CHAPTER 3

THE ROAD TO MADRID AND BEYOND

Negotiating and Implementing The Protocol

"As we make our mark on more corners of the Earth, it is becoming ever more important to save what remains unspoilt. Even though most people will never have the opportunity of seeing for themselves the amazing ice formations, the vast penguin colonies or the awe-inspiring views of the mountains and glaciers of Antarctica, it is still a great consolation to know that somewhere on Earth there exists a whole continent that is an almost pristine wilderness."

Sir Peter Scott
The Greenpeace Book of Antarctica

THE ANTARCTIC TREATY SYSTEM

Antarctica, the last great wilderness on earth, is a continent of extremes. It is the coldest, highest, driest, windiest, remotest, and most desolate place on the planet. Yet despite these profoundly forbidding characteristics the Antarctic commons has attracted increasing political, economic, and diplomatic attention in recent years. This interest has been stimulated by the tremendous bounty of living marine resources, concern over ozone depletion and environmental degradation, and exaggerated public speculation about the potential of exploiting mineral wealth, especially hydrocarbons, on and around the continent. Antarctica is a continent without a tree, and with only two species of flowering plants. Being the coldest place on earth, Antarctica is a continent of extremes, often referred to as the 'frozen wasteland' or 'the largest desert in the world'. In view of these facts, Lee Kimball’s question seems relevant: "[Antarctica] is cold, harsh, distant, and near lifeless. Why should anyone care about this huge glacier squashing the primeval bedrock beneath its billions of tons of ice?"2

The answer lies in the fact that there is a huge amount of biological, historical and geographic interest in the unique environment of the isolated white continent, as well as many meteorological and astrological answers to be found in its surroundings. Several areas central to the great curiosity sparked by Antarctica are as follows.³

- The continent and the surrounding ocean support an enormous and active ecosystem made up of a number of separate but interrelated environments and a diversity of species.

- Much of our planet's history is preserved in the ice and bedrock.

- Antarctica is known as a 'clean laboratory' due to its purity. Coupled with its central place in the world's weather system, global atmospheric and temperature anomalies are likely to show up and be noticed first in Antarctica. Also currents generated in Antarctica influence ocean movement throughout the world.

- The possible existence of great mineral resources buried in the ice has also been a source of great interest.

The 1959 Antarctica Treaty froze existing territorial claims⁴ to the region. As no claims for territorial sovereignty can be lodged upon it, many have argued that this constitutes a significant step in Antarctica's status as a global commons. Indeed, during the 1980's people began to talk about Antarctica as one of the last three areas of the human environment to be known as the 'Global Commons'. The oceans and the global atmosphere are believed to be the other two areas which can not be claimed as the property of some state or group. With the 1991 mining moratorium over Antarctica, this general question of the area's territorial definition has been brought dramatically into a strictly environmental context.⁵

The environmental policy for Antarctic is unique in two ways:

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³ Refer to http://www.rechten.rug.nl/stai/ir/iel/papers2k/2k02.htm#N_2
⁴ Already discussed in the previous chapter. Also refer to the map in the beginning of the thesis for more elaborate understanding.
⁵ Al Gillespie, “Antarctica, Environmentalist's Victory or Hidden Agendas?” http://www.nottingham.ac.uk/~llzweb/TEXTAG.HTM
- It is primarily managed cooperatively by interested countries on the basis of international agreements;

- Policies are mainly proactive, seeking to address potential problems before they arise.\(^6\)

The absence of agreed national sovereignty has shaped the international regime. The area south of 60°S is subject to a form of international governance involving 44 States (1999) under the Antarctic treaty System, although other states have contested the propriety of this subset of the global community regulating, outside the UN system, what they assert is a global commons.

Since the first Antarctic Treaty Consultative Meeting (ATCM) in 1961, the parties have met frequently, now annually, to discuss issues as diverse as scientific cooperation, measures to protect the environment, and operational issues - decisions based on consensus. This process has allowed the Antarctic Treaty to evolve into a system with a number of components that meet the special needs of managing activities in the Antarctic, while protecting national interests. This regime is now known by the broader title of the Antarctic Treaty System\(^7\), which operates under the umbrella of the annual ATCM.

**COMPONENTS OF THE TREATY SYSTEM**

The treaty system has evolved through the years by adoption of various conventions, agreed measures and the Protocol.

**The Antarctic Treaty, 1961**

The framers of the Treaty intended to guarantee that "...Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of\(^8\)

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\(^7\) The term Antarctic Treaty System was codified by the Consultative Parties in 1979 at the ATCM in Washington in an international instrument Recommendation X – 1 of Antarctic Mineral Resources. The term ATS was acknowledged by UN in 1983 resolution of General Assembly on 'Question of Antarctica' (UNGA Res 38/77 of December 15, 1983 para 3 of the Preamble and Para 1 of the text). According to the 1991 Madrid Protocol, ATS means "the Antarctic Treaty, the measures in effect under the treaty, its associated separate international instruments in force and the measures in effect under those instruments" (Article 1 (e) of the Protocol)
international discord”. The treaty covers everything south of 60° S latitude, known as Antarctic Treaty Area (ATA). The salient features of this treaty are:

- The suspension of territorial claims
- The prohibition of all military activities, nuclear experiments and the use of territory for nuclear disposal
- The freedom of scientific investigation, with the sole exception of having to give notice of expeditions or the setting up of research bases
- International cooperation in scientific activities, with exchange of information and personnel

Even though military activities is prohibited, in most cases the military provides the logistic support to the scientists, which is specifically allowed. Another noteworthy goal, apart from preservation of the pristine continent, is the fostering of international cooperation in scientific research. Bilateral cooperation in research through joint programming and sharing of bases (e.g. Norway does not have a base on the continent, but conducts its research cooperatively with UK & US) has now become a normal practice.

Since entering into force on 23 June 1961, the Treaty has been recognised as one of the most successful international agreements. Problematic differences over territorial claims have been effectively set aside and as a disarmament regime it has been outstandingly successful. The Treaty parties remain firmly committed to a system that is still effective in protecting their essential Antarctic interests. Science is proceeding unhindered.

**Agreed Measures for the Conservation of Antarctic Fauna and Flora, 1964**

The Agreed Measures were adopted in 1964 to protect endemic and native wildlife and plants. The provisions include a requirement for permits to take or harm birds and seals, and rules to prevent the uncontrolled introduction of non-indigenous organisms. In addition, the measures provide for areas of outstanding ecological interest to be set aside
as a Specially Protected Area. Sites of Special Scientific Interest were later added to protect significant scientific values.

**Convention for the Conservation of Antarctic Seals, 1978**

The Seal Convention was developed to provide a means to regulate commercial sealing, should such an industry ever be resumed. Southern elephant seals and Antarctic fur seals had been reduced to near extinction in the 19th Century. Although there is no indication of any interest in sealing, the Convention provides for such activities to be undertaken sustainably. Some species of seals are totally protected, and catch limits are set for others.

**Convention on the Conservation of Antarctic Marine Living Resources, 1980**

CCAMLR was adopted in 1980 in response to fears that unregulated fishing for krill, one of the key species in the Antarctic marine food web, might adversely affect whales, seals, penguins and other species that directly or indirectly depend on krill for food. The Convention adopts an ‘ecosystem approach’ - it provides that krill and all the other living resources of the Southern Ocean are treated as an integrated system where effects on predator, prey and related species are considered and decisions on sustainable harvesting levels are made on the basis of sound scientific advice. Conservation Measures under CCAMLR establish protected species, set catch limits, identify fishing regions, regulate when fishing may occur and what fishing methods can be used, and establish fisheries inspection procedures.

**Convention on the Regulation of Antarctic Mineral Resources Activities, 1988**

CRAMRA was adopted in 1988 at Wellington, New Zealand in the form of a unique multinational minerals treaty. Yet within two years, the legal attraction and political support for that instrument among most Consultative Parties had substantially withered off. With growing environmental concerns there was a change in the stance of Australia, followed by France and New Zealand. And so CRAMRA was abandoned. Even though CRAMRA did not come into effect, yet it was significant in paving the way towards the Protocol (a comprehensive instrument) and substantially influenced the content of its several provisions, specially the 50 year ban on mining exploitation and activities.
The Protocol On Environmental Protection To The Antarctic Treaty, 1991

The Protocol was adopted in 1991 in response to proposals that the wide range of provisions relating to protection of the Antarctic environment should be harmonised in a comprehensive and legally binding form. It draws on and updates the Agreed Measures as well as subsequent Treaty meeting recommendations relating to protection of the environment.

The Protocol:

- designates Antarctica as a ‘natural reserve, devoted to peace and science’;
- establishes environmental principles to govern the conduct of all activities;
- prohibits mining;
- subjects all activities to prior assessment of their environmental impacts;
- provides for the Committee for Environmental Protection, established in 1998, to advise the ATCM;
- requires the development of contingency plans to respond to environmental emergencies, and
- provides for the elaboration of rules relating to liability for environmental damage.

The Protocol includes Annexes that detail obligations relating to:

Annex I: Environmental impact assessment - activities are assessed in the planning stage to identify their possible impact on the environment. If the impacts are likely to be more than minor or transitory, a Comprehensive Environment Evaluation must be prepared and opportunity provided for the Committee for Environmental Protection and other Consultative Parties to comment on it.

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8 This text was adopted at the Antarctic Treaty Consultative Meeting in Peru, May/June 1999, as an introduction to the Antarctic Treaty, particularly for intending visitors to the Antarctic (Introducing the Antarctic Treaty, http://www.antdiv.gov.au/information/treaty/treaty.asp

110
Annex II: Conservation of Antarctic Fauna and Flora - updates the existing rules relating to protection of animals and plants (requiring a permit for taking or interfering with them) and relating to the introduction of non-indigenous organisms.

Annex III: Waste disposal and waste management - this Annex specifies wastes that may be disposed of within the Antarctic Treaty area and wastes that must be removed. It also provides rules relating to the disposal of human waste and the use of incinerators. The Annex requires the development of waste management plans. Particularly harmful products such as PCBs, polystyrene packaging beads and pesticides are prohibited in the Antarctic.

Annex IV: Prevention of Marine Pollution - the discharge of potentially harmful substances from ships (including oily mixtures and garbage) is regulated, as is the disposal of ship-generated sewage. The Annex adopts practices broadly consistent with those applying in the relevant annexes of MARPOL. Disposal at sea of any plastics is prohibited.

Annex V: Management of Protected Areas - establishes an improved protected area system that integrates the previous categories of protected areas into Antarctic Specially Protected Areas (entry to which requires a permit) and Antarctic Specially Managed Areas. Management plans are required for both categories. The protected area system also provides for the designation of historic sites and monuments, which must not be damaged or removed.

THE DEVELOPMENT OF COMPREHENSIVE ENVIRONMENTAL PROTECTION FOR ANTARCTICA

Conservation of Antarctica, as a point of eminence was first raised at the inaugural Antarctic Treaty Consultative Parties (ATCP) meeting in Canberra in 1961. The British delegation called for the recognition of Antarctica as a 'nature reserve'. The Soviet delegation echoed a similar idea in 1964. However, the idea only started to gain credibility in 1972 at the Second World Conference on National Parks, and stated: "...unanimously recommended that the Antarctic continent and its surrounding seas be established as the first World park, under the auspices of the United Nations".
In 1975 New Zealand was the first member of the nations that make up the signatories to the Antarctic Treaty to propose that Antarctica be made into a World Park. It received no support at all from the other Consultative members, apart from Chile, and the matter was subsequently not included on the Agenda for the 1975 ATCP meeting. The former Prime Minister of New Zealand, Geoffrey Palmer, remarked in 1990: "One of the most significant features on the Antarctic policy is that when the New Zealand Government took the position when Labour was in power in 1975 that we wanted a World Park in Antarctica, nobody agreed with us. But NOBODY, ANYWHERE".9

Objections raised to the World Park concept were twofold. Some rejected it on the basis that it was inconsistent with their position on sovereignty. Others flatly rejected the possibility that the Antarctica minerals might not be utilised. The ideal of a World Park was re-examined in the World Conservation Strategy in 1980.10 The Strategy classified Antarctica as a global common, which, as such, should be a priority for international action. The 1981 International Union for the Conservation of Nature Assembly urged governments to give consideration to ascribing: "... to the Antarctic environment as a whole a designation which connotes worldwide its unique character and values and the special measures accorded to its planning, management and conservation".11 The 1982 World's National Parks Congress also considered Antarctica, resolving that: "The concept of a World Park and other appropriate designations should be developed more urgently."12

In Annexe 1 of the World Commission on Environment and Development report, a group of experts on environmental law have adopted a summary of proposed legal principles for environmental protection and sustainable development. Part I reads as follows:

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9 Lee Kimble, n. 2, p. 15
11 Refer to http://www.unep-wcmc.org/
"States shall conserve and use the environment and natural resources for the benefit of present and future generations..." 13

In 1987 the World Commission on Environment and Development urged, inter alia, that Antarctica's environment be protected by applying more stringent environmental standards. It also recognised that a truly international consensus on merging Antarctica's vast resources was needed:

"Such a consensus is the only way to prevent a tragic plundering of the silent continent, and to maintain Antarctica as a symbol of peaceful international co-operation and environmental protection." 14

Despite the World Commission and all the other 'pro-environmental' activity surrounding the Antarctic, the Consultative Parties refused to even consider the idea of a protected environmental wilderness. Yet on the 22nd of May 1989, the Australian government issued a statement:

"The Cabinet considered the question of the Antarctic environment at its meeting this morning and we have decided that we will not sign the Minerals Convention, but instead will pursue the urgent negotiation of the comprehensive environmental protection convention within the framework of the Antarctic Treaty system... the basic objective we want to achieve is no mining in Antarctica and to secure the establishment of an Antarctic Wilderness Park." 15

France and New Zealand

A few months later towards the end of 1989, the United Nations General Assembly passed Resolution 44/124B. The resolution stated that: "The establishment, though negotiations with the full participation of all members of the international community, of Antarctica as a nature reserve or a world park would ensure the protection and

14 Ibid.
conservation of its environment and its dependent and associated ecosystems for the benefit of all humanity".  

However, the signatories to the Antarctica Treaty, both those who were in favour of the idea of the World Park, and those who were against it refused to participate the vote. It thus became apparent that not everything was as straightforward as it seemed.

However, by December 1990, CRAMRA was effectively `dead in the water'. This in itself was quite remarkable for since 1982, the nations with the power to destroy the wilderness of Antarctica had mentally travelled a long way down the road to exploitation, and were now at the final barrier before legitimatising mining on the last true wilderness on Earth. Nevertheless today a majority of the Consultative Parties support the World Park proposal and have signed a moratorium to enforce that intent. As such: "The parties commit themselves to the comprehensive protection of the Antarctic environment and dependant and associated ecosystems and hereby designate Antarctica as a nature reserve, devoted to peace and science."

**PAVING THE WAY FOR A COMPREHENSIVE PROTECTION**

**Mineral Prospects**

The question of Antarctica's mineral prospects was first raised when coal was discovered and used by the British Antarctic Expeditions of 1907 and 1909. Since that time Antarctica's mineral potential has proved a continuing preoccupation for a number of countries. This interest grew in the 1940s and 1950s, right up to the original Treaty negotiations, where several delegates were expressing resource concerns.

The main scientific theory behind this is the Gondwanaland hypothesis which presents the view that all present day southern continents, including Antarctica once formed a single landmass called Gondwana. Because of this past relationship, it is argued that Antarctica should be closely related to in its current geological structure, its former neighbours, South Africa, South America, Australia and India. The logical extension of
this hypothesis is that, in theory, Antarctica should have resources similar to those areas.\textsuperscript{17}

Although there are no known commercially valuable deposits of either hydrocarbons or hard minerals, many scientists still believe that Antarctica may contain economically valuable mineral resources, such as coal, copper, chromate and platinum. However, despite the optimism that comes with the Gondawan hypothesis, there have not been substantial mineral deposits located, more so as an effect of ban on mining.

The situation is different in the case of oil and gas. As early as 1969, the governments of the United States, Australia and New Zealand were approached by commercial interests for prospecting rights in Antarctica. Applications for petroleum exploration were received by the New Zealand government, and date back to the early 1970's. Even though there is a moratorium upon prospecting for commercial exploration of resources before 1991, the searches go on under the guise of scientific research. Norway, Japan, Germany, Great Britain, France, Poland and the former Soviet Union are all believed to have engaged in mineral prospecting under this approach.

Between 1972 and 1973 United States research ships found the requisite concentrates to indicate hydrocarbon deposits. A United States geological survey now estimates that the Antarctic shelf may contain 45 billion barrels of petroleum and 115 trillion cubic feet of natural gas. Recently, the case of Lake Vostok\textsuperscript{18} has come under great speculation due to the prospects of mining under the guise of scientific explorations. The debate still continues in the Antarctic Treaty meetings.

A point to note on this mineral speculation is that for our analysis it remains just that. As Jacques Cousteau pointed out: "I have not been able to find any [mineral company] that would agree that they had plans [for Antarctica] although I'm not sure that they were ... frank".


\textsuperscript{18} Lake Vostok in Antarctica has spent 15 million years under four kilometers of ice and scientists believe it contains life –but ecologists fear drilling into it could destroy it. The 14,000 square kilometer body of water, 1,300 kilometers from the South Pole is one of the world's largest lakes. Its waters have been sealed from light and air for up to 35 million years under the huge pressure of the continental ice sheet. Reported in 'Hidden Polar Lake Faces Test', The Times of India, (New Delhi, March 25, 2002)
Something that is more soundly known is that, although the technology possibly exists now for the exploitation of Antarctica, the question of current commercial viability remains open. Lack of exact technological knowledge, logistical problems and currently prohibitive costs remain an impediment to the international desirability of what Antarctica holds within itself. At the present time it is believed that world prices available for the Antarctic minerals would have to rise considerably before it would be economically feasible to mine. As Blay pointed out:

"The general view is that, given the hostile Antarctic environment, it would take the discovery of exceptionally large deposits of mineral resources to make exploitation economically feasible and that even under the most favourable political, technical geological and economic assumptions, commercial oil development appears unlikely before the year 2020". 19

When CRAMRA20 was eventually concluded in 1988 there was some debate over whether conservation measures included within it were adequate to protect Antarctica from environmental damage caused by mining activities. The Australia/French decision in May 1989 not to sign CRAMRA, with the consequence that the Convention could not effectively enter into force, was the catalyst for a full-scale debate within the ATS and at international fora over whether a comprehensive environmental protection regime was necessary for Antarctica or if CRAMRA should continue to be supported.21 At ATCM XV in Paris during 1989 it seemed as if the ATCPs were seeking to keep their options open when they adopted Recommendations which called for both the convening of a Special ATM to consider the question of a comprehensive environmental protection regime for Antarctica while another meeting was to consider the development of detailed

liability provisions under CRAMRA. The adoption of the Protocol, with its outright prohibition on any "activity relating to mineral resources", brings to an end this debate at least for the duration of the Protocol. One potential difficulty though may be found in the exception contained within Article 7 of the Protocol that allows scientific research to continue on Antarctic mineral resources.

The Group of 77

Knowing that the original Antarctic Treaty of 1959 was coming under increasing scrutiny, the Treaty partners displayed an uncanny amount of co-operation in the working out of CRAMRA, particularly when one considers that it was created as 'a matter of urgency'.

At the time the original Treaty was negotiated, it was felt that the minerals issue was so controversial that the subject of mineral exploration and exploitation was ignored. If it had been pursued, it is believed that there would have been no Treaty at all. Even from 1959 to 1972, it had not been possible to discuss the subject of mineral exploration at any of the Consultative Meetings.

In 1992, Antarctica was due to be one of the topics at the United Nations Conference on Environment and Development. If a comprehensive regime for Antarctica had not been established by that time, then it may have been alleged that the Antarctic Treaty system was not functioning. If it was not, then this would support increasing international pressure from the Southern countries in the United Nations General Assembly, to insist on classifying Antarctica as the property of all nations, and not just a select few. And effectively raising the issue of sharing of exploits by all nations again.

Therefore, to prove that Antarctica Treaty was working, and with the intention of showing an orderly and uniform approach, in 1991, all the Consultative member nations adopted a policy of voluntary restraint on mineral exploitation and exploration. This view


23 Eventually this UNCED Conference was termed as the 'Earth Summit' also referred to as "Rio Summit" as it was held at Rio de Janeiro, Brazil in 1992.
coincided with paragraph 8 of the Antarctic Treaty Consultative Parties 1977 London meeting which stated, the ATCPs were to:

"urge their national and other states to refrain from all exploration and exploitation of Antarctica mineral resources while making progress towards the timely adoption of an agreed regime concerning Antarctic mineral resource activity."^24

Had the Consultative Parties not exhibited self-restraint, and, instead acted independently, it would have made the majority position within the United Nations all the more arguable. But after a number of years of 'mineral self-restraint', and six years of negotiations, CRAMRA appeared, which was of course disbanded later in early 1990 in favour of a 'comprehensive regime'.

Several countries over the past decade have been voicing their resentment towards the Antarctic Treaty system for claiming exclusive rights to make all-important decisions affecting scientific research, environmental protection and possible mineral exploitation. Trinidad and Tobago have argued that the search for a solution to the Antarctica question can: "No longer be left to a self-elected few". ^25

Fearing that the rest of the world was being left out of the picture, the Malaysian Prime Minister, Mohammed Mahathir declared to the United Nations General Assembly in 1982, that:

"The Antarctic Treaty...is an argument between a select group of countries that does not reflect the true feelings of the members of the United Nations...all the unclaimed wealth of the Earth must be regarded as the common heritage of all the nations of this planet...Antarctica does not legally belong to the discoverers, just as the colonial territories do not belong to the colonial powers. Like the seas and the sea-bed, these uninhabited lands belong to the international community. The countries now claiming them..." ^26

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^24 IXth ATCM, London 1977
^25 Al Gillespie, n.5
must give them up so that the United Nations can administer these lands or the present occupants can act as trustees for the nations of the world." 26

Or, as the Sri Lankan representative, Mr Jayasinghe argued in 1988,

"Our responsibility should be to ensure that Antarctica is managed in the interests of all mankind in a manner that conserves its unique environment, preserves its value for scientific research and restrains its character as a demilitarised, non-nuclear zone. Those interests can best be served only by the full participation of the international community, not by a few rich and technically advanced countries, self appointed to determine the future of the continent." 27

As it stands, both the 1959 Treaty and the 1988 CRAMRA convention invite universal participation, and claim to further the interests of the international community. In reality, however, limits on meaningful participation in the decision making bodies reveal that the Treaty System is based upon principles of territorial control. It was envisaged that the original membership of the Resource Commission will consist of those parties who were Antarctic Treaty consultative parties, and any other party engaged in 'substantial scientific, technical or environmental research directly relevant to decisions about the Antarctic mineral resource activities'. The inherent limitations on membership are obvious.

Many Southern nations wanted a broader international agreement for Antarctica - one that would allow participation by all nations of the world, and ensure that activities in Antarctica were carried out for the benefit of all humanity. This claim to international ownership was highlighted by the fact that Antarctica had no indigenous population.

The Common Heritage of Antarctica

(a) The Oceans and the wealth within them

The Group of 77 first used the concept of the 'common heritage of humankind' with regard to the 1982 Law of the Sea Convention. The Group's interpretation of 'common heritage of humanity' was now applied by it to Antarctica. Before going further, it is necessary to elaborate upon the Group's interpretation of this.

The intention of G-77 countries was to classify and treat the oceans and all that was within them as part of the 'common heritage' of humanity. This idea can be traced to Dr Pardo, the United Nations Ambassador from Malta, who in 1967 suggested that the deep seabed be regarded as the common heritage of humanity, and its wealth be used to foster economic progress of the world's poorer regions. He stated that, "The resources of the seabed and of the ocean are as great as the resources on the dry land. The seabed and the ocean floor are also of vital and increasing strategic importance. Present or clearly foreseeable technology permits the effective exploitation of virtually all of this area for military or economic purposes. Some countries may therefore be tempted to use their technical competence to achieve near unbreakable world dominance through predominant control over the seabed and the ocean floor...the process has already started and may lead to a competitive scramble for sovereign rights over land underlying the World's oceans and seas, surpassing in magnitude and in implication last century's colonial scramble for territory in Asia and Africa...the strong would get stronger, the rich richer..." He eventually went on to conclude that the only solution to avert catastrophe was for it to become the common heritage of all nations.

The Indonesian negotiator Hasjim Djalal remarked at the 1982 Law of the Sea conference: "It is no longer possible to regard the seabed resources as free for all under the disguise of freedom of the seas. In fact, it has never been regarded as such...To contend that the principles of the common heritage of mankind permit the exploitation of the deep seabed only by those who are capable of exploiting it is, to say the least, illogical and unjust. Such a contention would lead to the colonisation of the international..." 28

28 This concept was formulated in the principles of the Maltese explanatory Memorandum of August 17, 1967, UN doc. A/6695.
seabed and its resources solely by those who currently have the technology, financial capacity and organisational ability to do so. This interpretation would obviously only benefit private companies and industrialised countries, thereby making a mockery of the principle of common heritage of mankind.  

In working terms, this meant that all nations should receive the wealth of the commons, not just those with sufficient capital to extract it and monopolise it for themselves. The Malaysian Prime Minister said at the United Nations in 1982:

"The days when the rich nations of the world can take for themselves whatever territory and resources they have access to are over. Henceforth, all the unclaimed wealth of the Earth must be regarded as the common heritage of all the nations of this planet".  

In essence, this advocates the redistribution of the world's wealth. This form of international socialism would have given an unprecedented power to redistribute wealth to the world community, without direct reference to the capital input of the mining nation. This proposal was also backed up by a distrust of capitalist multinational corporations, and a fear that if the minerals and other materials from the seabed were not strictly controlled then the developing countries could suffer a severe decline in price for their products.

(b) Antarctica

It was this basic outline and interpretation of 'common heritage' that was now being applied to Antarctica by the Southern nations. However, it should be noted that the idea of a common heritage in modern terms of Antarctica actually predates a common heritage of the oceans and all their resources. For example, the idea of Antarctica as a form of common heritage can be traced back to 1910, T. Balch in the American Journal of International Law suggested that Antarctica should: "Become common possessions of all the family of nations"

This ideal was championed by India in 1956 at the United Nations, who suggested that the continent be used for peaceful purposes and for general welfare for all. This proposal

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30 UN doc. A/CONF.62.PV.189. P. 81-82
was more focused in 1975 when Sri Lanka argued that Antarctica should come within the ambit of the Third Law of the Sea Conference. By implication this meant that Antarctica should become part of the new international economic order which the Sri Lankan representative described as: "widely accepted ideas and concepts relating to international co-operation with their special stress on the principle of equitable sharing of the world's resources". 31

However, all three of these proposals took time to evolve and mature, as each was cut back at the initial time of its proposition. The increasing pressure from the United Nations provided a degree of cohesion among the Consultative parties, frightened them into beginning serious mineral negotiations. The Indian representative stated that:

"The Consultative Parties began to fear that if they did not address the mineral issue, the international community might make it more difficult for them to control Antarctic policy. CRAMRA was negotiated in this political climate." 32

The Group of 77 came to argue that the United Nations should govern Antarctica according to a one-nation one-vote organisation. If this happened then Antarctica would truly be as the common property of all nations, although not necessarily as a World Park.

The ideal of the 'global commons of the oceans', from a Third World perspective, involved profit sharing and redistribution for the benefit of the entire world. However, it is worth noting that the factual bases for a common heritage of Antarctica and that of the Oceans are different. Nevertheless, the same principles may be prima facie inferred for a 'global commons of Antarctica' as put forward from a G-77 perspective. As it stood, CRAMRA, did not require Operators to share profits from mineral resource development, and did not provide any form of direct financial benefit for either parties or non-parties.

Such perspectives, from either the Consultative Members of the G-77 do not seem readily identifiable with environmental considerations. Indeed, with a country like Malaysia being one of the most vocal on this issue, hopes of environmental protection could not

31 UNCLOS, IIIrd Conference, 1984; UN doc. A/37/PV.10,
32 See 1987 UNGA resolution 42/46 on the 'Question of Antarctica'; also statement issued on 8 June 1988 by Antigua and Barbuda, Bangladesh, Brunei, Darussalam, Cameroon, the Congo (siss.), Ghana, Indonesia, Kenya, Malaysia, Nepal, Nigeria, Oman, Pakistan, Rwanda, Sri Lanka, Sudan, Uganda, Zambia and Zimbabwe, supported the concerns voiced by India.
have been overtly high. Malaysia, with its deforestation record, is not renowned for its preservationist stand on international environmental issues. For example, Malaysia had stated at the United Nations in 1985:

"We wish to see a system of management that... would make it more possible for the relevant international agencies to be more directly involved and which would ensure the fruits of the exploitation of its resources could be shared more equitably". 33

However within a few years, the substance of the debate put forward by the G-77 shifted, with a much greater prominence given to the environment. This was confirmed with the United Nations 1989 Resolution, calling for a World Park or Nature Reserve, for the benefit of all humanity. This helped reduce fears that the Third World’s interest in Antarctica was purely for exploitative purposes.

By the end of 1983, the General Assembly called for the United Nations Secretary General to prepare a comprehensive, factual and objective study of all aspects of Antarctica, taking into account the Antarctic Treaty System and other relevant factors. In 1988 Malaysia introduced a resolution which reaffirmed the role that the Secretary General and all state members of the United Nations should play in the conduct of the minerals negotiations, which, it said should be in accordance with the United Nations Charter.

Australia voiced its concerns by claiming that any such international mandate would introduce uncertainty and possible instability into a region that had demonstrated international harmony; that the scientific research was for all humanity; and that the Antarctica Treaty was open to all to join. However, more than rhetoric was required to counter the voting muscle of the G-77, which by 1985 had achieved considerable mandate to pass and enforce resolutions.

33 Pursuant to the UNGA Resolution 40/156 A of 16 December 1985.
Consequently, the Antarctic Treaty nations boycotted the item on Antarctica on the agenda of the United Nations General Assembly, unless and until 'consensus is restored'. The result was, that the 1985 session adopted three resolutions. **Resolution 40/165 A** requested the U.N. Secretary General to produce an updated and expanded study on the 'Questions of Antarctica'. This was adopted with 96 in favour, none against, 11 formal abstentions, with 41 nations having announced that they were not participating in the vote. The boycotting nations consisted of the Antarctic Treaty Consultative Parties and their immediate allies (such as Afghanistan - then controlled by the USSR - and Israel). Such a large boycott was rare in UN history, perhaps even unprecedented". Similar voting patterns followed on all subsequent 'Question over Antarctica' in the 1987, 1988 and 1989 United Nations General Assembly sessions.

However, the former Prime Minister of New Zealand, Geoffrey Palmer aptly explained at the time: "The words 'World Park' are in our White Paper. We have always been for a park in Antarctica, to make it a sort of wilderness area so that it is preserved. We have always been for that, however, through the United Nations. We want to have it under the Antarctic Treaty, that is the important part...the United Nations park proposals. We don't want to get into that".34

The confusion which came about from the usage of the term 'World Park' soon resulted in the adoption of the term 'Antarctic Wilderness Reserve' as an alternative. This was a device to remove the confusion over the term 'World Park' and to clearly show that the ambit within which Antarctica was to be protected, was one set out by the members of the original Antarctic Treaty. At no stage did the proposals put forward by Australia or France mention the possibility that those nations which had land claims to particular areas of Antarctica maybe required to relinquish those claims. Indeed, the nomenclature 'Antarctic Wilderness Reserve' seems an attempt to dispel any notion that such a requirement would exist.

The official reason given for keeping the 1959 treaty was that it was a model of international co-operation. It contained 'protections' which already provided a certain amount of protection and 'common sense' suggests that it would be easier to build on a

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treaty that already existed. The 'common sense' argument referred to the relative success of the demilitarisation of the area and the scientific co-operation of the previous thirty years. It did not refer to the inequitable basis of the Antarctic Regime.

Philip Woollaston, the New Zealand Conservation Minister of the period, continued: "But much more seriously, a separate, parallel, competing convention would put at risk the Antarctic Treaty itself". 35

Thus the objection to the U.N. resolution 44/124 B calling for a World Park with full participation of all members of the United Nations, was out rightly rejected by the Treaty members who instead bickered over finer points of the 'closed' protection plans put forward by France and Australia.

Consequently, the Consultative Parties did not, and have not wanted the United Nations to assert any influence over the region, and objected to any proposal that Antarctica should fall under the mandate of the United Nations.

(c) Awakening of the Environmentalist Forum

At the time, the original mining proposals for Antarctica had generated great criticism from environmentalists and the public at large when 'green' issues were riding high on the public conscience. Only months before the Exxon Valdez had (again) exposed the world to the possibilities of large-scale environmental havoc. This was also at the time of the high media profile of the ozone hole and Greenhouse warming. Thus, as Waller believed "The one consideration most responsible for eroding state support for the proposed mineral regime is the growing international concern for the environment".

Australia's opposition to the Antarctic Mineral Convention coincided with state elections. Green Party members were being elected in various states and were holding the balance of power. Earlier, in 1987 the Labour Party's electoral victory was attributed to the 'green vote' after environmental groups called on their members to support Labour. Also the Australian government was in current disrepute over its own record with the logging of...

the Tasmanian rainforests. Consequently the Government must have been looking for ways to improve its standing on environmental issues.

France another claimant, declared in June 1989 that it would join Australia in not signing CRAMRA. The impetus for the French action stemmed largely from the pervasive green politics in France, as well as from public pressure generated by the famous ocean explorer Jacques Cousteau. In August, the Prime Ministers of Australia and France announced a joint initiative to promote the protection of the Antarctic environment. Indeed, the 'Green vote' was prominent. As the newspapers recorded

"France withdraws support from the Minerals Convention, hoping to placate the state's environmental lobby".

This was also the time when Environmental NGOs started putting Antarctic on their agenda for future action on its protection and preservation. Environmental NGOs have played crucial role in developing and shaping public opinion on issues that might prove harmful for the Antarctic environment. The role of ASOC, UNEP and IMO can best be summarised by the fact that they have been accorded the position of ‘Observer Status’ in the ATCMs. NGOs like Greenpeace were actively involved in the collapse of CRAMRA, demonstrating in Canberra against the Mineral regime in 1988. ASOC is playing a crucial role in monitoring the emerging issues of Liability and Tourism at the ATCMs and regularly submits Information Papers as to the implementation of the Protocol by Consultative Parties. Therefore, the Antarctic Treaty System is not just in the realm of Consultative Parties, or G77 or UN mandate but draws considerable attention of the non-state actors as well.

**THE MORATORIUM On Antarctic Mining**

To date, not only have the majority of the Southern nations of the world been kept out of Antarctica, but the minerals regime has also been sealed up and put to one side. It may be

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noted that the countries advocating a ban on mining were not unanimous in their approach. Australia (who in 1982 preferred a minerals regime to a world park) and France, lead a group of 10 out of 20 nations who supported a permanent ban on mineral exploitation. Bob Hawke, the former Australian Prime Minister set out his government's opposition to the Treaty: "The most urgent and relevant action we can take is to ensure that this irreplaceable environment is never put at risk by mining. That is why Australia has decided not to sign the Minerals Convention. This proposition is based on two simple propositions. First, the Antarctic environment is extremely fragile and critically important to the whole global ecosystem. Second, mining in Antarctica will always be dangerous, and could be catastrophically so. In light of these propositions, we are convinced that the Minerals Convention is basically flawed. It is based on the incorrect assumption - that mining in the Antarctic could be consistent with the preservation of the continent's fragile environment". 38

New Zealand soon changed its position, from supporting to abstaining the mineral regime, after some strong criticism of the Australian and French position, classifying it as unachieveably utopian, and stating that CRAMRA provided total and timeless protection for Antarctica.

Japan 39 made its position quite clear, stating that it prefers a system of open access to Antarctica with a special status attached to the Consultative Parties. As it was the Japanese were ardent opponents of the much weaker CRAMRA, which they viewed as imposing "undue burdensome consideration of undefined environmental concerns and potential impacts prior to any prospecting or exploration activities". The Japanese did not want their access impeded. Any further ideals of world parks, or Antarctica becoming realised as 'Common Heritage of Mankind' were 'strongly opposed'. Consequently Japan remained one of the most outspoken defenders of the Minerals regime.


Traditionally, the United States has been the strongest proponent of the 'open door' policy. In 1975 it demanded non-discriminatory, guaranteed access for exploitation purposes to any part of the Antarctic, except specially protected areas - it should be remembered that the 1959 Treaty itself does not prohibit mining. In the past, United States enthusiasm for exploiting Antarctica has been strong enough to shake the nation's support of the Antarctic Treaty and the principle of joint management of the area. Until, and throughout the CRAMRA negotiations, it was said that the United States, and Brazil, wanted access for their mining companies. Previous public records show that: "The present administration in Washington would be unwilling to take any step which directly reduced the freedom of American companies to go where they wanted in Antarctica and to do whatever appeared to be commercially attractive... or which compelled the United States government to consult with other parties before licensing mineral exploration of exploitation... Any type of profit sharing or joint consultation is doubtful, and... The most promising future for Antarctica, like Alaska, lies in mineral concessions to American pioneer prospectors". 40

The British took a more diplomatic line. The head of the British delegation said: "The British government is of the view that the Antarctic continent is so vast that it would not be wise to give up the chance of extracting increasingly rare minerals at some future date". Nevertheless, the British had introduced a way to get around the developing impasse with the idea of a moratorium with the idea implicit in the phrase 'some future date'. The United States, the United Kingdom and Norway were all satisfied with this idea, rather than a complete and permanent ban on mining. Only Japan wanted to revive CRAMRA, although Chile was also interested in a 'clean' Antarctica, which was at the same time both open and useful to humanity. Thus, although there was a consensus to protect Antarctica, there were differing approaches as to the method to be employed.

In the end a compromise was reached. On the one hand a series of strong environmental protection measures were achieved. Article 7 of the 1991 Madrid Protocol states:

40 Ibid.
"Any activity relating to mineral resources, other than scientific research, shall be prohibited".\(^{41}\)

The overall effectiveness of these measures has been inherently undermined by the reiteration of sovereignty and the possibly limited duration of the Protocol. At the eleventh hour, the United States refused to sign the Protocol, unless a 'walkway' clause was written in. This allows any signatory to drop out of the protocol when it comes up for review again in 2041. The other sections of the protocol required a 75% approval of the Treaty nations to reserve the ban in 2041. Now after the 50-year period, regardless of the unanimity on the lifting of the moratorium, any state party is allowed to opt out of the agreement if so desired. Thus, as Article 25 (5) (B) states, "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 withdraw from the Protocol".

This overall situation is a compromise ban in two ways: firstly it placates the environmental and industrial lobbies; secondly, it is based on the optimistic principle that by 2041 humanity will have found energy sources other than fossil fuels and other mineral supplies. However, if this does not prove to be the case, then, as Holzhauer reports:

"that the Protocol is only as binding as its signatories allow it to be...a nation faced with a future energy collapse unless it can find new sources will present problems...how many people are going to worry about a couple of million penguins and some acres of prehistoric snow and ice - no matter how pretty and virginal when confronted with the total collapse of international order as they know it... the British Petroleum Statistical Review of World Energy reports that U.S. reserves will last just 10 years...".

Indeed it must be remembered that it was in the light of the oil crisis of the 1970s that serious interests were first expressed in the mineral potential of the continent. Japan, which is also dependent on imports for more than 80% of its natural resources, naturally looks elsewhere for its supplies. In particular, Japan views Antarctica as a potential

\(^{41}\) Refer to the text of the Madrid Protocol.
reservoir of substantial amounts of minerals. Consequently, given the magnitude of Japanese interest in Antarctica, "If minerals or oil are discoverable in exploitable quantities, Japan will wish to be among the first generation of exploiters and therefore, will be a force to be reckoned with in Antarctica".

Herber concluded that for this reason any effective environmental protection for Antarctica was doomed. He emphasised the continuing scarcity of world resources and the continual search by states for new sources of mineral wealth to exploit:

"This has always been the case in world history and there is no reason to believe it will change now. Furthermore, it seems reasonable to assume that as ever improving technology will eventually make the development of Antarctic oil and other minerals 'cost feasible'... It is predicted here that despite the theoretical strength of international collective consumption arguments for the use of Antarctica as a World Park, the thirst of the industrial world, both East and West, for more resources and the revenues which they generate will prevail".

THE COMMONWEALTH OF SCIENCE AND COOPERATION

Harry Kind has employed the phrase 'the Commonwealth of Science' to describe the practical nature of international scientific cooperation in Antarctica, which has served to bring together scientists and governments from a diverse range of countries, thereby enhancing the quality of the overall research contribution, promoting international understanding, and perhaps defusing, even removing, sovereignty problems.

The Antarctic treaty powers have employed the treaty as a framework for a range of scientific research conducted upon both national and international basis in such spheres as the earth sciences, glaciology, atmospheric sciences, and the marine sciences, and performed by, or organised under the auspices of, such bodies as the BAS, the National Science Foundation in the USA and the Department of Ocean Development in India. There exist varying levels of government involvement and control in such aspects as the organisation of research and the provision of logistical support through bases, ships and aircraft.
Article 3 of the Treaty states that:

"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."

Approximately 29 nations, all signatory to the Antarctic Treaty, send personnel to perform seasonal (summer) and year-round research on the continent and in its surrounding oceans, the population of persons doing and supporting science on the continent and its nearby islands south of 60 degrees south latitude (the region covered by the Antarctic Treaty) varies from approximately 4,000 in summer to 1,000 in winter, in addition, approximately 1,000 personnel including ship's crew and scientists doing onboard research are present in the waters of the treaty region.42

Article 6 of Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol)43 on "Cooperation" states that:

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42 Information from NSF Polar Programme office website. Summer (January) population - 3,687 total: Argentina 302, Australia 201, Belgium 13, Brazil 80, Bulgaria 16, Chile 352, China 70, Finland 11, France 100, Germany 51, India 60, Italy 106, Japan 136, South Korea 14, Netherlands 10, NZ 60, Norway 40, Peru 28, Poland 70, Russia 254, South Africa 80, Spain 43, Sweden 20, UK 192, US 1,378 (1998-99); Winter (July) population - 964 total; Argentina 165, Australia 75, Brazil 12, Chile 129, China 33, France 33, Germany 9, India 25, Japan 40, South Korea 14, NZ 10, Poland 20, Russia 102, South Africa 10, UK 39, US 248 (1998-99). Year-round stations - 42 total; Argentina 6, Australia 4, Brazil 1, Chile 4, China 2, Finland 1, France 1, Germany 1, India 1, Italy 1, Japan 1, South Korea 1, NZ 1, Norway 1, Poland 1, Russia 6, South Africa 1, Spain 1, Ukraine 1, UK 2, US 3, Uruguay 1 (1998-99); Summer-only stations - 32 total; Argentina 3, Australia 4, Bulgaria 1, Chile 7, Germany 1, India 1, Japan 3, NZ 1, Peru 1, Russia 3, Sweden 2, UK 5 (1998-99); in addition, during the austral summer some nations have numerous occupied locations such as tent camps, summer-long temporary facilities, and mobile traverses in support of research (July 2001 est.)

43 Refer to the Text of the Protocol.
1. "The Parties shall cooperate in the planning and conduct of activities in the Antarctic Treaty area. To this end, each Party shall endeavour to:

(a) promote cooperative programs 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 station 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."

International scientific links are fostered through SCAR - its role will be examined in a subsequent chapter - as well as through a range of formal and informal links conducted
through such bodies as the World Meteorological Organisation. In fact, international cooperation embraces not only research programmes but also logistics, such as evidenced by New Zealand's use of American support facilities or by Chilean air collaboration for BAS cartography. Naturally, scientists place emphasis upon the extent and utility of their research and cooperation, along with the desire to preserve the treaty in order to continue such activities.

The political benefits of such cooperative trends are difficult to quantify, but they have been significant, especially as political necessities contributed to the dedication of Antarctica to science. Maish's references to 'the scientist-diplomats' implied an appreciation of the inter-connection of science and politics, such as in terms of exerting a moderating and harmonizing effect upon international relationships and significantly scientific cooperation in Antarctica— for example, between the Soviet Union and the USA or between Argentina and the UK has proceeded in spite of their divisions in other parts of the world. There is also the hope that the experience of practical cooperation in Antarctica might exert significant political effects beyond the treaty area, although it remains difficult to assess the impact of Soviet-American cooperation in the sphere of Antarctic science upon their wider global relationship. One problem looming on the horizon of the Antarctic Treaty System concerns the detention of 'scientific investigation' as allowed and promoted by Articles II and III. In fact, like many issues, the matter was raised at the preparatory.

In practice, it is often difficult, if not impossible, to separate pure from applied research, especially as certain kinds of research in the earth and marine sciences possess a clear relevance in respect to resources; for example, the borderline between 'scientific investigation' this is permitted and encouraged by the treaty and resources exploration this is subject either to the provisions of CCAMLR or to the mineral exploration moratorium proves rather vague and confused, and has led to criticism of certain governments for using the cover of 'research' for exploration. Thus, work in the earth sciences can contribute to a more accurate picture of Antarctic geology, but the results may serve also to provide a more information assessment of the location and extent of minerals. The difficulties are accentuated by the fact that at times of fiscal stringency there is even more pressure upon scientists to demonstrate to their government
The growth in the number of membership to the Antarctic Treaty System

Source: National Science Foundation, United States, 1999
paymasters the practical utility of their works, especially as politicians tend to be more impressed by the results of applied rather than of fundamental research.

The alleged 'good' of science in Antarctica must be balanced against environmental factors, since even the scientific use of the continent poses environmental risks, such as through the effects of refuse and sewage around bases, of excessive disturbance in heavily-researched locations, and even the alleged visual 'pollution' caused by base structures.

Therefore, Antarctic science programmes embrace a diverse range of disciplines and occur in both national and international frameworks. It is impossible to cover all the possibilities, but it is worth pointing to a further cooperative aspect, which derives from the manner in which the more expertise of particular value to new comers. As a result, entrants into the sphere of Antarctic research have relied extensively upon this advice on such matters as costing, the design of base stations and of research programmes, and the form of logistical support. In general, the formal commencement of Antarctic research programmes by newcomers has often been preceded by the appointment of scientists to the base stations of existing treaty powers.

NEGOTIATING THE PROTOCOL

The conclusion of the Protocol resulted from negotiations during the Eleventh Antarctic Treaty Special Consultative Meeting among the Antarctic Treaty Consultative Parties - Argentina, Australia, Belgium, Brazil, Chile, China; Ecuador, Finland, France, Germany, India, Italy, Japan, Republic of Korea, Netherlands, New Zealand, Norway, Peru, Poland, South Africa, Spain, Sweden, the Soviet Union, the United Kingdom, the United States and Uruguay.

Fourteen Contracting Parties which are not Consultative Parties - Austria, Bulgaria, Canada, Colombia, Czechoslovakia, Cuba, Denmark, Greece, Guatemala, Hungary, Democratic People's Republic of Korea, Papua New Guinea, Romania and Switzerland, as well as representatives of a number of international organizations, attended as observers.
The Special Consultative Meeting, convened pursuant to a recommendation adopted in Paris in October, 1989, had as general terms of reference the "further elaboration, maintenance and effective implementation of a comprehensive system for the protection of the Antarctic environment." The first session of the Special Consultative Meeting took place in Vina del Mar, Chile, November 19-December 6, 1990; and the second in Madrid, April 22-30, June 17-22, and October 3-4, 1991.

The Protocol, including the annexes on environmental impact assessment, conservation of Antarctic fauna and flora, waste disposal and waste management, and prevention of marine pollution, was adopted by consensus of the twenty-six Antarctic Treaty Consultative Parties. The Protocol was opened for signature on October 4 in Madrid and, thereafter, in Washington until October 3, 1992. All 26 of the Antarctic Treaty Consultative Parties, including the United States, signed the Protocol during that period, along with ten of the Contracting Parties that are not Consultative Parties.

It was decided that the Protocol would enter into force thirty days following the ratification of all Consultative Parties to the Antarctic Treaty. At the signing ceremony on October 4, 1991, 23 of the 26 Consultative Parties signed the Protocol. Japan, India, and South Korea did not immediately sign because their delegations did not have authorization from their governments. Eight other non-consultative treaty nations also signed the Protocol. The Consultative Parties that signed the Protocol, thereby initiating their formal commitment to ratify it, were the United States, Argentina, Australia, Belgium, Brazil, Chile, China, Ecuador, Finland, France, Germany, Italy, the Netherlands, New Zealand, Norway, Peru, Poland, South Africa, Spain, Sweden, the U.S.S.R. (Russia), the United Kingdom, and Uruguay.

On 15 December 1997 Japan, as the last Consultative Party, ratified the Protocol. Consequently the Protocol entered into force on 14 January 1998. From the day the Protocol entered into force, no Non-Consultative Party may become a full Antarctic Consultative Party unless it has ratified the Environmental Protocol. Annex V on Area Protection and Management will enter into force on the date on which that Annex has

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been approved by all Antarctic Treaty Consultative Parties. The Protocol concluded in Madrid on October 4, 1991, builds upon the Antarctic Treaty to extend and improve the Treaty's effectiveness as a mechanism for ensuring the protection of the Antarctic environment.

The Environmental Protocol was negotiated in haste, and to a larger extent, the provisions were taken over from previous recommendations adopted earlier. Even some of the Protocol's basic environmental principles came from CRAMRA - the very instrument the Protocol has suspended. But the Protocol did bring about new regulations into the Antarctic Treaty System by the fact that:

(i) the Protocol approached the protection of the Antarctic environment in a comprehensive manner;

(ii) the Protocol 'codified' the existing recommendations into a legally binding instrument;

(iii) the Protocol provided for the establishment of a new institution within the Antarctic Treaty System, the Committee for Environmental Protection (CEP), that became operative in 1998 - with the coming into effect of the Protocol

(iv) the Protocol supplements the Antarctic Treaty and neither modifies nor amends the Treaty Article IV (I). Consistency with other components of the Antarctic Treaty System is the subject of a special provision, Article V (in the Madrid Protocol).

Environmental Principles imbedded in the Environmental Protocol

Protection of the Antarctic environment is to be fundamental considerations in the planning and conduct of all human activities in Antarctica. This includes protection of its intrinsic value (including wilderness and aesthetic values) and its value as an area for the conduct of scientific research (especially research essential to understanding the global
environment) With this aim, all activities are to be planned and conducted so as to avoid: 47

- adverse effects on climate or weather patterns
- significant adverse effects on air or water quality
- significant changes in the atmospheric, terrestrial (including aquatic), 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
- degradation of, or substantial risk to, areas of biological, scientific, historic, aesthetic or wilderness significance

The environmental principles in the Protocol also include requirements for:

- prior assessment of the environmental impacts of all activities
- regular and effective monitoring to assess predicted impacts and to detect unforeseen impacts.

Through the Protocol the Parties have agreed to prohibit any mineral resources activities for the next 50 years.

ANNEXES TO THE PROTOCOL

An outstanding feature of the Protocol is the annexes. The Annexes form an integral part of the Protocol and additional annexes may be adopted in accordance with the provisions of Article IX of the Antarctic Treaty. In the initial version agreed to in October 1991 there were four annexes while at ATM XVI a fifth Annex was added. Additional annexes as agreed to from time to time will initially take the form of Recommendations agreed to.


137
at ATMs. It is interesting to note that given the importance attached to the role of the annexes in the Protocol, with the Protocol merely being a framework instrument under which various Annexes can be developed\(^{48}\) to deal with environmental issues as they arise, that additional annexes can be adopted simply by consensus at ATMs. This should be contrasted with the stricter modification or amendment procedures of the Protocol, which by adopting the mechanism of Article XII of the Antarctic Treaty, will require unanimous agreement before acceptance.\(^{49}\)

The Protocol includes Annexes that detail obligations relating to\(^{50}\) that have been drawn up are:

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<th>Annex</th>
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<td>I</td>
<td>Environmental Impact Assessment</td>
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<td>II</td>
<td>Conservation of Antarctic Fauna and Flora</td>
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<td>III</td>
<td>Waste Disposal and Waste Management</td>
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<td>IV</td>
<td>Prevention of Marine Pollution</td>
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<td>V</td>
<td>Area Protection and Management</td>
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The first four annexes form an integral part of the Protocol. Of the five annexes, Annex I is perhaps the most significant at present as it creates the procedure for EIA. Article 3 of the Annex provides for a comprehensive environmental evaluation of proposed activities under the EIA process. This results in a determination being made on whether the proposed activity proceeds, or, if the proposal goes before the Committee and the ATCPs. Annex V concerning the establishment and management of special reserves in Antarctica

\(^{48}\) Discussion on 'Liability' at the ATCMs is going on for quite sometime now, and may be in near future form an important Annex to the Protocol.

\(^{49}\) Article 25, which makes an exception in regard to the adoption and modification of Annexes.

\(^{50}\) This text was adopted at the Antarctic Treaty Consultative Meeting in Peru, May/June 1999, as an introduction to the Antarctic Treaty, particularly for intending visitors to the Antarctic (Introducing the Antarctic Treaty, http://www.antdiv.gov.au/information/treaty/treaty.asp)

\(^{51}\) XXIV ATCM Report, 2001. India however has ratified the Annex V in April/May 2002.
was adopted in 1992 at the 16th ATCM in Bonn, after the Protocol, and has to go through a separate ratification process.

In 1998, Annex I-IV came into effect along with the protocol, but Annex V could not come into force, as many countries had not ratified it. At the XXIVth ATCM at St. Petersburg, Russia in 2001, India was the 'only' Consultative Party remaining to ratify the annex.51

**Annex I: Environmental impact assessment** - activities are assessed in the planning to stage to identify their possible impact on the environment. If the impacts are likely to be more than minor or transitory, a Comprehensive Environment Evaluation must be prepared and opportunity provided for the Committee for Environmental Protection and other Consultative Parties to comment on it.

**Annex II: Conservation of Antarctic Fauna and Flora** - updates the existing rules relating to protection of animals and plants (requiring a permit for taking or interfering with them) and relating to the introduction of non-indigenous organisms.

**Annex III: Waste disposal and waste management** - this Annex specifies wastes that may be disposed of within the Antarctic Treaty area and wastes that must be removed. It also provides rules relating to the disposal of human waste and the use of incinerators. The Annex requires the development of waste management plans. Particularly harmful products such as PCBs, polystyrene packaging beads and pesticides are prohibited in the Antarctic.

**Annex IV: Prevention of Marine Pollution** - the discharge of potentially harmful substances from ships (including oily mixtures and garbage) is regulated, as is the disposal of ship-generated sewage. The Annex adopts practices broadly consistent with those applying in the relevant annexes of MARPOL. Disposal at sea of any plastics is prohibited.

**Annex V: Management of Protected Areas** - establishes an improved protected area system that integrates the previous categories of protected areas into Antarctic Specially Protected Areas (entry to which requires a permit) and Antarctic Specially Managed Areas. Management plans are required for both categories. The protected area system
also provides for the designation of historic sites and monuments, which must not be damaged or removed.

Detailed mandatory rules for environmental protection pursuant to these requirements are incorporated in a system of annexes, forming an integral part of the Protocol. Specific annexes on environmental impact assessment; conservation of Antarctic fauna and flora; waste disposal and waste management; and the prevention of marine pollution were adopted with the Protocol. A fifth annex on area protection and management was adopted October 17, 1991 by the Antarctic Treaty Consultative Parties at the Sixteenth Antarctic Treaty Consultative Meeting. Provision is also made for additional annexes to be incorporated following entry into force of the Protocol.

Dispute settlement procedures are included in the Protocol. These Include compulsory and binding procedures for disputes over the interpretation or application of, and compliance with, the provisions of the Protocol relating to mineral resource activities, environmental impact assessment and response action, as well as most provisions included in the Annexes.

The Protocol establishes a Committee on Environment Protection, as an expert advisory body to provide advice and formulate recommendations to the Antarctic Treaty Consultative Meetings in connection with the implementation of the Protocol.

A number of SPECIALISED BODIES assist the Treaty parties in the conduct of their work. Specific tasks may be directed to these bodies, or they may be invited to provide observers or experts to participate in Treaty forums.

1. The Scientific Committee on Antarctic Research coordinates Antarctic research programs and encourages scientific cooperation. Through its various subordinate groups it is able to provide expert information on a range of disciplines and on the scientific implications of operational proposals of the Treaty meetings.

2. The Council of Managers of National Antarctic Programmes comprises the heads of each of the national Antarctic operating agencies. COMNAP meets annually to
exchange logistic information, encourage cooperation and develop advice to the Treaty parties on a range of practical matters.

3. The Antarctic Treaty parties have also developed a close relationship with environmental inter-governmental and non-government organisations that represent the broader community interests in conservation. Organisations such as the International Union for the Conservation of Nature (IUCN), the United Nations Environment Programme (UNEP) and the Antarctic and Southern Ocean Coalition (ASOC) are also invited to the Treaty meetings as experts.

4. Bodies with technical expertise relevant to the Treaty discussions also participate. They include the International Hydrographic Organisation, the World Meteorological Organisation and the Intergovernmental Oceanographic Commission.

5. The International Association of Antarctic Tour Operators (IAATO) is an industry body representing the interests of the growing tourist trade in Antarctica. Many tour operators are affiliated with IAATO, which also provides experts to the annual Treaty meetings.

IMPLEMENTING THE PROTOCOL

In 1998, when the Madrid Protocol came into effect, the requirement for its proper implementation by Consultative parties became imminent. The notion of implementation refers to “all measures that have been taken by a state party to fulfil the objectives of the Madrid Protocol”. Implementation can be considered to have two separate components, which at times operate in parallel and at times sequentially: legal implementation – incorporation of the relevant provisions of the protocol into the national legal system; and practical implementation – the measures taken to put the protocol into action, including the application and enforcement of the national law.52

52 IP 40, Legal Implementation of the Five Annexes of the Environmental Protocol to the Antarctic treaty, submitted by ASOC at the 24th ATCM, St. Petersburg, Russia, 2001.
ASOC submitted an Information Paper "Legal Implementation of the Five Annexes of the Environmental Protocol to the Antarctic treaty"\textsuperscript{53}, at the 24\textsuperscript{th} ATCM, St. Petersburg, Russia, 2001. ASOC's information paper can be summarised thus:

Annex I: Environmental Impact Assessment

Most countries (approximately 19) have adopted some form of regulation to implement Annex I (EIAs). The level to which it has been addressed by/ incorporated into the national legal system varies greatly. Some states have inducted the Protocol regulations verbatim or without much modification into the national law; whereas, some others have adopted interim (or perhaps semi-interim) ad hoc procedures, in some cases based on national EIA legislation or as in some European ATCPs, on EU regulations. In these cases, the National Antarctic authority is often in charge of processing these EIAs.

Annex II: Conservation of Antarctic Flora and Fauna

According to data collected to ASOC, 66\% of all parties have implemented Annex II legislatively, while 30\% have implemented it through regulations or in practice. For most Parties, an agency has been designated to review permit applications and issue permits.

Annex III: Waste Disposal and Waste Management

ASOC data suggests that 44 \% of all parties have implemented this Annex legislatively. 2/3 \textsuperscript{rd} of these states have also produced waste management plans for part or all of the national programme. Another 37\% of CPs have implemented the Annex through regulations or administrative procedures.

Annex IV: Prevention of Marine Pollution

As per data collected and presented by ASOC, 70\% of all parties have implemented this Annex legislatively, through the national legislation that implements MARPOL. Additionally, 37\% of all parties have implemented this Annex through regulations or administrative process.

\textsuperscript{53} ASOC has been updating information on Protocol Implementation by Treaty parties and presenting at the ATCMs, an effort recognized and appreciated by many member nations.
Annex V: Area Protection and Management (Recommendation XVI/10):\textsuperscript{54}

According to data available to ASOC, 63\% of all parties have implemented Annex II legislatively; of these, 12\% have also implemented regulations to implement the Annex, while 65\% have updated management plans to comply with Annex V. Additionally 15\% of all Parties have promulgated regulations or implemented procedures and updated management plans to comply with this particular annex.

**IMPLEMENTATION OF THE PROTOCOL**

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\begin{array}{c|c}
\text{International} & \text{Domestic} \\
\downarrow & \downarrow \\
\text{Jurisdiction} & \text{Environmental Impact Assessment} \\
\text{Institutional support} & \text{Permit System} \\
\text{Liability Regime} & \text{Enforcement} \\
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**International Measures:**

1. *Issues of jurisdiction, control and enforcement:* The AT regulates jurisdiction in a limited manner\textsuperscript{55}, failing to resolve the question of jurisdiction over nationals of treaty parties who are not observers or scientists, and also does not address the issue in relation to nationals of the third states. Growing Antarctic tourism and illegal fishing in Southern ocean makes it mandatory to keep a watch over third states that offer 'flag of convenience' to tourist and fishing vessels. Since all the gateway ports to Antarctica are subject to the jurisdiction of parties to the protocol, a concept such as 'Departure State jurisdiction' was proposed by United Kingdom at the XXIst ATCM, 1997. CCAMLR in 1997 adopted 'Scheme to promote Compliance by non-Contracting Party Vessels with CCAMLR

\textsuperscript{54} It may be noted that Annex V has NOT yet (July 2002) come into effect. With India’s approval in April/May 2002, all countries have approved/ratified the Annex by XXVth ATCM scheduled in September 2002, Warsaw, Poland.

\textsuperscript{55} Art. VIII of the Antarctic Treaty.
Conservation Measures\textsuperscript{56}, according to this if a non-party flagged vessel engages in fishing activity in the CCAMLR regulated waters, it will be presumed to have undermined the CCAMLR Conservation measures and be liable for inspection.

2. \textit{Issues related to institutions:} ATS has been quite unaffected by the institutional development during its evolution over the past four decades. Ever since the treaty came into existence in 1961, treaty meetings, which is the main policy-making forum of Antarctic cooperation, is being held periodically to evaluate and assess the issues and related concerns. This meeting of treaty parties was earlier held once in 2 years, it was converted into an annual meeting following a decision of the XVI Consultative Meeting, (Bonn, 1991) which was inspired by the adoption of the Protocol. The meeting was held in locations chosen in accordance with a preordained principle of rotation among CPs as host states, based on alphabetical order in English language. The host country provided some sort of basic secretarial functions with the responsibility for a) preparing for the meeting b) circulating documents prior to the meeting c) providing administrative and secretarial services during the meeting d) preparing the Final report e) providing certified copies to the Treaty parties and the Secretary General of UN f) providing authentic texts of the measures adopted in the meeting.\textsuperscript{57} The Recommendations XIII-1: providing for 'national contact points'; and XIII-2: providing for presentation of reports at each ATCM has greatly facilitated communication among the treaty parties and exchange of information among the components of the ATS. The Government of United States acts as a depository government and provides secretarial assistance as and when required. The practice of \textit{ad hoc secretariat} before every ATCM has not always proved very successful in terms providing /availability of certified texts for further reproduction; and as it has to be established every time from scratch, it proves to be a financial burden on the host nation.

\textsuperscript{56} Conservation Measure 118/XVI. Report of the 16\textsuperscript{th} meeting of the Commission, Hobart, Australia, 27 October – 7 November, 1997
\textsuperscript{57} Davor Vidas (ed.), n. 46, p. 127.
At the 24th ATCM in St. Petersburg, Russia, it was decided by consensus to establish The Antarctic Treaty Secretariat in Buenos Aires, Argentina. The logistics is yet to be decided.

3. The unfinished agenda on Liability for environmental damage: The implementation of a liability annex to the Protocol is currently under negotiation. By providing a legal obligation to that effect, it will give Antarctic operators (both governments and nongovernmental) an incentive to be more cautious in the conduct of their Antarctic activities. Perhaps one of the most significant gaps in the Environmental Protocol is the lack of an Annex on liability.

The existence of this gap is recognised within the Protocol, which states (Art 16):

*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....*

A liability regime is essential for the completion of the Protocol for several reasons. First, should an accident occur that threatens the Antarctic environment, it provides a legal obligation for immediate and ongoing action to mitigate the effects of that accident. Second, where it is not possible to restore the environment to the state it was in before the damage occurred, it provides for compensation to be paid. Third, by providing legal obligations, it gives Antarctic operators an incentive to be more cautious in the conduct of their Antarctic activities.58

At the XVII ATCM at Venice, 1992, the ‘Group of Legal Experts’ was established, and convened for the first time in 1993, under the Chairmanship of Prof. Wolfrum.59 The deliberations took place on the basis of draft ‘openings’ prepared by the Chairman. The

58 Refer to www.asoc.org/liability/
59 The Group of Legal Experts meet nine times during the period 1993-98 in conjunction with Consultative Meetings and intersessionally. The deliberations took place on the basis of draft ‘offerings’ prepared by the Chairman. The last, eighth, of the ‘offerings’ is annexed to the ‘Liability – Report of the Group of Legal Experts’.
fifth to the eighth offerings presented a systematic view of issues. This Group of Experts presented their report in 1998, which listed key pending issues for an Antarctic liability regime, and was then dissolved. However, in 1996 US presented a draft text that focused on 'liability that would result from a failure by an operator or party to carry out appropriate emergency action. Since 1999 ATCM at Lima to 24th ATCM in Russia (2001), these key issues have been addressed in informal consultations and negotiations are undertaken at the Working Group I meetings. Nevertheless, major policy dilemmas between a comprehensive and restricted regime still remains to be discussed and negotiated.60

Domestic Measures:

Every nation that is a Party to the Antarctic Treaty is under the obligation to effectively implement the Recommendations, Measures and Decisions arrived upon at the ATCMs. The practical implementation of the Protocol rests on the Contracting Parties and requires that the parties make all the arrangements necessary application of their national legislation, e.g. an organisational structure will have to be developed for the well functioning of the EIA provisions and the permit requirements.61

As has been pointed out by ASOC’s IP presented at XXIVth ATCM, 2002:

“the fact that a Party has not produced the legal instruments to implement certain aspects of the Protocol does not necessarily mean that it is not implementing its Protocol obligations and that it is perhaps using ad hoc procedures. The opposite is also true: the existence of implementing legislation does not necessarily imply adequate practical implementation. Implementing legislation could be legal but not real. It should be noted, however, that the Protocol is not a unicum: certain obligations may be self-executing while others are not.62 Even those obligations that are clearly self-executing may be

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60 Quick Reference National Stances on Liability post SATCM (September 2000), Refer to the Annexure at the end.
61 Kees Bastmeijer, "Implementing the Environmental Protocol Domestically, An Overview”, in Davor Vidas (ed.), n. 46, p.301.
subject to considerable differences in interpretation. The Protocol establishes obligations of result rather than obligations of action.\footnote{ASOC Information Paper 55, Legal Implementation of the Five Annexes of the Environmental Protocol to the Antarctic Treaty, tabled at the XIV th ATCM, 2001.}

1. \textit{Environmental Impact Assessment:} The environmental principle as embodied in Article 3 of the Protocol which apply to activities in the Antarctic treaty Area state that these ‘shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgments about, their possible impacts’ (Art. 3 (3) (c)). Article 8(1) of the protocol states that the proposed activities shall be subject to procedures set out in Annex I for prior assessment of the impacts of those activities.

The ‘\textit{Guidelines for environmental impact assessment in Antarctica}’ provides a non-mandatory basis for planning a CEE. Some CPs have inducted this requirement in their domestic legislation in different ways. For example, in UK the preliminary assessment is in the form of a permit with detailed information attached and approved by competent authority.\footnote{Refer to Art. 4 of the UK Antarctic Regulations 1995.} The New Zealand legislation has a separate provision (Art. 17 of the New Zealand Antarctica (Environmental Protection )Act 1994). In the legislation of some states, including Norway and Netherlands, no distinction has been made between the preliminary assessment and initial environmental evaluation (IEE).\footnote{Kees Bastmeijer, n. 61, p. 298.} Even though the national competent authority is usually responsible for undertaking/ensuring EIAs, the Protocol provides for it to be tabled at the CEP for information and discussion.

Nonetheless, certain factors have undermined the desired effect of EIA such as:

(a) The requirement for EIA exclusively depends on the discretion of the national authority.

(b) It does not apply to activities of states (and its nationals) that is ‘not’ a party to the treaty.

\footnote{ASOC Information Paper 55, Legal Implementation of the Five Annexes of the Environmental Protocol to the Antarctic Treaty, tabled at the XIV th ATCM, 2001.}
(c) There is no laid down international procedure that addresses preliminary assessment, and national practices vary.

Sharing of expertise and baseline data, developing guidelines, etc. can help in effective environmental assessment.

2. *Permit System:* The concept of permits goes back to the 1964 Agreed Measures for the Conservation of Fauna and Flora that required a permit to take native mammals, to control of activities within specially protected areas, and to regulate the introduction of non-indigenous species (Art. VI, VII & IX). This was further incorporated into the Annex II (Conservation of Antarctic Fauna and Flora) & Annex V (Area Protection & management) of the Protocol.

The issuing of permit is again at the discretion of the national competent authority which decides that taking of particular species in or out of Antarctica will not effect the environment. The criterion being that if permit is issued 'it will not jeopardize the survival or recovery of that species or local population' (Annex II, Art. 3 (5)). In case it is understood to have an impact, EIA is to be conducted. A permit system to be effective needs to have clear limits, like the fishing limits under CCAMLR.

3. *Enforcement:* The onus of implementation and enforcement rests with the national competent authority of all the parties to the treaty. Enforcement as to protocol implementation is generally through set guidelines and manuals that the nodal authority prepares with reference to the text Protocol. Many parties have formulated legislation to help enforce their treaty obligations. Any breach to these set guidelines is dealt with by the national competent authority and/or by the organization to which the national may be responsible to, as per the legal procedures established by the Government.

*National Antarctic Programmes* are permanent, and establish long-term and short-term scientific activities for the nation in question. These programmes have developed as a response to intensified Antarctic research, particularly towards understanding of the global environment. These developments have required:
a. establishment of national Antarctic operating agencies;

b. complex logistics far beyond what was needed in the days of exploratory expeditions;

c. credible science based on the entire pool of scientific resources available to nations taking part.

Enforcement is thus left to the Contracting Parties who are obliged to take “appropriate measures” within their competence – including administrative actions – to ensure compliance with the Protocol, and to publish annually a report of such measures undertaken. An inspection system (of sorts) is provided in Article 14, with reports and comments thereon ultimately made publicly available. This parallels the inspection system under the ATS and CCAMLR.  

CONCLUSION

"Diplomacy is the application of intelligence and the tact to the conduct of official relations between the governments of independent States, or more briefly the conduct of business between states by peaceful means."

Satow’s definition of Diplomacy

The road to Madrid may have been covered in haste but the outcomes have initiated an unanimous and positive approach to the protection of Antarctica, through cooperative scientific research and also by settling issues through consultation. Where at the ATCMs an international policy is discussed and measures/recommendations adopted it is for the CPs to implement them at the national level. Policy enunciations and legal set up of nations are crucial factors that either foster or hinder such implementation.

While the 1959 Antarctic Treaty initially sought to neutralise sovereignty and promote scientific cooperation, increasingly an environmental focus in Antarctic management has begun to prevail. The result is a comprehensive environmental law regime which

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increasingly controls all activities undertaken on the continent and the surrounding Southern Ocean. Antarctica is a unique model for development and implementation of international environmental law with successes often replicated in other global or regional law instruments. This permits some important lessons to be drawn from the Antarctic experience for the development of international environmental law and treaty-making generally. 68

According to Laura Pineschi the adoption of the treaty is the most, "...dramatic and definitive step towards an environmentally oriented Antarctic regime [that has ever] been made." 69

The idea of creating an environmental wilderness, free from human contact, is remarkably noble. Yet the past record of the Consultative Parties on environmental protection in Antarctica is dismal. Simply, the frequent pronouncements on the subject of environmental protection have not translated into positive practice. The French airstrip built at Pointe Ge'ologie provides a startling example: this airstrip was to be built at a location specifically identified as a priority site for the study of Antarctic wildlife. Construction was undertaken without securing Environmental Impact Assessments or construction permits - as required by the applicable French law. The resulting disruption of the habitat of several rare Antarctic bird species violated not only French law, but also the 1964 Agreed Measures for the Conservation of Flora and Fauna. France also unambiguously indicated that it was unwilling to comply with aspects of the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). This unwillingness was because of France's territorial claim to the Kerguelen Islands, which France classifies as an independent French territory, but which CCAMLR claimed fell within its ambit.

This type of position is in a general sense consistent with a previously prevailing lack of interest with the protection of the Antarctic environment. Thus, CCAMLR while proposed in 1964 did not come up for signature until 1980 and into force in 1982. Prior to

this, despite the 1972 Convention to Conserve Antarctic Seals and the fact that whaling in the region had been potentially subject to regulation since 1945, Consultative Members paid little attention to environmental or resource issues.

As it is, many scientific bases in Antarctica fail to comply with the stipulated environmental regulations like those for fuel handling, waste disposal, etc. Consequently, there has been a number of complaints about waste disposal in Antarctica, and a number of areas near research stations are badly polluted. This is despite individual state legislation of the various claimant states which makes it unlawful for any of their citizens to discharge or dispose of any 'pollutant' within Antarctica. There were 6 oil spills in 1989 including the disastrous Argentinean Bahia Paraiso.\textsuperscript{70} Such spills are even more dangerous than normal oil slicks because of the slow metabolism in the Antarctic waters. The consequence of this is that it takes years more before all traces of contamination are dispersed. It has also been said that the waters around McMurdo\textsuperscript{71} base contained greater concentrations of cancer causing PCB chemicals than many of the waterways in the United States. These toxins were found in the tissues of Antarctic seals and penguins.

The inspection procedures established under the 1959 Antarctica Treaty have not proven suitable for the purpose. No real enforcement procedure exists for breach of the Recommendations, and considerable uncertainty exists over the binding nature of these Recommendations. Auburn noted on this system that: "Clearly all Consultative Parties which have actually approved recommendations are bound by their agreement. How far, if at all, any further effect is obtained may be seen as one of the fundamental legal issues of the Antarctic system".

This problem is compounded by the fact that the Consultative Parties have failed to enforce environmental rules in the past, and also omit to criticise each other for this failure. Rothwell described this as 'an occasional lack of political will within the Antarctic Treaty System to enforce the recommendations'.

\textsuperscript{70} The supply ship that ran aground in Argentine waters in Jan 1989. Francesco Francioni, Resource Sharing in Antarctica, For Whose Benefit?, http://www.ejil.org/journal/vol1/No1/art15.html
\textsuperscript{71} McMurdo is the US base located at 77°50'53"S 166°40'06"E.
The Consultative Parties have also frequently frustrated any independent international efforts to protect Antarctica. For example, in 1975 UNEP proposed to extend the Treaty's environmental protection provisions with respect to mineral resource exploitation. Programme administrators representing the Consultative Parties to the original Treaty blocked the proposal. Similarly, the Scientific Committee on Antarctic Research proposed in 1973 and in 1985 that mandatory environmental impact assessments be required for any major construction work in Antarctica. These proposals were rejected by the Consultative members, and non-binding, recommendations were adopted covering the alternatives.

There have also been distinct problems with the implementation and respect of the Conservation of Antarctic Marine Living Resources (CCAMLR). This Convention has only partly achieved its objectives. There have been high levels of fish catches around Antarctica which has lead to the alarming depletion of many stocks. CCAMLR was initially negotiated to deal with the developing commercial fisheries that were going down to the Antarctic waters as there were no fishing limits or jurisdictions. Nevertheless, although CCAMLR attempted to counter this problem, the success has been very limited.

The reason there has only been limited results, is due to the lack of complete information on which to base quotas and size limits. Certain countries are reluctant to part with this information in their possession. The exchange information is 'more often than not, inaccurate or incomplete'. Delegations also systematically dispute figures put forward by other states indicating overexploitation of stocks and calling for a reduction or a total ban on fishing. This problem is exasperated by the fact that it only takes one fishing state to reject the opinion of the Scientific Committee that recommends the appropriate catch sizes. for any conservation measure to be rejected. A solution advocated to resolve the problems of those who flout what weak quotas exist was having to institute more elaborate inspection systems. This suggestion was dismissed as being 'higher in cost than any of the Parties would be willing to bear'.

Thus, having seen the lack of concern in the past by the Consultative Members with the environment of Antarctica and its surrounding ecosystems, there does appear to be a
contradiction with the recent calls. This is especially so considering that the Consultative Members became: "Convinced of the need to enhance the protection of the Antarctic environment". Consequently, "participants stressed the absolute priority of the earliest possible ratification and entry into force of the Protocol".

The 1991 Protocol on Environmental Protection to the Antarctic Treaty has created for the first time an integrated environmental protection regime for Antarctica. Negotiated at a time when there was considerable debate over whether mining should be permitted in Antarctica and not long after the Treaty parties had concluded negotiations for a specific Antarctic minerals regime, its entry into force in 1998 is a testament to the international goodwill to cooperatively manage Antarctica and the robustness of the Antarctic Treaty system. The Protocol is also another milestone in the international management of Antarctica and generally for international environmental law.

The most significant feature of the Madrid Protocol is the prohibition of any mineral activity except for research purposes. It also sets out detailed requirements for environmental impact assessment of all human activities, and strengthens the existing measure for the conservation of flora and fauna. New standards for waste disposal and management and marine pollution are also set out. The Madrid protocol is yet another example of the extraordinary agreements that constitute the Antarctic Treaty System. States have repeatedly set aside their national interests, and worked together to achieve a peaceful solution as to the use and exploration of Antarctica.

The non-governmental bodies, the Scientific Committee on Antarctic Research (SCAR), together with the protocols and recommendations constitute what is referred to as the Antarctic Treaty System (ATS). The United Nations Environmental Programme (UNEP) and the Antarctic and Southern Oceans Coalition (ASOC) have shaped policy making as well as sponsored and financed international negotiations. According to the Commission, "Although further change in the management status of Antarctica is inevitable, it is essential that such change not jeopardise the achievement of the Treaty system in the areas of peace, science, conservation and environment. Antarctica has been an agreed
zone of peace for... 30 years, free of all military activities, nuclear tests, and radioactive waves. This a foundation on which humanity must build."

Environmental protection has always played a central role in the cooperation within the Antarctic Treaty System. The majority of the recommendations which have been adopted since the Treaty came into force concern environmental protection. A growing awareness of environmental issues was expressed in the 1980s during the course of negotiations concerning the Convention for the Regulation of Antarctic Mineral Resource Activities (CRAMRA). The Convention laid down stringent rules governing environmental aspects of future mineral resources activities, the assumption being that it may be possible for mining to be consistent with the protection of the Antarctic environment. However, CRAMRA was never ratified, not least because of environmental concerns of some of the Treaty Parties. Instead, a new round of negotiations concerning an environmental protocol for the Antarctic led to the Protocol on Environmental Protection in Madrid on 4 October 1991.

Although the continued claims on sovereignty are frozen, they are frozen amongst the claimant Consultative member countries, and not amongst the whole world. The sudden switch to an environmental focus, successfully diverted the discussion surrounding the legitimacy of the Antarctic Treaty System. This situation is sweetened by the fact that while on the one hand the majority of the G-77 countries are kept at bay, the 'green vote' is secured and governments are perceived to be concerned about the environment. The icing on the cake is that although the minerals in Antarctica are not profitable to extract at present, they may be later, at which time the moratorium will have elapsed. As Cuthbert of Greenpeace New Zealand argued: "To defer the ratification of CRAMRA is to put it on the back-burner until the political and industrial climate is more conducive to minerals activity in Antarctica; to announce that it may be necessary to look at a moratorium on mining, hardly supports the government's claim to oppose mining, it merely forestalls it; to promote a series of separate environmental protective measures for specified problems rather than adopt a comprehensive convention is compatible with re-instating the convention at a later stage. Clearly it is a strategy to protect the Minerals Convention by slipping it out of view in the short-term, to protect the present decision making structure -

72 The World Commission on Environment and Development, n.13, p. 282
the Antarctica Treaty System and so serve national interests, and to win public favour before an election by appearing to place the interests of the environment paramount. 73

Antarctica has not been saved. The decision on its fate has been postponed until a later date. The sovereignty question is nicely settled in a 50-year time capsule. The majority of the non-industrialised countries are kept at bay ... at least for some time to come. But what with growing needs and demands on our natural resources?!

As aptly discussed earlier, there has been a change in the attitude of traditional environmentally-hostile governments as a result of both internal lobbying by NGOs and external pressure by international environmental bodies. The past, present and future role of NGOs as key actors in the overall development of both domestic and international environmental policy is illustrated through case-studies in the US, Japan and other countries. There has been a shift from mainly domestic lobbying through institutional channels and consumer boycotts, to international coordinated pressure to influence decisions taken by friendly governments and international bodies such as the UN, Greenpeace and WWF.

Countries with diverse political, economic and social backgrounds are actively involved in Antarctic scientific research. Industrialised countries, developing countries, countries with opposing ideologies, and countries that stake claims and that do not, all use science as 'political capital' 74 to influence the course of activities in Antarctica. It is through the conduct of scientific research in Antarctica that states acquire Consultative status or decision making status. With the growth of the environmental movement and increased Antarctic activity, the issue relating to protection and preservation of this frozen continent has come under public scrutiny.

A significant change in the function of science is that rather than being used for achieving political ends, like permanent occupation to defend territorial claims or the non-recognition of such claims, it is now being used as a tool for the protection of the environment and indeed to bring about measures for the conservation of resources. There has been a shift from the political importance of having a presence in Antarctica, to the political importance of ensuring that the quality of science in Antarctica is at a

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73 J. May, n. 1.
sufficiently high level to enable countries to remain in the forefront of Antarctic decision making.\textsuperscript{75}

Interest in Antarctic environment throughout the 1980s was spurred by a wide range of events and circumstances. Prominent influences on international interest were conditioned by: debate revolving around the formation of regime to regulate mineral resource activities in Antarctica; the continued existence of the Treaty over 30 years; increasing pressure from environmental organisations; important significant discoveries like the depletion of ozone over Antarctica\textsuperscript{76}; increasing awareness of the importance of Antarctica in global environmental processes and intensified debate on climate change. Towards the end of the decade (of 1980s) two polar marine disasters drew attention to human activities in Antarctica.

There were a number of other interested parties working for the conservation of Antarctica with a potential for drawing attention to activities – political, scientific or commercial – with the aim of addressing environmental issues. Antarctic and Southern Ocean Coalition (ASOC) has been one of the NGO coalition\textsuperscript{77} which has effectively worked to promote the ‘World Park’ campaign in 1980s. International Union for Conservation of Nature and Natural Resources’ (IUCN) interest in Antarctica dates back to 1960 when the organisation recommended that areas of Antarctica be set aside as conservation reserves. Thereafter, the organisation maintained an interest in the World Conservation Strategy 1980, which declared Antarctica as a priority area for the establishment of reserves, and through regular dialogue with SCAR. IUCN Strategy for Antarctic Conservation(1991) was developed in collaboration with SCAR.

Instruments and institutions for environmental management in Antarctica have evolved from the Antarctic Treaty, with subsequent ratification in 1998 of the Protocol on Environmental Protection to the Antarctic Treaty. This comprehensive protocol addresses issues like environment impact assessment, conservation of fauna and flora, disposal of wastes, prevention of marine pollution and specially protected areas and management. The Protocol forms the basis of environmental protection for this pristine land, but its


\textsuperscript{77} Coalition members include Greenpeace, WWF, Friends of the Earth, and others. ASOC was established in 1977, and presently has an Observers Status in the Treaty System. www.asoc.org
successive management depends largely on Consultative Parties who are bound to fulfil obligations by virtue of being parties to the Treaty.

The diplomacy of protecting the environment beyond the limits of national jurisdiction is thus inevitably multilateral. This means that the possibilities of individual actors, even big and powerful ones, are limited. Moreover, the subject-matter, i.e. protection of the environment, means that cooperation of all concerned, the willing and the unwilling ones, is required to produce the desired result. It will not suffice to draft nice treaties that States will be free to ratify or accede to or not. Only treaties which will be ratified or acceded to by all concerned will be useful. This will immensely complicate negotiations. There are of course treaties that anyone will accept to become party to because they only contain pious recommendations and platitudes, are so vague that everyone can interpret provisions to suit his purposes, and lack any form of sanction.

Just as essential as familiarity with underlying scientific issues is an understanding of the peculiarities of environmental diplomacy. There is for instance the economic aspect. Countries are asked to forgo some types of development because of its negative ecological implications. Tropical countries are asked to stop overexploiting and burning down virgin tropical forests and to replant exploited surfaces in the interest of humanity, much of which lives a lot better than their own population. Conversely, developed countries are asked to pay penalties for having spoilt the world environment during their own industrialisation, including where, at the time of the damage, the environmental implications were unknown. Proposing and promoting global solidarity that would lead to a generally acceptable form of burden sharing must be done in a manner that carries conviction and does not sound like lofty preaching of the rich to the poor or the supposedly victimised poor to the rich.

Antarctica is no longer a 'pole apart'. From a scientific perspective, the Antarctic ice sheet, ocean and climate systems are intimately linked with the global climate and are now seen to be of international significance for understanding climate change. From an economic perspective, Antarctic is perceived to have great potential as a source of marine resources although the extent of speculated mineral and hydrocarbon resources is unknown. From a conservation perspective, the continent of Antarctica represents the ideal image of unspoiled wilderness.