) to determine in accordance with Article 35(7) the disposition of revenues, if any, accruing to the Commission which are surplus to the requirements for financing the budget pursuant to Article 35;

(s) to perform the functions assigned to it in Article 7(7) and (8);

(t) to perform the functions relating to inspection assigned to it in Article 12;

(u) to consider monitoring reports received pursuant to Article 52;

(v) to perform the functions relating to dispute settlement assigned to it in Article 59;

(w) to perform the functions relating to consultation and cooperation assigned to it in Articles 10(2) and 34;

(x) to keep under review the conduct of Antarctic mineral resource activities with a view to safeguarding the protection of the Antarctic environment in the interest of all mankind; and

(y) to perform such other functions as are provided for elsewhere in this Convention.

2 In performing its functions the Commission shall seek and take full account of the views of the Advisory Committee provided in accordance with Article 26.

3 Each measure adopted by the Commission shall specify the date on which it comes into effect.

4 The Commission shall, subject to Article 16 and measures in effect pursuant to it and paragraph 1(h) above, ensure that a publicly available record of its meetings and decisions and of information, notifications and reports submitted to it is maintained.

Article 22

Decision Making in the Commission

1 The Commission shall take decisions on matters of substance by a three-quarters majority of the members present and voting. When a question arises as to whether a matter is one of substance or not, that matter shall be treated as one of substance unless otherwise decided by a three-quarters majority of the members present and voting.

2 Notwithstanding paragraph 1 above, consensus shall be required for the following:

(a) the adoption of the budget and decisions on budgetary and related matters pursuant to Article 21(1)(p) (q) and (r) and Article 35(1), (2), (3), (4) and (5);

(b) decisions taken pursuant to Article 21(1)(i);

(c) decisions taken pursuant to Article 41(2).

3 Decisions on matters of procedure shall be taken by a simple majority of the members present and voting.

4 Nothing in this Article shall be interpreted as preventing the Commission, in taking decisions on matters of substance, from endeavouring to reach a consensus.

5 For the purposes of this Article, consensus means the absence of a formal objection. If, with respect to any decision covered by paragraph 2(c) above, the Chairman of the
Commission determines that there would be such an objection he shall consult the members of the Commission. If, as a result of these consultations, the Chairman determines that an objection would remain, he shall convene those members most directly interested for the purpose of seeking to reconcile the differences and producing a generally acceptable proposal.

**Article 23**
Advisory Committee

1 There is hereby established the Scientific, Technical and Environmental Advisory Committee.

2 Membership of the Advisory Committee shall be open to all Parties.

3 Each member of the Advisory Committee shall be represented by one representative with suitable scientific, technical or environmental competence who may be accompanied by alternate representatives and by experts and advisers.

4 Observer status in the Advisory Committee shall be open to any Contracting Party to the Antarctic Treaty or to the Convention on the Conservation of Antarctic Marine Living Resources which is not a Party to this Convention.

**Article 24**
Advisory Committee Meetings

1 Unless the Commission decides otherwise, the Advisory Committee shall be convened for its first meeting within six months of the first meeting of the Commission. It shall meet thereafter as necessary to fulfil its functions on the basis of a schedule established by the Commission.

2. Meetings of the Advisory Committee, in addition to those scheduled pursuant to paragraph 1 above, shall be convened at the request of at least six members of the Commission or pursuant to Article 40(1).

3 Unless the Commission decides otherwise, the meetings of the Advisory Committee shall be convened by the Executive Secretary.

**Article 25**
Advisory Committee Procedure

1 The Advisory Committee shall elect from among its members a Chairman and two Vice-Chairmen, each of whom shall be a representative of a different Party.

2(a) Until such time as the Commission has established a schedule of meetings in accordance with Article 24(1), the Chairman and Vice-Chairmen shall be elected to serve for a period of two years, provided that if no meeting is held during that period they shall continue to serve until the conclusion of the first meeting held thereafter.

(b) When a schedule of meetings has been established, the Chairman and Vice-Chairmen shall be elected to serve for a period of two years.

3 The Advisory Committee shall give advance public notice of its meetings and of matters to be considered at each meeting so as to permit the receipt and consideration of views on such matters from international organisations having an interest in them. For this purpose the Advisory Committee may, subject to review by the Commission, establish procedures for the transmission of relevant information to these organisations.

4 The Advisory Committee shall, by a two-thirds majority of the members present and voting, adopt its rules of procedure. Such rules may include provisions concerning the number of terms of office which the Chairman and Vice-Chairmen may serve and for the rotation of such offices. The rules of procedure and any amendments thereto shall be subject to approval by the Commission.

5 The Advisory Committee may establish such subcommittees, subject to budgetary approval, as may be necessary for the performance of its functions.

**Article 26**
Functions of the Advisory Committee

1 The Advisory Committee shall advise the Commission and Regulatory Committees, as required by this Convention, or as requested by them, on the scientific, technical and environmental aspects of Antarctic mineral resource activities. It shall provide a forum for consultation and cooperation concerning the collection, exchange and evaluation of information related to the scientific, technical and environmental aspects of Antarctic mineral resource activities.
2 It shall provide advice to:

(a) the Commission relating to its functions under Articles 21(1)(a) to (f), (u) and (x) and 35(7)(a) (in matters relating to scientific research) as well as on the implementation of Article 4; and

(b) Regulatory Committees with respect to:
   (i) the implementation of Article 4;
   (ii) scientific, technical and environmental aspects of Articles 43(3) and (5), 45, 47, 51, 52 and 54;
   (iii) data to be collected and reported in accordance with Article 47 and 52; and
   (iv) the scientific, technical and environmental implications of reports and reported data provided in accordance with Articles 47 and 52.

3 It shall provide advice to the Commission and to Regulatory Committees on:

(a) criteria in respect of the judgments required under Article 4(2) and (3) for the purposes of Article 4(1);

(b) types of data and information required to carry out its functions, and how they should be collected, reported and archived;

(c) scientific research which would contribute to the base of data and information required in subparagraph (b) above;

(d) effective procedures and systems for data and information analysis, evaluation, presentation and dissemination to facilitate the judgments referred to in Article 4; and

(e) possibilities for scientific, technical and environmental cooperation amongst interested Parties which are developing countries and other Parties.

4 The Advisory Committee, in providing advice on decisions to be taken in accordance with Articles 41, 43, 45, and 54 shall, in each case, undertake a comprehensive environmental and technical assessment of the proposed actions. Such assessments shall be based on all information, and any amplifications thereof, available to the Advisory Committee, including the information provided pursuant to Articles 39(2)(e), 44(2)(b)(iii) and 53(2)(b). The assessments of the Advisory Committee shall, in each case, address the nature and scope of the decisions to be taken and shall include consideration, as appropriate, of, inter alia:

(a) the adequacy of existing information to enable informed judgments to be made;

(b) the nature, extent, duration and intensity of likely direct environmental impacts resulting from the proposed activity;

(c) possible indirect impacts;

(d) means and alternatives by which such direct or indirect impacts might be reduced, including environmental consequences of the alternatives of not proceeding;

(e) cumulative impacts of the proposed activity in the light of existing or planned activities;

(f) capacity to respond effectively to accidents with potential environmental effects;

(g) the environmental significance of unavoidable impacts; and

(h) the probabilities of accidents and their environmental consequences.

5 In preparing its advice the Advisory Committee may seek information and advice from other scientists and experts of scientific organisations as may be required on an ad hoc basis.

6 The Advisory Committee shall, with a view to promoting international participation in Antarctic mineral resource activities as provided for in Article 6, provide advice concerning the availability to interested developing country Parties and other Parties, of the information referred to in paragraph 3 above, of training programmes related to scientific, technical and environmental matters bearing on Antarctic mineral resource activities, and of opportunities for cooperation among Parties in these programmes.

Article 27
Reporting by the Advisory Committee

The Advisory Committee shall present a report on each of its meetings to the Commission and to any relevant Regulatory Committee. The report shall cover all matters considered at the meeting and shall reflect the conclusions reached and all the views expressed by members of the Advisory Committee. The report shall be circulated by the Executive Secretary to all Parties, and to observers attending the meeting, and shall thereupon be made publicly available.
Article 28
Special Meeting of Parties

1 A Special Meeting of Parties shall, as required, be convened in accordance with Article 40(2) and shall have the functions, in relation to the identification of an area for possible exploration and development, specified in Article 40(3).

2 Membership of a Special Meeting of Parties shall be open to all Parties, each of which shall be represented by one representative who may be accompanied by alternate representatives and advisers.

3 Observer status at a Special Meeting of Parties shall be open to any Contracting Party of the Antarctic Treaty which is not a Party to this Convention.

4 Each Special Meeting of Parties shall elect from among its members a Chairman and Vice-Chairman, each of whom shall serve for the duration of that meeting. The Chairman and Vice-Chairman shall not be representatives of the same Party.

5 The Special Meeting of Parties shall, by a two-thirds majority of the members present and voting, adopt its rules of procedure. Until such time as this has been done the Special Meeting of Parties apply provisional rules of procedure drawn up by the Commission.

6 Unless the Commission decides otherwise, a Special Meeting of Parties shall be convened by the Executive Secretary and shall be held at the same venue as the meeting of the Commission convened to consider the identification of an area for possible exploration and development.

Article 29
Regulatory Committees

1 An Antarctic Mineral Resource Regulatory Committee shall be established for each area identified by the Commission pursuant to Article 41.

2 Subject to paragraph 6 below, each Regulatory Committee shall consist of 10 members. Membership shall be determined by the Commission in accordance with this Article and, taking into account Article 9, shall include:

(a) the member, if any, or if there are more than one, those members of the Commission identified by reference to Article 9(b) which assert rights or claims in the identified area;
(b) the two members of the Commission also identified by reference to Article 9(b) which assert a basis of claim in Antarctica;
(c) other members of the Commission determined in accordance with this Article so that the Regulatory Committee shall, subject to paragraph 6 below, consist, in total, of 10 members:

(i) four members identified by reference to Article 9(b) which assert rights or claims, including the member or members, if any, referred to in subparagraph (a) above; and
(ii) six members which do not assert rights or claims as described in Article 9(b), including the two members referred to in subparagraph (b) above.

3 Upon the identification of an area in accordance with Article 41(2), the Chairman of the Commission shall, as soon as possible and in any event within 90 days, make a recommendation to the Commission concerning the membership of the Regulatory Committee. To this end the Chairman shall consult, as appropriate, with the Chairman of the Advisory Committee and all members of the Commission. Such recommendation shall comply with the requirements of paragraphs 2 and 4 of this Article and shall ensure:

(a) the inclusion of members of the Commission which, whether through prospecting, scientific research or otherwise, have contributed substantial scientific, technical or environmental information relevant to the identification of the area by the Commission pursuant to Article 41;
(b) adequate and equitable representation of developing country members of the Commission, having regard to the overall balance between developed and developing country members of the Commission, including at least three developing country members of the Commission;
(c) that account is taken of the value of a rotation of membership of Regulatory Committees as a further means of ensuring equitable representation of members of the Commission.
4(a) When there are one or more members of the Regulatory Committee referred to in paragraph 2(a) above, the Chairman of the Commission shall make the recommendation in respect of paragraph 2(c)(i) above upon the nomination, if any, of such member or members which shall take into account paragraph 3 above, in particular subparagraph (b) of that paragraph.

(b) In making the recommendation in respect of paragraph 2(c)(ii) above, the Chairman of the Commission shall give full weight to the views (which shall take into account paragraph 3 above) which may be presented on behalf of those members of the Commission which do not assert rights of or claims to territorial sovereignty in Antarctica and, with reference to the requirements of paragraph 3(b) above, to the views which may be presented on behalf of the developing countries among them.

5 The recommendation of the Chairman of the Commission shall be deemed to have been approved by the Commission if it does not decide otherwise at the same meeting as the recommendation is submitted. In taking any decision in accordance with this Article the Commission shall ensure that the requirements of paragraphs 2 and 3 above are complied with and that the nomination, if any, referred to in paragraph 4(a) above is given effect.

6(a) If a member of the Commission which has sponsored prospecting in the identified area and submitted the notification pursuant to Article 39 upon which the Commission based its identification of the area pursuant to Article 41, is not a member of the Regulatory Committee by virtue of paragraphs 2 and 3 above, that member of the Commission shall be a member of the Regulatory Committee until such time as an application for an exploration permit is lodged pursuant to Article 44.

(b) If a Party lodging an application for an exploration permit pursuant to Article 44 is not a member of the Regulatory Committee by virtue of paragraphs 2 and 3 above, that Party shall be a member of the Regulatory Committee for its consideration of that application. Should such application result in approval of a Management Scheme pursuant to Article 48, the Party in question shall remain a member of the Regulatory Committee during such time as that Management Scheme is in force with the right to take part in decisions on matters affecting that Management Scheme.

7 Nothing in this Article shall be interpreted as affecting Article IV of the Antarctic Treaty.

Article 30
Regulatory Committee Procedure

1 The first meeting of each Regulatory Committee shall be convened by the Executive Secretary in accordance with Article 43(1). Each Regulatory Committee shall meet thereafter when and where necessary to fulfil its functions.

2 Each member of a Regulatory Committee shall be represented by one representative who may be accompanied by alternate representatives and advisers.

3 Each Regulatory Committee shall elect from among its members a Chairman and Vice-Chairman. The Chairman and Vice-Chairman shall not be representatives of the same Party.

4 Any Party may attend meetings of a Regulatory Committee as an observer.

5 Each Regulatory Committee shall adopt its rules of procedure. Such rules may include provisions concerning the period and number of terms of office which the Chairman and Vice-Chairman may serve and for the rotation of such offices.

Article 31
Functions of Regulatory Committees

1 The functions of each Regulatory Committee shall be:

(a) to undertake the preparatory work provided for in Article 43;
(b) to consider applications for exploration and development permits in accordance with Articles 45, 46 and 54;
(c) to approve Management Schemes and issue exploration and development permits in accordance with Articles 47, 48 and 54;
(d) to monitor exploration and development activities in accordance with Article 52;
(e) to perform the functions assigned to it in Article 51;
(f) to perform the functions relating to inspection assigned to it in Article 12;
(g) to perform the functions relating to dispute settlement assigned to it in Article 47(r); and
(h) to perform such other functions as are provided for elsewhere in this Convention.

2 In performing its functions each Regulatory Committee shall seek and take full account of the views of the Advisory Committee provided in accordance with Article 26.

3 Each Regulatory Committee shall, subject to Article 16 and measures in effect pursuant to it and Article 21(1)(b), ensure that a publicly available record of its decisions, and of Management Schemes in force, is maintained.

**Article 32**
Decision Making in Regulatory Committees

1 Decisions in a Regulatory Committee pursuant to Articles 48 and 54(5) shall be taken by a two-thirds majority of the members present and voting, which majority shall include a simple majority of those members present and voting referred to in Article 29(2)(c)(i) and also a simply majority of those members present and voting referred to in Article 29(2)(c)(ii).

2 Decisions by a Regulatory Committee pursuant to Article 43(3) and (5) shall be taken by a two-thirds majority of the members present and voting, which majority shall include at least half of those members present and voting referred to in Article 29(2)(c)(i) and also at least half of those members present and voting referred to in Article 29(2)(c)(ii).

3 Decisions on all other matters of substance shall be taken by a two-thirds majority of the members present and voting. When a question arises as to whether a matter is one of substance or not, that matter shall be treated as one of substance unless otherwise decided by a two-thirds majority of the members present and voting.

4 Decisions on matters of procedure shall be taken by a simply majority of the members present and voting.

5 Nothing in the Article shall be interpreted as preventing a Regulatory Committee, in taking decisions on matters of substance, from endeavouring to reach a consensus.

**Article 33**
Secretariat

1 The Commission may establish a Secretariat to serve the Commission, Regulatory Committees, the Advisory Committee, the Special Meeting of Parties and any subsidiary bodies established.

2 The Commission may appoint an Executive Secretary, who shall be the head of the Secretariat, according to such procedures and on such terms and conditions as the Commission may determine. The Executive Secretary shall serve for a four year term and may be reappointed.

3 The Commission may, with due regard to the need for efficiency and economy, authorise such staff establishment for the Secretariat as may be necessary. The Executive Secretary shall appoint, direct and supervise the staff according to such rules and procedures and on such terms and conditions as the Commission may determine.

4 The Secretariat shall perform the functions specified in this Convention and, subject to the approved budget, the tasks entrusted to it by the Commission, Regulatory Committees, the Advisory Committee and the Special Meeting of Parties.

**Article 34**
Cooperation with International Organisations

1 The Commission and, as appropriate, the Advisory Committee shall cooperate with the Antarctic Treaty Consultative Parties, the Contracting Parties to the Convention for the Conservation of Antarctic Seals, the Commission for the Conservation of Antarctic Marine Living Resources, and the Scientific Committee on Antarctic Research.

2 The Commission shall cooperate with the United Nations, its relevant Specialised Agencies, and, as appropriate, any international organisation which may have competence in respect of mineral resources in areas adjacent to those covered by this Convention.
3 The Commission shall also, as appropriate, cooperate with the International Union for the Conservation of Nature and Natural Resources, and with other relevant international organisations, including non-governmental organisations having a scientific, technical or environmental interest in Antarctica.

4 The Commission may, as appropriate, accord observer status in the Commission and in the Advisory Committee to such relevant international organisations, including non-governmental organisations, as might assist in the work of the institution in question. Observer status at a Special Meeting of Parties shall be open to such organisations as have been accorded observer status in the Commission or the Advisory Committee.

5 The Commission may enter into agreements with the organisations referred to in this Article.

Article 35
Financial Provisions

1 The Commission shall adopt a budget, on an annual or other appropriate basis, for:

(a) its activities and the activities of Regulatory Committees, the Advisory Committee, the Special Meeting of Parties, any subsidiary bodies established and the Secretariat; and
(b) the progressive reimbursement of any contributions paid under paragraphs 5 and 6 below whenever revenues under paragraph 4 below exceed expenditure.

2 The first draft budget shall be submitted by the Depositary at least 90 days before the first meeting of the Commission. At that meeting the Commission shall adopt its first budget and decide upon arrangements for the preparation of subsequent budgets.

3 The Commission shall adopt financial regulations.

4 Subject to paragraph 5 below, the budget shall be financed, inter alia, by:

(a) fees prescribed pursuant to Articles 21(1)(p) and 43(2)(b);
(b) levies on Operators, subject to any measures adopted by the Commission in accordance with Article 21(1)(q), pursuant to Article 47(k)(i); and
(c) such other financial payments by Operators pursuant to Article 47(k)(ii) as may be required to be paid to the institutions of this Convention.

5 If the budget is not fully financed by revenues in accordance with paragraph 4 above, and subject to reimbursement in accordance with paragraph 1(b) above, the budget shall, to the extent of any shortfall and subject to paragraph 6 below, be financed by contributions from the members of the Commission. To this end, the Commission shall adopt as soon as possible a method of equitable sharing of contributions to the budget. The budget shall, in the meantime, to the extent of any shortfall, be financed by equal contributions from each member of the Commission.

6 In adopting the method of contribution referred to in paragraph 5 above the Commission shall consider the extent to which members of and observers at institutions of this Convention may be called upon to contribute to the costs of those institutions.

7 The Commission, in determining the disposition of revenues accruing to it, which are surplus to the requirements for financing the budget pursuant to this Article, shall:

(a) promote scientific research in Antarctica, particularly that related to the Antarctic environment and Antarctic resources, and a wide spread of participation in such research by all Parties, particularly developing country Parties;
(b) ensure that the interests of the members of Regulatory Committees having the most direct interest in the matter in relation to the areas in question are respected in any disposition of that surplus.

8 The finances of the Commission, Regulatory Committees, the Advisory Committee, the Special Meeting of Parties, any subsidiary bodies established and the Secretariat shall accord with the financial regulations adopted by the Commission and shall be subject to an annual audit by external auditors selected by the Commission.

9 Each member of the Commission, Regulatory Committees, the Advisory Committee, the Special Meeting of Parties, and any subsidiary bodies established, as well as any observer at a meeting of any of the institutions of this Convention, shall meet its own expenses arising from attendance at meetings.
10 A member of the Commission that fails to pay its contribution for two consecutive years shall not, during the period of its continuing subsequent default, have the right to participate in the taking of decisions in any of the institutions of this Convention. If it continues to be in default for a further two consecutive years, the Commission shall decide what further action should be taken, which may include loss by that member of the right to participate in meetings of the institutions of this Convention. Such member shall resume the full enjoyment of its rights upon payment of the outstanding contributions.

11 Nothing in this Article shall be construed as prejudicing the position of any member of a Regulatory Committee on the outcome of consideration by the Regulatory Committee of terms and conditions in a Management Scheme pursuant to Article 47(k)(ii).

Article 36
Official and Working Languages

The official and working languages of the Commission, Regulatory Committees, the Advisory Committee, the Special Meeting of Parties and any meeting convened under Article 64 shall be English, French, Russian and Spanish.

CHAPTER III: PROSPECTING

Article 37
Prospecting

1 Prospecting shall not confer upon any Operators any right to Antarctic mineral resources.

2 Prospecting shall at all times be conducted in compliance with this Convention and with measures in effect pursuant to this Convention, but shall not require authorisation by the institutions of this Convention.

3(a) The Sponsoring State shall ensure that its Operators undertaking prospecting maintain the necessary financial and technical means to comply with Article 8(1), and, to the extent that any such Operator fails to take response action as required in Article 8(1), shall ensure that this is undertaken.

(b) The Sponsoring State shall also ensure that its Operators undertaking prospecting maintain financial capacity, commensurate with the nature and level of the activity undertaken and the risks involved, to comply with Article 8(2).

4 In cases where more than one Operator is engaged in prospecting in the same general area, the Sponsoring State or States shall ensure that those Operators conduct their activities with due regard to each others' rights.

5 Where an Operator wishes to conduct prospecting in an area identified under Article 41 in which another Operator has been authorised to undertake exploration or development, the Sponsoring State shall ensure that such prospecting is carried out subject to the rights of any authorised Operator and any requirements to protect its rights specified by the relevant Regulatory Committee.

6 Each Operator shall ensure upon cessation of prospecting the removal of all installations and equipment and site rehabilitation. On the request of the Sponsoring State, the Commission may waive the obligation to remove installations and equipment.

7 The Sponsoring State shall notify the Commission at least nine months in advance of the commencement of planned prospecting. The notification shall be accompanied by such fees as may be established by the Commission in accordance with Article 21(1)(p) and shall:

(a) identify, by reference to coordinates of latitude and longitude or identifiable geographic features, the general area in which the prospecting is to take place;
(b) broadly identify the mineral resource or resources which are to be the subject of the prospecting;
(c) describe the prospecting, including the methods to be used, and the general programme of work to be undertaken and its expected duration;
(d) provide an assessment of the possible environmental and other impacts of the prospecting, taking into account possible cumulative impacts as referred to in Article 4(5);
(e) describe the measures, including monitoring programmes, to be adopted to avoid harmful environmental consequences or undue interference with other established uses of Antarctica, and outline the measures to be put into effect in the event of any accident and contingency plans for evacuation in an emergency;
(f) provide details on the Operator and certify that it:
(i) has a substantial and genuine link with the Sponsoring State as defined in Article 1(12); and
(ii) is financially and technically qualified to carry out the proposed prospecting in accordance with this Convention; and
(g) provide such further information as may be required by measures adopted by the Commission.

8 The Sponsoring State shall subsequently provide to the Commission:

(a) notification of any changes to the information referred to in paragraph 7 above;
(b) notification of the cessation of prospecting, including removal of any installations and equipment as well as site rehabilitation; and
(c) a general annual account on the prospecting undertaken by the Operator.

9 Notifications and reports submitted pursuant to this Article shall be circulated by the Executive Secretary without delay to all Parties and observers attending Commission meetings.

10 Paragraphs 7, 8 and 9 above shall not be interpreted as requiring the disclosure of data and information of commercial value.

11 The Sponsoring State shall ensure that basic data and information of commercial value generated by prospecting are maintained in archives and may at any time release part of or all such data and information, on conditions which it shall establish, for scientific or environmental purposes.

12 The Sponsoring State shall ensure that basic data and information, other than interpretative data, generated by prospecting are made readily available when such data and information are not, or are no longer, of commercial value and, in any event, no later than 10 years after the year the data and information were collected, unless it certifies to the Commission that the data and information continue to have commercial value. It shall review at regular intervals whether such data and information may be released and shall report the results of such reviews to the Commission.

13 The Commission may adopt measures consistent with this Article relating to the release of data and information of commercial value including requirements for certifications, the frequency of reviews and maximum time limits for extensions of the protection of such data and information.

Article 38
Consideration of Prospecting by the Commission

1 If a member of the Commission considers that a notification submitted in accordance with Article 37(7) or (8), or ongoing prospecting, causes concern as to consistency with this Convention or measures in effect pursuant thereto, that member may request the Sponsoring State to provide a clarification. If that member considers that an adequate response is not forthcoming from the Sponsoring State within a reasonable time, the member may request that the Commission be convened in accordance with Article 19(2)(b) to consider the question and take appropriate action.

2 If measures applicable to all relevant Operators are adopted by the Commission following a request made in accordance with paragraph 1 above, Sponsoring States that have submitted notifications in accordance with Article 37(7) or (8), and Sponsoring States whose Operators are conducting prospecting, shall ensure that the plans and activities of their Operators are modified to the extent necessary to conform with those measures within such time limit as the Commission may prescribe, and shall notify the Commission accordingly.

CHAPTER IV : EXPLORATION

Article 39
Requests for Identification of an Area for Possible Exploration and Development

1 Any Party may submit to the Executive Secretary a notification requesting that the Commission identify an area for possible exploration and development of a particular mineral resource or resources.

2 Any such notification shall be accompanied by such fees as may be established by the Commission in accordance with Article 21(1)(p) and shall contain:
(a) a precise delineation, including coordinates, of the area proposed for identification;
(b) specification of the resource or resources for which the area would be identified and any relevant data and information, excluding data and information of commercial value, concerning that resource or those resources, including a geological description of the proposed area;
(c) a detailed description of the physical and environmental characteristics of the proposed area;
(d) a description of the likely scale of exploration and development for the resource or resources involved in the proposed area and of the methods which could be employed in such exploration and development;
(e) a detailed assessment of the environmental and other impacts of possible exploration and development for the resource or resources involved, taking into account Articles 15 and 26(4); and
(f) such other information as may be required pursuant to measures adopted by the Commission.

3 A notification under paragraph 1 above shall be referred promptly by the Executive Secretary to all Parties and shall be circulated to observers attending the meeting of the Commission to be convened pursuant to Article 19(2)(a).

Article 40
Action by the Advisory Committee and Special Meeting of Parties

1 The Advisory Committee shall meet as soon as possible after the meeting of the Commission convened pursuant to Article 19(2)(a) has commenced. The Advisory Committee shall provide advice to the Commission on the notification submitted pursuant to Article 39(1). The Commission may prescribe a time limit for the provision of such advice.

2 A Special Meeting of Parties shall meet as soon as possible after circulation of the report of the Advisory Committee and in any event not later than two months after that report has been circulated.

3 The Special Meeting of Parties shall consider whether identification of an area by the Commission in accordance with the request contained in the notification would be consistent with this Convention, and shall report thereon to the Commission as soon as possible and in any event not later than 21 days from the commencement of the meeting.

4 The report of the Special Meeting of Parties to the Commission shall reflect the conclusions reached and all the views expressed by Parties participating in the meeting.

Article 41
Action by the Commission

1 The Commission shall, as soon as possible after receipt of the report of the Special Meeting of Parties, consider whether or not it will identify an area as requested. Taking full account of the views and giving special weight to the conclusions of the Special Meeting of Parties, and taking full account of the views and the conclusions of the Advisory Committee, the Commission shall determine whether such identification would be consistent with this Convention. For this purpose:

(a) the Commission shall ensure that an area to be identified shall be such that, taking into account all factors relevant to such identification, including the physical, geological, environmental and other characteristics of such area, it forms a coherent unit for the purposes of resource management. The Commission shall thus consider whether an area to be identified should include all or part of that which was requested in the notification and, subject to the necessary assessments having been made, adjacent areas not covered by that notification.
(b) the Commission shall consider whether there are, within an area requested or to be identified, any areas in which exploration and development are or should be prohibited or restricted in accordance with Article 13;
(c) the Commission shall specify the mineral resource or resources for which the area would be identified;
(d) the Commission shall give effect to Article 6, by elaborating opportunities for joint ventures or different forms of participation, up to a defined level, including procedures for offering such participation, in possible exploration and development, within the area, by interested Parties which are Antarctic Treaty Consultative Parties and by other interested Parties, in particular, developing countries in either category;
(e) the Commission shall prescribe any additional associated conditions necessary to ensure that an area to be identified is consistent with other provisions of this Convention and may prescribe general guidelines relating to the operational requirements for exploration and development in an area to be identified including measures establishing maximum block sizes and advice concerning related support activities; and

(f) the Commission shall give effect to the requirement in Article 59 to establish additional procedures for the settlement of disputes.

2 After it has completed its consideration in accordance with paragraph 1 above, the Commission shall identify an area for possible exploration and development if there is a consensus of Commission members that such identification is consistent with this Convention.

**Article 42**

**Revision in the Scope of an Identified Area**

1 If, after an area has been identified in accordance with Article 41, a Party requests identification of an area, all or part of which is contained within the boundaries of the area already identified but in respect of a mineral resource or resources different from any resource in respect of which the area has already been identified, the request shall be dealt with in accordance with Articles 39, 40 and 41. Should the Commission identify an area in respect of such different mineral resource or resources, it shall have regard, in addition to the requirements of Article 41(1)(a), to the desirability of specifying the boundaries of the area in such a way that it can be assigned to the Regulatory Committee with competence for the area already identified.

2 In the light of increased knowledge bearing on the effective management of the area, and after seeking the views of the Advisory Committee and the relevant Regulatory Committee, the Commission may amend the boundaries of any area it has identified. In making such an amendment the Commission shall ensure that authorised exploration and development in the area are not adversely affected. Unless there are compelling reasons for doing so, the Commission shall not amend the boundaries of an area it has identified in such a way as to involve a change in the composition of the relevant Regulatory Committee.

**Article 43**

**Preparatory Work by Regulatory Committee**

1 As soon as possible after the identification of an area pursuant to Article 41, the relevant Regulatory Committee established in accordance with Article 29 shall be convened.

2 The Regulatory Committee shall:

(a) subject to any measures adopted by the Commission pursuant to Article 21(1)(j) relating to maximum block sizes, divide its area of competence into blocks in respect of which applications for exploration and development may be submitted and make provision for a limit in appropriate circumstances on the number of blocks to be accorded to any Party;

(b) subject to any measures adopted by the Commission pursuant to Article 21(1)(p), establish fees to be paid with any application for an exploration or development permit lodged pursuant to Article 44 or 53;

(c) establish periods within which applications for exploration and development may be lodged, all applications received within each such period being considered as simultaneous;

(d) establish procedures for the handling of applications; and

(e) determine a method of resolving competing applications which are not resolved in accordance with Article 45(4)(a), which method shall, provided that all other requirements of this Convention are satisfied and consistently with measures adopted pursuant to Article 41(1)(d), include priority for the application with the broadest participation among interested Parties which are Antarctic Treaty Consultative Parties and other interested Parties, in particular, developing countries in either category.

3 The Regulatory Committee shall adopt guidelines which are consistent with, and which taken together with, the provisions of this Convention and measures of general applicability adopted by the Commission, as well as associated conditions and general guidelines adopted by the Commission when identifying the area, shall, by addressing the relevant items in Article 47, identify the general requirements for exploration and development in its area of competence.
4 Upon adoption of guidelines under paragraph 3 above the Executive Secretary shall, without delay, inform all members of the Commission of the decisions taken by the Regulatory Committee pursuant to paragraphs 2 and 3 above and shall make them publicly available together with relevant measures, associated conditions and general guidelines adopted by the Commission.

5 The Regulatory Committee may from time to time revise guidelines adopted under paragraph 3 above, taking into account any views of the Commission.

6 In performing its functions under paragraphs 3 and 5 above, the Regulatory Committee shall seek and take full account of the views of the Advisory Committee provided in accordance with Article 26.

Article 44
Application for an Exploration Permit

1 Following completion of the work undertaken pursuant to Article 43, any Party, on behalf of an Operator for which it is the Sponsoring State, may lodge with the Regulatory Committee an application for an exploration permit within the periods established by the Regulatory Committee pursuant to Article 43(2)(c).

2 An application shall be accompanied by the fees established by the Regulatory Committee in accordance with Article 43(2)(b) and shall contain:

(a) a detailed description of the Operator, including its managerial structure, financial composition and resources and technical expertise, and, in the case of an Operator being a joint venture, the inclusion of a detailed description of the degree to which Parties are involved in the Operator through, inter alia, juridical persons with which Parties have substantial and genuine links, so that each component of the joint venture can be easily attributed to a Party or Parties for the purposes of identifying the level of Antarctic mineral resource activities thereof, which description of substantial and genuine links shall include a description of equity sharing;

(b) a detailed description of the proposed exploration activities and a description in as much detail as possible of proposed development activities, including:

(i) an identification of the mineral resource or resources and the block to which the application applies;

(ii) a detailed explanation of how the proposed activities conform with the general requirements referred to in Article 43(3);

(iii) a detailed assessment of the environmental and other impacts of the proposed activities, taking into account Articles 15 and 26(4); and

(iv) a description of the capacity to respond effectively to accidents, especially those with potential environmental effects;

(c) a certification by the Sponsoring State of the capacity of the Operator to comply with the general requirements referred to in Article 43(3);

(d) a certification by the Sponsoring State of the technical competence and financial capacity of the Operator and that the Operator has a substantial and genuine link with it as defined in Article 1(12);

(e) a description of the manner in which the application complies with any measures adopted by the Commission pursuant to Article 41(1)(d); and

(f) such further information as may be required by the Regulatory Committee or in measures adopted by the Commission.

Article 45
Examination of Applications

1 The Regulatory Committee shall meet as soon as possible after an application has been lodged pursuant to Article 44, for the purpose of elaborating a Management Scheme. In performing this function it shall:

(a) determine whether the application contains sufficient or adequate information pursuant to Article 44(2). To this end, it may at any time seek further information from the Sponsoring State consistent with Article 44(2);

(b) consider the exploration and development activities proposed in the application, and such elaborations, revisions or adaptations as necessary:

(i) to ensure their consistency with this Convention as well as measures in effect pursuant thereto and the general requirements referred to in Article 43(3); and
(ii) to prescribe the specific terms and conditions of a Management Scheme in accordance with Article 47.

2 At any time during the process of consideration described above, the Regulatory Committee may decline the application if it considers that the activities proposed therein cannot be elaborated, revised or adapted to ensure consistency with this Convention as well as measures in effect pursuant thereto and the general requirements referred to in Article 43(3).

3 In performing its functions under this Article, the Regulatory Committee shall seek and take full account of the views of the Advisory Committee. To that end the Regulatory Committee shall refer to the Advisory Committee all parts of the application which are necessary for it to provide advice pursuant to Article 26, together with any other relevant information.

4 If two or more applications meeting the requirements of Article 44(2) are lodged in respect of the same block:

(a) the competing applicants shall be invited by the Regulatory Committee to resolve the competition amongst themselves, by means of their own choice within a prescribed period;

(b) if the competition is not resolved pursuant to subparagraph (a) above it shall be resolved by the Regulatory Committee in accordance with the method determined by it pursuant to Article 43(2)(e).

Article 46
Management Scheme

In performing its functions under Article 45, including the preparation of a Management Scheme, and under Article 54, the Regulatory Committee shall have recourse to the Sponsoring State and the member or members, if any, referred to in Article 29(2)(a) and, as may be required, one or two additional members of the Regulatory Committee.

Article 47
Scope of the Management Scheme

The Management Scheme shall prescribe the specific terms and conditions for exploration and development of the mineral resource or resources concerned within the relevant block. Such terms and conditions shall be consistent with the general requirements referred to in Article 43(3), and shall cover, inter alia:

(a) duration of exploration and development permits;
(b) measures and procedures for the protection of the Antarctic environment and dependent and associated ecosystems, including methods, activities and undertakings by the Operator to minimise environmental risks and damage;
(c) provision for necessary and timely response action, including prevention, containment and clean up and removal measures, for restoration to the status quo ante, and for contingency plans, resource and equipment to enable such action to be taken;
(d) procedures for the implementation of different stages of exploration and development;
(e) performance requirements;
(f) technical and safety specifications, including standards and procedures to ensure safe operations;
(g) monitoring and inspection;
(h) liability;
(i) procedures for the development of mineral deposits which extend outside the area covered by a permit;
(j) resource conservation requirements;
(k) financial obligations of the Operator including:
(i) levies in accordance with measures adopted pursuant to Article 21(1)(q);
(ii) payments in the nature of and similar to taxes, royalties or payments in kind;
(l) financial guarantees and insurance;
(m) assignment and relinquishment;
(n) suspension and modification of the Management Scheme, or cancellation of the Management Scheme, exploration or development permit, and the imposition of monetary penalties, in accordance with Article 51;
(o) procedures for agreed modifications;
(p) enforcement of the Management Scheme;
(q) applicable law to the extent necessary;
(r) effective additional procedures for the settlement of disputes;
(s) provisions to avoid and to resolve conflict with other legitimate uses of Antarctica;
(t) data and information collection, reporting and notification requirements;
(u) confidentiality; and
(v) removal of installations and equipment, as well as site rehabilitation.
Article 48
Approval of the Management Scheme

A Management Scheme prepared in accordance with Articles 45, 46 and 47 shall be subject to approval pursuant to Article 32. Such approval shall constitute authorisation for the issue without delay of an exploration permit by the Regulatory Committee. The exploration permit shall accord exclusive rights to the Operator to explore and, subject to Articles 53 and 54, to develop the mineral resource or resources which are the subject of the Management Scheme exclusively in accordance with the terms and conditions of the Management Scheme.

Article 49
Review

1 Any member of the Commission, or any member of a Regulatory Committee, may within one month of a decision by that Regulatory Committee to approve a Management Scheme or issue a development permit, request that the Commission be convened in accordance with Article 19(2)(b) or (c), as the case may be, to review the decision of the Regulatory Committee for consistency with the decision taken by the Commission to identify the area pursuant to Article 41 and any measures in effect relevant to that decision.

2 The Commission shall complete its consideration within three months of a request made pursuant to paragraph 1 above. In performing its functions the Commission shall not assume the functions of the Regulatory Committee, nor shall it substitute its discretion for that of the Regulatory Committee.

3 Should the Commission determine that a decision to approve a Management Scheme or issue a development permit is inconsistent with the decision taken by the Commission to identify the area pursuant to Article 41 and any measures in effect relevant to that decision, it may request that Regulatory Committee to reconsider its decision.

Article 50
Rights of Authorised Operators

1 No Management Scheme shall be suspended or modified and no Management Scheme, exploration or development permit shall be cancelled without the consent of the Sponsoring State except pursuant to Article 51, or Article 54 or the Management Scheme itself.

2 Each Operator authorised to conduct activities pursuant to a Management Scheme shall exercise its rights with due regard to the rights of other Operators undertaking exploration or development in the same identified area.

Article 51
Suspension, Modification or Cancellation of the Management Scheme and Monetary Penalties

1 If a Regulatory Committee determines that exploration or development authorised pursuant to a Management Scheme has resulted or is about to result in impacts on the Antarctic environment or dependent or associated ecosystems beyond those judged acceptable pursuant to this Convention, it shall suspend the relevant activities and as soon as possible modify the Management Scheme so as to avoid such impacts. If such impacts cannot be avoided by the modification of the Management Scheme, the Regulatory Committee shall suspend it, or cancel it and the exploration or development permit.

2 In performing its functions under paragraph 1 above a Regulatory Committee shall, unless emergency action is required, seek and take into account the views of the Advisory Committee.

3 If a Regulatory Committee determines that an Operator has failed to comply with this Convention or with measures in effect pursuant to it or a Management Scheme applicable to that Operator, the Regulatory Committee may do all or any of the following:

(a) modify the Management Scheme;
(b) suspend the Management Scheme;
(c) cancel the Management Scheme and the exploration or development permit; and
(d) impose a monetary penalty.

4 Sanctions determined pursuant to paragraph 3(a) to (d) above shall be proportionate to the seriousness of the failure to comply.

5 A Regulatory Committee shall cancel a Management Scheme and the exploration or development permit if an Operator ceases to have a substantial and genuine link with the Sponsoring State as defined in Article 1(12).
6 The Commission shall adopt general measures, which may include mitigation, relating to action by Regulatory Committees pursuant to paragraphs 1 and 3 above and, as appropriate, to the consequences of such action. No application pursuant to Article 44 may be lodged until such measures have come into effect.

**Article 52**

**Monitoring in Relation to Management Schemes**

1 Each Regulatory Committee shall monitor the compliance of Operators with Management Schemes within its area of competence.

2 Each Regulatory Committee, taking into account the advice of the Advisory Committee, shall monitor and assess the effects on the Antarctic environment and on dependent and on associated ecosystems of Antarctic mineral resource activities within its area of competence, particularly by reference to key environmental parameters and ecosystem components.

3 Each Regulatory Committee shall, as appropriate, inform the Commission and the Advisory Committee in a timely fashion of monitoring under this Article.

**CHAPTER V: DEVELOPMENT**

**Article 53**

**Application for a Development Permit**

1 At any time during the period in which an approved Management Scheme and exploration permit are in force for an Operator, the Sponsoring State may, on behalf of that Operator, lodge with the Regulatory Committee an application for a development permit.

2 An application shall be accompanied by the fees established by the Regulatory Committee in accordance with Article 43(2)(b) and shall contain:

(a) an updated description of the planned development identifying any modifications proposed to the approved Management Scheme and any additional measures to be taken, consequent upon such modifications, to ensure consistency with this Convention, including any measures in effect pursuant thereto and the general requirements referred to in Article 43(3);

(b) a detailed assessment of the environmental and other impacts of the planned development, taking into account Articles 15 and 26(4);

(c) a recertification by the Sponsoring State of the technical competence and financial capacity of the Operator and that the Operator has a substantial and genuine link with it as defined in Article 1(12);

(d) a recertification by the Sponsoring State of the capacity of the Operator to comply with the general requirements referred to in Article 43(3);

(e) updated information in relation to all other matters specified in Article 44(2); and

(f) such further information as may be required by the Regulatory Committee or in measures adopted by the Commission.

**Article 54**

**Examination of Applications and Issue of Development Permits**

1 The Regulatory Committee shall meet as soon as possible after an application has been lodged pursuant to Article 53.

2 The Regulatory Committee shall determine whether the application contains sufficient or adequate information pursuant to Article 53(2). In performing this function it may at any time seek further information pursuant to Article 53(2).

3 The Regulatory Committee shall consider whether:

(a) the application reveals modifications to the planned development previously envisaged;

(b) the planned development would cause previously unforeseen impacts on the Antarctic environment or dependent or associated ecosystems, either as a result of any modifications referred to in subparagraph (a) above or in the light of increased knowledge.

4 The Regulatory Committee shall consider any modifications to the Management Scheme necessary in the light of paragraph 3 above to ensure that the development activities proposed would be undertaken consistently with this Convention as well as measures in effect pursuant thereto and the general requirements referred to in Article 43(3). However, the financial obligations specified in the
Management Scheme may not be revised without the consent of the Sponsoring State, unless provided for in the Management Scheme itself.

5 If the Regulatory Committee in accordance with Article 32 approves modifications under paragraph 4 above, or if it does not consider that such modifications are necessary, the Regulatory Committee shall issue without delay a development permit.

6 In performing its functions under this Article, the Regulatory Committee shall seek and take full account of the views of the Advisory Committee. To that end the Regulatory Committee shall refer to the Advisory Committee all parts of the application which are necessary for it to provide advice pursuant to Article 26, together with any other relevant information.

CHAPTER VI: DISPUTES SETTLEMENT

Article 55
Disputes Between Two or More Parties

Articles 56, 57 and 58 apply to disputes between two or more Parties.

Article 56
Choice of Procedure

1 Each Party, when signing, ratifying, accepting, approving or acceding to this Convention, or at any time thereafter, may choose, by written declaration, one or both of the following means for the settlement of disputes concerning the interpretation or application of this Convention:

(a) the International Court of Justice;
(b) the Arbitral Tribunal.

2 A declaration made under paragraph 1 above shall not affect the operation of Article 57(1), (3), (4) and (5).

3 A Party that has not made a declaration under paragraph 1 above or in respect of which a declaration is no longer in force shall be deemed to have accepted the competence of the Arbitral Tribunal.

4 If the parties to a dispute have accepted the same means for the settlement of a dispute, the dispute may be submitted only to that procedure, unless the parties otherwise agree.

5 If the parties to a dispute have not accepted the same means for the settlement of a dispute, or if they have both accepted both means, the dispute may be submitted only to the Arbitral Tribunal, unless the parties otherwise agree.

6 A declaration made under paragraph 1 above shall remain in force until it expires in accordance with its terms or until 3 months after written notice of revocation has been deposited with the Depositary.

7 A new declaration, a notice of revocation or the expiry of a declaration shall not in any way affect proceedings pending before the International Court of Justice or the Arbitral Tribunal, unless the parties to the dispute otherwise agree.

8 Declarations and notices referred to in this Article shall be deposited with the Depositary who shall transmit copies thereof to all Parties.

Article 57
Procedure for Dispute Settlement

1 If a dispute arises concerning the interpretation or application of this Convention, the parties to the dispute shall, at the request of any one of them, consult among themselves as soon as possible with a view to having the dispute resolved by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means of their choice.

2 If the parties to a dispute concerning the interpretation or application of this Convention have not agreed on a means for resolving it within 12 months of the request for consultation pursuant to paragraph 1 above, the dispute shall be referred, at the request of any party to the dispute, for settlement in accordance with the procedure determined by the operation of Article 56(4) and (5).

3 If a dispute concerning the interpretation or application of this Convention relates to a measure in effect pursuant to this Convention or a Management Scheme and the parties to such a dispute:

(a) have not agreed on a means for resolving the dispute within 6 months of the request for consultation pursuant to paragraph 1 above, the dispute shall be referred, at the request of any party to the dispute, for discussion in the institution which adopted the instrument in question;
(b) have not agreed on a means for resolving the dispute within 12 months of the request for consultation pursuant to paragraph 1 above, the dispute shall be referred for settlement, at the request of any party to the dispute, to the Arbitral Tribunal.

4 The Arbitral Tribunal shall not be competent to decide or otherwise rule upon any matter within the scope of Article 9. In addition, nothing in this Convention shall be interpreted as conferring competence of jurisdiction on the International Court of Justice or any other tribunal established for the purpose of settling disputes between Parties to decide or otherwise rule upon any matter within the scope of Article 9.

5 The Arbitral Tribunal shall not be competent with regard to the exercise by an institution of its discretionary powers in accordance with this Convention; in no case shall the Arbitral Tribunal substitute its discretion for that of an institution. In addition, nothing in this Convention shall be interpreted as conferring competence or jurisdiction on the International Court of Justice or any other tribunal established for the purpose of settling disputes between Parties with regard to the exercise by an institution of its discretionary powers or to substitute its discretion for that of an institution.

Article 58
Exclusion of Categories of Dispute

1 Any Party, when signing, ratifying, accepting, approving or acceding to this Convention, or at any time thereafter, may, by written declaration, exclude the operation of Article 57(2) or (3) without its consent with respect to a category or categories of disputes specified in the declaration. Such declaration may not cover disputes concerning the interpretation or application of:

(a) any provision of this Convention or of any measure in effect pursuant to it relating to the protection of the Antarctic environment or dependent or associated ecosystems;
(b) Article 7(1);
(c) Article 8;
(d) Article 12;
(e) Article 14;
(f) Article 15; or
(g) Article 37.

2 Nothing in paragraph 1 above or in any declaration made under it shall affect the operation of Article 57(1), (4) and (5).

3 A declaration made under paragraph 1 above shall remain in force until it expires in accordance with its terms or until 3 months after written notice of revocation has been deposited with the Depositary.

4 A new declaration, a notice of revocation or the expiry of a declaration shall not in any way affect proceedings pending before the International Court of Justice or the Arbitral Tribunal, unless the parties to the dispute otherwise agree.

5 Declarations and notices referred to in this Article shall be deposited with the Depositary who shall transmit copies thereof to all Parties.

6 A Party which, by declaration made under paragraph 1 above, has excluded a specific category or categories of disputes from the operation of Article 57(2) or (3) without its consent shall not be entitled to submit any dispute falling within that category or those categories for settlement pursuant to Article 57(2) or (3), as the case may be, without the consent of the other party or parties to the dispute.

Article 59
Additional Dispute Settlement Procedures

1 The Commission, in conjunction with its responsibilities pursuant to Article 41(1), shall establish additional procedures for third-party settlement, by the Arbitral Tribunal or through other similar procedures, of disputes which may arise if it is alleged that a violation of this Convention has occurred by virtue of:

(a) a decision to decline a Management Scheme;
(b) a decision to decline the issue of a development permit; or
(c) a decision to suspend, modify or cancel a Management Scheme or to impose monetary penalties.

2 Such procedures shall:

(a) permit, as appropriate, Parties and Operators under their sponsorship, but not both in respect of any particular dispute, to initiate proceedings against a Regulatory Committee;
(b) require disputes to which they relate to be referred in the first instance to the relevant Regulatory Committee for consideration;

(c) incorporate the rules in Article 57(4) and (5).

CHAPTER VII: FINAL CLAUSES

Article 60
Signature

This Convention shall be open for signature at Wellington from 25 November 1988 to 25 November 1989 by States which participated in the final session of the Fourth Special Antarctic Treaty Consultative Meeting.

Article 61
Ratification, Acceptance, Approval or Accession

1 This Convention is subject to ratification, acceptance or approval by Signatory States.

2 After 25 November 1989 this Convention shall be open for accession by any State with a Contracting Party to the Antarctic Treaty.

3 Instruments of ratification, acceptance, approval or accession shall be deposited with the Government of New Zealand, hereby designated as the Depositary.

Article 62
Entry into Force

1 This Convention shall enter into force on the thirtieth day following the date of deposit of instruments of ratification, acceptance, approval or accession by 16 Antarctic Treaty Consultative Parties which participated in the final session of the Fourth Special Antarctic Treaty Consultative Meeting, provided that number includes all the States necessary in order to establish all of the institutions of the Convention in respect of every area of Antarctica, including 5 developing countries and 11 developed countries.

2 For each State which, subsequent to the date of entry into force of this Convention, deposits an instrument of ratification, acceptance, approval or accession, the Convention shall enter into force on the thirtieth day following such deposit.

Article 63
Reservations, Declarations and Statements

1 Reservations to this Convention shall not be permitted. This does not preclude a State, when signing, ratifying, accepting, approving or acceding to this Convention, from making declarations or statements, however phrased or named, with a view, inter alia, to the harmonisation of its laws and regulations with this Convention, provided that such declarations or statements do not purport to exclude or to modify the legal effect of this Convention in its application to that State.

2 The provisions of this Article are without prejudice to the right to make written declarations in accordance with Article 58.

Article 64
Amendment

1 This Convention shall not be subject to amendment until after the expiry of 10 years from the date of its entry into force. Thereafter, any Party may, by written communication addressed to the Depositary, propose a specific amendment to this Convention and request the convening of a meeting to consider such proposed amendment.

2 The Depositary shall circulate such communication to all Parties. If within 12 months of the date of the circulation of the communication at least one-third of the Parties reply favourably to the request, the Depositary shall convene the meeting.

3 The adoption of such an amendment considered at such a meeting shall require the affirmative votes of two-thirds of the Parties present and voting, including the concurrent votes of the members of the Commission attending the meeting.

4 The adoption of any amendment relating to the Special Meeting of Parties or to the Advisory Committee shall require the affirmative votes of three-quarters of the Parties present and voting, including the concurrent votes of the members of the Commission attending the meeting.

5 An amendment shall enter into force for those Parties having deposited instruments of ratification, acceptance or approval thereof 30 days after the Depositary has received such instruments of ratification, acceptance or approval from all the members of the Commission.
6 Such amendment shall thereafter enter into force for any other Party 30 days after the Depositary has received its instrument of ratification, acceptance or approval thereof.

7 An amendment that has entered into force pursuant to this Article shall be without prejudice to the provisions of any Management Scheme approved before the date on which the amendment entered into force.

**Article 65**
Withdrawal

1 Any Party may withdraw from this Convention by giving to the Depositary notice in writing of its intention to withdraw. Withdrawal shall take effect two years after the date of receipt of such notice by the Depositary.

2 Any Party which ceases to be a Contracting Party to the Antarctic Treaty shall be deemed to have withdrawn from this Convention on the date that it ceases to be a Contracting Party to the Antarctic Treaty.

3 Where an amendment has entered into force pursuant to Article 64(5), any Party from which no instrument of ratification, acceptance or approval of the amendment has been received by the Depositary within a period of two years from the date of the entry into force of the amendment shall be deemed to have withdrawn from this Convention on the date of the expiration of a further two year period.

4 Subject to paragraphs 5 and 6 below, the rights and obligations of any Operator pursuant to this Convention shall cease at the time its Sponsoring State withdraws or is deemed to have withdrawn from this Convention.

5 Such Sponsoring State shall ensure that the obligations of the Operator have been discharged no later than the date on which its withdrawal takes effect.

6 Withdrawal from this Convention by any Party shall not affect its financial or other obligations under this Convention pending on the date withdrawal takes effect. Any dispute settlement procedure in which that Party is involved and which has been commenced prior to that date shall continue to its conclusion unless agreed otherwise by the parties to the dispute.

**Article 66**
Notifications by the Depositary

The Depositary shall notify all Contracting Parties to the Antarctic Treaty of the following:

(a) signatures of this Convention and the deposit of instruments of ratification, acceptance, approval or accession;

(b) the deposit of instruments of ratification, acceptance or approval of any amendment adopted pursuant to Article 64;

(c) the date of entry into force of this Convention and of any amendment thereto;

(d) the deposit of declarations and notices pursuant to Articles 56 and 58;

(e) notifications pursuant to Article 18; and

(f) the withdrawal of a Party pursuant to Article 65.

**Article 67**
Authentic Texts, Certified Copies and Registration with the United Nations

1 This Convention of which the Chinese, English, French, Russian and Spanish texts are equally authentic shall be deposited with the Government of New Zealand which shall transmit duly certified copies thereof to all Signatory and Acceding States.

2 The Depositary shall also transmit duly certified copies to all Signatory and Acceding States of the text of this Convention in any additional languages of a Signatory or Acceding State which submits such text to the Depositary.

3 This Convention shall be registered by the Depositary pursuant to Article 102 of the Charter of the United Nations.

Done at Wellington this second day of June 1988.

In witness whereof, the undersigned, duly authorised, have signed this Convention.
ANNEX FOR AN ARBITRAL TRIBunal

Article 1

The Arbitral Tribunal shall be constituted and shall function in accordance with this Convention, including this Annex.

Article 2

1 Each Party shall be entitled to designate up to three Arbitrators, at least one of whom shall be designated within three months of the entry into force of this Convention for that Party. Each Arbitrator shall be experienced in Antarctic affairs, with knowledge of international law and enjoying the highest reputation for fairness, competence and integrity. The names of the persons so designated shall constitute the list of Arbitrators. Each Party shall at all times maintain the name of at least one Arbitrator on the list.

2 Subject to paragraph 3 below, an Arbitrator designated by a Party shall remain on the list for a period of five years and shall be eligible for redesignation by that Party for additional five year periods.

3 An Arbitrator may by notice given to the Party which designated that person withdraw his name from the list. If an Arbitrator dies or gives notice of withdrawal of his name from the list or if a Party for any reason withdraws from the list the name of an Arbitrator designated by it, the Party which designated the Arbitrator in question shall notify the Executive Secretary promptly. An Arbitrator whose name is withdrawn from the list shall continue to serve on any Arbitral Tribunal to which that Arbitrator has been appointed until the completion of proceedings before that Arbitral Tribunal.

4 The Executive Secretary shall ensure that an up-to-date list is maintained of the Arbitrators designated pursuant to this Article.

Article 3

1 The Arbitral Tribunal shall be composed of three Arbitrators who shall be appointed as follows:

(a) the party to the dispute commencing the proceedings shall appoint one Arbitrator, who may be its national, from the list referred to in Article 2 of this Annex. This appointment shall be included in the notification referred to in Article 4 of this Annex.

(b) Within 40 days of the receipt of that notification, the other party to the dispute shall appoint the second Arbitrator, who may be its national, from the list referred to in Article 2 of this Annex.

(c) Within 60 days of the appointment of the second Arbitrator, the parties to the dispute shall appoint by agreement the third Arbitrator from the list referred to in Article 2 of this Annex. The third Arbitrator shall not be either a national of, or a person designated by, a party to the dispute, or of the same nationality as either of the first two Arbitrators. The third Arbitrator shall be the Chairman of the Arbitral Tribunal.

(d) If the second Arbitrator has not been appointed within the prescribed period, or if the parties to the dispute have not reached agreement within the prescribed period on the appointment of the third Arbitrator, the Arbitrator or Arbitrators shall be appointed, at the request of any party to the dispute and within 30 days of the receipt of such request, by the President of the International Court of Justice from the list referred to in Article 2 of this Annex and subject to the conditions prescribed in subparagraphs (b) and (c) above. In performing the functions accorded him in this subparagraph, the President of the Court shall consult the parties to the dispute and the Chairman of the Commission.

(e) If the President of the International Court of Justice is unable to perform the functions accorded him in subparagraph (d) above or is a national of a party to the dispute, the functions shall be performed by the Vice-President of the Court, except that if the Vice-President is unable to perform the functions or is a national of a party to the dispute the functions shall be performed by the next most senior member of the Court who is available and is not a national of a party to the dispute.

2 Any vacancy shall be filled in the manner prescribed for the initial appointment.
3 In disputes involving more than two Parties, those Parties having the same interest shall appoint one Arbitrator by agreement within the period specified in paragraph 1(b) above.

**Article 4**

The party to the dispute commencing proceedings shall so notify the other party or parties to the dispute and the Executive Secretary in writing. Such notification shall include a statement of the claim and the grounds on which it is based. The notification shall be transmitted by the Executive Secretary to all Parties.

**Article 5**

1 Unless the parties to the dispute agree otherwise, arbitration shall take place at the headquarters of the Commission, where the records of the Arbitral Tribunal shall be kept. The Arbitral Tribunal shall adopt its own rules of procedure. Such rules shall ensure that each party to the dispute has a full opportunity to be heard and to present its case and shall also ensure that the proceedings are conducted expeditiously.

2 The Arbitral Tribunal may hear and decide counterclaims arising out of the dispute.

**Article 6**

1 The Arbitral Tribunal, where it considers that *prima facie* it has jurisdiction under this Convention, may:

(a) at the request of any party to a dispute, indicate such provisional measures as it considers necessary to preserve the respective rights of the parties to the dispute;

(b) prescribe any provisional measures which it considers appropriate under the circumstances to prevent serious harm to the Antarctic environment or dependent or associated ecosystems.

2 The parties to a dispute shall comply promptly with any provisional measures prescribed under paragraph 1(b) above pending an award under Article 9 of this Annex.

3 Notwithstanding Article 57(1), (2) and (3) of this Convention, a party to any dispute that may arise falling within the categories specified in Article 58(1)(a) to (g) of this Convention may at any time, by notification to the other party or parties to the dispute and to the Executive Secretary in accordance with Article 4 of this Annex, request that the Arbitral Tribunal be constituted as a matter of exceptional urgency to indicate or prescribe emergency provisional measures in accordance with this Article. In such case, the Arbitral Tribunal shall be constituted as soon as possible in accordance with Article 3 of this Annex, except that the time periods in Article 3(1)(b), (c) and (d) shall be reduced to 14 days in each case. The Arbitral Tribunal shall decide upon the request for emergency provisional measures within two months of the appointment of its Chairman.

4 Following a decision by the Arbitral Tribunal upon a request for emergency provisional measures in accordance with paragraph 3 above, settlement of the dispute shall proceed in accordance with Articles 56 and 57 of this Convention.

**Article 7**

Any Party which believes it has a legal interest, whether general or individual, which may be substantially affected by the award of an Arbitral Tribunal, may, unless the Arbitral Tribunal decides otherwise, intervene in the proceedings.

**Article 8**

The parties to the dispute shall facilitate the work of the Arbitral Tribunal and, in particular, in accordance with their law and using all means at their disposal, shall provide it with all relevant documents and information, and enable it, when necessary, to call witnesses or experts and receive their evidence.

**Article 9**

If one of the parties to the dispute does not appear before the Arbitral Tribunal or fails to defend its case, any other party to the dispute may request the Arbitral Tribunal to continue the proceedings and make its award.

**Article 10**

1 The Arbitral Tribunal shall decide, on the basis of this Convention and other rules of law not incompatible with it, such disputes as are submitted to it.
2 The Arbitral Tribunal may decide, _ex aequo et bono_, a dispute submitted to it, if the parties to the dispute so agree.

**Article 11**

1 Before making its award, the Arbitral Tribunal shall satisfy itself that it has competence in respect of the dispute and that the claim or counterclaim is well founded in fact and law.

2 The award shall be accompanied by a statement of reasons for the decision and shall be communicated to the Executive Secretary who shall transmit it to all Parties.

3 The award shall be final and binding on the parties to the dispute and on any Party which intervened in the proceedings and shall be complied with without delay. The Arbitral Tribunal shall interpret the award at the request of a party to the dispute or of any intervening Party.

4 The award shall have no binding force except in respect of that particular case.

5 Unless the Arbitral Tribunal decides otherwise, the expenses of the Arbitral Tribunal, including the remuneration of the Arbitrators, shall be borne by the parties to the dispute in equal shares.

**Article 12**

All decisions of the Arbitral Tribunal, including those referred to in Articles 5, 6 and 11 of this Annex, shall be made by a majority of the Arbitrators who may not abstain from voting.

The following Treaty parties signed CRAMRA in the year-long signature period which began on 25 November 1988.

**Consultative Parties**

<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
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<tbody>
<tr>
<td>Brazil</td>
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<tr>
<td>Finland</td>
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<tr>
<td>New Zealand</td>
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<td>United States</td>
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<td>Poland</td>
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<tr>
<td>Argentina</td>
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<td>Chile</td>
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<tr>
<td>United Kingdom</td>
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<tr>
<td>China</td>
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<tr>
<td>East Germany</td>
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<td>Japan</td>
<td>22 November 1989</td>
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**Non-Consultative Parties**

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</thead>
<tbody>
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<td>Denmark</td>
<td>24 February 1989</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>4 November 1989</td>
</tr>
</tbody>
</table>

* Finland and the Republic of Korea were Non-Consultative Parties when they signed the Convention. Both attained Consultative Party status on 9 October 1989.*
Appendix 9

RECOMMENDATION XV-1 (1989)
COMPREHENSIVE MEASURES FOR THE PROTECTION OF THE ANTARCTIC ENVIRONMENT AND DEPENDENT AND ASSOCIATED ECOSYSTEMS

The Representatives,

_Convinced_ of the need to preserve the Antarctic Treaty system so as to ensure that Antarctica does not become the scene of object of international discord;

_Bearing in mind_ the special legal and political status of Antarctica and the special responsibility of the Antarctic Treaty Consultative Parties to ensure that all activities in Antarctica are consistent with the purposes and principles of the Antarctic Treaty;

_Recalling_ the designation of Antarctica as a Special Conservation Area;

_Recognising_ the vulnerability to human interference of the Antarctic environment and its dependent and associated ecosystems;

_Recognising further_, the unique opportunities Antarctica offers for scientific research on processes of global as well as regional importance;

_Taking into account_ international concern for the environment and the importance of Antarctica for the global environment;

_Bearing in mind_ the substantial body of measures adopted by the Antarctic Treaty Consultative Parties in recognition of their special responsibilities for the protection of the Antarctic environment and its dependent and associated ecosystems;

_Recalling_ in this context Articles V and IX(1)(f) of the Antarctic Treaty and Recommendations setting out general principles for the protection of the Antarctic environment;

_Recalling_ also:

(a) the Agreed Measures for the Conservation of Antarctic Fauna and Flora and associated recommendations;

(b) the Convention for the Conservation of Antarctic Seals (which entered into force on 11 March 1978);

(c) the Convention on the Conservation of Antarctic Marine Living Resources (which entered into force on 7 April 1982);

(d) the Convention on the Regulation of Antarctic Mineral Resource Activities (which has not yet entered into force);

(e) Recommendations relating to:

(i) the Antarctic Protected Area system concerning Specially Protected Areas, Sites of Special Scientific Interest and Historic Sites and Monuments;

(ii) the Code of Conduct for Antarctic expeditions and station activities;

(iii) the effects of Antarctic tourism and non-governmental expeditions;

(iv) the use of radio-isotopes;

(v) oil contamination;

(vi) the prohibition on the disposal of nuclear waste; and

(vii) environmental impact assessment procedures;

as well as work undertaken in relation to the uses of Antarctic ice;

_Taking note_ of proposals made at XVth Consultative Meeting by France and Australia for a comprehensive Convention for the Protection of the Antarctic Environment which would establish Antarctica as a natural reserve, land of science; by the United States for comprehensive measures building on the components of the Antarctic Treaty system; by Chile on comprehensive measures, which include the development of the concept of Antarctica as a Special Conservation Area; by New Zealand for comprehensive measures constituting an integrated and binding environmental protection regime; and by Sweden relating to common elements for environmental protection;

_Welcoming_ the further substantial progress made on the protection of the Antarctic environment and its dependent and associated ecosystems through the work of this Consultative Meeting including the adoption of Recommendation XV-3 on Waste Disposal; Recommendation XV-4 on the Prevention, Control and Response to Marine Pollution; Recommendation XV-5 on Environmental Monitoring in Antarctica; Recommendation XV-6 on New Sites of Special Scientific
Interest; Recommendation XV-8 amending Article VIII of the Agreed Measures to provide for Management Plans for Specially Protected Areas (SPAs); Recommendation XV-9 on Development of improved descriptions and management plans for SPAs; Recommendation XV-10 on Establishment of Specially Reserved Areas; Recommendation XV-11 on Establishment of Multiple-use Planning Areas; Recommendation XV-14 and XV-15 on promotion of international scientific cooperation; Recommendation XV-17 on the Siting of Stations; Recommendation XV-19 on Charting of Antarctic waters; Recommendation XV-21 on Antarctic Ice and the Declaration on the Ozone Layer and Climate Change;

Acknowledging the need, in the light of the unique qualities of Antarctica and increasing human activities there, to ensure the effective implementation, coordination and further elaboration of the system of protection of the Antarctic environment and its dependent and associated ecosystems;

Recommend to their Governments that:

1. They undertake as a priority objective the further elaboration, maintenance and effective implementation of a comprehensive system for the protection of the Antarctic environment and its dependent and associated ecosystems aimed at ensuring that human activity does not have adverse impacts on the Antarctic environment or its dependent or associated ecosystems or compromise the scientific, aesthetic or wilderness values of Antarctica.

2. To contribute to this objective, a Special Antarctic Treaty Consultative Meeting be held in 1990 to explore and discuss all proposals relating to the comprehensive protection of the Antarctic environment and its dependent and associated ecosystems.

3. In addressing the requirements of such a comprehensive system, they:

(a) have regard to the principles for the protection of the Antarctic environment and its dependent and associated ecosystems already established under the Antarctic Treaty system and shall consider the need to elaborate further, expand and supplement those principles;

(b) review the existing body of measures for the protection of the Antarctic environment and its dependent and associated ecosystems in order, inter alia, to:

(i) identify those measures which should be updated, strengthened or otherwise improved;

(ii) identify areas where the existing measures should be supplemented;

(iii) consider the nature of the legal obligations contained in existing measures and the need, as necessary, to state those obligations with greater precision;

(iv) make provision for the promotion of research related to environmental management decisions;

(v) promote the establishment of procedures for assessing the possible impact of human activities on the Antarctic environment and its dependent and associated ecosystems in order to provide for informed decision-making as to their acceptability;

(vi) promote the establishment of procedures to monitor the effectiveness and adequacy of environmental protection measures;

(vii) consider the role of an information and data base for the effective implementation, revision and extension of environmental protection measures;

(c) consider if and to what extent institutional arrangements may be necessary and the form or forms of the legal or other measures needed to ensure the maintenance, integration, consistency and comprehensiveness of the system of protection of the Antarctic environment and its dependent and associated ecosystems.
Preamble

The States Parties to this Protocol to the Antarctic Treaty, hereinafter referred to as the Parties,

Convinced of the need to enhance the protection of the Antarctic environment and dependent and associated ecosystems;

Convinced of the need to strengthen the Antarctic Treaty so as to ensure that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene of object of international discord;

Bearing in mind the special legal and political status of Antarctica and the special responsibility of the Antarctic Treaty Consultative Parties to ensure that all activities in Antarctica are consistent with the purposes and principles of the Antarctic Treaty;

Recalling the designation of Antarctica as a Special Conservation Area and other measures adopted under the Antarctic Treaty system to protect the Antarctic environment and dependent and associated ecosystems;

Acknowledging further the unique opportunities Antarctica offers for scientific monitoring of and research on processes of global as well as regional importance;

Reaffirming the conservation principles of the Convention on the Conservation of Antarctic Marine Living Resources;

Convinced that the development of a comprehensive regime for the protection of the Antarctic environment and dependent and associated ecosystems is in the interest of all mankind as a whole;

Desiring to supplement the Antarctic Treaty to this end;

Have agreed as follows:

Article 1
Definitions

For the purposes of this Protocol:

(a) "The Antarctic Treaty" means the Antarctic Treaty done at Washington on 1 December 1959;
(b) "Antarctic Treaty area" means the area to which the provisions of the Antarctic Treaty apply in accordance with Article VI of that Treaty;
(c) "Antarctic Treaty Consultative Meetings" means the meetings referred to in Article IX of the Antarctic Treaty;
(d) "Antarctic Treaty Consultative Parties" means the Contracting Parties to the Antarctic Treaty entitled to appoint representatives to participate in the meetings referred to in Article IX of that Treaty;
(e) "Antarctic Treaty system" means the Antarctic Treaty, the measures in effect under that Treaty, its associated separate international instruments in force and the measures in effect under those instruments;
(f) "Arbitral Tribunal" means the Arbitral Tribunal established in accordance with the Schedule to this Protocol, which forms an integral part thereof;
(g) "Committee" means the Committee for Environmental Protection established in accordance with Article 11.

Article 2
Objective and Designation

The Parties commit themselves to the comprehensive protection of the Antarctic environment and dependent and associated ecosystems and hereby designate Antarctica as a natural reserve, devoted to peace and science.

Article 3
Environmental Principles

1. The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental
considerations in the planning and conduct of all activities in the Antarctic Treaty area.

2. To this end:

(a) activities in the Antarctic Treaty area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems;

(b) activities in the Antarctic Treaty area shall be planned and conducted so as to avoid:
   (i) adverse effects on climate or weather patterns;
   (ii) significant adverse effects on air or water quality;
   (iii) significant changes in the atmospheric, terrestrial (including aquatic), glacial or marine environments;
   (iv) detrimental changes in the distribution, abundance or productivity of species or populations of species of fauna and flora;
   (v) further jeopardy to endangered or threatened species or populations of such species; or
   (vi) degradation of, or substantial risk to, areas of biological, scientific, historic, aesthetic or wilderness significance;

(c) activities in the Antarctic Treaty area shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgments about, their possible impacts on the Antarctic environment and dependent and associated ecosystems and on the value of Antarctica for the conduct of scientific research; such judgments shall take full account of:
   (i) the scope of the activity, including its area, duration and intensity;
   (ii) the cumulative impacts of the activity, both by itself and in combination with other activities in the Antarctic Treaty area;
   (iii) whether the activity will detrimentally affect any other activity in the Antarctic Treaty area;
   (iv) whether technology and procedures are available to provide for environmentally safe operations;
   (v) whether there exists the capacity to monitor key environmental parameters and ecosystem components so as to identify and provide early warning of any adverse effects of the activity and to provide for such modification of operating procedures as may be necessary in the light of the results of monitoring or increased knowledge of the Antarctic environment and dependent and associated ecosystems; and
   (vi) whether there exists the capacity to respond promptly and effectively to accidents, particularly those with potential environmental effects;

(d) regular and effective monitoring shall take place to allow assessment of the impacts of ongoing activities, including the verification of predicted impacts;

(e) regular and effective monitoring shall take place to facilitate early detection of the possible unforeseen effects of activities carried on both within and outside the Antarctic Treaty area on the Antarctic environment and dependent and associated ecosystems.

3. Activities shall be planned and conducted in the Antarctic Treaty area so as to accord priority to scientific research and to preserve the value of Antarctica as an area for the conduct of such research, including research essential to understanding the global environment.

4. Activities undertaken in the Antarctic Treaty area pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities in the Antarctic Treaty area for which advance notice is required in accordance with Article VII(5) of the Antarctic Treaty, including associated logistic support activities, shall:
   (a) take place in a manner consistent with the principles in this Article; and
   (b) be modified, suspended or cancelled if they result in or threaten to result in impacts upon the Antarctic environment or dependent or associated ecosystems inconsistent with those principles.

Article 4
Relationship with other components of the Antarctic Treaty System

1. This Protocol shall supplement the Antarctic Treaty and shall neither modify nor amend that Treaty.
2. Nothing in this Protocol shall derogate from the rights and obligations of the Parties to this Protocol under the other international instruments in force within the Antarctic Treaty system.

Article 5
Consistency with the other components of the Antarctic Treaty system

The Parties shall consult and co-operate with the Contracting Parties to the other international instruments in force within the Antarctic Treaty system and their respective institutions with a view to ensuring the achievement of the objectives and principles of this Protocol and avoiding any interference with the achievement of the objectives and principles of those instruments or any inconsistency between the implementation of those instruments and of this Protocol.

Article 6
Co-operation

1. The Parties shall co-operate in the planning and conduct of activities in the Antarctic Treaty area. To this end, each Party shall endeavour to:

(a) promote co-operative programmes of scientific, technical and educational value, concerning the protection of the Antarctic environment and dependent and associated ecosystems;
(b) provide appropriate assistance to other Parties in the preparation of environmental impact assessments;
(c) provide to other Parties upon request information relevant to any potential environmental risk and assistance to minimise the effects of accidents which may damage the Antarctic environment or dependent and associated ecosystems;
(d) consult with other Parties with regard to the choice of sites for prospective stations and other facilities so as to avoid the cumulative impacts caused by their excessive concentration in any location;
(e) where appropriate, undertake joint expeditions and share the use of stations and other facilities; and
(f) carry out such steps as may be agreed upon at Antarctic Treaty Consultative Meetings.

2. Each Party undertakes, to the extent possible, to share information that may be helpful to other Parties in planning and conducting their activities in the Antarctic Treaty area, with a view to the protection of the Antarctic environment and dependent and associated ecosystems.

3. The Parties shall co-operate with those Parties which may exercise jurisdiction in areas adjacent to the Antarctic Treaty area with a view to ensuring that activities in the Antarctic Treaty area do not have adverse environmental impacts on those areas.

Article 7
Prohibition of Mineral Resource Activities

Any activity relating to mineral resources, other than scientific research, shall be prohibited.

Article 8
Environmental Impact Assessment

1. Proposed activities referred to in paragraph 2 below shall be subject to the procedures set out in Annex I for prior assessment of the impacts of those activities on the Antarctic environment or on dependent or associated ecosystems according to whether those activities are identified as having:

(a) less than a minor or transitory impact;
(b) a minor or transitory impact; or
(c) more than a minor or transitory impact.

2. Each Party shall ensure that the assessment procedures set out in Annex I are applied in the planning processes leading to decisions about any activities undertaken in the Antarctic Treaty area pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities in the Antarctic Treaty area for which advance notice is required under Article VII(5) of the Antarctic Treaty, including associated logistic support activities.

3. The assessment procedures set out in Annex I shall apply to any change in an activity whether the change arises from an increase or decrease in the intensity of an existing activity, from the addition of an activity, the decommissioning of a facility, or otherwise.

4. Where activities are planned jointly by more than one Party, the Parties involved shall nominate one of their number to coordinate the implementation of the environmental impact assessment procedures set out in Annex I.
Article 9
Annexes

1. The Annexes to this Protocol shall form an integral part thereof.

2. Annexes, additional to Annexes I-IV, may be adopted and become effective in accordance with Article IX of the Antarctic Treaty.

3. Amendments and modifications to Annexes may be adopted and become effective in accordance with Article IX of the Antarctic Treaty, provided that any Annex may itself make provision for amendments and modifications to become effective on an accelerated basis.

4. Annexes and any amendments and modifications thereto which have become effective in accordance with paragraphs 2 and 3 above shall, unless an Annex itself provides otherwise in respect of the entry into effect of any amendment or modification thereto, become effective for a Contracting Party to the Antarctic Treaty which is not an Antarctic Treaty Consultative Party, or which was not an Antarctic Treaty Consultative Party at the time of the adoption, when notice of approval of that Contracting Party has been received by the Depositary.

5. Annexes shall, except to the extent that an Annex provides otherwise, be subject to the procedures for dispute settlement set out in Articles 18 to 20.

Article 10
Antarctic Treaty Consultative Meetings

1. Antarctic Treaty Consultative Meetings shall, drawing upon the best scientific and technical advice available:

(a) define, in accordance with the provisions of this Protocol, the general policy for the comprehensive protection of the Antarctic environment and dependent and associated ecosystems; and

(b) adopt measures under Article IX of the Antarctic Treaty for the implementation of this Protocol.

2. Antarctic Treaty Consultative Meetings shall review the work of the Committee and shall draw fully upon its advice and recommendations in carrying out the tasks referred to in paragraph 1 above, as well as upon the advice of the Scientific Committee on Antarctic Research.

Article 11
Committee for Environmental Protection

1. There is hereby established the Committee for Environmental Protection.

2. Each Party shall be entitled to be a member of the Committee and to appoint a representative who may be accompanied by experts and advisers.

3. Observer status in the Committee shall be open to any Contracting Party to the Antarctic Treaty which is not a Party to this Protocol.

4. The Committee shall invite the President of the Scientific Committee on Antarctic Research and the Chairman of the Scientific Committee for the Conservation of Antarctic Marine Living Resources to participate as observers at its sessions. The Committee may also, with the approval of the Antarctic Treaty Consultative Meeting, invite such other relevant scientific, environmental and technical organisations which can contribute to its work to participate as observers at its sessions.

5. The Committee shall present a report on each of its sessions to the Antarctic Treaty Consultative Meeting. The report shall cover all matters considered at the session and shall reflect the views expressed. The report shall be circulated to the Parties and to observers attending the session, and shall thereupon be made publicly available.

6. The Committee shall adopt its rules of procedure which shall be subject to approval by the Antarctic Treaty Consultative Meeting.

Article 12
Functions of the Committee

1. The functions of the Committee shall be to provide advice and formulate recommendations to the Parties in connection with the implementation of this Protocol, including the operation of its Annexes, for consideration at Antarctic Treaty Consultative Meetings, and to perform such other functions as may be referred to it by the Antarctic Treaty Consultative Meetings. In particular, it shall provide advice on:

(a) the effectiveness of measures taken pursuant to this Protocol;

(b) the need to update, strengthen or otherwise improve such measures;
(c) the need for additional measures, including the need for additional Annexes, where appropriate;
(d) the application and implementation of the environmental impact assessment procedures set out in Article 8 and Annex I;
(e) means of minimising or mitigating environmental impacts of activities in the Antarctic Treaty area;
(f) procedures for situations requiring urgent action, including response action in environmental emergencies;
(g) the operation and further elaboration of the Antarctic Protected Area system;
(h) inspection procedures, including formats for inspection reports and checklists for the conduct of inspections;
(i) the collection, archiving, exchange and evaluation of information related to environmental protection;
(j) the state of the Antarctic environment; and
(k) the need for scientific research, including environmental monitoring, related to the implementation of this Protocol.

2. In carrying out its functions, the Committee shall, as appropriate, consult with the Scientific Committee on Antarctic Research, the Scientific Committee for the Conservation of Antarctic Marine Living Resources and other relevant scientific, environmental and technical organisations.

Article 13
Compliance with this Protocol

1. Each Party shall take appropriate measures within its competence, including the adoption of laws and regulations, administrative actions and enforcement measures, to ensure compliance with this Protocol.

2. Each Party shall exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any activity contrary to this Protocol.

3. Each Party shall notify all other Parties of the measures it takes pursuant to paragraphs 1 and 2 above.

4. Each Party shall draw the attention of all other Parties to any activity which in its opinion affects the implementation of the objectives and principles of this Protocol.

5. The Antarctic Treaty Consultative Meetings shall draw the attention of any State which is not a Party to this Protocol to any activity undertaken by that State, its agencies, instrumentalities, natural or juridical persons, ships, aircraft or other means of transport which affects the implementation of the objectives and principles of this Protocol.

Article 14
Inspection

1. In order to promote the protection of the Antarctic environment and dependent and associated ecosystems, and to ensure compliance with this Protocol, the Antarctic Treaty Consultative Parties shall arrange, individually or collectively, for inspections by observers to be made in accordance with Article VII of the Antarctic Treaty.

2. Observers are:
   (a) observers designated by any Antarctic Treaty Consultative Party who shall be nationals of that Party; and
   (b) any observers designated at Antarctic Treaty Consultative Meetings to carry out inspections under procedures to be established by an Antarctic Treaty Consultative Meeting.

3. Parties shall co-operate fully with observers undertaking inspections, and shall ensure that during inspections, observers are given access to all parts of stations, installations, equipment, ships and aircraft open to inspection under Article VII(3) of the Antarctic Treaty, as well as to all records maintained thereon which are called for pursuant to this Protocol.

4. Reports of inspections shall be sent to the Parties whose stations, installations, equipment, ships or aircraft are covered by the reports. After those Parties have been given the opportunity to comment, the reports and any comments thereon shall be circulated to all the Parties and to the Committee, considered at the next Antarctic Treaty Antarctic Treaty Consultative Meeting, and thereafter made publicly available.

Article 15
Emergency Response Action

1. In order to respond to environmental emergencies in the Antarctic Treaty area, each Party agrees to:
   (a) provide for prompt and effective response action to such emergencies which might arise in the performance of scientific
research programmes, tourism and all other governmental and non-governmental activities in the Antarctic Treaty area for which advance notice is required under Article VII(5) of the Antarctic Treaty, including associated logistic support activities;
(b) establish contingency plans for response to incidents with potential adverse effects on the Antarctic environment or dependent or associated ecosystems.

2. To this end, the Parties shall:
(a) co-operate in the formulation and implementation of such contingency plans; and
(b) establish procedures for immediate notification of, and co-operative response to, environmental emergencies.

3. In the implementation of this Article, the Parties shall draw upon the advice of the appropriate international organisations.

Article 16
Liability

Consistent with the objectives of this Protocol for the comprehensive protection of the Antarctic environment and dependent and associated ecosystems, the Parties undertake to elaborate rules and procedures relating to liability for damage arising from activities taking place in the Antarctic Treaty area and covered by this Protocol. Those rules and procedures shall be included in one or more Annexes to be adopted in accordance with Article 9(2).

Article 17
Annual Report by Parties

1. Each Party shall report annually on the steps taken to implement this Protocol. Such reports shall include notifications made in accordance with Article 13(3), contingency plans established in accordance with Article 15 and any other notifications and information called for pursuant to this Protocol for which there is no other provision concerning the circulation and exchange of information.

2. Reports made in accordance with paragraph 1 above shall be circulated to all Parties and to the Committee, considered at the next Antarctic Treaty Consultative Meeting, and made publicly available.

Article 18
Dispute Settlement

If a dispute arises concerning the interpretation or application of this Protocol, the parties to the dispute shall, at the request of any one of them, consult among themselves as soon as possible with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means to which the parties to the dispute agree.

Article 19
Choice of Dispute Settlement Procedure

1. Each Party, when signing, ratifying, accepting, approving or acceding to this Protocol, or at any time thereafter, may choose, by written declaration, one or both of the following means for the settlement of disputes concerning the interpretation or application of Articles 7, 8 and 15 and, expect to the extent that an Annex provides otherwise, the provisions of any Annex and, insofar as it relates to these Articles and provisions, Article 13:
(a) the International Court of Justice;
(b) the Arbitral Tribunal.

2. A declaration made under paragraph 1 above shall not affect the operation of Article 18 and Article 20(2).

3. A Party that has not made a declaration under paragraph 1 above or in respect of which a declaration is no longer in force shall be deemed to have accepted the competence of the Arbitral Tribunal.

4. If the parties to a dispute have accepted the same means for the settlement of a dispute, the dispute may be submitted only to that procedure, unless the parties otherwise agree.

5. If the parties to a dispute have not accepted the same means for the settlement of a dispute, or if they have both accepted both means, the dispute may be submitted only to the Arbitral Tribunal, unless the parties otherwise agree.

6. A declaration made under paragraph 1 above shall remain in force until it expires in accordance with its terms or until three months after written notice of revocation has been deposited with the Depositary.
7 A new declaration, a notice of revocation
or the expiry of a declaration shall not in any
way affect proceedings pending before the
International Court of Justice or the Arbitral
Tribunal, unless the parties to the dispute
otherwise agree.

8 Declarations and notices referred to in this
Article shall be deposited with the Depositary
who shall transmit copies thereof to all Parties.

Article 20
Dispute Settlement Procedure

1. If the parties to a dispute concerning the
interpretation or application of Articles 7, 8 or
15 or, except to the extent that an Annex
provides otherwise, the provisions of any Annex
or, insofar as it relates to these Articles and
provisions, Article 13, have not agreed on a
means for resolving it within 12 months of the
request for consultation pursuant to Article 18,
the dispute shall be referred, at the request of
any party to the dispute, for settlement in
accordance with the procedure determined by
Article 19(4) and (5).

2. The Arbitral Tribunal shall not be
competent to decide or rule upon any matter
within the scope of Article IV of the Antarctic
Treaty. In addition, nothing in this Protocol
shall be interpreted as conferring competence of
jurisdiction on the International Court of Justice
or any other tribunal established for the purpose
of settling disputes between Parties to decide or
otherwise rule upon any matter within the scope
of Article IV of the Antarctic Treaty.

Article 21
Signature

This Protocol shall be open for signature at
Madrid on the 4th of October 1991 and
thereafter at Washington until the 3rd of
October 1992 by any State which is a
Contracting Party to the Antarctic Treaty.

Article 22
Ratification, Acceptance, Approval or
Accession

1. This Protocol is subject to ratification,
acceptance or approval by signatory States.

2. After the 3rd of October 1992 this
Protocol shall be open for accession by any
State which is a Contracting Party to the
Antarctic Treaty.

3. Instruments of ratification, acceptance,
approval or accession shall be deposited with
the Government of the United States of
America, hereby designated as the Depositary.

4. After the date on which this Protocol has
entered into force, the Antarctic Treaty
Consultative Parties shall not act upon a
notification regarding the entitlemen of a
Contracting Party to the Antarctic Treaty to
appoint representatives to participate in
Antarctic Treaty Consultative Meetings in
accordance with Article IX(2) of the Antarctic
Treaty unless that Contracting Party has first
ratified, accepted, approved or acceded to this
Protocol.

Article 23
Entry into Force

1. This Protocol shall enter into force on the
thirtieth day following the date of deposit of
instruments of ratification, acceptance, approval
or accession by all States which are Antarctic
Treaty Consultative Parties at the date on which
this Protocol is adopted.

2. For each Contracting Party to the
Antarctic Treaty which, subsequent to the date
of entry into force of this Protocol, deposits an
instrument of ratification, acceptance, approval
or accession, this Protocol shall enter into force
on the thirtieth day following such deposit.

Article 24
Reservations

Reservations to this Protocol shall not be
permitted.

Article 25
Modification or Amendment

1. Without prejudice to the provisions of
Article 9, this Protocol may be modified or
amended at any time in accordance with the
procedures set forth in Article XII (1)(a) and (b)
of the Antarctic Treaty.

2. If, after the expiration of 50 years from the
date of entry into force of this Protocol, any of
the Antarctic Treaty Consultative Parties so
requests by a communication addressed to the
Depositary, a conference shall be held as soon
as practicable to review the operation of this
Protocol.
3. A modification or amendment proposed at any Review Conference called pursuant to paragraph 2 above shall be adopted by a majority of the Parties, including 3/4 of the States which are Antarctic Treaty Consultative Parties at the time of adoption of this Protocol.

4. Any modification or amendment adopted pursuant to paragraph 3 above shall enter into force upon ratification by 3/4 of the Consultative Parties, including ratification, acceptance, approval or accession by all States which are Consultative Parties at the time of the adoption of this Protocol.

5(a) With respect to Article 7, the prohibition on Antarctic mineral resource activities contained therein shall continue unless there is in force a binding legal regime on Antarctic mineral resource activities that includes an agreed means for determining whether, and, if so, under which conditions, any such activities would be acceptable. This regime shall fully safeguard the interests of all States referred to in Article IV of the Antarctic Treaty and apply the principles thereof. Therefore, if a modification or amendments to Article 7 is proposed at a Review Conference referred to in paragraph 2 above, it shall include such a binding legal regime.

(b) If any such modification or amendment has not entered into force within 3 years of the date of its adoption, any Party may at any time thereafter notify to the Depositary of its withdrawal from this Protocol, and such withdrawal shall take effect 2 years after receipt of the notice by the Depositary.

Article 26
Notifications by the Depositary

The Depositary shall notify all Contracting Parties to the Antarctic Treaty of the following:

(a) signatures of this Protocol and the deposits of instruments of ratification, acceptance, approval or accession;
(b) the date of entry into force of this Protocol and any additional Annex thereto;
(c) the date of entry into force of any amendment or modification to this Protocol; and
(d) the deposit of declarations and notices pursuant to Article 19; and
(e) any notification received pursuant to Article 25(5)(b).

Article 27
Authentic Texts and Registration with the United Nations

1. This Protocol, done in the English, French, Russian and Spanish languages, each version being equally authentic, shall be deposited in the archives of the Government of the United States of America, which shall transmit duly certified copies thereof to all Contracting Parties to the Antarctic Treaty.

2. This Protocol shall be registered by the Depositary pursuant to Article 102 of the Charter of the United Nations.

SCHEDULE TO THE PROTOCOL

ARBITRATION

Article 1

1. The Arbitral Tribunal shall be constituted and shall function in accordance with this Protocol, including this Schedule.

2. The Secretary referred to in this Schedule is the Secretary General of the Permanent Court of Arbitration.

Article 2

1. Each Party shall be entitled to designate up to three Arbitrators, at least one of whom shall be designated within three months of the entry into force of this Protocol for that Party. Each Arbitrator shall be experienced in Antarctic affairs, have thorough knowledge of international law and enjoying the highest reputation for fairness, competence and integrity. The names of the persons so designated shall constitute the list of Arbitrators. Each Party shall at all times maintain the name of at least one Arbitrator on the list.

2. Subject to paragraph 3 below, an Arbitrator designated by a Party shall remain on the list for a period of five years and shall be eligible for redesignation by that Party for additional five year periods.
3 A Party which designated an Arbitrator may withdraw the name of that Arbitrator from the list. If an Arbitrator dies or if a Party for any reason withdraws from the list the name of an Arbitrator designated by it, the Party which designated the Arbitrator in question shall notify the Secretary promptly. An Arbitrator whose name is withdrawn from the list shall continue to serve on any Arbitral Tribunal to which that Arbitrator has been appointed until the completion of proceedings before the Arbitral Tribunal.

4 The Secretary shall ensure that an up-to-date list is maintained of the Arbitrators designated pursuant to this Article.

Article 3

1 The Arbitral Tribunal shall be composed of three Arbitrators who shall be appointed as follows:

(a) the party to the dispute commencing the proceedings shall appoint one Arbitrator, who may be its national, from the list referred to in Article 2. This appointment shall be included in the notification referred to in Article 4.

(b) Within 40 days of the receipt of that notification, the other party to the dispute shall appoint the second Arbitrator, who may be its national, from the list referred to in Article 2.

(c) Within 60 days of the appointment of the second Arbitrator, the parties to the dispute shall appoint by agreement the third Arbitrator from the list referred to in Article 2. The third Arbitrator shall not be either a national of, or a person designated by, a party to the dispute, or of the same nationality as either of the first two Arbitrators. The third Arbitrator shall be the Chairperson of the Arbitral Tribunal.

(d) If the second Arbitrator has not been appointed within the prescribed period, or if the parties to the dispute have not reached agreement within the prescribed period on the appointment of the third Arbitrator, the Arbitrator or Arbitrators shall be appointed, at the request of any party to the dispute and within 30 days of the receipt of such request, by the President of the International Court of Justice from the list referred to in Article 2 and subject to the conditions prescribed in subparagraphs (b) and (c) above. In performing the functions accorded him or her in this subparagraph, the President of the Court shall consult the parties to the dispute.

(e) If the President of the International Court of Justice is unable to perform the functions accorded him or her in subparagraph (d) above or is a national of a party to the dispute, the functions shall be performed by the Vice-President of the Court, except that if the Vice-President is unable to perform the functions or is a national of a party to the dispute the functions shall be performed by the next most senior member of the Court who is available and is not a national of a party to the dispute.

2 Any vacancy shall be filled in the manner prescribed for the initial appointment.

3 In any dispute involving more than two Parties, those Parties having the same interest shall appoint one Arbitrator by agreement within the period specified in paragraph 1(b) above.

Article 4

The party to the dispute commencing proceedings shall so notify the other party or parties to the dispute and the Secretary in writing. Such notification shall include a statement of the claim and the grounds on which it is based. The notification shall be transmitted by the Secretary to all Parties.

Article 5

1 Unless the parties to the dispute agree otherwise, arbitration shall take place at The Hague, where the records of the Arbitral Tribunal shall be kept. The Arbitral Tribunal shall adopt its own rules of procedure. Such rules shall ensure that each party to the dispute has a full opportunity to be heard and to present its case and shall also ensure that the proceedings are conducted expeditiously.

2 The Arbitral Tribunal may hear and decide counterclaims arising out of the dispute.
Article 6

1 The Arbitral Tribunal, where it considers that prima facie it has jurisdiction under this Protocol, may:

(a) at the request of any party to a dispute, indicate such provisional measures as it considers necessary to preserve the respective rights of the parties to the dispute;

(b) prescribe any provisional measures which it considers appropriate under the circumstances to prevent serious harm to the Antarctic environment or dependent or associated ecosystems.

2 The parties to a dispute shall comply promptly with any provisional measures prescribed under paragraph 1(b) above pending an award under Article 9.

3 Notwithstanding Article 20(1) and (2) of this Protocol, a party to a dispute may at any time, by notification to the other party or parties to the dispute and to the Secretary in accordance with Article 4, request that the Arbitral Tribunal be constituted as a matter of exceptional urgency to indicate or prescribe emergency provisional measures in accordance with this Article. In such case, the Arbitral Tribunal shall be constituted as soon as possible in accordance with Article 3, except that the time periods in Article 3(1)(b), (c) and (d) shall be reduced to 14 days in each case. The Arbitral Tribunal shall decide upon the request for emergency provisional measures within two months of the appointment of its Chairperson.

4 Following a decision by the Arbitral Tribunal upon a request for emergency provisional measures in accordance with paragraph 3 above, settlement of the dispute shall proceed in accordance with Articles 18 and 19 of the Protocol.

Article 7

Any Party which believes it has a legal interest, whether general or individual, which may be substantially affected by the award of an Arbitral Tribunal, may, unless the Arbitral Tribunal decides otherwise, intervene in the proceedings.

Article 8

The parties to the dispute shall facilitate the work of the Arbitral Tribunal and, in particular, in accordance with their law and using all means at their disposal, shall provide it with all relevant documents and information, and enable it, when necessary, to call witnesses or experts and receive their evidence.

Article 9

If one of the parties to the dispute does not appear before the Arbitral Tribunal or fails to defend its case, any other party to the dispute may request the Arbitral Tribunal to continue the proceedings and make its award.

Article 10

1 The Arbitral Tribunal shall, on the basis of this Protocol and other applicable rules of law that are not incompatible with such provisions, decide such disputes as are submitted to it.

2 The Arbitral Tribunal may decide, ex aequo et bono, a dispute submitted to it, if the parties to the dispute so agree.

Article 11

1 Before making its award, the Arbitral Tribunal shall satisfy itself that it has competence in respect of the dispute and that the claim or counterclaim is well founded in fact and law.

2 The award shall be accompanied by a statement of reasons for the decision and shall be communicated to the Secretary who shall transmit it to all Parties.

3 The award shall be final and binding on the parties to the dispute and on any Party which intervened in the proceedings and shall be complied with without delay. The Arbitral Tribunal shall interpret the award at the request of a party to the dispute or of any intervening Party.

4 The award shall have no binding force except in respect of that particular case.

5 Unless the Arbitral Tribunal decides otherwise, the expenses of the Arbitral Tribunal, including the remuneration of the Arbitrators, shall be borne by the parties to the dispute in equal shares.
Article 12

All decisions of the Arbitral Tribunal, including those referred to in Articles 5, 6 and 11, shall be made by a majority of the Arbitrators who may not abstain from voting.

Article 13

1. This Schedule may be amended or modified by a measure adopted in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the amendment or modification shall be deemed to have been approved, and shall become effective, one year after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Antarctic Treaty Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or that it is unable to approve the measure.

2. Any amendment or modification of this Schedule which becomes effective in accordance with paragraph 1 above shall thereafter become effective as to any other Party when notice of approval by it has been received by the Depositary.

ANNEX I TO THE PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY

ENVIRONMENTAL IMPACT ASSESSMENT

Article 1
Preliminary Stage

1. The environmental impacts of proposed activities referred to in Article 8 of the Protocol shall, before their commencement, be considered in accordance with appropriate national procedures.

2. If an activity is determined as having less than a minor or transitory impact, the activity may proceed forthwith.

Article 2
Initial Environmental Evaluation

1. Unless it has been determined that an activity will have less than a minor or transitory impact, or unless a Comprehensive Environmental Evaluation is being prepared in accordance with Article 3, an Initial Environmental Evaluation shall be prepared. It shall contain sufficient detail to assess whether a proposed activity may have more than a minor or transitory impact and shall include:

(a) a description of the proposed activity, including its purpose, location, duration, and intensity; and

(b) consideration of alternatives to the proposed activity and any impacts that the activity may have, including consideration of cumulative impacts in the light of existing and known planned activities.

2. If an Initial Environmental Evaluation indicates that a proposed activity is likely to have no more than a minor or transitory impact, the activity may proceed, provided that appropriate procedures, which may include monitoring, are put in place to assess and verify the impact of the activity.

Article 3
Comprehensive Environmental Evaluation

1. If an Initial Environmental Evaluation indicates or if it is otherwise determined that a proposed activity is likely to have more than a minor or transitory impact, a Comprehensive Environmental Evaluation shall be prepared.

2. A Comprehensive Environmental Evaluation shall include:

(a) a description of the proposed activity including its purpose, location, duration and intensity, and possible alternatives to the activity, including the alternative of not proceeding, and the consequences of those alternatives;

(b) a description of the initial environmental reference state with which predicted changes are to be compared and a prediction of the future environmental reference state in the absence of the proposed activity;

(c) a description of the methods and data used to forecast the impacts of the proposed activity;

(d) estimation of the nature, extent, duration and intensity of the likely direct impacts of the proposed activity;

(e) consideration of possible indirect or second order impacts of the proposed activity;
(f) consideration of cumulative impacts of the proposed activity in the light of existing activities and other known planned activities;

(g) identification of measures, including monitoring programmes, that could be taken to minimise or mitigate impacts of the proposed activity and to detect unforeseen impacts and that could provide early warning of any adverse effects of the activity as well as to deal promptly and effectively with accidents;

(h) identification of unavoidable impacts of the proposed activity;

(i) consideration of the effects of the proposed activity on the conduct of scientific research and on other existing uses and values;

(j) an identification of gaps in knowledge and uncertainties encountered in compiling the information required under this paragraph;

(k) a non-technical summary of the information provided under this paragraph;

(l) the name and address of the person or organisation which prepared the Comprehensive Environmental Evaluation and the address to which comments thereon should be directed.

3. The draft Comprehensive Environmental Evaluation shall be made publicly available and shall be circulated to all Parties, which shall also make it publicly available, for comment. A period of 90 days shall be allowed for the receipt of comments.

4. The draft Comprehensive Environmental Evaluation shall be forwarded to the Committee at the same time as it is circulated to the Parties, and at least 120 days before the next Antarctic Treaty Consultative Meeting, for consideration as appropriate.

5. No final decision shall be taken to proceed with the proposed activity in the Antarctic Treaty area unless there has been an opportunity for consideration of the draft Comprehensive Environmental Evaluation by the Antarctic Treaty Consultative Meeting on the advice of the Committee, provided that no decision to proceed with a proposed activity shall be delayed through the operation of this paragraph for longer than 15 months from the date of circulation of the draft Comprehensive Environmental Evaluation.

6. A final Comprehensive Environmental Evaluation shall address and shall include or summarise comments received on the draft Comprehensive Environmental Evaluation. The final Comprehensive Environmental Evaluation, notice of any decisions relating thereto, and any evaluation of the significance of the predicted impacts in relation to the advantages of the proposed activity, shall be circulated to all Parties, which shall also make them publicly available, at least 60 days before the commencement of the proposed activity in the Antarctic Treaty area.

Article 4
Decisions to be based on Comprehensive Environmental Evaluations

Any decision on whether a proposed activity, to which Article 3 applies, should proceed, and, if so, whether in its original or in a modified form, shall be based on the Comprehensive Environmental Evaluation as well as other relevant considerations.

Article 5
Monitoring

1. Procedures shall be put in place, including appropriate monitoring of key environmental indicators, to assess and verify the impact of any activity that proceeds following the completion of a Comprehensive Environmental Evaluation.

2. The procedures referred to in paragraph 1 above and in Article 2(2) shall be designed to provide a regular and verifiable record of the impacts of the activity in order, *inter alia*, to:

(a) enable assessments to be made of the extent to which such impacts are consistent with this Protocol; and

(b) provide information useful for minimising or mitigating impacts, and, where appropriate, information on the need for suspension, cancellation or modification of the activity.

Article 6
Circulation of Information

1. The following information shall be circulated to the Parties, forwarded to the Committee and made publicly available:

(a) a description of the procedures referred to in Article 1;

(b) an annual list of an Initial Environmental Evaluations prepared in accordance with Article 2 and any decisions taken in consequence thereof;
(c) significant information obtained, and any action taken in consequence thereof, from procedures put in place in accordance with Articles 2(2) and 5; and
(d) information referred to in Article 3(6).

2. Any Initial Environmental Evaluation prepared in accordance with Article 2 shall be made available on request.

Article 7
Cases of Emergency

1. This Annex shall not apply in cases of emergency relating to the safety of human life or of ships, aircraft, or equipment and facilities of high value, or the protection of the environment, which require an activity to be undertaken without completion of the procedures set out in this Annex.

2. Notice of activities undertaken in cases of emergency, which would otherwise have required preparation of a Comprehensive Environmental Evaluation, shall be circulated immediately to the Parties and forwarded to the Committee and a full explanation of the activities carried out shall be provided within 90 days of those activities.

Article 8
Amendment or Modification

1. This Annex may be amended or modified by a measure adopted in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the amendment or modification shall be deemed to have been approved, and shall become effective, one year after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Antarctic Treaty Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or that it is unable to approve the measure.

2. Any amendment or modification of this Annex which becomes effective in accordance with paragraph 1 above shall thereafter become effective as to any other Party when notice of approval by it has been received by the Depositary.

ANNEX II TO THE PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY

CONSERVATION OF ANTARCTIC FAUNA AND FLORA

Article 1
 Definitions

For the purposes of this Annex:

(a) "native mammal" means any member of any species belonging to the Class Mammalia, indigenous to the Antarctic Treaty area or occurring there seasonally through natural migrations;
(b) "native bird" means any member, at any stage of its life cycle (including eggs), of any species of the Class Aves indigenous to the Antarctic Treaty area or occurring there seasonally through natural migrations;
(c) "native plant" means any terrestrial or freshwater vegetation, including bryophytes, lichens, fungi and algae, at any state of its life cycle (including seeds, and other propagules), indigenous to the Antarctic Treaty area;
(d) "native invertebrate" means any terrestrial or freshwater invertebrate, at any stage of its life cycle, indigenous to the Antarctic Treaty area;
(e) "appropriate authority" means any person or agency authorised by a Party to issue permits under this Annex;
(f) "permit" means a formal permission in writing issued by an appropriate authority;
(g) "take" or "taking" means to kill, injure, capture, handle or molest, a native mammal or bird, or to remove or damage such quantities of native plants that their local distribution or abundance would be significantly affected;
(h) "harmful interference" means:
   (i) flying of landing helicopters or other aircraft in a manner that disturbs concentrations of birds and seals;
   (ii) using vehicles or vessels, including hovercraft and small boats, in a manner that disturbs concentrations of bird and seals;
   (iii) using explosives or firearms in a manner that disturbs concentrations of birds and seals;
   (iv) wilfully disturbing breeding or moulting birds or concentrations of birds and seals by persons on foot;
(v) significantly damaging concentrations of native terrestrial plants by landing aircraft, driving vehicles, or walking on them, or by other means;
(vi) any activity that results in the significant adverse modification of habitats of any species or population of native mammal, bird, plant or invertebrate.

(i) "International Convention for the Regulation of Whaling" means the Convention done at Washington on 2 December 1946.

**Article 2**
Cases of Emergency

1. The provisions of this Annex shall not apply in cases of emergency relating to the safety of human life or of ships, aircraft, or equipment and facilities of high value, or protection of the environment.

2. Notice of activities undertaken in cases of emergency shall be circulated immediately to all Parties and to the Committee.

**Article 3**
Protection of Native Fauna and Flora

1. Taking or harmful interference shall be prohibited except in accordance with a permit.

2. Such permits shall specify the authorised activity, including when, where and by whom it is to be conducted and shall be issued only in the following circumstances:

   (a) to provide specimens for scientific study or scientific information;
   (b) to provide specimens for museums, herbaria, zoological and botanical gardens, or other educational or cultural institutions or uses; and
   (c) to provide for unavoidable consequences of scientific activities not otherwise authorised under sub-paragraphs (a) or (b) above, or of the construction and operation of scientific support facilities.

3. The issue of such permits shall be limited so as to ensure that:

   (a) no more native mammals, birds, or plants are taken than are strictly necessary to meet the purposes set forth in paragraph 2 above;
   (b) only small numbers of native mammals or birds are killed and in no case more native mammals or birds are killed from local populations than can, in combination with other permitted takings, normally be replaced by natural reproduction in the following season; and
   (c) the diversity of species, as well as the habitats essential to their existence, and the balance of the ecological systems existing within the Antarctic Treaty area are maintained.

4. Any species of native mammals, birds and plants listed in Appendix A to this Annex shall be designated "Specially Protected Species" and shall be accorded special protection by the Parties.

5. A permit shall not be issued to take a Specially Protected Species unless the taking:

   (a) is for a compelling scientific purpose;
   (b) will not jeopardise the survival or recovery of that species or local population; and
   (c) uses non-lethal techniques where appropriate.

6. All taking of native mammals and birds shall be done in the manner that involves the least degree of pain and suffering practicable.

**Article 4**
Introduction of non-native species, parasites and diseases

1. No species of animal or plant not native to the Antarctic Treaty area shall be introduced onto land or ice shelves, or into water in the Antarctic Treaty area except in accordance with a permit.

2. Dogs shall not be introduced onto land or ice shelves and dogs currently in those areas shall be removed by April 1, 1994.

3. Permits under paragraph 1 above shall be issued to allow the importation only of the animals and plants listed in Appendix B to this Annex and shall specify the species, numbers and, if appropriate, age and sex and precautions to be taken to prevent escape or contact with native fauna and flora.

4. Any plant or animal for which a permit has been issued in accordance with paragraphs 1 and 3 above, shall, prior to expiration of the permit, be removed from the Antarctic Treaty area or be disposed of by incineration or equally effective means that eliminates risk to native
fauna or flora. The permit shall specify this obligation. Any other plant or animal introduced into the Antarctic Treaty area not native to that area, including any progeny, shall be removed or disposed of, by incineration or by equally effective means, so as to be rendered sterile, unless it is determined that they pose no risk to native flora or fauna.

5. Nothing in this Article shall apply to the importation of food into the Antarctic Treaty area provided that no live animals are imported for this purpose and all plants and animal parts and products are kept under carefully controlled conditions and disposed of in accordance with Annex III to the Protocol and Appendix C to this Annex.

6. Each Party shall require that precautions, including those listed in Appendix C to this Annex, be taken to prevent the introduction of micro-organisms (e.g., viruses, bacteria, parasites, yeasts, fungi) not present in the native fauna and flora.

Article 5
Information
Each Party shall prepare and make available information setting forth, in particular, prohibited activities and providing lists of Specially Protected Species and relevant Protected Areas to all those persons present in or intending to enter the Antarctic Treaty area with a view to ensuring that such persons understand and observe the provisions of this Annex.

Article 6
Exchange of Information
1. The Parties shall make arrangements for:
   
   (a) collecting and exchanging records (including records of permits) and statistics concerning the numbers of quantities of each species of native mammal, bird or plant taken annually in the Antarctic Treaty area;
   
   (b) obtaining and exchanging information as to the status of native mammals, birds, plants, and invertebrates in the Antarctic Treaty area, and the extent to which any species or population needs protection;
   
   (c) establishing a common form in which this information shall be submitted by Parties in accordance with paragraph 2 below.

2. Each Party shall inform the other Parties as well as the Committee before the end of November each year of any step taken pursuant to paragraph 1 above and of the number and nature of permits issued under this Annex in the preceding period of 1st July to 30th June.

Article 7
Relationship with Other Agreements outside the Antarctic Treaty system
Nothing in this Annex shall derogate from the rights and obligations of Parties under the International Convention for the Regulation of Whaling.

Article 8
Review
The Parties shall keep under continuing review measures for the conservation of Antarctic fauna and flora, taking into account any recommendations from the Committee.

Article 9
Amendment or Modification
1. This Annex may be amended or modified by a measure adopted in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the amendment or modification shall be deemed to have been approved, and shall become effective, one year after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Antarctic Treaty Consultative Parties notifies the Depository, within that time period, that it wishes an extension of that period of time or that it is unable to approve the measure.

2. Any amendment or modification of this Annex which becomes effective in accordance with paragraph 1 above shall thereafter become effective as to any other Party when notice of approval by it has been received by the Depository.

APPENDICES TO THE ANNEX

Appendix A: Specially Protected Species
All species of the genus Arctocephalus, Fur Seals. Ommatophoca rossii, Ross Seal.
Appendix B:
Importation of Animals and Plants

The following animals and plants may be imported into the Antarctic Treaty area in accordance with permits issued under Article 4 of this Annex:

(a) domestic plants; and
(b) laboratory animals and plants including viruses, bacteria, yeasts and fungi.

Appendix C:
Precautions to prevent introduction of microorganisms

1. Poultry. No live poultry or other living birds shall be brought into the Antarctic Treaty area. Before dressed poultry is packaged for shipment to the Antarctic Treaty area, it shall be inspected for evidence of disease, such as Newcastle's Disease, tuberculosis, and yeast infection. Any poultry or parts not consumed shall be removed from the Antarctic Treaty area or disposed of by incineration or equivalent means that eliminates risks to native flora and fauna.

2. The importation of non-sterile soil shall be avoided to the maximum extent practicable.

ANNEX III TO THE PROTOCOL ON
ENVIRONMENTAL PROTECTION TO
THE ANTARCTIC TREATY

WASTE DISPOSAL AND WASTE MANAGEMENT

Article 1
General Obligations

1. This Annex shall apply to activities undertaken in the Antarctic Treaty area pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities in the Antarctic Treaty area for which advance notice is required under Article VII (5) of the Antarctic Treaty, including associated logistic support activities.

2. The amount of wastes produced or disposed of in the Antarctic Treaty area shall be reduced as far as practicable so as to minimise interference with the natural values of Antarctica, with scientific research and with other uses of Antarctica which are consistent with the Antarctic Treaty.

3. Waste storage, disposal and removal from the Antarctic Treaty area, as well as recycling and source reduction, shall be essential considerations in the planning and conduct of activities in the Antarctic Treaty area.

4. Wastes removed from the Antarctic Treaty area shall, to the maximum extent practicable, be returned to the country from which the activities generating the waste were organised or to any other country in which arrangements have made for the disposal of such wastes in accordance with relevant international agreements.

5. Past and present waste disposal sites on land and abandoned work sites of Antarctic activities shall be cleaned up by the generator of such wastes and the user of such sites. This obligation shall not be interpreted as requiring:

(a) the removal of any structure designated as a historic site or monument; or
(b) the removal of any structure or waste material in circumstances where the removal by an practical option would result in greater adverse environmental impact than leaving the structure or waste material in its existing location.

Article 2
Waste Disposal by Removal from the Antarctic Treaty Area

1. The following wastes, if generated after entry into force of this Annex, shall be removed from the Antarctic Treaty area by the generator of such wastes:

(a) radio-active materials;
(b) electrical batteries;
(c) fuel, both liquid and solid;
(d) wastes containing harmful levels of heavy metals or acutely toxic or harmful persistent compounds;
(e) poly-vinyl chloride (PVC), polyurethane foam, polystyrene foam, rubber and lubricating oils, treated timbers and other products which contain additives that could produce harmful emissions if incinerated;
(f) all other plastic wastes, except low density polyethylene containers (such as bags for storing wastes), provided that such containers shall be incinerated in accordance with Article 3(1);
(g) fuel drums; and
(h) other solid, non-combustible wastes;
provided that the obligation to remove drums and solid non-combustible wastes contained in subparagraphs (g) and (h) above shall not apply in circumstances where the removal of such wastes by any practical option would result in greater adverse environmental impact than leaving them in their existing locations.

2. Liquid wastes which are not covered by paragraph 1 above and sewage and domestic liquid wastes, shall, to the maximum extent practicable, be removed from the Antarctic Treaty area by the generator of such wastes.

3. The following wastes shall be removed from the Antarctic Treaty area by the generator of such wastes, unless incinerated, autoclaved or otherwise treated to be made sterile:
   (a) residues of carcasses of imported animals;
   (b) laboratory culture of micro-organisms and plant pathogens; and
   (c) introduced avian products.

Article 3
Waste Disposal by Incineration

1. Subject to paragraph 2 below, combustible wastes, other than those referred to in Article 2(1), which are not removed from the Antarctic Treaty area shall be burnt in incinerators which to the maximum extent practicable reduce harmful emissions. Any emission standards and equipment guidelines which may be recommended by, inter alia, the Committee and the Scientific Committee on Antarctic Research shall be taken into account. The solid residue of such incineration shall be removed from the Antarctic Treaty area.

2. All open burning of wastes shall be phased out as soon as practicable, but no later than the end of the 1998/1999 season. Pending the completion of such phase-out, when it is necessary to dispose of wastes by open burning, allowance shall be made for the wind direction and speed and the type of wastes to be burnt to limit particulate deposition and to avoid such deposition over areas of special biological, scientific, historic, aesthetic or wilderness significance including, in particular, areas accorded protection under the Antarctic Treaty.

Article 4
Other Waste Disposal on Land

1. Wastes not removed or disposed of in accordance with Articles 2 and 3 shall not be disposed of onto ice-free areas or into fresh water systems.

2. Sewage, domestic liquid wastes and other liquid wastes not removed from the Antarctic Treaty area in accordance with Article 2, shall, to the maximum extent practicable, not be disposed of onto sea ice, ice shelves or the grounded ice-sheet, provided that such wastes which are generated by stations located inland on ice shelves or on the grounded ice-sheet may be disposed of in deep ice pits where such disposal is the only practicable option. Such pits shall not be located on known ice-flow lines which terminate at ice-free areas or in areas of high ablation.

3. Wastes generated at field camps shall, to the maximum extent practicable, be removed by the generator of such wastes to supporting stations or ships for disposal in accordance with this Annex.

Article 5
Disposal of Waste in the Sea

1. Sewage and domestic liquid wastes may be discharged directly into the sea, taking into account the assimilative capacity of the receiving marine environment and provided that:
   (a) such discharge is located, wherever practicable, where conditions exist for initial dilution and rapid dispersal; and
   (b) large quantities of such wastes (generated in a station where the average weekly occupancy over the austral summer is approximately 30 individuals or more) shall be treated at least by maceration.

2. The by-product of sewage treatment by the Rotary Biological Contacter process or similar processes may be disposed of into the sea provided that such disposal does not adversely affect the local environment, and provided also that any such disposal at sea shall be in accordance with Annex IV to the Protocol.

Article 6
Storage of Waste

All wastes to be removed from the Antarctic Treaty area, or otherwise disposed of, shall be stored in such a way as to prevent their dispersal into the environment.
Article 7
Prohibited Products

No polychlorinated biphenyls (PCBs), non-sterile soil, polystyrene beads, chips or similar forms of packaging, or pesticides (other than those required for scientific, medical or hygiene purposes) shall be introduced onto land or ice shelves or into water in the Antarctic Treaty area.

Article 8
Waste Management Planning

1. Each Party which itself conducts activities in the Antarctic Treaty area shall, in respect of those activities, establish a waste disposal classification system as a basis for recording wastes and to facilitate studies aimed at evaluating the environmental impacts of scientific activity and associated logistic support. To that end, wastes produced shall be classified as:

(a) sewage and domestic liquid wastes (Group 1);
(b) other liquid wastes and chemicals, including fuels and lubricants (Group 2);
(c) solids to be combusted (Group 3);
(d) other solid wastes (Group 4); and
(e) radioactive materials (Group 5).

2. In order to reduce further the impact of waste on the Antarctic environment, each such Party shall prepare and annually review and update its waste management plans (including waste reduction, storage and disposal), specifying for each fixed site, or field camps generally, and for each ship (other than small boats that are part of the operation of fixed sites or of ships and taking into account existing management plans for ships):

(a) programmes for cleaning up existing waste disposal sites and abandoned work sites;
(b) current and planned waste management arrangements, including final disposal;
(c) current and planned arrangements for analysing the environmental effects of waste and waste management; and
(d) other efforts to minimise any environmental effects of wastes and waste management.

3. Each such Party shall, as far as is practicable, also prepare an inventory of past activities (such as traverses, fuel depots, field bases, crashed aircraft) before the information is lost, so that such locations can be taken into account in planning future scientific programmes (such as snow chemistry, pollutants in lichens or ice core drilling).

Article 9
Circulation and Review of Waste Management Plans

1. The waste management plans prepared in accordance with Article 8, reports on their implementation, and the inventories referred to in Article 8(3), shall be included in the annual exchanges of information in accordance with Articles III and VII of the Antarctic Treaty and related Recommendations under Article IX of the Antarctic Treaty.

2. Each Party shall send copies of its waste management plans, and reports on their implementation and review, to the Committee.

3. The Committee may review waste management plans and reports thereon and may offer comments, including suggestions for minimising impacts and modifications and improvement to the plans, for the consideration of the Parties.

4. The Parties may exchange information and provide advice on, inter alia, available low waste technologies, reconversion of existing installations, special requirements for effluents, and appropriate disposal and discharge methods.

Article 10
Management Practices

Each Party shall:

(a) designate a waste management official to develop and monitor waste management plans; in the field, this responsibility shall be delegated to an appropriate person at each site;
(b) ensure that members of its expedition receive training designed to limit the impact of its operations on the Antarctic environment and to inform them of requirements of this Annex; and
c) discourage the use of poly-vinyl chloride (PVC) products and ensure that its expeditions to the Antarctic Treaty area are advised of any PVC products they may introduce in the Antarctic Treaty area in order that they may be removed subsequently in accordance with this Annex.
Article 11
Review

This Annex shall be subject to regular review in order to ensure that it is updated to reflect improvement in waste disposal technology and procedures and to ensure thereby maximum protection of the Antarctic environment.

Article 12
Cases of Emergency

1. This Annex shall not apply in cases of emergency relating to the safety of human life or of ships, aircraft or other equipment and facilities of high value.

2. Notice of activities undertaken in cases of emergency shall be circulated immediately to all Parties and to the Committee.

Article 13
Amendment or Modification

1. This Annex may be amended or modified by a measure adopted in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the amendment or modification shall be deemed to have been approved, and shall become effective, one year after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Antarctic Treaty Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period of time or that it is unable to approve the amendment.

2. Any amendment or modification of this Annex which becomes effective in accordance with paragraph 1 above shall thereafter become effective as to any other Party when notice of approval by it has been received by the Depositary.

ANNEX IV TO THE PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY
PREVENTION OF MARINE POLLUTION

Article 1
Definitions

For the purposes of this Annex:

(a) "discharge" means any release howsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying;

(b) "garbage" means all kinds of victual, domestic and operational waste excluding fresh fish and parts thereof, generated during the normal operation of the ship except those substances which are covered by Articles 3 and 4;

(c) "MARPOL 73/78" means the International Convention for the Prevention of Pollution from Ships, 1973 as amended by the Protocol of 1978 relating thereto and by any other amendment in force thereafter;

(d) "Noxious liquid substance" means any noxious liquid substance as defined in Annex II of MARPOL 73/78;

(e) "oil" means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined oil products (other than petrochemicals which are subject to the provisions of Article 4);

(f) "oily mixture" means a mixture with any oil content;

(g) "ship" means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms.
(i) provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimising the discharge; and
(ii) except if the owner or the Master acted either with intent to cause damage, or recklessly and with the knowledge that damage would probably result; or
(b) the discharge into the sea of substances containing oil which are being used for the purpose of combating specific pollution incidents in order to minimise the damage from pollution.

Article 4
Discharge of Noxious Liquid Substances

The discharge into the sea of any noxious liquid substance, and any other chemical or other substances, in quantities or concentrations that are harmful to the marine environment, shall be prohibited.

Article 5
Disposal of Garbage

1. The disposal into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets, and plastic garbage bags, shall be prohibited.

2. The disposal into the sea of all other garbage, including paper products, rags, glass, metal, bottles, crockery, incineration ash, dunnage, lining and packing materials, shall be prohibited.

3. The disposal into the sea of food wastes may be permitted when they have passed through a comminuter or grinder, provided that such disposal shall, except in cases permitted under Annex V of MARPOL 73/78, be made as far as practicable from land and ice shelves but in any case not less than 12 nautical miles from the nearest land or ice shelf. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 millimeters.

4. When a substance or material covered by this article is mixed with other such substance or material for discharge or disposal, having different disposal or discharge requirements, the most stringent disposal or discharge requirements shall apply.

5. The provisions of paragraphs 1 and 2 above shall not apply to:
(a) the escape of garbage resulting from damage to a ship or its equipment provided all reasonable precautions have been taken, before and after the occurrence of the damage, for the purpose of preventing or minimising the escape; or
(b) the accidental loss of synthetic fishing nets, provided all reasonable precautions have been taken to prevent such loss.

6. The Parties shall, where appropriate, require the use of garbage record books.

Article 6
Discharge of Sewage

1. Except where it would unduly impair Antarctic operations:
(a) each Party shall eliminate all discharge into the sea of untreated sewage ("sewage" being defined in Annex IV of MARPOL 73/78) within 12 nautical miles of land or ice shelves;
(b) beyond such distance, sewage stored in a holding tank shall not be discharged instantaneously but shall be discharged at a moderate rate and, where practicable, while the ship is en route at a speed of no less than 4 knots.

This paragraph does not apply to ships certified to carry not more than 10 persons.

2. The Parties shall, where appropriate, require the use of sewage record books.

Article 7
Cases of Emergency

1. Articles 3, 4, 5, and 6 of this Annex shall not apply in cases of emergency relating to the safety of a ship and those on board or saving life at sea.

2. Notice of activities undertaken in cases of emergency shall be circulated immediately to all Parties and to the Committee.
Article 8
Effect on Dependent and Associated Ecosystems

In implementing the provisions of this Annex, due consideration shall be given to the need to avoid detrimental effects on dependent and associated ecosystems, outside the Antarctic Treaty area.

Article 9
Ship Retention Capacity and Reception Facilities

1. Each Party shall undertake to ensure that all ships entitled to fly its flag and any other ship engaged in or supporting its Antarctic operations, before entering the Antarctic Treaty area, are fitted with a tank or tanks of sufficient capacity on board for the retention of all sludge, dirty ballast, tank washing water, other oily residues and mixtures, and have sufficient capacity on board for the retention of garbage, while operating in the Antarctic Treaty area and have concluded arrangements to discharge such oily residues and garbage at a reception facility after leaving that area. Ships shall also have sufficient capacity on board for the retention of noxious liquid substances.

2. Each Party at whose ports ships depart en route to or arrive from the Antarctic Treaty area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all sludge, dirty ballast, tank washing water, other oily residues and mixtures, and garbage from ships, without causing undue delay, and according to the needs of the ships using them.

3. Parties operating ships which depart to or arrive from the Antarctic Treaty area at ports of other Parties shall consult with those Parties with a view to ensuring that the establishment of port reception facilities does not place an inequitable burden on Parties adjacent to the Antarctic Treaty area.

Article 10
Design, Construction, Manning and Equipment of Sites

In the design, construction, manning and equipment of ships engaged in or supporting Antarctic operations, each Party shall take into account the objectives of this Annex.

Article 11
Sovereign Immunity

1. This Annex shall not apply to any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government non-commercial service. However, each Party shall ensure by the adoption of appropriate measures not impairing the operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable, with this Annex.

2. In applying paragraph 1 above, each Party shall take into account the importance of protecting the Antarctic environment.

3. Each Party shall inform the other Parties of how it implements this provision.

4. The dispute settlement procedure set out in Articles 18 to 20 of the Protocol shall not apply to this Article.

Article 12
Preventive Measures and Emergency Preparedness and Response

1. In order to respond more effectively to marine pollution emergencies or the threat thereof in the Antarctic Treaty area the Parties, in accordance with Article 15 of the Protocol, shall develop contingency plans for marine pollution response in the Antarctic Treaty area, including contingency plans for ships (other than small boats that are part of the operations of fixed sites or of ships) operating in the Antarctic Treaty area, particularly ships carrying oil as cargo and for oil spills originating from coastal installations, which enter into the marine environment. To this end they shall:

(a) co-operate in the formulation and implementation of such plans; and
(b) draw on the advice of the Committee, the International Maritime Organisation and other international organisations.

2. The Parties shall also establish procedures for co-operative response to pollution emergencies and shall take appropriate response actions in accordance with such procedures.
Article 13
Review

The Parties shall keep under continuous review the provisions of this Annex and other measures to prevent, reduce and respond to pollution of the Antarctic marine environment, including any amendments and new regulations adopted under MARPOL 73/78, with a view to achieving the objectives of this Annex.

Article 14
Relationship with MARPOL 73/78

With respect to those Parties which are also Parties to MARPOL 73/78, nothing in this Annex shall derogate from the specific rights and obligations thereunder.

Article 15
Amendment or Modification

1. This Annex may be amended or modified by a measure adopted in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the amendment or modification shall be deemed to have been approved, and shall become effective, one year after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Antarctic Treaty Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or that it is unable to approve the measure.

2. Any amendment or modification of this Annex which becomes effective in accordance with paragraph 1 above shall thereafter become effective as to any other Party when notice of approval by it has been received by the Depositary.
ANNEX V TO THE PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY

AREA PROTECTION AND MANAGEMENT

(Annex to recommendation XVI-10)

Article 1
Definitions

For the purposes of this Annex:

(a) "appropriate authority" means any person or agency authorised by a Party to issue permits under this Annex;
(b) "permit" means a formal permission in writing issued by an appropriate authority;
(c) "Management Plan" means a plan to manage the activities and protect the special value or values in an Antarctic Specially Protected Area or an Antarctic Specially Managed Area.

Article 2
Objectives

For the purposes set out in this Annex, any area, including any marine area, may be designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area. Activities in those areas shall be prohibited, restricted or managed in accordance with Management Plans adopted under the provisions of this Annex.

Article 3
Antarctic Specially Protected Areas

1. Any area, including any marine area, may be designated as an Antarctic Specially Protected Area to protect outstanding environmental, scientific, historic, aesthetic or wilderness values, any combination of those values, or ongoing or planned scientific research.

2. Parties shall seek to identify, within a systematic environmental-geographical framework, and to include in the series of Antarctic Specially Protected Areas:

(a) areas kept inviolate from human interference so that future comparisons may be possible with localities that have been affected by human activities;
(b) representative examples of major terrestrial, including glacial and aquatic, ecosystems and marine ecosystems;
(c) areas with important or unusual assemblages of species, including major colonies or breeding native birds or mammals;
(d) the type locality or only known habitat of any species;
(e) areas of particular interest to ongoing or planned scientific research;
(f) examples of outstanding geological, glaciological or geomorphological features;
(g) areas of outstanding aesthetic and wilderness value;
(h) sites or monuments of recognised historic value; and
(i) such other areas as may be appropriate to protect the values set out in paragraph 1 above.

3. Specially Protected Areas and Sites of Special Scientific Interest designated as such by past Antarctic Treaty Consultative Meetings are hereby designated as Antarctic Specially Protected Area and shall be renamed and renumbered accordingly.

4. Entry into an Antarctic Specially Protected Area shall be prohibited except in accordance with a permit issued under Article 7.

Article 4
Antarctic Specially Managed Areas

1. Any area, including any marine area, where activities are being conducted or may in the future be conducted, may be designated as an Antarctic Specially Managed Area to assist in the planning and co-ordination of activities, avoid possible conflicts, improve co-operation between Parties or minimise environmental impacts.

2. Antarctic Specially Managed Areas may include:

(a) areas where activities pose risks of mutual interference or cumulative environmental impacts; and
(b) sites or monuments of recognised historic value.
3. Entry into an Antarctic Specially Managed Area shall not require a permit.

4. Notwithstanding paragraph 3 above, an Antarctic Specially Managed Area may contain one or more Antarctic Specially Protected Areas, entry into which shall be prohibited except in accordance with a permit issued under Article 7.

Article 5
Management Plans

1. Any Party, the Committee, the Scientific Committee on Antarctic Research or the Commission for the Conservation of Antarctic Marine Living Resources may propose an area for designation as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area by submitting a proposed Management Plan to the Antarctic Treaty Consultative Meeting.

2. The area proposed for designation shall be of sufficient size to protect the values for which the special protection or management is required.

3. Proposed Management Plans shall include, as appropriate:

(a) a description of the value or values for which special protection or management is required;
(b) a statement of the aims and objectives of the Management Plan for the protection or management of those values;
(c) management activities which are to be undertaken to protect the values for which special protection or management is required;
(d) a period of designation, if any;
(e) a description of the area, including:
   (i) the geographical co-ordinates, boundary markers and natural features that delineate the area;
   (ii) access to the area by land, sea or air including marine approaches and anchorages, pedestrian and vehicular routes within the area, and aircraft routes and landing areas;
   (iii) the location of structures, including scientific stations, research or refuge facilities, both within the area and near to it; and
   (iv) the location in or near the area of other Antarctic Specially Protected Areas or Antarctic Specially Managed Areas designated under this Annex, or other protected areas designated in accordance with measures adopted under other components of the Antarctic Treaty System.

(f) the identification of zones within the area, in which activities are to be prohibited, restricted or managed for the purpose of achieving the aims and objectives referred to in subparagraph (b) above;
(g) maps and photographs that show clearly the boundary of the area in relation to surrounding features and key features within the area;
(h) supporting documentation;
(i) in respect of an area proposed for designation as an Antarctic Specially Protected Area, a clear description of the conditions under which permits may be granted by the appropriate authority regarding:
   (i) access to and movement within or over the area;
   (ii) activities which are or may be conducted within the area, including restrictions on time and place;
   (iii) the installation, modification, or removal of structures;
   (iv) the location of field camps;
   (v) restrictions on materials and organisms which may be brought into the area;
   (vi) the taking of or harmful interference with native flora and fauna;
   (vii) the collection or removal of anything not brought into the area by the permit-holder;
   (viii) the disposal of waste;
   (ix) measures that may be necessary to ensure that the aims and objectives of the Management Plan can continue to be met; and
   (x) requirements for reports to be made to the appropriate authority regarding visits to the area;
(j) in respect of an area proposed for designation as an Antarctic Specially Managed Area, a code of conduct regarding:
   (i) access to and movement within or over the area;
   (ii) activities which are or may be conducted within the area, including restrictions on time and place;
(iii) the installation, modification, or removal of structures;
(iv) the location of field camps;
(v) the taking of or harmful interference with native flora and fauna;
(vi) the collection or removal of anything not brought into the area by the visitor;
(vii) the disposal of waste; and
(viii) any requirements for reporting to be made to the appropriate authority regarding visits to the area; and

(k) provisions relating to the circumstances in which Parties should seek to exchange information in advance of activities which they propose to conduct.

Article 6 Designation Procedures

1. Proposed Management Plans shall be forwarded to the Committee, the Scientific Committee on Antarctic Research and, as appropriate, to the Commission for the Conservation of Antarctic Marine Living Resources. In formulating its advice to the Antarctic Treaty Consultative Meeting, the Committee shall take into account any comments provided by the Scientific Committee on Antarctic Research and, as appropriate, by the Commission for the Conservation of Antarctic Marine Living Resources. Thereafter Management Plans may be approved by the Antarctic Treaty Consultative Parties by a measure adopted at an Antarctic Treaty Consultative Meeting in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the Plan shall be deemed to have been approved 90 days after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or is unable to approve the measure.

2. Having regard to the provisions of Articles 4 and 5 of the Protocol, no marine area shall be designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area without the prior approval of the Commission for the Conservation of Antarctic Marine Living Resources.

3. Designation of an Antarctic Specially Protected Area or an Antarctic Specially Managed Area shall be for an indefinite period unless the Management Plan provides otherwise. A review of a Management Plan shall be initiated at least every five years. The Plan shall be updated as necessary.

4. Management Plans may be amended or revoked in accordance with paragraph 1 above.

5. Upon approval Management Plans shall be circulated promptly by the Depositary to all Parties. The Depositary shall maintain a record of all currently approved Management Plans.

Article 7 Permits

1. Each Party shall appoint an appropriate authority to issue permits to enter and engage in activities within an Antarctic Specially Protected Area in accordance with the requirements of the Management Plan relating to that Area. The permit shall be accompanied by the relevant sections of the Management Plan and shall specify the extent and location of the Area, the authorised activities and when, where and by whom the activities are authorised and any other conditions imposed by the Management Plan.

2. In the case of a Specially Protected Area designated as such by past Antarctic Treaty Consultative Meetings which does not have a Management Plan, the appropriate authority may issue a permit for a compelling scientific purpose which cannot be served elsewhere and which will not jeopardise the natural ecological system in that Area.

3. Each Party shall require a permit-holder to carry a copy of the permit while in the Antarctic Specially Protected Area concerned.

Article 8 Historic Sites and Monuments

1. Sites or monuments of recognised historic value which have been designated as Antarctic Specially Protected Areas or Antarctic Specially Managed Areas, or which are located within such Areas, shall be listed as Historic Sites and Monuments.

2. Any Party may propose a site or monument or recognised historic value which has not been designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area, or which is not located within such an Area, for listing as a Historic Site or Monument. The proposal for listing may be approved by the Antarctic Treaty Consultative
Parties by a measure adopted at an Antarctic Treaty Consultative Meeting in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the proposal shall be deemed to have been approved 90 days after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or is unable to approve the measure.

3. Existing Historic Sites and Monuments which have been listed as such by previous Antarctic Treaty Consultative Meetings shall be included in the list of Historic Sites and Monuments under this Article.

4. Listed Historic Sites and Monuments shall not be damaged, removed or destroyed.

5. The list of Historic Sites and Monuments may be amended in accordance with paragraph 2 above. The Depositary shall maintain a list of current Historic Sites and Monuments.

Article 9
Information and Publicity

1. With a view to ensuring that all persons visiting or proposing to visit Antarctica understand and observe the provisions of this Annex, each Party shall make available information setting forth, in particular:

(a) the location of Antarctic Specially Protected Areas and Antarctic Specially Managed Areas;
(b) listing and maps of those Areas;
(c) the Management Plans, including listings of prohibitions relevant to each Area;
(d) the location of Historic Sites and Monuments and any relevant prohibition or restriction.

2. Each Party shall ensure that the location and, if possible, the limits of Antarctic Specially Protected Areas, Antarctic Specially Managed Areas and Historic Sites and Monuments are shown on its topographic maps, hydrographic charts and in other relevant publications.

3. Parties shall co-operate to ensure that, where appropriate, the boundaries of Antarctic Specially Protected Areas, Antarctic Specially Managed Areas and Historic Sites and Monuments are suitably marked on the site.

Article 10
Exchange of Information

1. The Parties shall make arrangements for:

(a) collecting and exchanging records, including records of permits and reports of visits, including inspection visits, to Antarctic Specially Protected Areas and reports of inspection visits to Antarctic Specially Managed Areas;
(b) obtaining and exchanging information on any significant change or damage to any Antarctic Specially Managed Area, Antarctic Specially Protected Area or Historic Site or Monument; and
(c) establishing common forms in which records and information shall be submitted by Parties in accordance with paragraph 2 below.

2. Each Party shall inform the other Parties and the Committee before the end of November each year of the number and nature of permits issued under this Annex in the preceding period of 1st July to 30th June.

3. Each Party conducting, funding or authorising research or other activities in Antarctic Specially Protected Areas or Antarctic Specially Managed Areas shall maintain a record of such activities and in the annual exchange of information in accordance with the Treaty shall provide summary descriptions of the activities conducted by persons subject to its jurisdiction in such areas in the preceding year.

4. Each Party shall inform the other Parties and the Committee before the end of November each year of measures it has taken to implement this Annex, including any site inspections and any steps it has taken to address instances of activities in contravention of the provisions of the approved Management Plan for an Antarctic Specially Protected Area of Antarctic Specially Managed Area.

Article 11
Cases of Emergency

1. The restrictions laid down and authorised by this Annex shall not apply in cases of emergency involving safety of human life or of ships, aircraft, or equipment and facilities of high value or the protection of the environment.

2. Notice of activities undertaken in cases of emergency shall be circulated immediately to all Parties and to the Committee.
**Article 12**

**Amendment or Modification**

1. This Annex may be amended or modified by a measure adopted in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the amendment or modification shall be deemed to have been approved, and shall become effective, one year after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Antarctic Treaty Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or that it is unable to approve the measure.

2. Any amendment or modification of this Annex which becomes effective in accordance with paragraph 1 above shall thereafter become effective as to any other Party when notice of approval by it has been received by the Depositary.
Interviews

Many people were interviewed as participants or observers to the Antarctic issues discussed in this thesis. Those listed below include only active participants - government officials and non-governmental representatives. These interviews were conducted on a confidential basis and material gained through them has been used to support analysis and develop interpretations.

Vladimir Golitsyn, Senior Legal Officer, Special Assistant to the Under-Secretary General, United Nations, New York, 6 July 1989, 10 August 1989

Dr Robert Hofman, Scientific Program Director, US Marine Mammal Commission, Washington DC, 19 July 1989

Dale A Crane, Staff Director, Subcommittee on National Parks and Public Lands, US House of Representatives, Washington DC, 19 July 1989

Sue Sabella and Molly Evans, Greenpeace USA, Washington DC, 20 July 1989

Robin Tuttle, Foreign Affairs Officer, Office of International Affairs, National Marine and Fisheries Service, National Oceanic and Atmospheric Administration, US Department of Commerce, Silver Spring, Maryland, 21 July 1989

Michael Tillman, Senior Scientist for Fisheries, National Marine and Fisheries Service, National Oceanic and Atmospheric Administration, US Department of Commerce, Silver Spring, Maryland, 21 July 1989


Alfred N Fowler, Executive Secretary, Council of Managers of National Antarctic Programs, Washington DC, 24 July 1989


Jack Talmadge, Head, Polar Coordination and Information, Division of Polar Programs, National Science Foundation, Washington DC, 26 July 1989

Sherburne Abbott, Staff Director, Polar Research Board, National Research Council, Washington DC, 26 July 1989


Lee Kimball, World Resources Institute, Washington DC, 27 July 1989


Peter Zoller, Australian High Commission, London, 1 September 1989

John Heap, Head, Polar Regions Section, South America Department, Foreign and Commonwealth Office, London, 4 September 1989
Lena Hagelin, Antarctic Campaigner, Greenpeace International, Amsterdam, 13 September 1989

Danny Elder, Co-ordinator, Coastal and Marine Programme, IUCN, Gland, 15 September 1989

Peter Clarkson, Executive Secretary, SCAR, Cambridge, 3 October 1989

Nigel Bonner, British Antarctic Survey, 26 October 1989, (telephone interview)

Inigo Everson, Chair, Scientific Committee, CCAMLR, Cambridge, 27 September 1989

Alan Hemmings, NGO Representative, New Zealand Antarctic delegation, Auckland, 23 August 1988, December 1989

Catherine Wallace, Antarctic and Southern Ocean Coalition, Coromandel, New Zealand, 30 December 1989

Christopher Beeby, Deputy Secretary, Ministry of External Relations and Trade, Wellington, 10 January 1990

Brendon Doran, Antarctic Section, Department of Foreign Affairs and Trade, Canberra, 2 August 1991
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Explanatory Notes

The following notes provide a guide to the referencing system in the text of the thesis and the location of sources in the bibliography. Most of the notes here relate to primary sources.

Antarctic Treaty documents are listed by consultative meeting. They are numbered as on the original document and referenced in the text by document number and year of meeting.

Government documents are listed by country within each of the categories set out in the table of contents on the previous page. All United Nations documents are listed by document number in date order.

Material from non-governmental organisations is listed by organisation. The author of a NGO paper or report, if known, is included in square brackets in the bibliographic entry. Documents produced by Greenpeace offices are all listed under an entry for Greenpeace, in date order, regardless of which national office they came from. However, where the source is known (for example, Greenpeace Australia or Greenpeace International) that information is included in the bibliographic entry.

Non-governmental organisation journals such as ECO or Antarctic News (which are listed separately in the bibliography) are referenced in the text by the name of the journal, the number of the issue and the year (for example, ECO LXXI(1), 1989). The Campaigners Antarctic Notes are referenced in the text as CAN, with number of issue and year. Only those Notes cited in the text are specifically listed in the bibliography.

Entries for the Scientific Committee on Antarctic Research (SCAR) and the International Union for the Conservation of Nature (IUCN) are included in the non-government section of the primary sources part of the bibliography. Publications by national Antarctic operators, such as the National Science Foundation or the British Antarctic Survey, are listed with secondary source material.

There is a small section in the bibliography on newspapers. Those newspapers cited here refer to articles for which no author or title information is available. Where those details are available, the reference is included in the secondary source listing.

Books and articles are listed together in the secondary source section of the bibliography although material which relates to the theoretical framework of this thesis, developed in chapter one, is listed separately for ease of reference in what is a large bibliography.

Some authors will appear in more than one part of this bibliography. For example, Australian Prime Minister Hawke is listed in primary sources (for speeches, press releases etc) and in secondary sources (for published articles or chapters).

Where a document or publication is undated, but that date can be determined by context, it is included in the bibliographic entry in square brackets.
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