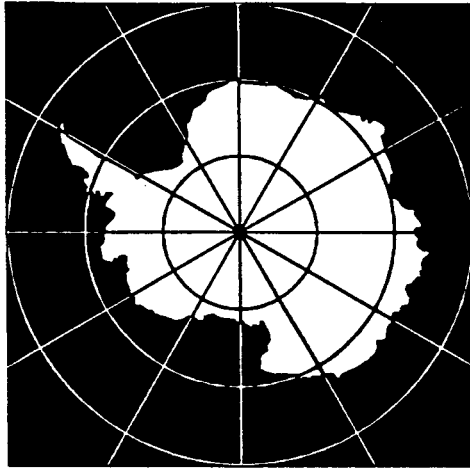


ANTARCTIC TREATY

Final Report of the Twenty-first Antarctic Treaty Consultative Meeting

CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997



ANTARCTIC TREATY

Final Report of the
Twenty-first Antarctic Treaty
Consultative Meeting

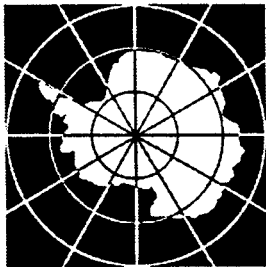
CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997

CONTENTS

Acronyms and Abbreviations	4
PART ONE: FINAL REPORT OF ATCM XXI	7
PART TWO: MEASURES, DECISIONS AND RESOLUTIONS ADOPTED AT ATCM XXI	
Annex A: Measures	37
Measure 1 (1997)	37
<i>Includes Management Plan for SPA 5</i>	38
Measure 2 (1997)	52
<i>Includes Management Plans for SPA 25</i>	53
<i>SPA 26</i>	61
Measure 3 (1997)	68
<i>Includes Management Plans for SSSI 12</i>	70
<i>SSSI 13</i>	83
<i>SSSI 14</i>	90
<i>SSSI 15</i>	98
<i>SSSI 37</i>	105
<i>and proposed change to Restricted Zone of SSSI 11</i>	115
Measure 4 (1997)	117
Measure 5 (1997)	118
Annex B: Decisions	121
Decision 1 (1997)	121
Decision 2 (1997)	128
Annex C: Resolutions	133
Resolution 1 (1997)	133
Resolution 2 (1997)	134
Resolution 3 (1997)	135
PART THREE: OPENING ADDRESSES AND REPORTS FROM ATCM XXI	
Annex D: Opening Addresses	141
Annex E: Reports of ATS (5a)	179
USA	179
United Kingdom	189
Australia	192
SCAR Report	193
Statement by the CCAMLR Observer	206
COMNAP Report	215
Annex F: Reports ATS (5b)	227
ASOC Report	227
IAATO Report	231
IHO Report	237
IOC Statement	239
IUCN Report	241
WMO Report	247
PART FOUR: ADDITIONAL DOCUMENTS FROM ATCM XXI	
Annex G: List of Documents for ATCM XXI	255
Annex H: Antarctic Treaty Inspections	269
Annex I: List of SSSIs with Marine Areas of Interest to CCAMLR	277
Annex J: Trial Report Form for Tourism and NGO Activities in Area	281
Annex K: List of Participants	287
Annex L: National Contact Points	309
Annex M: Preliminary Agenda for ATCM XXII	327
Annex N: CEP Draft Rules of Procedure	331

ACRONYMS AND ABBREVIATIONS

ASOC	Antarctic and Southern Ocean Coalition
ASMA	Antarctic Specially Managed Area
ASPA	Antarctic Specially Protected Area
ATCM	Antarctic Treaty Consultative Meeting
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CCAS	Convention for the Conservation of Antarctic Seals
CEE	Comprehensive Environmental Evaluation
CEP	Committee for Environmental Protection
COMNAP	Council of Managers of National Antarctic Programmes
CRAMRA	Convention on the Regulation of Antarctic Mineral Resource Activities
EIA	Environmental Impact Assessment
EPICA	European Project for Ice Coring in Antarctic
GOSEAC	Group of Specialists on Environmental Affairs and Conservation
IAATO	International Association of Antarctica Tour Operators
IAEA	International Atomic Energy Agency
IEE	Initial Environmental Evaluation
IHO	International Hydrographic Organisation
IMO	International Maritime Organisation
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature and Natural Resources
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
NSF	National Science Foundation
PATA	Pacific Asia Travel Association
SCALOP	Standing Committee on Antarctic Logistics and Operations
SCAR	Scientific Committee on Antarctic Research
SPA	Special Protected Area
SSSI	Site of Special Scientific Interest
TWEG	Transitional Environmental Working Group
UNEP	United Nations Environment Programme
WG I/II	Working Group I/II
WMO	World Meteorological Organisation
WTO	World Tourism Organisation



PART ONE

**FINAL REPORT OF THE
TWENTY-FIRST
ANTARCTIC TREATY
CONSULTATIVE MEETING**

CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997

FINAL REPORT OF THE XXIst ANTARCTIC TREATY CONSULTATIVE MEETING

CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997

- (1) Pursuant to Article IX of the Antarctic Treaty, Representatives of the Consultative Parties (Argentina, Australia, Belgium, Brazil, Chile, China, Ecuador, Finland, France, Germany, India, Italy, Japan, the Republic of Korea, the Netherlands, New Zealand, Norway, Peru, Poland, the Russian Federation, South Africa, Spain, Sweden, the United Kingdom of Great Britain and Northern Ireland, the United States of America, and Uruguay) met in Christchurch from 19 - 30 May 1997, for the purpose of exchanging information, holding consultations, and considering and recommending to their governments measures in furtherance of the principles and objectives of the Treaty.
- (2) The Meeting was also attended by Delegations from the following Contracting Parties to the Antarctic Treaty which are not Consultative Parties (Bulgaria, Canada, Colombia, the Czech Republic, Denmark, Greece, Switzerland, and Turkey).
- (3) A preparatory meeting with Embassy and High Commission Representatives was held in Wellington on 22 October 1996.
- (4) In accordance with Rules of Procedure, Observers and Experts having a technical or scientific interest in Antarctica were present at the Meeting. These are detailed in the list of Participants reproduced at Annex L.
- (5) The Meeting was opened by the Hon Simon Upton, Associate Minister of Foreign Affairs and Trade of New Zealand.
- (6) Mr Colin Keating, Deputy Secretary of the Ministry of Foreign Affairs and Trade, was elected Chairman of the Meeting. Mr Clive Pearson was appointed Executive Secretary. Three working groups were established and, on the suggestion of New Zealand as Host, the Meeting elected Professor Olav Orheim of Norway as Chairman of the Transitional Environmental Working Group (TEWG), Dr Francois Hanekom of South Africa as Chairman of Working Group I, and Dr Roberto Puceiro of Uruguay as Chairman of Working Group II.
- (7) A Meeting of the Group of Legal Experts on Liability, chaired by Professor Ruediger Wolfrum of Germany, was held to continue discussions on the draft Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty.
- (8) Following previous practice the texts of opening statements were not delivered at the meeting and are reproduced at Annex D.

(9) The following Agenda was adopted:

1. Opening of Meeting
2. Election of Officers
3. Opening Addresses
4. Adoption of Agenda
5. Operation of the Antarctic Treaty System: Reports
6. Protocol on Environmental Protection to the Antarctic Treaty
7. Operation of the Antarctic Treaty System
8. Relevance of Developments in the Arctic and the Antarctic
9. Tourism and Non-Governmental Activities in the Antarctic Treaty Area
10. Inspections under the Antarctic Treaty
11. Operations Issues
12. Science Issues
13. Education Issues
14. Environmental Monitoring and the State of the Antarctic Environment
15. Specific Environmental Protection Measures (only if Protocol in force)
16. Preparation of the XXII Consultative Meeting
17. Other Business
18. Adoption of the Report
19. Closing of the Meeting

(10) In accordance with a request made at the previous ATCM New Zealand, as Host of ATCM XXI, was asked to make a provisional allocation of agenda items to the Working Groups. New Zealand's proposal was adopted and the agenda items were discussed as follows:

Plenary: Items 1, 2, 3, 4, 5, 16, 17, 18, 19

The Transitional Environmental Working Group (TEWG) : Items 6b-f, 14

Working Group I (WG I): Items 6a, 6g, 7, 8

Working Group II (WG II): Items 9, 10, 11, 12, 13

Item 5 : Operation of the Antarctic Treaty System: Reports

a) Reports under Recommendation XIII-2

(11) Pursuant to Recommendation XIII-2, the Meeting received reports from:

- i the head of the Delegation of the United States of America as the Representative of the Depositary Government of the Antarctic Treaty.
- ii the Executive Secretary of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).
- iii the Head of the Delegation of Australia as the Representative of the Depositary Government for the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR).

- iv the Head of the Delegation of the United Kingdom as the Representative of the Depositary Government for the Convention for the Conservation of Antarctic Seals (CCAS).
- v the President of the Scientific Committee on Antarctic Research (SCAR).
- vi the Chairman of the Council of Managers of National Antarctic Programmes (COMNAP).

These reports are reproduced at Annex E.

(12) In response to the report from the Depositary Government of the Antarctic Treaty, some Delegations noted that only 11 of the Consultative Parties had subsequently approved Recommendation XVI-10 which contains Annex V of the Environmental Protocol, and urged that those Parties which had not yet approved the Recommendation should do so in a timely fashion.

b) Reports in Relation to Article III-2

(13) In accordance with Rule 20, Reports were presented to the Plenary by ASOC, IAATO, IHO, IOC, IUCN, WMO, and UNEP. These are reproduced at Annex F.

Item 6 : Protocol on Environmental Protection to the Antarctic Treaty

a) General Measures and Implementation by ATCPs

(14) Germany introduced Working Paper (XXI ATCM/WP 16) on the inspection of ships by port states, which proceeded from the discussion of this topic at ATCM XX. Appreciation was expressed for this contribution. Some Delegations noted the particular problems posed in relation to jurisdiction in Antarctica.

(15) The United Kingdom introduced Working Paper (XXI ATCM/WP 22) on the concept of 'departure state jurisdiction' as a means by which Parties to the Protocol could control foreign expeditions departing from their territory for Antarctica. Some Delegations expressed their appreciation for the Working Paper. While the Meeting supported efforts to ensure compliance with the Protocol by non-Parties, concern was expressed by some Delegations about the legality of asserting jurisdiction over future acts of foreign expeditions outside territorial waters, in light of the Vienna Convention on the Law of Treaties 1969, and the United Nations Convention on the Law of the Sea 1982. Others supported the concept. Argentina noted that proposals in this context -going beyond the limits of international law - such as departure state jurisdiction, might endanger the delicate balance provided for by the Law of the Sea Convention 1982. The United Kingdom noted that the legislation of some of the Parties, including the United Kingdom, New Zealand, and to a certain extent, Finland, embodied departure state jurisdiction.

(16) The Meeting agreed to keep the broad topic of "How best to promote universal compliance with the Protocol" on the agenda for ATCM XXII. In this regard ASOC encouraged ATCPs who are not already members of MARPOL and CCAMLR to adhere to those treaties.

(17) The United Kingdom introduced Working Paper (XXI ATCM/WP 37) on maritime insurance as a way of ensuring compliance with the Protocol. The Meeting noted with appreciation the willingness of Norway to inform the main maritime insurance markets and the International Group of Protection and Indemnity Clubs of the imminent (and actual) entry into force of the Environmental Protocol, and to seek information from them as to the normal insurance terms and conditions applicable to vessels sailing south of 60° South and whether these may be modified on the entry into force of the Protocol.

(18) The United Kingdom introduced Working Paper (XXI ATCM/WP 9) on emergency response action and contingency planning. The Meeting thanked the United Kingdom for its Paper on a subject of vital importance, particularly given the increasing number of ships and aircraft in the Antarctic.

(19) The Meeting noted that the IMO draft International Code of Safety for Ships Navigating in Polar Waters to be presented to the IMO during 1998 will be relevant in this regard. IAATO noted that all 13 tourist vessels that had visited the Antarctic during the 1996-97 season had Ship-Board Oil Pollution Emergency Plans (SOPEPs). IAATO is currently working on an IAATO-wide amendment to the current SOPEPs and hopes to have it in place for the upcoming 1997-98 season. The United Kingdom undertook to provide interested parties with a synopsis of the Report (Downie, 1996), referred to in Working Paper (XXI ATCM/WP 9).

(20) The Meeting expressed support for the substance of the proposals outlined in the Working Paper (XXI ATCM/WP 9), and adopted Resolution 1 (1997) on Emergency Response Action and Contingency Planning.

b) Matters Covered by Annex I (Environmental Impact Assessments)

Concepts of 'minor' and 'transitory'

(21) New Zealand introduced Working Paper (XXI ATCM/WP 34) which reported on the intersessional work process it had undertaken as directed by ATCM XX. New Zealand then introduced Working Paper (XXI ATCM/WP 35) on the development of a further understanding of the terms 'minor' and 'transitory'. Russia and Brazil also introduced Information Papers (XXI ATCM/INF 80 and 97) on this topic. Argentina introduced Information Paper (XXI ATCM/INF 55) on its interpretation of environmental impact assessment procedures established in Annex I of the Protocol. Several Delegations commended Argentina on its valuable Paper.

(22) There was discussion on the usefulness of trying to further define what was understood by the terms 'minor' and 'transitory'. It was noted by several Delegations that determination of the status of activities was context

dependent, based on value judgements and information available at the time. SCAR noted that it was important to ensure transparency of methodology so as to allow Parties to assess the basis of the determination. The United States commented that the focus of the discussion should not be on developing prescriptive definitions but rather on providing guidance for making determinations. The United States also noted that the Protocol refers to “minor or transitory” impacts, not “minor and transitory impacts”.

(23) The Meeting thanked New Zealand for leading this very useful intersessional work. The long history of discussion of the terms ‘minor’ and ‘transitory’ was noted, and it was recognised that understanding had been advanced by this type of work. The Meeting agreed to New Zealand’s suggestion that the developing body of environmental impact assessments could be drawn upon in developing a further understanding of the terms.

(24) The Meeting discussed ways of further advancing the understanding of ‘minor’ and ‘transitory’ in the context of the environmental impact assessment process. The Meeting accepted the offer by Australia to coordinate intersessional work amongst Parties to analyse the usefulness of existing environmental impact assessment guidelines, to seek feedback from experienced environmental impact assessment practitioners, and to collate the information for presentation to ATCM XXII. Parties interested in taking part in this intersessional work should provide the name and e-mail address of their contact to the Australian coordinator, Mr Tom Maggs on e-mail: Tom_Mag@antdiv.gov.au.

Examination of the Environmental Impact Assessment Processes

(25) A second aspect of the intersessional work described in Working Paper (XXI ATCM/WP 34) was expanded in the New Zealand Working Paper (XXI ATCM/WP 36) on the understanding of environmental impact assessment processes.

(26) The United States introduced an Information Paper (XXI ATCM/INF 3) on its experiences with Antarctic environmental impact assessment. Norway introduced an Information Paper (XXI ATCM/INF 38) which described the Norwegian environmental impact assessment procedures and legislation. The IUCN introduced the relevant sections of their Information Paper (XXI ATCM/INF 61) on minimisation and management of cumulative effects. IUCN brought to the attention of the Meeting several recommendations from the Paper of relevance to this discussion; in particular that consideration of cumulative impacts should include all relevant past, present and reasonably foreseeable activities; and that wherever obligations regarding environmental impacts are identified, it should be taken that this includes cumulative impacts.

(27) New Zealand introduced two papers prepared by the Secretariat, Information Paper (XXI ATCM/INF 57 Rev.1), which provided a summary of environmental impact assessments, audits/reviews and related documents prepared for activities in Antarctica; and Information Paper (XXI ATCM/INF 46) on the circulation of information on environmental impact

assessments, as required by Resolution 6 (1995).

(28) In relation to Information Paper (XXI ATCM/INF 57 Rev.1), New Zealand thanked the United Kingdom for initiating the list of documents and proposed that ATCM host governments undertake this as an annual task. Norway, as host country for the next ATCM, offered to provide an updated list of environmental impact assessments, audits/reviews and associated guidance documents for that meeting.

(29) It was noted that the information provided to New Zealand as the basis for XXI ATCM/INF 57 did not constitute a definitive list of IEEs and CEEs undertaken since 1988, but rather a compilation of data provided in response to information requests. New Zealand invited Parties to advise it of any additional environmental impact assessments which should be added to the list.

(30) Russia noted that the Paper did not include any Russian reports but that a number of documents were being translated and it was hoped they would be presented at ATCM XXII. The United States noted that the lack of reports from many Parties could indicate that they are carrying out few new activities or had not done environmental assessments for new activities. The United States further noted that Parties were not obliged to prepare IEEs and CEEs yet as the Protocol had not entered into force, but that Parties had agreed to act as if it was.

(31) Some Parties noted the desirability of exchanging environmental impact assessments, preferably through electronic media (e-mail). IUCN observed that an exchange of environmental impact assessments was recommended by the IUCN cumulative impacts workshop (see para 41) and that this might assist in assessing the possible cumulative impacts of activities on the Antarctic environment. The Meeting urged Parties to comply with the requirements of Resolution 6 (1995) relating to the collection and dissemination of environmental impact assessment information.

(32) The Meeting noted that once the CEP was established, all draft CEEs would be forwarded to the Committee. It was noted that it was important to focus on the process of environmental impact assessment in general and to consider whether this was working well. SCAR remarked that although different approaches were taken to preparing environmental impact assessments, it had noticed an increasing level of professionalism and detail apparent in the reports over time.

Transparency of the Environmental Impact Assessment: Process and Flow of Information

(33) South Africa introduced Information Papers (XXI ATCM/INF 94 and 11) reporting on, respectively, the South African initiative to acquire ISO 14001 accreditation for its SANAE IV base, and the Environmental Health and Safety Management Systems - a follow-up report. The Meeting welcomed the information in these papers.

(34) New Zealand introduced a joint Working Paper with South Africa (XXI ATCM/WP 13) on further initiatives in the implementation methodology for CEEs. The Paper expressed the view that an independent review of the activities carried out following the completion of the CEEs had proven useful. As a result, the Paper outlined a suggested process for CEE follow-up and set out a draft resolution for consideration.

(35) Some Delegations noted differing interpretations regarding what constitutes an 'independent' review. Parties subsequently adopted Resolution 2 (1997).

Examination of Individual Environmental Assessments

(36) Italy introduced Working Paper (XXI ATCM/WP 23) outlining environmental management problems relating to joint research activities. The Meeting noted the need for further work on this, and that the Antarctic Environmental Officers Network (AEON) might be a useful medium for it.

(37) New Zealand introduced Information Papers (XXI ATCM/INF 5) updating the CEE for the Cape Roberts drilling project and (XXI ATCM/INF 20) which presented a model IEE for New Zealand-based tourism operators in the Ross Sea region.

(38) IAATO presented Information Paper (XXI ATCM/INF 74) which included draft Terms of Reference for an IEE of ship-based activities in the Antarctic Peninsula area and for the South Shetland Islands.

(39) Several delegations noted the difficulties of employing a single IEE, given the range of tourist activities, locations visited, and differing legislative requirements of Parties. It was noted that a programmatic approach to tourist environmental impact assessment was one useful way of assessing possible cumulative impacts. Several delegations suggested that wide circulation of individual environmental impact assessments would also assist in assessing possible cumulative impacts. IAATO noted that individual operators would each submit their documents to the appropriate national authority. The Meeting congratulated IAATO on its continuing efforts to implement the provisions of Annex I of the Protocol.

(40) Information Papers were presented by Italy (XXI ATCM/INF 21), Argentina (XXI ATCM/INF 36), and China (XXI ATCM/INF 89) on environmental measures at their stations.

(41) IUCN presented Information Paper (XXI ATCM/INF 61) outlining the findings of its 1996 workshop on the minimisation and management of cumulative environmental impacts in the Antarctic. The Meeting welcomed the Paper and congratulated IUCN on its important work on this difficult issue. It was noted that the CEP will have to consider how cumulative impacts should be addressed. It was noted that some actions recommended in the IUCN Paper are already being undertaken. In particular SCAR had already set in train investigations to locate pristine areas to provide reference to operational databases in the Antarctic Digital Data System, to identify

control areas for monitoring, and to consider the implications of translocation of species within the Antarctic.

(42) The Meeting also noted that it was important to further this work intersessionally, and suggested that Parties and interested Observers and Experts, including SCAR, forward their comments to IUCN. It was hoped that a follow-up Paper could then be completed and circulated well before ATCM XXII so that the issue of cumulative impacts could be considered at the next Meeting.

c) Matters Covered by Annex II (Fauna and Flora)

(43) Australia introduced Information Paper (XXI ATCM/INF 51) on the introduction of disease into Antarctic birds. The Meeting noted the data presented by Australia and welcomed the Australian initiative to host a workshop on further research. This initiative was strongly supported by SCAR. Parties were encouraged to contact the workshop organiser Dr Knowles Kerry if they were interested in participating in the workshop (email: knowle_ker@antdiv.gov.au).

d) Matters Covered by Annex III (Waste Management)

(44) Argentina introduced Information Paper (XXI ATCM/INF 17) on a waste management plan for Marambio Station. The Meeting took note of the information presented and congratulated Argentina on its extensive efforts on waste management practices at a scientific station with considerable logistic activity.

e) Matters Covered by Annex IV (Marine Pollution)

(45) Chile introduced Working Paper (XXI ATCM/WP 21) outlining the Chilean Antarctic environmental management programme and encouraging other member countries to implement the environmental measures mentioned in the appendices of the Madrid Protocol. The Meeting commended the initiative taken by Chile.

(46) China introduced two Information Papers (XXI ATCM/INF 87 and 88) outlining the oil spill contingency plans for its Antarctic bases. The Meeting commended China on these plans.

f) Matters Covered by Annex V (areas, sites, monuments)

Specially Protected Areas

(47) New Zealand introduced Working Papers (XXI ATCM/WP 5 Rev.2, 4 Rev.1, and 15 Rev.2) proposing a revised Management Plan for Beaufort Island (SPA 5), and new Management Plans for the Cape Evans Historic Site (SPA 25), and the Lewis Bay Tomb (SPA 26). Parties adopted Measure 1 (1997) for SPA 5, and Measure 2 (1997) for SPAs 25 and 26.

(48) Parties recognised that, until Annex V of the Environmental Protocol

enters into force, there is no means for designating Antarctic Specially Protected Areas (ASPAs), and that an interim process was required to ensure appropriate protection for, and management of, areas which include historic sites and monuments. Parties agreed that pending entry into force of Annex V, proposals to designate and adopt management plans for these types of areas should be viewed as proposals for the designation of Specially Protected Areas (SPAs) in accordance with the Agreed Measures for the Conservation of Antarctic Fauna and Flora.

(49) Brazil introduced Information Paper (XXI ATCM/INF 40) which reported on measures adopted for the implementation of the Management Plan for the Specially Managed Area at Admiralty Bay.

(50) A point was raised relating to possible confusion when prohibitions on activities set out in the various Annexes of the Protocol are repeated in Management Plans for protected areas. It was suggested that prohibitions should be cited in the relevant Management Plans so they are complete, but that these should be worded in such a way that they are consistent with and refer to the relevant Article in the Protocol, eg "in accordance with Article ... of the Protocol ...".

Sites of Special Scientific Interest (SSSI)

(51) New Zealand introduced Working Paper (XXI ATCM/WP 6 Rev.2) proposing a Management Plan for a new SSSI at Botany Bay (SSSI 37), and Working Paper (XXI ATCM/WP 7 Rev.2) proposing a revised Management Plan for Canada Glacier (SSSI 12). In addition to this, New Zealand proposed a change from the term 'restricted zone' in the current Tramway Ridge Plan (SSSI 11) to 'prohibited zone' as outlined in Working Paper (XXI ATCM/WP 17). Parties adopted Measure 3 (1997) to adopt these plans and to reflect the amended zone description for Tramway Ridge. The United Kingdom congratulated New Zealand on the excellent quality of the maps in these Working Papers.

(52) In respect of the plan for the Botany Bay SSSI, it was noted that areas listed as historic sites traditionally related to specific sites or monuments, rather than historic 'areas' or 'zones' as discussed in the Working Paper. It was, however, noted that this would be resolved once Annex V came into force.

(53) Argentina introduced Working Papers (XXI ATCM/WP 29 Rev.1, and 30 Rev.1), proposing revised Management Plans for Cierva Point (SSSI 15) and Potter Peninsula (SSSI 13). Argentina introduced a joint Working Paper with Chile (XXI ATCM/WP 31 Rev.1) proposing a revised Management Plan for Harmony Point (SSSI 14). Parties adopted Measure 3 (1997) to adopt these plans.

(54) It was noted that Management Plans for SSSIs are voluntarily adopted. There was a problem therefore with incorporating prohibitions on activities at these sites. The Meeting noted that, until Annex V enters into force, it will be incumbent on Parties to ensure that their nationals comply with

prohibitions within SSSIs. This was reflected in Measure 3 (1997) adopted by Parties.

(55) It was noted that in preparing Management Plans for SSSIs, the Management Plan for the Rothera Point SSSI (SSSI 9) might be a useful model.

Historic Sites and Monuments

(56) New Zealand introduced Working Paper (XXI ATCM/WP 3) proposing that the Lewis Bay Memorial Cross be designated as an historic site. New Zealand noted that this marked the site of the 1979 Mt Erebus tragedy. Argentina introduced Working Paper (XXI ATCM/WP 27) proposing an amendment to Historic Site 41 on Paulet Island to include a rock cairn built by the survivors of the "Antarctic" wreck in 1903. Parties adopted Measure 4 (1997) to add the Lewis Bay Memorial Cross to the "List of Historic Monuments Identified and Described by a Proposing Government or Governments", and Measure 5 (1997) to amend Historic Site 41.

Area Protection and Management under Annex V

(57) At ATCM XVII a report (XVII ATCM/WP 4) was tabled by SCAR and IUCN, containing the recommendations of a 1992 SCAR/IUCN workshop which had examined the Antarctic protected area system. Based on a number of these recommendations, the United Kingdom presented Working Paper (XXI ATCM/WP 10) to the Meeting. The paper contained proposals for improving the protected area system, including a proposal for a further workshop on this topic.

(58) The Meeting noted that a protected areas workshop was consistent with Article 3 of Annex V of the Environmental Protocol which calls upon Parties to identify and protect areas of outstanding environmental, scientific, historic, aesthetic or wilderness values, any combination of these values, or ongoing or planned scientific research within a systematic environmental-geographical framework.

(59) The Meeting agreed that the protected areas currently designated in Antarctica should be examined to see if they include representative examples of all the categories of areas identified in Article 3 (2) of Annex V. The Meeting further agreed that a workshop should be convened for this purpose.

(60) The Meeting decided that the Terms of Reference of the workshop would be to:

- i) compare the protected areas currently designated against the categories of areas set out in Article 3 (2) of Annex V in order to identify gaps in the existing system;
- ii) examine the SCAR ecosystem classification matrix for protected areas to identify the changes that are needed so that the matrix better incorporates the categories of areas set out in Article 3 (2) of Annex V;

iii) identify, where possible, areas which might be designated to fill any gaps found in the existing system; and

iv) examine, and where possible identify ways to improve, the procedures for developing and reviewing proposals for ASPAs.

(61) The Meeting agreed that participants in the workshop should have appropriate scientific, technical or environmental expertise and include representatives from Treaty Parties, and from interested Observers and Experts, including SCAR, CCAMLR, and IUCN.

(62) The Meeting agreed that the workshop should be organised by a small Steering Committee chaired by the United Kingdom working during the intersessional period via e-mail. The Meeting further agreed that representatives from Australia, Chile, Norway, SCAR and IUCN be invited to serve on the Steering Committee.

(63) Norway offered to host the workshop on the Saturday immediately preceding the start of the meeting of the TEWG/CEP at ATCM XXII in Tromsø in 1998. This offer was gratefully accepted by the Meeting.

(64) SCAR introduced Working Paper (XXI ATCM/WP 18) setting out a Draft Guide for Preparing Management Plans for Specially Protected Areas. The Meeting thanked SCAR for its efforts and noted the draft Guide was a useful step forward in how to prepare a management plan for any Antarctic Specially Protected Area.

(65) The Meeting considered that the Guide required further improvements before its adoption could be considered. Delegates were urged to provide written comments to SCAR, who undertook to amend and circulate the text. The Meeting thanked the United Kingdom for its offer to coordinate intersessional work on this matter and report back to ATCM XXII.

(66) IUCN introduced Information Paper (XXI ATCM/INF 65) regarding the United Nations list of Protected Areas.

(67) Article 6 (2) of Annex V sets out the requirement that no marine area shall be designated as an Antarctic Specially Protected Area or Antarctic Specially Managed Area without the prior approval of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

(68) ATCM XX agreed that a list of existing SSSIs containing marine areas be submitted to CCAMLR XV. The Commission subsequently requested that the Treaty Parties advise on the definition of a 'marine area'.

(69) The Meeting agreed that the draft text, below, should be transmitted along with the draft list of SSSIs (see Annex I) to CCAMLR for its consideration and possible endorsement:

"For the purpose of implementation of Article 6(2), draft management plans requiring the endorsement of CCAMLR are those that include

marine areas in which:

- there is actual harvesting or potential capability for harvesting of marine living resources which might be affected by site designation; or
- there are provisions specified in a draft management plan that might prohibit or restrict CCAMLR-related activities.

The draft list is attached. In addition, further proposals for ASPA/SPA designations which contain such elements will also be submitted to CCAMLR."

(70) It was further agreed that proposals for site designations which might have implications for CCAMLR Environmental Monitoring Program (CEMP) sites should also be submitted to CCAMLR.

g) Matters Relating to Article 16 of the Environment Protocol (Liability)

(71) Professor Wolfrum, Chairman of the Group of Legal Experts on Liability, reported on the Group's discussions. Professor Wolfrum's report covered the following matters:

- the procedure followed by the Group;
- where the Group stood at present;
- some of the difficult issues facing the Group;
- how the work of the Group might continue.

(72) Professor Wolfrum reported that while there were still other issues which required consideration by the Group, it had been able to identify particular matters on which the guidance of the ATCM should be sought. These were, for example, issues relating to the definition of 'damage', the actions required to be taken by operators, the reimbursement of costs, unrepaired damage and the process for settlement of disputes.

(73) Professor Wolfrum proposed that to this end the Group would provide a written report to ATCM XXII which would:

- describe the results achieved;
- identify the major problems with respect to the draft texts before the Group;
- set out the different alternatives and approaches.

(74) Some Delegations were concerned to ensure that the report would discuss both the comprehensive approach of Professor Wolfrum's "Offering" and the functional approach proposed by the United States at Utrecht, as alternatives for the consideration of ATCM XXII.

(75) The Meeting expressed its appreciation to Professor Wolfrum for his work as Chair of the Group. The Meeting agreed with Professor Wolfrum's proposal that a written report should be developed by the Group for submission as a Working Paper to ATCM XXII and that the latest "Offering" of the Chairman's draft text as well as different alternatives and approaches should be appended to it. It was agreed that the written report would need to be approved by the Group of Legal Experts on Liability before submission as a working Paper to ATCM XXII.

(76) Germany introduced Working Paper (XXI ATCM/WP 28) which proposed that the Meeting agree that the mandate of the Group be extended and that an intersessional meeting be convened.

(77) The Meeting agreed:

a) to take note of the work of the Group of Legal Experts on Liability as reported by the Chairman of the Group;

b) to extend, in accordance with Recommendation IV-24, the mandate of the Group of Legal Experts on Liability;

c) that an intersessional meeting of Legal Experts on Liability be convened before ATCM XXII;

d) that the Group of Legal Experts on Liability prepare a written report on the work undertaken to elaborate an annex or annexes on liability for environmental damage, and that the report should outline the results achieved, identify the major outstanding problems and the different alternatives and approaches;

e) that the report should be presented to ATCM XXII for discussion and decision on how to proceed further;

f) that the report should be circulated to ATCM XXII as a Working Paper;

g) that the Group of Legal Experts should meet in conjunction with ATCM XXII to continue discussion on any issues not addressed by the report and identified by the Group of Legal Experts at the intersessional meeting.

(78) The Meeting welcomed the offer of South Africa to host the intersessional meeting of the Group of Legal Experts on Liability in Cape Town from 17-22 November 1997.

(79) ASOC introduced Information Papers (XXI ATCM/INF 63 and 92) relating to the work of the Group of Legal Experts. ASOC asked Delegations which had concerns about ASOC participation in the Group of Legal Experts to reconsider their positions.

Item 7 : Operation of the Antarctic Treaty System

(80) France introduced a joint France/New Zealand Working Paper (XXI ATCM/WP 24) which proposed amendments to the Rules of Procedure of Antarctic Treaty Consultative Meetings. The Meeting welcomed the further efforts to expedite document circulation, but felt that additional consideration was required before a Decision could be agreed. Issues identified as requiring further discussion by some Delegations included possible effects on the ability of Experts to contribute effectively to the ATCM's discussions if their documents (Information Papers) were excluded from consideration in discussions because they had not been translated into the four official languages. Other Delegations expressed the view that the content of the Guidelines should remain unchanged. Pending resolution of these issues, the Meeting reaffirmed that document circulation continue as set out in the Guideline to Pre-sessional Document Circulation and Document Handling attached as Annex D to the Final Report of ATCM XX.

(81) New Zealand and the Netherlands introduced Working Papers (XXI ATCM/WP 1 Rev.1 and WP 33 respectively) proposing amendments to the Rules of Procedure. The Meeting agreed to these amendments and adopted Decision 1 (1997).

(82) The Netherlands, New Zealand and South Africa tabled Working Paper (XXI ATCM/WP 2/Rev.1) as a discussion paper on establishment issues for the Committee for Environmental Protection.

(83) The Meeting examined the draft Rules of Procedure of the Committee for Environmental Protection which were drafted at and appended to the Report of ATCM XVII, with a view to providing a text which would be available for the Committee at its first meeting, expected to be ATCM XXII. The draft Rules as revised at ATCM XXI are attached at Annex N.

(84) Norway expressed its willingness to initiate intersessional work prior to ATCM XXII, through either written communications or by arranging an informal intersessional meeting in Oslo, to facilitate the work of the CEP (provided the Environmental Protocol had entered into force). As some Delegations expressed concern as to the need for, and format of, such a meeting, the Meeting agreed that Norway would proceed with the intersessional work in the same manner as New Zealand had in preparation for ATCM XXI.

(85) Professor Wolfrum reported on the work of the Contact Group on Organisational Aspects of the Establishment of an Antarctic Treaty Secretariat, which he chaired. A number of Delegations expressed their preference for an arrangement where the specific regulations on privileges and immunities for the Secretariat and its staff would be dealt with in a host state agreement. The Meeting recommended the reconvening of the Contact Group for one day at ATCM XXII.

(86) The Meeting noted Information Paper (XXI ATCM/INF 117) on the establishment of the Antarctic Treaty Secretariat, submitted by Argentina,

Brazil, Chile, Ecuador, Peru and Uruguay. The Paper was introduced by the delegation of Brazil and urged the establishment of the Antarctic Treaty Secretariat considering that the Madrid Protocol will shortly enter into force. In the Paper, the sponsors reiterated their full support to the establishment of the Secretariat in Buenos Aires, evoking an appropriate geographical balance in the distribution of the headquarters of Antarctic *fora*. In the case of the Antarctic Treaty, such a decision would more adequately reflect the equitable spirit of cooperation and harmony that has prevailed throughout the last thirty-five years. The Information Paper noted that the candidacy of Buenos Aires had obtained an almost unanimous support of the Consultative Parties and a consensus on this matter was very close in achieving a satisfactory solution on the establishment of the Secretariat and the designation of Buenos Aires as its Headquarters.

Item 8 : Relevance of Developments in the Arctic and the Antarctic

(87) Norway introduced Information Paper (XXI ATCM/INF 76) on developments in the Arctic and the Antarctic. The Paper drew attention to the Ministerial Meeting of the Arctic Environmental Protection Strategy (AEPS) to take place in Alta, Norway in June 1997. The Meeting welcomed Norway's offer to report on the results of ATCM XXI at this meeting. Attention was also drawn to the September 1996 Declaration on the Establishment of the Arctic Council. It was noted that the activities of the AEPS will be integrated into the work of the Arctic Council and that the first Ministerial meeting of the Arctic Council will take place in September 1998. The Meeting noted that the legal situations of the Arctic and the Antarctic are quite different.

(88) The Meeting agreed on the need to facilitate the exchange of information on scientific and logistic activities in the polar regions. Canada and Denmark noted several examples. SCAR outlined steps that have been taken to facilitate interaction concerning scientific activities in the Arctic and the Antarctic. The Meeting noted that SCAR and the International Arctic Science Committee are planning to co-sponsor a symposium on Polar Aspects of Global Change to be held in Tromsø next year.

Item 9 : Tourism and Non-Governmental Activities in the Antarctic Treaty Area

(89) New Zealand introduced Working Paper (XXI ATCM/WP 25) on a standard form for reporting on tourism and non-governmental activities in the Antarctic Treaty Area. This Paper was submitted as a follow-up to Recommendation XVIII- 1, Resolution 3 (1995), and the trial report form developed at ATCM XX. The trial form was used by tour operators during the 1996/97 Antarctic season and, as a result, New Zealand had made several minor changes to the form.

(90) The Meeting welcomed the Paper and expressed its appreciation for the work done by New Zealand. Several Delegations suggested further

changes to the report form. The Meeting adopted Resolution 3 (1997) agreeing that a standard form be used for reporting on tourism and non-governmental activities. The Meeting agreed that a trial form be used for the 1997/98 season and asked that interested Parties and IAATO report back to ATCM XXII on its use. The trial form is attached at Annex J.

(91) Several Delegations questioned the need for, and usefulness of, information regarding the nationality of passengers, staff and crew as required by Section C of the trial post-visit report form. Others indicated that such information would be required if a standard form were to be adopted. The Meeting agreed that this issue could be examined at ATCM XXII.

(92) Issues were raised relating to data management. The Meeting noted that developments in electronic data handling may facilitate the gathering, storage, access and analysis of data on tourism and non-governmental activities.

(93) The United States submitted Information Paper (XXI ATCM/INF 90) providing information on Antarctic ship-borne tourism status and trends. The United States and the United Kingdom submitted Information Paper (XXI ATCM/INF 114) describing results to date of the Antarctic Site Inventory project. The project objectives are to:

- (i) determine whether small groups of researchers on tour ships and other vessels can cost-effectively gather information needed to detect and determine how to avoid the possible cumulative impacts of tourist activities on the Antarctic environment;
- (ii) begin gathering data to characterise the current state of sites being visited by tourists in the Antarctic Peninsula.

(94) Germany noted that the information being obtained by the project would contribute to meeting the goals of the CCAMLR Ecosystem Monitoring Programme as well as assessing the possible cumulative effects of Antarctic tourism.

(95) The United States noted that the project was being carried out cooperatively with the United Kingdom and that valuable assistance had been provided by Argentina, Chile, and several tour operators. It encouraged other Parties to become involved in the project.

(96) France introduced Information Paper (XXI ATCM/INF 25) on tourism and non-governmental activities in the Antarctic and raised concerns relating to navigational safety in Antarctic waters.

(97) Several Delegations were concerned about the safety of ships operating in Antarctica, and considered that operational safety issues should be examined by ATCM XXII.

(98) A number of Delegations referred to the International Maritime

Organisation (IMO) "Polar Code" for ships sailing in polar waters, and considered that the technical issues raised by this Code should be discussed by ATCM XXII.

(99) IAATO submitted Information Paper (XXI ATCM/INF 75) which described the number of tourist visits to the Antarctic during the 1996/97 season and which included a forecast of predicted visitor numbers over the next five years.

(100) Additional Information Papers were tabled by New Zealand (XXI ATCM/INF 7) "Reporting of Tourist and Non-Governmental Activities in Antarctica: Antarctic Tourism Data: Prototype Post-Visit Data Entry Tool", (XXI ATCM/INF 20) "A model IEE for an Antarctic tourism cruise", Argentina (XXI ATCM/INF 54) "Report on Antarctic tourism through Ushuaia in 1996/97".

Item 10 : Inspections under the Antarctic Treaty

(101) Norway submitted Information Paper (XXI ATCM/INF 37) containing the findings of the Norwegian inspection undertaken under Article VII of the Antarctic Treaty carried out in December 1996. The stations inspected were Neumayer (Germany), SANAE IV (South Africa), Maitri (India) and Novolazarevskaya (Russia), all situated in Dronning Maud Land.

(102) The report noted that all the stations were used for purposes consistent with the provisions of the Treaty. Notwithstanding the fact that the Madrid Protocol has not entered into force, the stations visited were managed as if most of the Protocol's provisions were already binding. The observers were generally impressed with the quality of scientific research carried out at the stations inspected.

(103) The Norwegian inspection report contains a number of recommendations, including:

- (i) Nations which, for economic reasons are unable to carry out clean-ups and dismantling of former stations and installations, should be offered practical and logistic support.
- (ii) An inventory of locations of former activities, including fuel depots and waste sites, should be made to avoid such information being lost.
- (iii) More efforts should be made to develop alternative energy sources adapted to Antarctic conditions.
- (iv) Development of contingency plans for possible fuel spills and innovative means to further reduce risks of such spills should be given priority.
- (v) A better gender balance in over-wintering operations should be

encouraged.

(104) Many Delegations commented on the high quality and level of detail of the Norwegian report and the satisfactory nature of its findings. Several Delegations commented that Norway had used the inspection checklists agreed at ATCM XVIII as guidelines, and noted that Norway had found the checklists useful.

(105) The Netherlands stated that they had carried out an examination of Checklist B (Vessels within the Antarctic Treaty Area) in the context of existing international shipping provisions. The Netherlands had concluded that no alteration of the checklist was necessary and that the ATCM could proceed to see if the checklists could be merged into a single publication.

(106) New Zealand tabled an Information Paper describing an inspection handbook which had been used domestically to assist compliance with environmental protection requirements (XXI ATCM/INF 121). Several Delegations considered this was useful.

(107) The United Kingdom announced that it would be undertaking an inspection in the Antarctic Treaty Area under Article VII of the Antarctic Treaty during the 1997/98 austral summer season.

(108) Australia noted the imbalance between inspections in East and West Antarctica and offered two places on its vessel to allow inspection in Eastern Antarctica.

(109) The Meeting agreed that the list of inspections should be updated to include those reported at the Meeting and that the list be annexed to the Final Report. This can be found at Annex H.

Item 11 : Operational Issues

(110) Chile introduced Working Paper (XXI ATCM/WP 11) relating to natural disasters in the Antarctic and the dangers these presented to people working in, or visiting, the area. The Paper proposed that a list of hazardous and potentially dangerous areas be compiled and that this information be disseminated to assist in reducing the risk to visitors.

(111) Several Delegations welcomed the Paper and noted that it raised important issues of human health and safety. It was also noted that a full list of hazardous areas would be difficult and costly to compile. Several Parties noted that it may be productive to identify hazardous areas in the vicinity of stations as a first priority and to ensure that people visiting those areas were aware of the potential hazards. It was suggested that this should be considered within national education and training programmes. SCAR and COMNAP concurred with this suggestion from a scientific and operational point of view.

(112) Chile also referred to Information Paper (XXI ATCM/INF 69) which

reported on Chilean Naval activities in assisting shipping in Antarctic waters.

(113) ASOC submitted Information Paper (XXI ATCM/INF 66) which reported on an expedition carried out by one of its members in 1996/97. The Paper noted that environmental management and understanding of the Protocol in general had improved amongst Antarctic operators. The Paper queried some waste management activities permitted under the Protocol, and noted that the proliferation of stations and the increasing commercialisation of the Antarctic were matters for concern.

(114) WMO submitted Information Paper (XXI ATCM/INF 49) on WMO networks in support of Antarctic operations and research. The Paper made several observations on the meteorological reporting system being used in the Antarctic.

(115) The Meeting welcomed the implementation of the Antarctic Master Directory (AMD) as outlined in the SCAR/COMNAP Information Paper (XXI ATCM/INF 31). The Directory provides information on the types of Antarctic data held in each country and how it can be accessed. The first 200 metadata (ie data about data) entries had been made and Parties were urged to supply more details of data holdings to ICAIR, as the AMD host, as soon as possible. The Directory is publicly accessible via a World Wide Web interface. The Meeting endorsed the efforts of SCAR and COMNAP and noted that this initiative would significantly enhance the value of scientific data being collected in Antarctica.

(116) The United Kingdom presented Information Paper (XXI ATCM INF/124) on its data management initiatives which supports and complements the SCAR/COMNAP Antarctic Master Directory project.

(117) Information in the SCAR/COMNAP system will be in the public domain. However, control of access to the data it references is the responsibility of national scientists and operators.

(118) Additional Information Papers were submitted by Chile (XXI ATCM/INF 18) "Multidisciplinary Geographic Information System for Fildes Peninsula, King George Island, Antarctica", (XXI ATCM/INF 19) "Information System of Scientific Antarctic Data (SIDCA)", and Argentina (XXI ATCM/INF 129) "Conditions of the Ice on the Weddell Sea during the 1996/1997 Summer Season".

Item 12 : Science Issues

(119) Chile tabled Working Paper (XXI ATCM/WP 12 Rev.1) calling for the establishment of a programme to assess and prevent damage to wildlife and the environment being caused by marine debris, particularly plastic, being discarded from ships into the seas around Antarctica. The Meeting welcomed the Paper and noted that paragraphs 33 and 34 of the Statement by the CCAMLR Observer (XXI ATCM/INF 77) indicated that there has been an increase in the amount of marine debris in the Southern Ocean and that the

CCAMLR Secretariat had been asked to prepare materials for an education initiative to reverse this trend. The Meeting noted the seriousness of this issue and requested that CCAMLR, IAATO and other interested Parties report on progress in assessing and dealing with the marine debris problem at ATCM XXII.

(120) The Meeting welcomed the overview of international scientific programmes introduced by SCAR (XXI ATCM/INF 32, XXI ATCM/INF 33). The new programmes on sea ice were considered to be of great importance in improving the data for global climate models. New initiatives on palaeoclimatic research on marine sediments would complement the ice core data whilst an investigation of the atmospheric environment over the last 200 years would provide very fine resolution of recent climate trends. The integration of all the SCAR global change programmes into the general framework of IGBP was especially noted.

(121) SCAR highlighted some key developments including improved prediction capability for enhanced UV-B radiation, the remarkable new opportunities for geospace research offered by the installation of high frequency radars by the United Kingdom, Japan and South Africa (with future ones promised by France and Australia), the increased accuracy of measurement of the size of the Earth provided by gravity measurements, the production of the complete gazetteer of 37,000 names for the whole continent, the development of improved health care by pre-deployment screening and telemedicine, and the organisation of a new group to look at the evolution of Antarctic organisms.

(122) SCAR tabled Information Paper (XXI ATCM/INF 34) on biological diversity. The Meeting considered this a useful summary of present activities and one delegation urged SCAR to communicate it formally to the Secretariat of the Convention on Biodiversity.

(123) WMO presented Information Paper (XXI ATCM/INF 44 Rev.1) on Antarctic stratospheric ozone. The Paper noted that it was likely to be five years or more before any significant trend in the year-to-year weakening of the springtime ozone hole may emerge. The Paper also noted that ozone was a green house gas and its three-dimensional distribution was an important input for models which predict global warming.

(124) IOC introduced Information Paper (XXI ATCM/INF 45) reporting on the 6th Session of the IOC Regional Committee for the Southern Ocean and the Southern Ocean Forum.

(125) The Meeting welcomed two papers submitted by France and Italy (XXI ATCM/INF 16, XXI ATCM/INF 25) about the construction and operation of the new "Concordia" station, and on the European Programme for Ice Coring in Antarctica (EPICA). Several Delegations commented favourably on the collaborative research being carried out under the EPICA programme.

(126) Russia submitted Information Paper (XXI ATCM/INF 79) on glaciological and geophysical research at Vostok Station. Several Delegations

noted that the palaeoclimatic reconstructions which were being carried out using ice core samples from Vostok Station and which were planned to be performed in the course of the EPICA project, were a priority in current research in Antarctica. Russia reported that one of the future goals of its research was the study of the subglacial Lake Vostok.

(127) Seismological studies conducted in the last two seasons at Vostok Station by the Russian Antarctic Expedition had generated considerable interest in the project from the European polar community. The Russian delegation advised that there would be no penetration of the Lake until the project had been fully assessed by the international scientific community and subjected to full environmental assessment.

(128) An important new factor in Antarctic research was the interest expressed by NASA in the possible testing of space technologies and devices for future studies of the ice cover of Europa, one of the moons of the planet Jupiter.

(129) IAATO introduced Information Paper (XXI ATCM/INF 125) on Antarctic tourism as a resource for science and welcomed future cooperation and dialogue with regard to science projects. Some Delegations expressed doubts on the usefulness of tourist ships for scientific projects.

(130) Additional Information Papers were submitted by New Zealand (XXI ATCM/INF 4) "Antarctic Stratigraphic Drilling East of Cape Roberts in Southwest Ross Sea, Antarctica - Update of Activities", (XXI ATCM/INF 22) "New Joint Scientific and Related Initiatives Between New Zealand and South Africa", Chile (XXI ATCM/INF 8) "Medio Siglo de Ciencia Antarctica", France (XXI ATCM/INF 14) "Le Programme Europeen de Forage Glacier au Dome C", France and Italy (XXI ATCM/INF 16) "Concordia", Republic of Korea (XXI ATCM/INF 26) "International Collaborations on Scientific Activities on King George Island", Australia (XXI ATCM/INF 50) "Major Initiatives in Australian Antarctic Science, 1994-97", (XXI ATCM/INF 52) "50th Anniversary of Australian National Antarctic Research Expeditions", Bulgaria (XXI ATCM/INF 59) "Bulgarian Antarctic Research - Life Sciences", Norway (XXI ATCM/INF 96) "Norwegian Antarctic Research Expedition (NARE) 1996/97", Uruguay (XXI ATCM/INF 107) "Uses of a Krill Diet for the Treatment of Atherosclerosis: Six Studies", Russia and IAATO (XXI ATCM/INF 109) "Report on the Ecological Research Program within the Time Frame of Co-operation between Russian Antarctic Expedition and Quark Expeditions", and IOC (XXI ATCM/INF 45) "Report on the 6th Session of the IOC Regional Committee for the Southern Ocean and the 1st Southern Ocean Forum".

Item 13 : Education and Training Issues

(131) At ATCM XX two reports (XX ATCM/INF 70 and 53) were tabled by SCAR and IUCN containing the recommendations of a 1993 SCAR/IUCN workshop on environmental education and training. Based on a number of these recommendations, the United Kingdom presented Working Paper (XXI

ATCM/WP 14) to the Meeting which contained proposals for improving education and training for people working in or visiting Antarctica.

(132) The Meeting welcomed the United Kingdom proposal that information on Antarctica and the Antarctic Treaty System should be more widely available to the public and visitors to the region. A number of delegations considered that such material would necessarily be focused on the specific requirements of each Party. The Meeting agreed that there could be considerable value in developing a short document which would explain the nature, operation and achievements of the Antarctic Treaty System, and which could be endorsed by the Parties. Such a document would describe, and provide examples of, the accomplishments of the Antarctic Treaty System, and could be included with the information provided by each Party to its nationals. Australia offered to draft such a document, consult with interested Parties during the intersessional period via e-mail, and bring forward a draft to ATCM XXII for consideration. The Meeting accepted Australia's offer to coordinate this work. Parties interested in participating in this work were asked to provide the name and e-mail address of their contact to the coordinator: Rex Moncur (e-mail: rex_mon@antdiv.gov.au).

(133) The Meeting also welcomed the United Kingdom proposal that there should be a survey of the educational and training programmes developed by national Antarctic programmes and tour operators for people visiting or working in Antarctica. This proposal was supported by several Delegations. COMNAP considered that it was important for national operators to share information so that they could learn from one another. Therefore COMNAP, in association with IAATO, offered to collect information on the various education and training schemes which have been developed by national Antarctic programmes and by Antarctic tour operators and to report back the results of the survey to ATCM XXII for examination. The Meeting accepted the offer.

(134) A number of Delegations questioned whether it would be possible or useful to try to develop agreed guidelines for Antarctic education and training programmes. Several Delegations considered it could be useful to develop a simple checklist of issues which could be used as a guideline for educational and training programmes.

(134) Chile offered to host a workshop to discuss education and training for people going to Antarctica, and suggested that it could be held in conjunction with the SCAR/COMNAP meeting in Chile during July 1998. New Zealand offered to assist Chile in the organisation of this workshop. The Meeting thanked Chile for its offer and agreed that the workshop should examine in detail the results of the COMNAP/IAATO survey of education and training programmes, and provide an opportunity for those responsible for, and active in, such programmes to meet and exchange information and ideas.

(136) New Zealand informed the Meeting that it was currently drafting a "Laypersons Guide to the Protocol" and that this document would be tabled for consideration at ATCM XXII.

(137) Several Delegations supported the IUCN proposal (XXI ATCM/INF 64) to undertake a survey of education courses on Antarctica offered by secondary schools, colleges, technical schools, and universities. One delegation indicated that it would be a major and costly undertaking for it to provide the information requested. Another delegation suggested that the LEARNZ programme operated by New Zealand was an excellent example of a secondary school educational initiative dealing with Antarctica.

(138) Additional Information Papers were submitted by Belgium (XXI ATCM/INF 1) "100th Anniversary of the Antarctic Expedition of Captain A de Gerlache (Belgium) 1897 - 1899", and Chile (XXI ATCM/INF 9) "Divulgacion de los Valores Educativos de la Antartica".

Item 14 : Environmental Monitoring and State of the Antarctic Environment

(139) New Zealand and SCAR presented Working Papers (XXI ATCM/WP 32 and 19 respectively) on the need for, and suggested structure of, a State of the Antarctic Environment Report (SAER). Discussion then focused on the potential benefits and concerns facing Parties in the production of such a report, and on ways in which it might be taken forward.

(140) Parties acknowledged that a SAER could provide a valuable benchmark against which environmental change might be monitored and impacts measured, and that it might provide a valuable synthesis of the large and diverse amount of scientific information available. The discussions noted that such a report could be done in several ways, each with a differing focus and level of detail.

(141) The Meeting raised concerns about the potential scope, focus, cost and production of an SAER, noting that while there were numerous models for State of the Environment reporting elsewhere, an Antarctic report was likely to be a comprehensive undertaking. Existing world experience of SOE reporting suggested that the more comprehensive a report, the greater the time and financial resources required.

(142) Parties noted New Zealand's intention to prepare a framework for a Ross Sea Region State of the Environment Report (SOE-RSR) by the year 2000 in consultation with other countries active in the region. While it was acknowledged that this regionalised report could be used as a pilot for a larger, continent-wide report, it was felt that commencement of work on the SAER should not be tied to the timing or the completion of the SOE-RSR.

(143) The Parties agreed that the objectives for the SAER needed clarification to take into account different audiences and, consequently, *foci* for the Report. Uses to which the Report might be put include:

- i) as an archival benchmark/baseline document of global relevance;
- ii) as a basis for the provision of policy guidance; and

iii) as a basis for the provision of trend analysis in environmental monitoring.

(144) The Meeting agreed that any one, or combination, of these uses might be appropriate and the approach should be clearly established by the ATCM before work on the SAER is started.

(145) It was suggested that it could be useful for the SAER to distinguish the process of data collection, validation, and compilation, in which SCAR would play a major role, from the process of providing advice and formulating recommendations, which would have to be done by the TEWG/CEP.

(146) The Meeting noted that the Antarctic scientific community could be expected to play a major role in the preparation of the report. It expressed its appreciation for the work that SCAR had already done in preparing draft guidelines and a schema for the Report. SCAR had identified a number of organisations with the relevant specialist capabilities which might usefully be consulted in the development of the SAER.

(147) The Meeting agreed to form an open-ended contact group facilitated by New Zealand to consider intersessionally how uncertainties about the focus of a SAER and the methodology of production might be resolved, and to report back to ATCM XXII. The contact group would be tasked with:

- i) developing clear objectives for the Report;
- ii) recommending whether the Report should be comprehensive or summary in nature;
- iii) proposing a time-frame for the Report;
- iv) considering the financial and human resources required to meet the proposed time-frame and scope of the Report; and
- v) considering what progress might be made on the Report framework.

(148) The Meeting noted that there was likely to be a range of options involving possible financial commitment from Parties. The contact group should consider preparing indicative cost estimates based on different options, investigate possible sources of funding and potential outlets for publication.

(149) New Zealand's offer to coordinate the work of the contact group prior to ATCM XXII was gratefully accepted by the Meeting. New Zealand was asked to facilitate the intersessional work of the contact group by correspondence, including e-mail, and to report back to ATCM XXII. The Meeting noted that such intersessional work should take account of the financial, technical and other resource implications for participants in the production of a SAER.

(150) The Meeting agreed that the project should be open to the widest participation by Parties, Observers and Experts, and that all those interested should notify the New Zealand national contact point by the end of June 1997 of their interest in participating in the intersessional work to be carried out by the contact group. (Contact is apu@mft.govt.nz).

(151) COMNAP introduced Information Paper (XXI ATCM/INF 67) summarising existing environmental monitoring activities in the Antarctic.

(152) Korea introduced Information Paper (XXI ATCM/INF 27) outlining the environmental monitoring programme conducted at the Korean Antarctic base. The Meeting thanked Korea for this Paper.

(153) SCAR and COMNAP introduced Working Paper (XXI ATCM/WP 20) which described the results of two workshops on the monitoring of environmental impacts of scientific activities and operations in Antarctica. The Meeting welcomed these joint efforts and endorsed the Paper's proposals as subjects for future action. These are as follows:

- i) a technical handbook of standardised monitoring techniques to be prepared by COMNAP, with advice from SCAR, based on the parameters and key indicators identified in the workshop report;
- ii) a review of existing data and of key research issues to be undertaken through SCAR;
- iii) the process of data management to be developed through the SCAR/COMNAP Data Management Group to allow synthesis of data for comparative purposes; and
- iv) methods of coordination of monitoring activities to be developed through COMNAP to avoid wasteful duplication and ensure effective use of resources.

Item 15 : Specific Environmental Protection Measures

(154) This item was not discussed as the Protocol on Environmental Protection was not in force.

Item 16 : Preparation of the XXII Consultative Meeting

a) Date and Place of Next Meeting

(155) The Meeting welcomed the invitation of Norway to host the XXII Ind ATCM. Norway advised the Meeting that ATCM XXII would take place in Tromsø, from 25 May to 5 June 1998.

b) Invitations of International and Non-Governmental Organisations

(156) In accordance with established practice, the Meeting agreed that the following organisations having a scientific or technical interest in Antarctica should be invited to send experts to attend ATCM XXII: ASOC, IAATO, IHO, IOC, IMO, IUCN, PATA, UNEP, WMO and WTO.

c) Preparation of the Agenda of ATCM XXII

(157) The meeting approved a preliminary agenda for ATCM XXII, which is attached at Annex M.

(158) Provided that the Environmental Protocol to the Antarctic Treaty is in force before the opening of ATCM XXII, the Meeting agreed that the procedure envisaged in Rule 5 of the ATCM Rules of Procedure would be an appropriate model for the commencement of the CEP pending the adoption of its own Rules of Procedure.

(159) On this basis, Norway would provide a "Temporary Chair". The Temporary Chair would preside over the adoption of the Rules of Procedure and the Election of Officers in accordance with the adopted Rules. Norway would also prepare a Provisional Agenda.

Item 17 : Other Business

(160) The Meeting discussed whether, in the light of Decision 1 (1995), it should be necessary in the future to convene a Special Consultative Meeting for the purpose of reviewing notifications regarding Consultative Party status. The Meeting agreed to adopt Decision 2 (1997) establishing that, in the future, decisions on such matters shall be made at an ATCM.

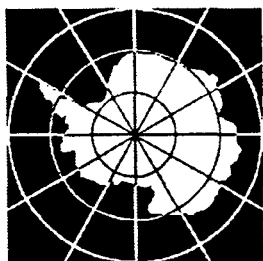
(161) The Meeting welcomed Bulgaria's recent notification of its interest in achieving Consultative Party status and its announcement of its intention to accede to the Protocol on Environmental Protection. The meeting noted Bulgaria's active involvement in scientific research in Antarctica. It was agreed that the question of Bulgaria's status should be considered further at an early stage during ATCM XXII if by then Bulgaria had met the conditions set out in Decision 2 (1997). A number of Delegations indicated that if Bulgarian vessels or interests are involved in harvesting Antarctic marine living resources, then Bulgaria should seek to become a member of the Commission for the Conservation of Antarctic Marine Living Resources.

Item 18: Adoption of Report

(162) The draft Final Report was adopted by Parties on 30 May.

Item 19: Closing of the Meeting

(163) ATCM XXI closed at 1330 on 30 May 1997.



PART TWO

**MEASURES, DECISIONS AND
RESOLUTIONS ADOPTED AT THE
TWENTY-FIRST
ANTARCTIC TREATY
CONSULTATIVE MEETING**

CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997

ANNEX A:

MEASURES

ANNEX A: MEASURES

MEASURE 1 (1997)

**Antarctic Protected Areas System:
Revised Description and Management Plan for
Specially Protected Area**

SPA 5 Beaufort Island (Annex A)

The Representatives,

Recalling Recommendations XV-8 and XV-9/VIII-3

Noting that revised and new Area Descriptions and Proposed Management Plans have been endorsed by the Scientific Committee on Antarctic Research (SCAR);

Noting also that the format of the revised and new Area Descriptions and proposed Management Plans accord with Article 5 of Annex V of the Protocol on Environmental Protection to the Antarctic Treaty adopted under recommendation XVI-10;

Recommend to their Governments the following Measure for approval in accordance with paragraph 4 of Article IX of the Antarctic Treaty:

For Specially Protected Area No. 5 Beaufort Island (Annex A)

1. That the Description inserted in Annex B, Specially Protected Areas, of the Agreed Measures for the Conservation of Antarctic Fauna and Flora shall be deleted.
2. That the Description and Management Plan of the Specially Protected Area at Annex A shall be inserted in Annex B, Specially Protected Areas, of the Agreed Measures for the Conservation of Antarctic Fauna and Flora.

Management Plan for Specially Protected Area (SPA) No. 5 BEAUFORT ISLAND, McMURDO SOUND, ROSS SEA

1. Description of Values to be Protected

Beaufort Island was originally designated in Recommendation IV-5 (1966, SPA No. 5) after a proposal by New Zealand on the grounds that it "contains substantial and varied avifauna, that it is one of the most important breeding grounds in the region, and that it should be protected to preserve the natural ecological system as a reference area". The Area has been set aside primarily to protect the site's ecological values and these reasons for long-term special protection still apply.

The island comprises a variety of terrain and habitats: gently sloping ice-free ground with summer ponds and small meltwater streams draining to the coast; moderately sloping ice fields covering much of the west side of the island; and steep, rugged cliffs on the eastern slopes. Recent investigations indicate the avifauna is not as varied as first thought, but there exists a large Adélie penguin (*Pygoscelis adeliae*) colony, a small breeding colony of Emperor penguins (*Aptenodytes forsteri*), and several breeding colonies of South polar skua (*Catharacta maccormicki*). The boundaries of the Area, which previously excluded the Emperor colony, have been extended to include fast-ice occupied by breeding birds.

Site visits in January 1995 and 1997 discovered and described a significant area of vegetation previously unrecorded on an ice-cored moraine bench of up to 50 m wide and 5–7 metres above the beach on the north of the island. The vegetation is exceptional both in its quantity and quality, and is the most extensive, continuous area of mosses yet known for the McMurdo Sound region. Although the area is extensive (approximately 2.5 ha), the moss community is dominated by a single species, *Bryum argenteum*: the essentially monospecific character of the site is also unique. The site enjoys warm summer temperatures because of its northerly aspect and shelter from southerly winds by high ice cliffs. The local microclimate, stability of the substrate and supply of water from the nearby ice-cliffs and snow banks are favourable for vegetation growth. As a result there is also a diverse community of algae, and while a detailed algal survey has not yet been undertaken, *Prasiola crispa* is particularly abundant throughout the site, together with a number of unicellular chlorophytes and xanthophytes (including *Botrydiopsis* and *Pseudococcomyxa*), and cyanobacteria (particularly scillatorians) mixed with the *Prasiola*. Green snow algae, a mixture of *Chloromonas* and *Klebsormidium*, are present as well as the red snow algae *Chlamydomonas* sp., *Chloromonas* sp., and *Chlamydomonas nivalis*. This represents one of the most southerly locations where red snow algae have been observed. The exceptional plant communities at this site are fragile and vulnerable to disturbance and destruction by trampling, sampling and/or through foreign introductions. Conservation of the ecological and scientific values of this community are important reasons for special protection at Beaufort Island. As an isolated island difficult of access, the site is known to have been visited only infrequently. Beaufort Island has not been comprehensively studied or documented but is largely undisturbed by

direct human activity. In particular, Beaufort Island has been exposed to fewer opportunities for direct exotic biological introductions than many other sites in the Ross Sea. The ecological, scientific and aesthetic values derived from the isolation and relatively low level of human impact are important reasons for special protection at Beaufort Island.

2. Aims and Objectives

Management at Beaufort Island aims to:

- avoid degradation of, or substantial risk to, the values of the Area by preventing unnecessary human disturbance to the Area;
- preserve the natural ecosystem as a reference area largely undisturbed by direct human activities;
- allow scientific research on the natural ecosystems, plant communities, avifauna and soils in the Area provided it is for compelling reasons which cannot be served elsewhere;
- minimise human disturbance to plant communities by preventing unnecessary sampling;
- minimise the possibility of introduction of alien plants, animals and microbes to the Area;
- allow visits for management purposes in support of the aims of the management plan.

3. Management Activities

The following management activities are to be undertaken to protect the values of the Area:

- Markers, signs or structures erected within the Area for scientific or management purposes shall be secured and maintained in good condition, and removed when no longer necessary.
- Visits shall be made as necessary to assess whether the Area continues to serve the purposes for which it was designated and to ensure management and maintenance measures are adequate.
- National Antarctic Programmes operating in the region shall consult together with a view to ensuring these steps are carried out.

4. Period of Designation

Designated for an indefinite period.

5. Maps and Photographs

Map A: Beaufort Island regional topographic map. The map is derived from the orthophotograph in Map B, using Map B specifications. Inset: McMurdo Sound, showing Ross Island and the location of McMurdo Station (US) and Scott Base (NZ). The nearest protected areas are SSSI-10 (Caughley Beach) and SPA-20 (New College Valley) at Cape Bird, and SSSI-1 (Cape Royds).

Map B: Beaufort Island regional orthophotograph.
Orthophotograph specifications:

Projection: Lambert conformal conic; Standard parallels: 1st 76° 40' 00" S; 2nd 79° 20' 00" S; Central Meridian: 167° 00' 00" E; Latitude of Origin: 78° 01' 16.211" S.

Spheroid: WGS84. The original orthophotograph was prepared at 1:5000 with a positional accuracy of ±2.5 m (horizontal and vertical) with an on-ground pixel resolution of 1 m. Photography: USGS/DoSLI (SN7850) 22 November 1993.

Map C: North Beaufort Island site orthophotograph. Specifications are the same as in Map B. The site of rich vegetation is indicated by hachures. The precise area of fast-ice occupied by breeding Emperor penguins is subject to variation both seasonally and inter-annually.

Map D: South Beaufort Island site orthophotograph. Specifications are the same as in Map B.

Figure 1: Perspective view of Beaufort Island from an elevation of 225 m, 900 m out from the preferred Helicopter Pad at an azimuth of 300° W.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

The designated Area encompasses the whole of Beaufort Island (76°58'S, 167°00'E Map A) above the mean high water mark, and includes adjacent fast-ice occupied by breeding Emperor penguins. The 7 km by 3.2 km island rises to 771 m at Paton Peak. The west side of the island is predominantly an ice field with ice cliffs of about 20 m on the coast, while the east and south sides of the island are largely ice-free, with steep and inaccessible cliffs rising straight from the sea. In view of the isolation of Beaufort Island and the current low levels of shipping activity in the region, boundary markers and signs have not been installed to mark the Area: the need for marking should be re-evaluated at each management plan review.

Beaufort Island is one of a series of late Tertiary volcanic vents that developed along a line of weakness in the Ross Sea floor. The geology is typical of an eroded, sub-aerially produced basaltic complex, with lava flows and explosion breccias and tuffs evident. Many of the volcanic rocks have been intruded by a series of late stage basaltic dikes, and there is evidence of layered ash-fall tuffs and welded spatter flows from local subsidiary cinder and spatter cones. Cadwalader Beach comprises a beach foreland and cusped spit, backed by steep basaltic cliffs and several talus cones. A series of beach ridges, which are generally occupied by the breeding penguins, have trapped meltwater ponds and mark the growth of the beach face away from the cliffs with time. A series of raised beaches is evident at the northeastern end of the island, some with evidence (quills and guano) of former and apparently substantial penguin colonies. Sub-tidal (abrasion) platforms and massive boulders are found below the highly weathered eastern and southern cliffs. An Adélie colony of 46,000 pair (1987 count) occupies the flat area at Cadwalader Beach (Map D). Above the steep cliffs that rise behind the colony, a population of skuas (numbers unknown) nest on more gentle ice-free slopes at the edge of the permanent ice field on the west flank of the island. This

ice field is punctuated mid-way by a 2 km line of rocky outcrops at an elevation of approximately 200 m. In the north the ice field broadens into an extensive flat area of less than 50 m elevation, NE of which extends an ice-free beach about 1000 m in length and 50 m wide (Map C). In January 1995 a newly-established, possibly transitory, colony of Adélie penguins (comprising 2 pairs with 3 chicks and a approximately 10-15 non-breeders) occupied the west end of this beach. Above the beach, a raised ice-cored moraine terrace (5–20 m elevation, ranging from 2-3 metres wide over most of its length but broadening to 20-50 metres at its eastern end) extends for 550 m before rising more steeply toward the unstable basaltic cliffs which persist around the entire eastern side of the island. At least three sub-fossil penguin colony deposits have been identified within the moraine terrace, each layer vertically separated by around 50–100 cm of gravels and sand, suggesting this part of the island had been occupied by a sizable breeding penguin colony in the recent past. The deposits may be useful for determining the age of former penguin colonies in the region.

A population of approximately 100 skuas (1995 count) breeds on the terrace and ice-free slopes leading toward the cliffs. The proportion of breeders to non-breeders in this population is not known, but approximately 25 and 50 chicks were counted in January 1995 and 1997 respectively.

On the fast-ice adjacent to the northern coastal reaches, a small colony of breeding Emperor penguins (1787 pairs at 1976 count; 179 pairs at 1983 count, 1355 adults at October 1994 count) is present annually between the months of approximately April to January. The size of the colony is limited by the areal extent and condition of the fast-ice, which affects the availability of breeding sites in the lee of the northern slopes of Beaufort Island. The precise location of the colony varies from year to year and the colony moves within a breeding season, but the general area of occupation is indicated on Map C. The ice-free moraine terrace on the north end of the island (Map C) also supports the richest growth of vegetation recorded on Beaufort Island. This vegetation is exceptional both in quantity and quality, and is the most extensive, continuous area of mosses yet known for the McMurdo Sound region. The site enjoys warm summer temperatures (an air temperature +13°C was recorded on 18 January 1997) because of its northerly aspect and shelter from southerly winds by a 20 m high semi-circular ice cliff. The local microclimate, stability of the ground surface and supply of water from the nearby ice-cliffs and snow banks are favourable for vegetation growth. Initially the water forms a diffuse flush but becomes progressively entrained into rivulets that have eroded narrow valleys in the edge of the terrace. The moss community is extensive (approximately 2.5 ha), with much of the site showing 100% ground cover, dominated by a single species, *Bryum argenteum*. One specimen of another species, *Pottia heimii*, was found after an extensive search: the essentially monospecific character of the site is also unique. The *Bryum* occurs in scattered patches at the upper (southern) margin of the bench, adjacent to the annual drift snow at the base of the ice cliff, and more continuous mats (hummocks) occur in the middle of the bench and in areas where spreading water drainage occurs, especially at the eastern end. In the upper (southern) part of the area the *Bryum* is intermixed with *Nostoc* colonies (cyanobacterium). At lower and more northerly sites in areas of high water

flow the moss may be overgrown with a brown coloured mixed cyanobacterial community, particularly in areas prone to flooding, cryoturbic disturbance and, possibly, skua activity. *Bryum argenteum* produces dehiscent shoot tips which disperse the plants down stream. Evidence of this dispersal was commonly seen with *B. argenteum* sometimes occurring as small, and probably ephemeral, communities on the beach below the terrace. The moss community is known to support significant populations of mites, but a detailed survey of invertebrates on Beaufort Island has yet to be undertaken. The vegetation at Beaufort Island is comparable to the upper, wetter parts of the flush at Canada Glacier (SSSI-12), Taylor Valley, Victoria Land. The Canada Glacier flush has a common, second species, *Pottia heimii*, that grows in drier areas but this was almost completely absent at Beaufort Island. The reason for this is unknown, but could be due to substrate differences, the presence of numerous skuas occupying the drier areas at Beaufort Island, high nutrient levels in the melt water at Beaufort Island, or limited dispersal and colonisation opportunities. At Botany Bay (ASPA-XYZ), Granite Harbour, Victoria Land — a warmer site than at Canada Glacier but at a similar latitude to Beaufort Island — the wetter areas are occupied by the moss *Ceratodon purpureus* or *Bryum argenteum*, so that there may be a sequence from wet to dry of *C. purpureus* - *B. argenteum* - *P. heimii*. While there is no understanding as to why *C. purpureus* is absent at Beaufort Island it is likely that limited dispersal and colonisation opportunities, as well as water nutrient status, may be important.

There is also a diverse community of algae, and while a detailed algal survey has not yet been undertaken, *Prasiola crispa* is particularly abundant throughout the site, reflecting the high nutrient status and abundance of melt water. A number of unicellular chlorophytes and xanthophytes (including *Botrydiopsis* and *Pseudococcomyxa*) and cyanobacteria (particularly scillatorians) were found mixed with the *Prasiola*. Green snow algae, noticeable as a green band at the lower levels of snow banks above the beach and below the ice cliffs, contained a mixture of *Chloromonas* and *Klebsormidium*. The snow and ice cliffs forming the upper edge of the beach also contain a pinkish-brown deposit, consisting largely of fine silty material as well as the red snow algae *Chlamydomonas* sp., *Chloromonas* sp., and *Chlamydomonas nivalis*. This represents one of the most southerly locations where red snow algae have been observed.

During a NZ/US visit in January 1995 abandoned equipment was removed from among the Adélie colony at Cadwalader Beach. No other human impact was visually evident in 1995.

6(ii) *Restricted zones within the Area*
None.

6(iii) *Structures within and near the Area*

The only structure known to exist on the island is a signpost on a prominent rock in the Adélie colony at Cadwalader Beach (Map D). The sign, erected in 1959-60, bears the names and home-towns of seamen and the Captain of the HMNZS Endeavour: the sign is set in concrete and was in good condition in January 1995. The sign is of potential historic value and should remain in

situ unless there are compelling reasons for its removal, which should be kept under review.

An astronomical survey station is recorded on a map of the island compiled in 1960, but it is unknown whether any associated permanent marker exists. The station is recorded as located at the south end of the main island ridge-line divide at an altitude of 549 m (Map A).

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected areas to Beaufort Island are Caughley Beach (SSSI-10) and New College Valley (SPA-20) located 35 km to the south at Cape Bird, Ross Island. Cape Royds (SSSI-1) is a further 35 km to the south (Inset: Map A)

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a Permit issued by appropriate national authorities. Conditions for issuing a Permit to enter the Area are that:

- it is issued only for compelling scientific reasons that cannot be served elsewhere, or for essential management purposes consistent with plan objectives such as inspection or review;
- the actions permitted will not jeopardise the ecological or scientific values of the Area;
- any management activities are in support of the aims of the Management Plan;
- the actions permitted are in accordance with the Management Plan;
- the Permit, or an authorized copy, shall be carried within the Area;
- a visit report shall be supplied to the authority named in the Permit;
- permits shall be issued for a stated period.

7(i) Access to and movement within the Area

Land vehicles are prohibited within the Area and access shall be by small boat or by aircraft. Aircraft should land on the island only at the designated site (166° 58' 20" E, 76° 55' 50" S: Map A) on the large flat toe of ice on the north end of the island. Should snow conditions at the designated landing site at the time of visit militate against a safe aircraft landing, a suitable mid- to late-season alternative to the designated landing site may be found at the nominated northern camp site at the western end of northern beach on Beaufort Island. It is preferred that aircraft approach and depart from the designated landing site from the south or west (Map A, Figure 1). When it is found necessary to use the alternative site at the northern beach campsite, practical considerations may dictate a northern approach: when this is the case aircraft shall avoid overflight of the area east of this site indicated on Maps A–C and Figure 1. Use of smoke grenades when landing within the Area is prohibited unless absolutely necessary for safety, and all grenades should be retrieved. There are no special restrictions on where access can be gained to the island by small boat. Pilots, air or boat crew, or other people on aircraft or boats, are prohibited from moving on foot beyond the immediate vicinity of the landing site unless specifically authorised by a Permit.

Overflight of bird breeding areas lower than 750 m (or 2500 ft) is normally prohibited: the areas where these special restrictions apply are shown on Maps A–D and Figure 1. When required for essential scientific or management purposes, transient overflight down to a minimum altitude of 300 m (1000 ft) may be allowed over these areas: conduct of such overflights must be specifically authorised by Permit.

Visitors should avoid unnecessary disturbance to birds, or walking on visible vegetation. Pedestrian traffic should be kept to the minimum consistent with the objectives of any permitted activities and every reasonable effort should be made to minimise effects.

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

- Scientific research that will not jeopardise the ecosystem of the Area and which cannot be served elsewhere;
- Essential management activities, including monitoring.

7(iii) Installation, modification or removal of structures

No structures are to be erected within the Area except as specified in a Permit. All scientific equipment installed in the Area must be approved by Permit and clearly identified by country, name of the principal investigator and year of installation. All such items should be made of materials that pose minimal risk of contamination of the Area. Removal of specific equipment for which the Permit has expired shall be a condition of the Permit.

7(iv) Location of field camps

Camping is permitted only at two designated sites (Maps A–D). The north camping site is located on the flat area north of the designated landing site, on a more sheltered location at the NW end of the beach, 200 m from where several pair of Adélie penguins and skuas nest (if present). The second site is located on the snow 100 m from the northern edge of the large Adélie colony at Cadwalader Beach.

7(v) Restrictions on materials and organisms which can be brought into the Area

No living animals, plant material or microorganisms shall be deliberately introduced into the Area and the precautions listed in 7(ix) below shall be taken against accidental introductions. No herbicides or pesticides shall be brought into the Area. Any other chemicals, including radio-nuclides or stable isotopes, which may be introduced for scientific or management purposes specified in the Permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted. Fuel is not to be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All materials introduced shall be for a stated period only, shall be removed at or before the conclusion of that stated period, and shall be stored and handled so that risk of their introduction into the environment is minimised.

7(vi) Taking or harmful interference with native flora or fauna

This is prohibited, except in accordance with a Permit. Where animal taking or harmful interference is involved this should, as a minimum standard,

be in accordance with the SCAR Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica.

7(vii) Collection or removal of anything not brought into the Area by the Permit holder

Material may be collected or removed from the Area only in accordance with a Permit and should be limited to the minimum necessary to meet scientific or management needs. Material of human origin likely to compromise the values of the Area, which was not brought into the Area by the Permit Holder or otherwise authorised, may be removed unless the impact of removal is likely to be greater than leaving the material *in situ* : if this is the case the appropriate authority should be notified.

7(viii) Disposal of waste

All wastes, including all human wastes, shall be removed from the Area.

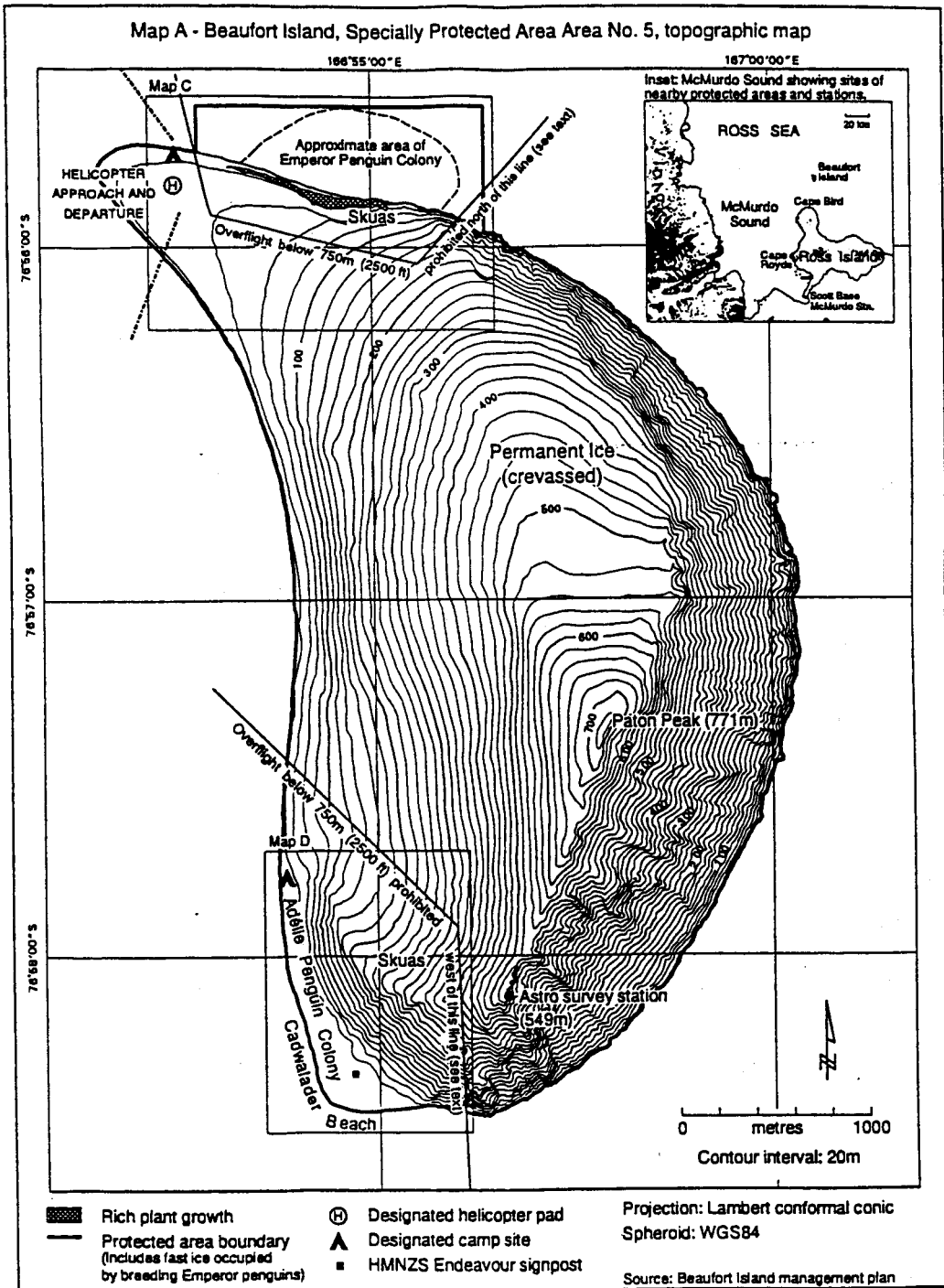
7(ix) Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met

1. Permits may be granted to enter the Area to carry out biological monitoring and site inspection activities, which may involve the collection of small samples for analysis or review, or for protective measures.
2. Any specific sites of long-term monitoring shall be appropriately marked.
3. To help maintain the ecological and scientific values of the isolation and historically low level of human impact at Beaufort Island visitors shall take special precautions against introductions. Of particular concern are microbial or vegetation introductions sourced from soils at other Antarctic sites, including stations, or from regions outside Antarctica. Visitors shall take the following measures to minimise the risk of introductions:
4. Any sampling equipment or markers brought into the Area shall be sterilised and, to the maximum extent practicable, maintained in a sterile condition before being used within the Area. To the maximum extent practicable, footwear and other equipment used or brought into the Area (including backpacks or carry-bags) shall be thoroughly cleaned or sterilised and maintained in this condition before entering the Area;
5. Sterilisation should be by an acceptable method, such as by UV light, autoclave or by washing exposed surfaces in 70% ethanol solution in water.

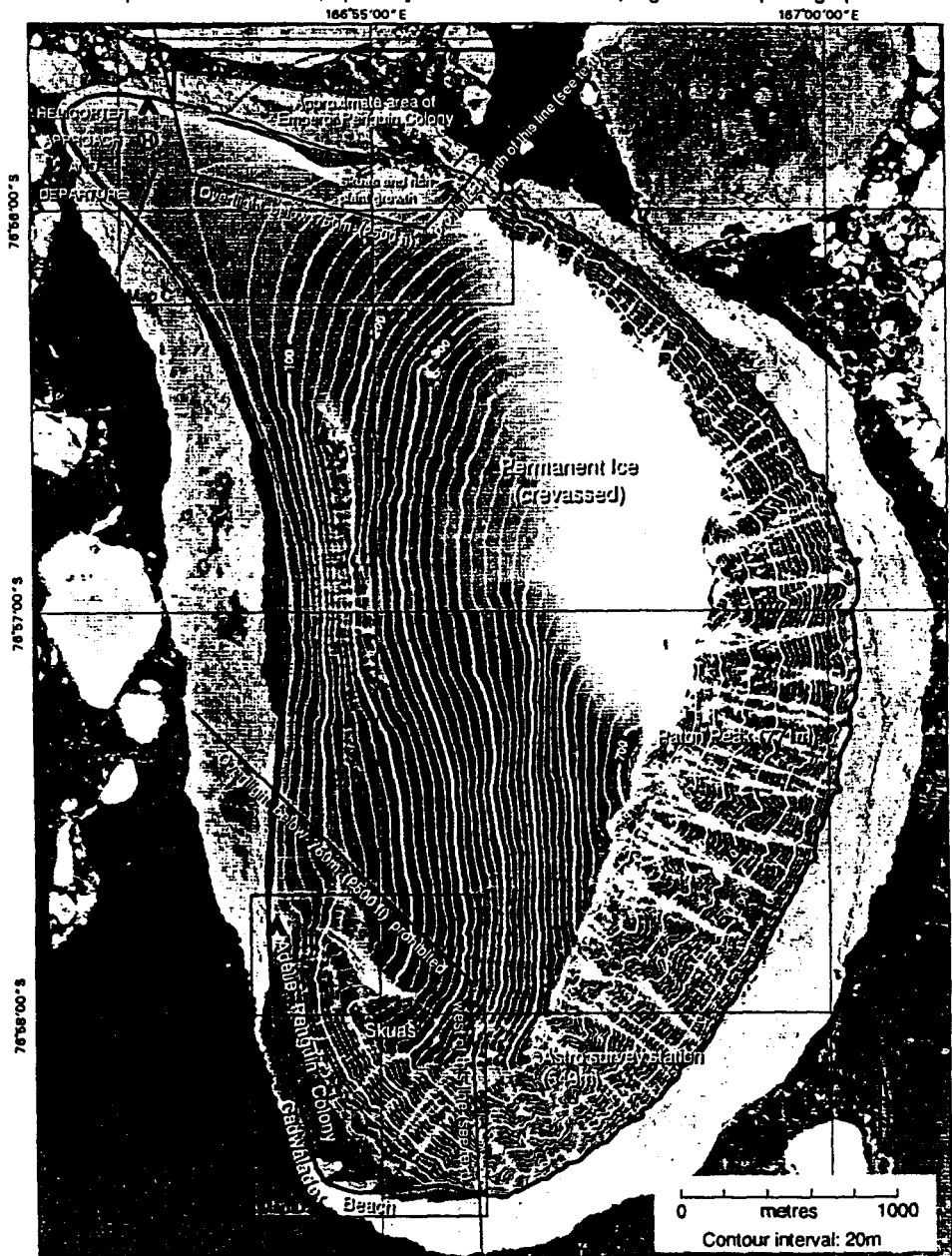
7(x) Requirements for reports

Parties should ensure that the principal holder for each permit issued submit to the appropriate authority a report describing the activities undertaken. Such reports should include, as appropriate, the information identified in the Visit Report form suggested by SCAR. Parties should maintain a record of such activities and, in the Annual Exchange of Information, should provide summary descriptions of activities conducted by persons subject to their jurisdiction, which should be in sufficient detail to allow evaluation of the effectiveness of the Management Plan. Parties should, wherever possible, deposit originals or copies of such original reports in a publicly acces-

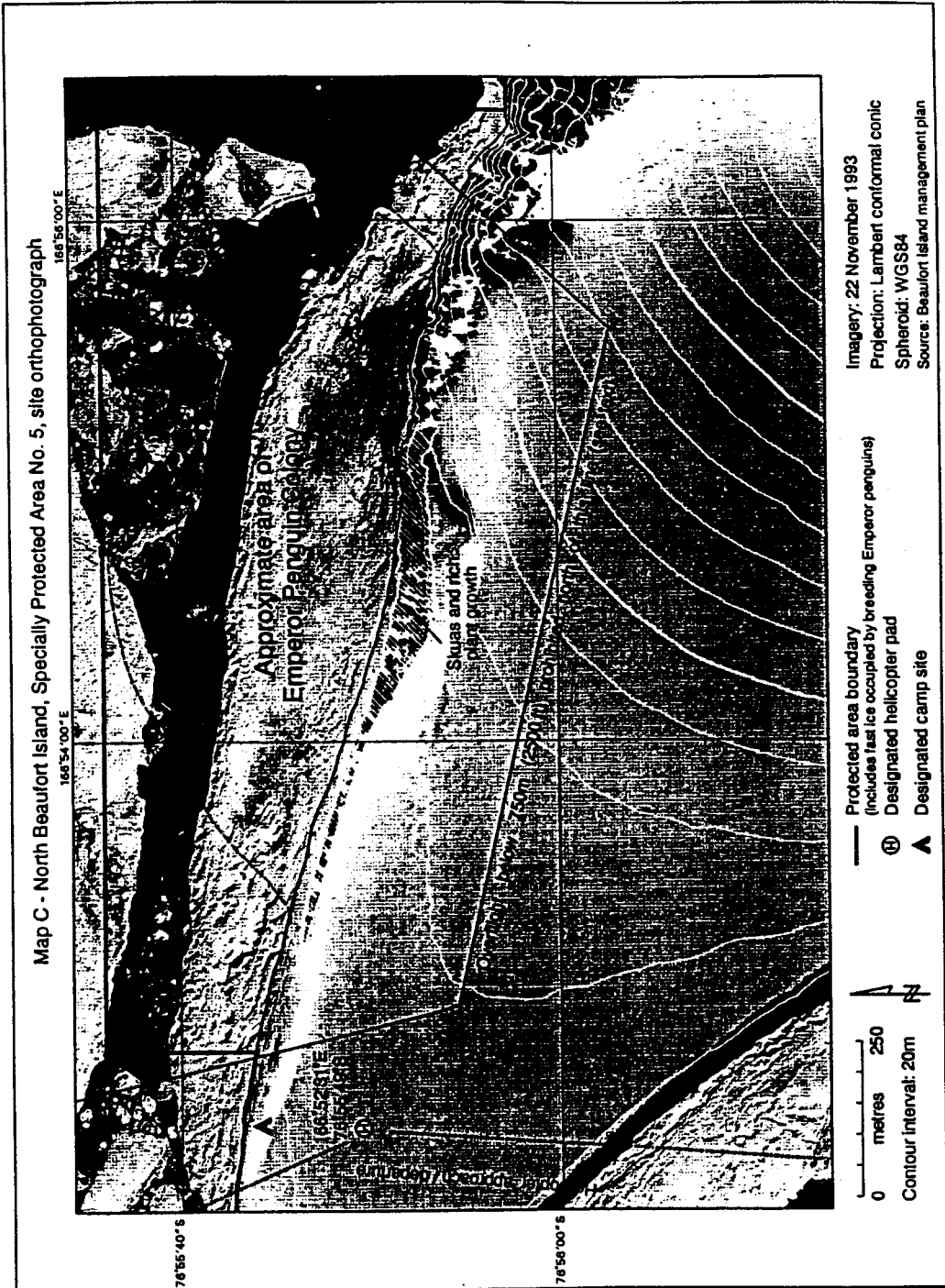
sible archive to maintain a record of usage, to be used both in any review of the management plan and in organising the scientific use of the Area.



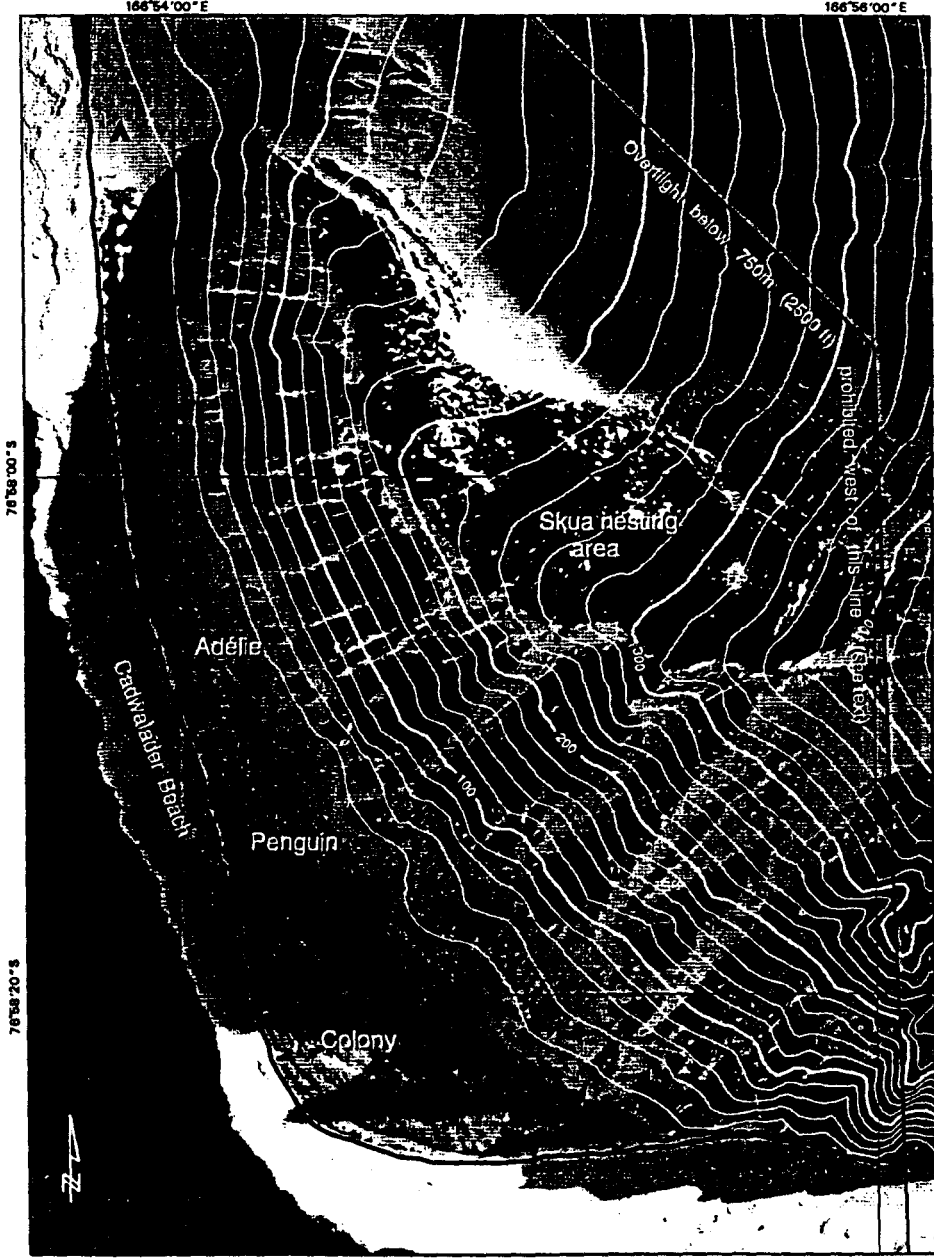
Map B - Beaufort Island, Specially Protected Area No. 5, regional orthophotograph



- | | | |
|---|---|---|
| <ul style="list-style-type: none"> — Protected area boundary (includes fast ice occupied by breeding Emperor penguins) ■ HMNZS Endeavour signpost | <ul style="list-style-type: none"> Ⓜ Designated helicopter pad ▲ Designated camp site | <p>Imagery: 22 November 1993
 Projection: Lambert conformal conic
 Spheroid: WGS84
 Source: Beaufort Island management plan</p> |
|---|---|---|



Map D - South Beaufort Island, Specially Protected Area No. 5, site orthophotograph



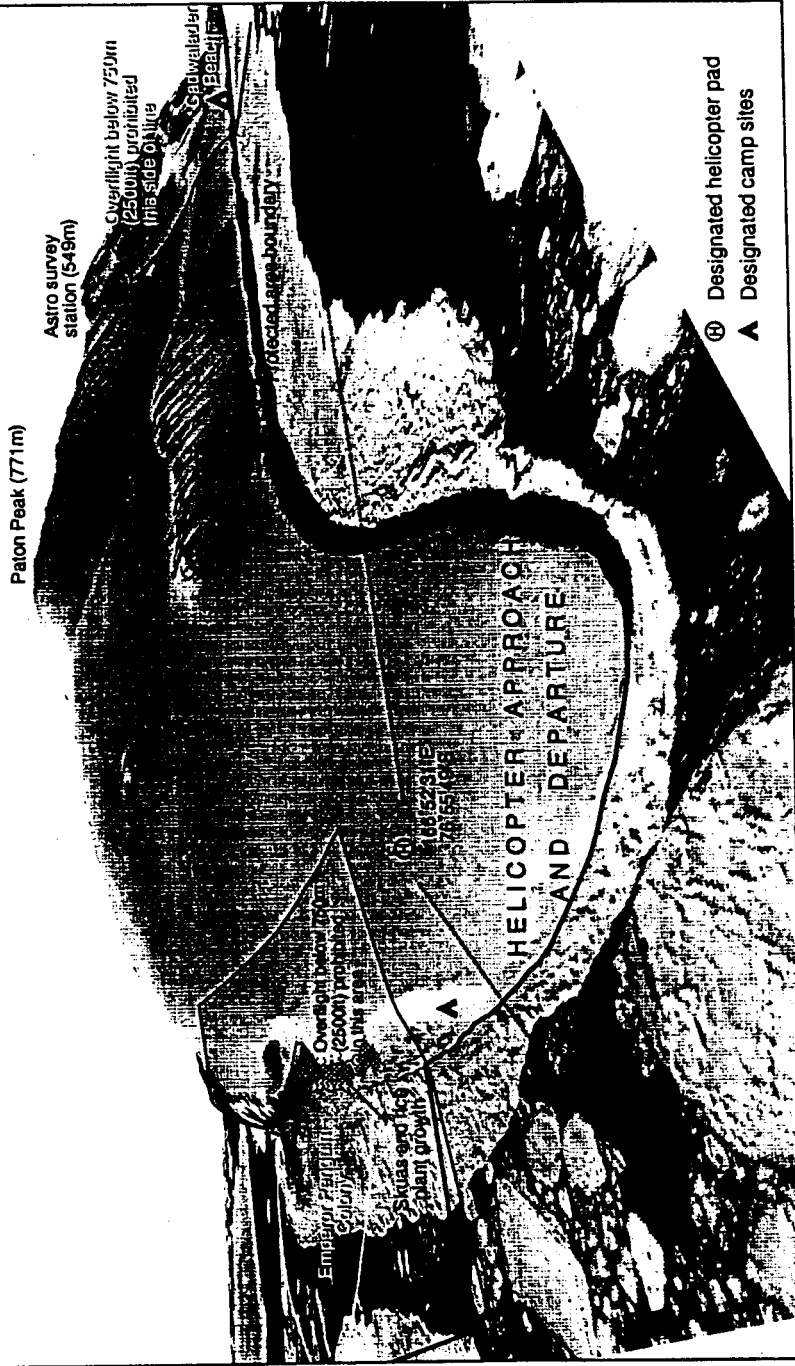
0 metres 150
 Contour interval: 20m

Boundary of Area (estimated coastline)
▲ Designated camp site
 HMNZS Endeavour signpost

Imagery: 22 November 1993
 Projection: Lambert conformal conic
 Spheroid: WGS84
 Source: Beaufort Island management plan

Figure 1 Beaufort Island, perspective view

Observer position 900m (approx. 3000ft) from helicopter pad, at an azimuth of 300° and an altitude of 225m (736ft).



MEASURE 2 (1997)

Antarctic Protected Areas System: Management Plans for Specially Protected Areas

- Number 25: Cape Evans Historic Site and its environs (Annex A)
Number 26: Lewis Bay Tomb (Annex B)

The Representatives,

Recalling Recommendations XV-8 and XV-9;

Noting that Management Plans for the above Areas have been endorsed by the Scientific Committee on Antarctic Research (SCAR);

Noting also that the format of the Management Plans accord with Article 5 of Annex V of the Protocol on Environmental Protection to the Antarctic Treaty adopted under recommendation XVI-10;

Recognising that both these Areas have outstanding historic and commemorative significance which require long-term protection to ensure that their values are maintained and to avoid undue human disturbance;

Agreeing that pending entry into force of Annex V, proposals to designate and adopt management plans for the protection of historic or commemorative values should be viewed as proposals for the designation of Specially Protected Areas (SPAs) in accordance with the Agreed Measures for the Conservation of Antarctic Flora and Fauna;

Recommend to their Governments the following Measure for approval in accordance with paragraph 4 of Article IX of the Antarctic Treaty:

That the Management Plans for the Cape Evans Historic Site and its environs (SPA No. 25) and the Lewis Bay Tomb (SPA No. 26) annexed to this Measure be adopted.

**Management Plan for Specially Protected Area (SPA) No. 25
FOR HISTORIC SITES NO. 16 AND 17
(containing the historic *Terra Nova* hut of Captain R F Scott and its
precincts)
CAPE EVANS, ROSS ISLAND
(77 degrees 38' 10" S, 166 degrees 25' 04" E)**

1. Description of Values to be Protected

This area was originally listed as Historic Sites 16 and 17 in Recommendation VII-9. The Terra Nova hut (Historic Site No. 16) is the largest of the historic huts in the Ross Sea region. It was built in January 1911 by the British Antarctic "Terra Nova" Expedition of 1910-1913 which was led by Captain Robert Falcoln Scott, RN. It was subsequently used as a base by the Ross Sea party of Sir Ernest Shackleton's Imperial Trans-Antarctic Expedition of 1914-1917.

Another major feature of this area is the Cross on Wind Vane Hill (Historic Site No. 17) which was erected in the memory of three members of Shackleton's Ross Sea party who died in 1916. In addition to this, there are also the anchors of the ship *Aurora* from the Imperial Trans-Antarctic Expedition, an instrument shelter, several supply dumps and dog kennels, and numerous artefacts distributed around the site.

The Cape Evans site is one of the principal sites of early human activity in Antarctica. It is an important symbol of the Heroic Age of Antarctic exploration, and as such, has considerable historical and cultural significance. Some of the earliest advances in the study of earth sciences, meteorology, flora and fauna are associated with the Terra Nova Expedition based at this site. The history of these activities and the contribution they have made to the understanding and awareness of Antarctica, give this Area significant scientific value.

2. Aims and Objectives

The aim of the management plan is to provide protection for the Area and its features so that its values can be preserved. The objectives of the plan are to:

- avoid degradation of, or substantial risk to, the values of the Area;
- maintain the historic values of the area through planned restoration and conservation work;
- allow management activities which support the protection of the values and features of the Area;
- prevent unnecessary human disturbance to the Area, its features and artefacts by means of managed access to the Terra Nova hut.

3. Management Activities

- a regular programme of restoration and preservation work shall be

- undertaken on the Terra Nova hut and associated artefacts in the Area;
- visits shall be made as necessary for management purposes;
- National Antarctic Programmes operating in, or those with an interest in, the region shall consult together with a view to ensuring the above provisions are implemented.

4. Period of Designation

Designated for an indefinite period.

5. Maps

Map A: Cape Evans regional map. This map shows the boundaries of the proposed Antarctic Specially Protected Area with significant topographical features, approaches, field camp sites and helicopter landing sites. It also shows the approximate location of significant historical items within the area. Inset: Ross Island showing sites of nearby protected areas and stations.

Map B: Cape Evans site map. This map shows the approximate location of specific historic artefacts and sites within the Area.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

Cape Evans is a small, triangular shaped, ice-free area in the south west of Ross Island, 10 kilometres to the south of Cape Royds and 22 kilometres to the north of Hut Point Peninsula on Ross Island. The ice-free area is composed of till-covered basalt bedrock. The designated Area is located on the north western coast of Cape Evans adjacent to Home Beach and centred on Scott's Terra Nova hut. The boundaries of the proposed ASPA are:

- South*: a line extending east from a point at 77 degrees 38' 15.47" S, 166 degrees 25' 9.48" E - 20 metres south of the cross on Wind Vane Hill;
- South/west*: a line from the reference point above extended to follow the crest of the small ridge descending in a north westerly direction to the shoreline at 77 degrees 38' 11.50" - 166 degrees 24' 49.47";
- North/west*: by the shoreline of Home Beach;
- North/east*: by the line of the outlet stream from Skua Lake to Home Beach at 77 degrees 38' 4.89" - 166 degrees 25' 13.46";
- East*: by the line extending south from the western edge of Skua Lake at 77 degrees 38' 5.96" - 166 degrees 25' 35.74" - to intersect with the southern boundary at 77 degrees 38' 15.48" - 166 degrees 25' 35.68".

A major feature of the Area is Scott's *Terra Nova* hut located on the north western coast of Cape Evans at Home Beach. The hut is surrounded by many historic relics and include the anchors from the *Aurora*, dog skeletons, instrument shelters, dog line, meteorological screen, fuel dump, magnetic hut, coal, stores, rubbish dumps and flag pole. A memorial cross to three members of Shackleton's Ross Sea party of 1914-1917 stands on West Vane Hill. All these features are included within the boundaries of the Area.

Skuas (*Catharacta maccormicki*) nest on Cape Evans and Adelie penguins (*Pygoscelis adeliae*) from the rookery at Cape Royds may occasionally transit the Area. Weddel seals have also been seen hauled up on Home Beach.

6(ii) *Restricted Zones within the Area*

None.

6(iii) *Structures within the Area*

All structures located within the Area are of historic origin, although a temporary, modern protective enclosure around the magnetic hut remains in place.

6(iv) *Location of other Protected Areas within close proximity*

SSSI No. 1 Cape Royds is 10 kilometres north of Cape Evans; SSSI No. 2 Arrival Heights, Hut Peninsula is 22 kilometres south of Cape Evans; and SSSI No. 11 Tramway Ridge is approximately 20 kilometres east of Cape Evans. All sites are located on Ross Island.

7. Permit Conditions

Entry to the Area is prohibited except in accordance with a Permit.

Permits shall be issued only by appropriate national authorities and may contain both general and specific conditions. A Permit may be issued by a national authority to cover a number of visits in a season. Parties operating in the Ross Sea Area shall consult together and with groups and organisations interested in visiting the site to ensure that visitor numbers are not exceeded.

General conditions for issuing a Permit to enter the site may include:

- activities related to preservation, maintenance, research and/or monitoring purposes;
- management activities in support of the objectives of the Plan;
- activities related to tourism, educational or recreational activities providing they do not conflict with the objectives of this plan.

7(i) *Access to and Movement within the Area*

Control of movement within the Area is necessary to prevent damage caused by crowding around the many vulnerable features within the Area. The maximum number in the Area at any time (including those within the hut is **40 people**.

Control of numbers within the hut is necessary to prevent damage caused by crowding around the many vulnerable features within the hut. The maximum number within the hut at any time (including guides) is **12 people**.

Avoidance of cumulative impacts on the interior of the hut requires an annual limit on visitor numbers. The effects of the current visitor level (approximately 1,000 per calendar year (1995)) suggest that an increase of more than 100 percent could cause significant adverse impacts. The annual maximum number of visitors is **2,000 people**.

These limits have been set based on current visitor levels and on the best advice available from conservation advisory agencies (which include conservators, archaeologists, historians, museologists and other heritage protection professionals). The limits are based on the proposition that any significant increase in the current level of visitor numbers would be detrimental to the values to be protected. An ongoing monitoring programme of the effects of visitors is in place. This will provide the basis for future reviews.

Helicopter landings are prohibited within the Area as they have the potential to damage the site by blowing scoria and ice particles and to accelerate the abrasion of the hut and surrounding artefacts. Landings may be made at the existing designated landing sites (see Maps 1 and 2). One site is approximately 150 metres to the north of the hut outside the Area. Another designated site is located adjacent to the field shelters erected approximately 200 metres beyond the south western boundary of the Area.

Vehicles are prohibited within the Area. Landings from the sea by boat may be made by visitors directly in front of the hut at Home Beach.

7(ii) Activities which may be conducted within the Area

Activities which may be conducted within the area include:

- visits for restoration, preservation and/or protection purposes;
- educational and/or recreational visits including tourism;
- scientific activity which does not detract from the values of the Area.

7(iii) Installation, modification and removal of structures

No new structures are to be erected in the Area, or scientific equipment installed, except for conservation activities as specified in 7(ii). No historic structure, relic or artefact shall be removed from the Area, except for the purposes of restoration and/or preservation and then only in accordance with a Permit.

7(iv) Location of field camps

Use of the historic hut for living purposes is not permitted.

Camping is prohibited in the Area under any circumstances. An existing field camp site is located approximately 300 metres beyond the south western boundary of the area (see Map 2). Two Antarctica New Zealand (New Zealand Antarctic Institute) field shelters are located at this site and should be used by all parties intending to camp in this area. The helicopter pad has been relocated away from the immediate vicinity of Scott's hut inside the Area, to a point immediately outside the Area near the north east boundary. To the north east of Scott's hut is the site of the Greenpeace year-round World Park Base which was removed in 1991-92. the plaque which marked this site was removed in January 1996.

7(v) Restrictions on materials and organisms which may be brought to the Area

No living animals or plant material shall be introduced to the Area.

No poultry products, including food products containing uncooked dried

eggs, shall be taken into the Area.

Chemicals which may be introduced for management purposes shall be removed from the Area at or before the conclusion of the activity specified in the plan.

Fuel, food or other materials are not to be left in depots in the Area, unless required for essential purposes connected with the protection and conservation of the historic structures or associated relics. All such materials are to be removed when no longer required.

Smoking, or the use of any naked flame including lanterns, is not permitted in the hut under any circumstances.

7(vi) Taking or harmful interference with native flora and fauna

This activity is prohibited except in accordance with a Permit. Where animal taking or harmful interference is involved, this should, as a minimum standard, be in accordance with the SCAR Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica.

7(vii) Collection or removal of anything not introduced by visitors

Material may be collected and removed from the Area only for restoration, preservation or protection reasons and only in accordance with the management activities detailed as necessary to protect the values of the area in a Permit. Visitors must remove objects, substances, and waste produced by them during their time in the Area. Samples from or specimens of fauna, flora and soil may be removed for scientific purposes only in accordance with an appropriate Permit.

7(viii) Disposal of waste

All human waste and grey water shall be removed from the Area. Waste generated by work parties shall be removed from the Area.

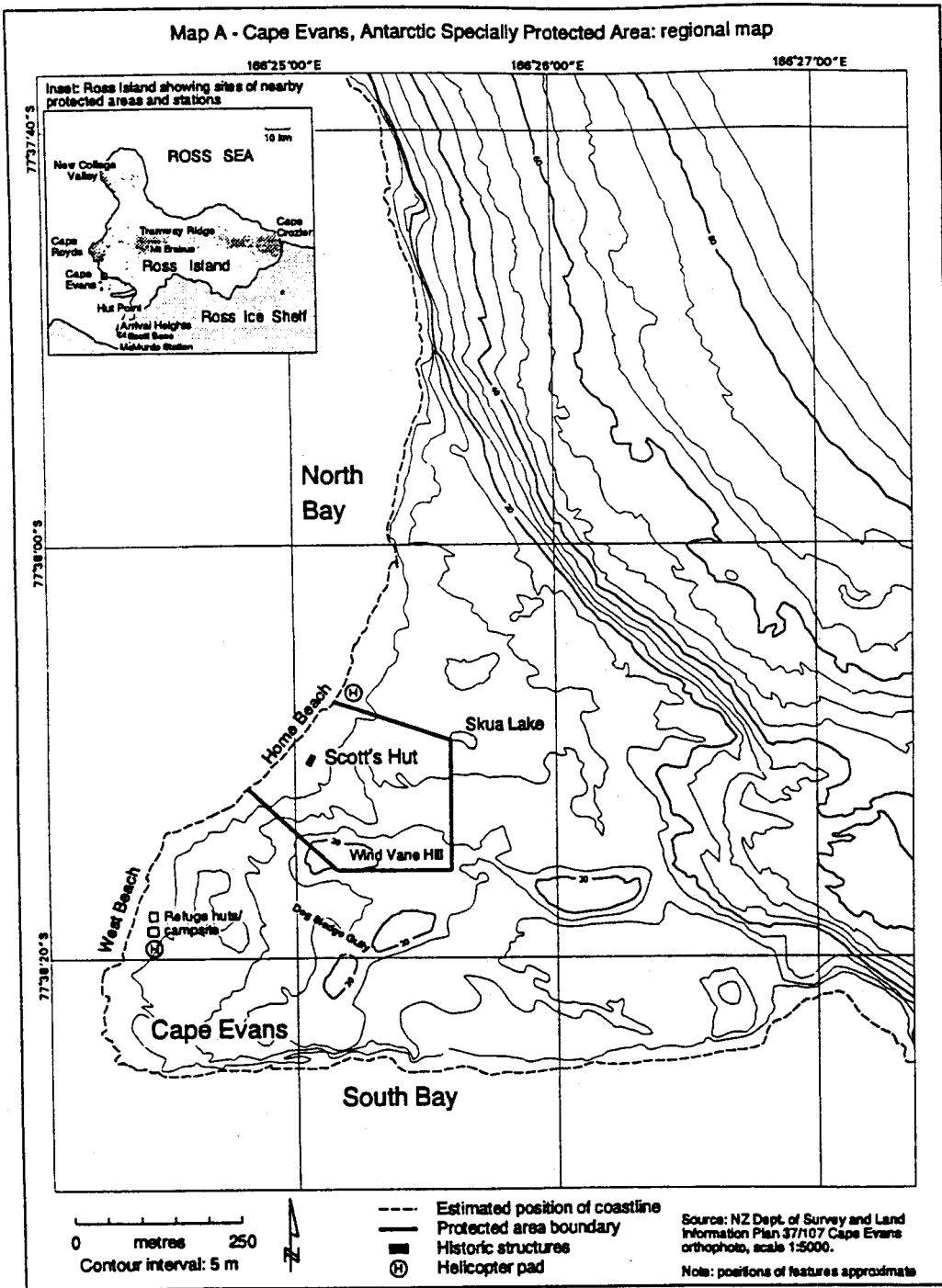
7(ix) Measures that may be necessary to ensure that the aims and objectives of the management plan continue to be met

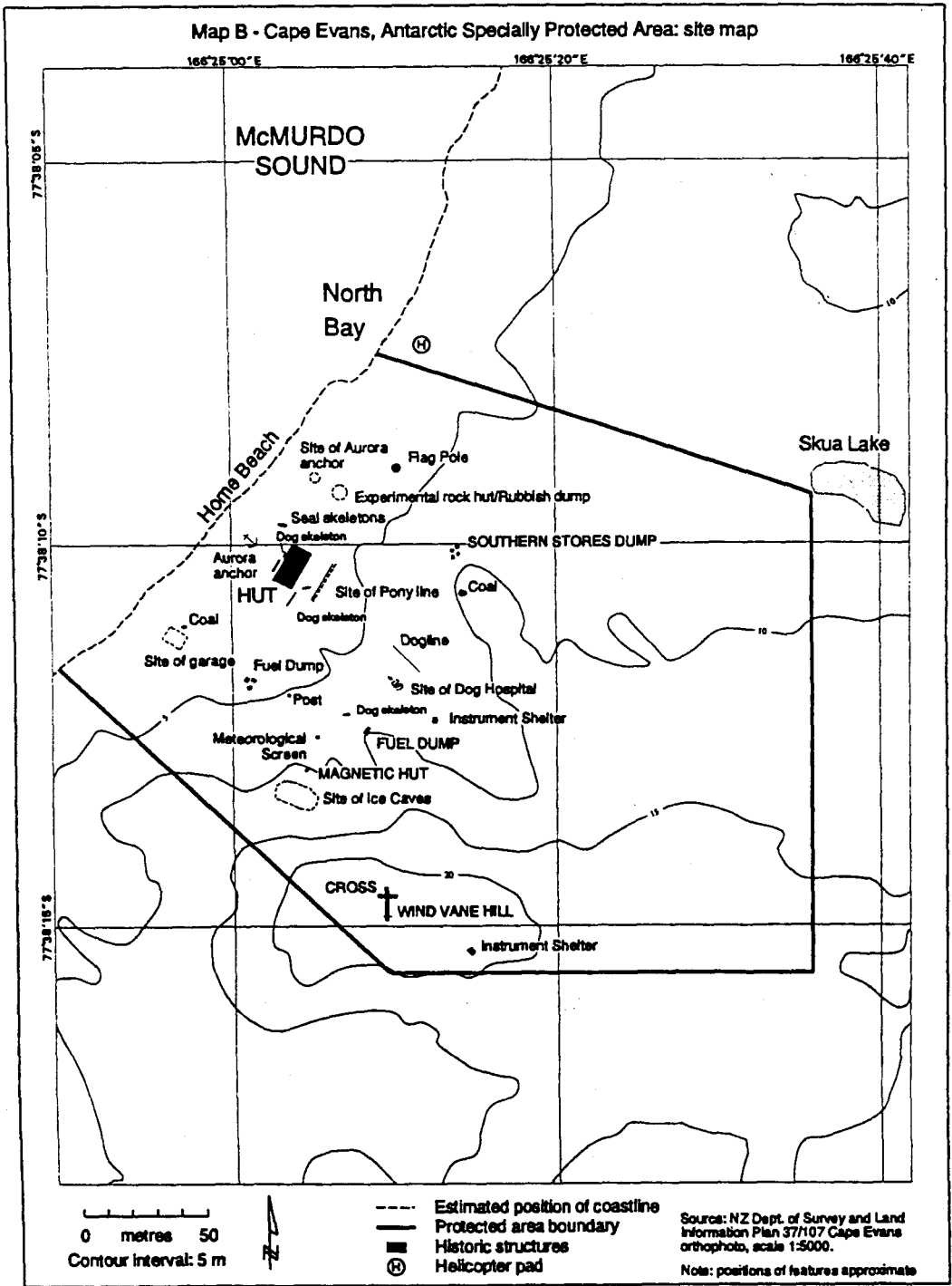
1. the Permit, or an authorised copy, must be carried within the Area;
2. provision of information for visitors;
3. development of skills and resources, particularly those related to conservation and preservation techniques, to assist with the protection of the Area's values.

7(x) Requirements for Reports

Parties should ensure that the principal holder for each Permit issued submit to the appropriate authority a report describing the activities undertaken. Such reports should include, as appropriate, the information identified in the Visit Report suggested by SCAR. Parties should maintain a record of such activities and, in the Annual Exchange of Information, should provide summary descriptions of activities conducted by persons subject to their jurisdiction, in sufficient detail to allow an evaluation of the effectiveness of the Management Plan. Parties should wherever possible deposit originals or copies of such reports in a publically accessible archive to maintain a record of usage, to be used both for review of the Management Plan and in

organising the use of the site.





Management Plan for Specially Protected Area (SPA) No. 26 LEWIS BAY, MOUNT EREBUS, ROSS ISLAND

1. Description of Values to be Protected

An area on the lower slopes of Mount Erebus, above Lewis Bay on the north side of Ross Island, was originally declared a tomb in Recommendation XI-3 (1081) after notification by New Zealand that 257 people of several nationalities had lost their lives when the DC-10 aircraft in which they were travelling crashed at this site on 28 November 1979. In spite of the determined and courageous actions of the New Zealand and United States Antarctic expeditions the bodies of some of those who died could not be recovered. Expressing deep sympathy with the Government and people of New Zealand, the tomb was declared in order to ensure that the area be left in peace. These reasons for special protection are still valid, and the Area is to be kept inviolate as a mark of respect in remembrance and in order to protect the site's emotional values.

In late 1979 a six foot Oregon timber cross was erected close to the crash site as a memorial to those who lost their lives. After damage by wind, this cross was replaced on 30 January 1987 with a cross of stainless steel, located on a rocky promontory overlooking and approximately 3 kilometres from the site. This is not part of the protected area, but is an Historic Monument (Number 73) in recognition of the commemorative and symbolic values of the cross.

2. Aims and Objectives

Management at Lewis Bay aims to:

- avoid degradation of, or substantial risk to, the values of the Area;
- ensure the crash site is kept inviolate and prevent unnecessary human disturbance to the Area;
- allow visits to the nearby site of the memorial cross for the purposes of commemoration to pay respects;
- allow visits for the purpose in support of the aims of the management plan.

3. Management Activities

The following management activities are to be undertaken to protect the values of the Area:

- all pilots operating in the region shall be informed of the location, boundaries and restrictions applying to entry and overflight in the Area;
- visits shall be made as necessary (no less than once every five years) for inspection and to assess whether the Area continues to serve the purposes for which it was designated;
- National Antarctic Programmes operating in the region shall consult together with a view to ensuring these steps are carried out.

4. Period of designation

Designated for an indefinite period.

5. Maps and Photographs

Map A: Lewis Bay protected area topographic map. Note: Map A is derived from the Antarctic Digital Database (ADD) Version 1.0, 1993 which was prepared to a base scale of 1:250,000 under the auspices of SCAR. Positional corrections have been applied to the ADD source data using 1993 and 1995 Global Positioning System (GPS) data and 1993 aerial photography. Accuracy of the map remains approximate pending publication of new and accurate Ross Island maps at 1:50,000 scale. The geographical coordinates of the crash site and other features are considered accurate to within approximately 100-200 m horizontally. Elevation data are considered accurate to approximately 100 m vertically.

Map A specifications: Projection: Lambert conformal conic; standard parallels: 1st 79°18'00"S; 2nd 76°42'00"S; Central Meridian: 167°30'00"E; Latitude of Origin: 78°01'16.211"S; Spheroid: GRS80.

INSET: Lewis Bay, Ross Island location map, showing sites of nearby protected areas and stations.

Figure 1: Photograph of the Lewis Bay area and crash site from the memorial cross.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

The designated Area on Ross Island (Map A) encompasses the crash zone (centred on 167° 28'30"E, 77°25'29"S, elevation 520 m (1720 feet) and the surrounding glacial ice 2 km above and to either side of this position, extends as a 4 km wide "rectangle" down to the sea, and includes the airspace above this region to an altitude of 1000 m (3280 feet) with the exception of a 200 m wide air access "corridor" along the coastline. The west boundary of the Area is the 167°23'33"E meridian; the east boundary is the 167°33'27"E meridian. The south boundary is the 77°26'33"S parallel, while the north boundary is defined by the coastline. The aircraft's primary impact occurred at an elevation of 446.7 m: debris was spread up-slope 570 m from that point over an area 120 m wide to an elevation of 580 m (1900 feet). Much of the aircraft wreckage is now buried in ice and is slowly moving down-slope with the glacier (see Figure 1). The bodies of some of those who died could not be recovered and remain in the Area. Boundary markers have not been placed to mark the Area for two reasons: their presence is considered detrimental to the inviolate values of the site, and their maintenance would be impractical on the moving glacier.

6(ii) Restricted Zones within the Area

None

6(iii) Structures within and near the Area

The stainless steel memorial cross (Historic Site Number 73) is located on a rocky outcrop (167°33'43"E, 77°26'38"S; elevation 810 m (2660 feet)) approximately 3 km SE of the crash site, and is a symbol of the special significance of the Area. No other structures exist within or near the Area. Debris from the aircraft remains *in situ*.

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected area to Lewis Bay is SSSI-11 at Tramway Ridge (15 km distant) near the summit of Mount Erebus. Caughley Beach (SSSI-10) and New College Valley (SPA-20) (at Cape Bird) and Cape Royds (SSSI-1) are approximately 35 km west on Ross Island. Cape Crozier (SSSI-4) is 40 km to the east (Inset: Map A).

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a Permit issued by appropriate national authorities. Conditions for issuing a Permit to enter the Area are that:

- it is issued only for compelling purposes that are in support of the aims of the Management Plan;
- the actions permitted will not compromise the values of the Area;
- the actions permitted are in accordance with the Management Plan;
- the Permit, or an authorised copy, shall be carried within the Area;
- a visit report shall be supplied to the authority named in the Permit;
- permits shall be issued for a stated period.

7(i) Access to and movement within the Area

Land vehicles are prohibited within the Area and access shall be by foot or helicopter. Overflight of the Area is prohibited below 1000 m (3280 feet) above sea level, except for essential access related to the values for which this site is protected, or for inspection and monitoring of the site (at least once every five years). An exception to the overflight restriction is provided by a 200 m wide access "corridor" through the Area immediately adjacent to the coastline (Map A), which allows transit of aircraft through the Area at times when visibility or conditions make avoidance of the Area otherwise impractical. No special restrictions apply to the air routes used to move to and from the Area by helicopter when access is permitted. Use of helicopter smoke grenades within the Area is prohibited unless absolutely necessary for safety, and these should be retrieved.

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

All visits to the Area for any purpose shall be made recognising the principal values to be protected in the Area, and as far as possible the Area should be left in peace. Visits may be made for essential inspection to ensure the values of the Area are being maintained, and to determine if materials at the site present a problem by emergence from the ice and then possible wind

dispersal, or for securing or removal of such items. Visits may also be made for removal of materials introduced into the Area subsequent to its designation, if appropriate.

7(iii) Installation, modification or removal of structures

No structures are to be erected within the Area except as specified in a Permit. It is prohibited to modify or remove any structure that was present within the Area at the time of special protection designation.

7(iv) Location of Field Camps

Camping is prohibited within the Area, unless under exceptional circumstances for management or protection. Where camping is required for such activities, the site selected shall be no closer than 200 m from the location of the wreckage at the time of the visit.

7(v) Restrictions on materials which can be brought into the Area

It is prohibited to introduce any materials into the Area. Smoke grenades used when absolutely necessary for safety of air operations should be retrieved.

7(vi) Taking or harmful interference with native flora or fauna

Taking or harmful interference with native flora or fauna is prohibited within the Area.

7(vii) Collection or removal of anything not brought into the Area by the Permit holder

Collection or removal of anything not brought into the Area by the Permit holder is prohibited, unless it has been determined that materials at the site are emerging from the ice and their dispersal by wind presents a management problem. If this is the case, such materials should be appropriately disposed of with due regard to the families of victims and according to national procedures. Materials introduced into the Area subsequent to designation may be removed unless the impact of removal is likely to be greater than leaving the material *in situ*: if this is the case the appropriate authority should be notified.

7(viii) Disposal of Waste

It is prohibited to dispose of any waste, including all human wastes, within the Area.

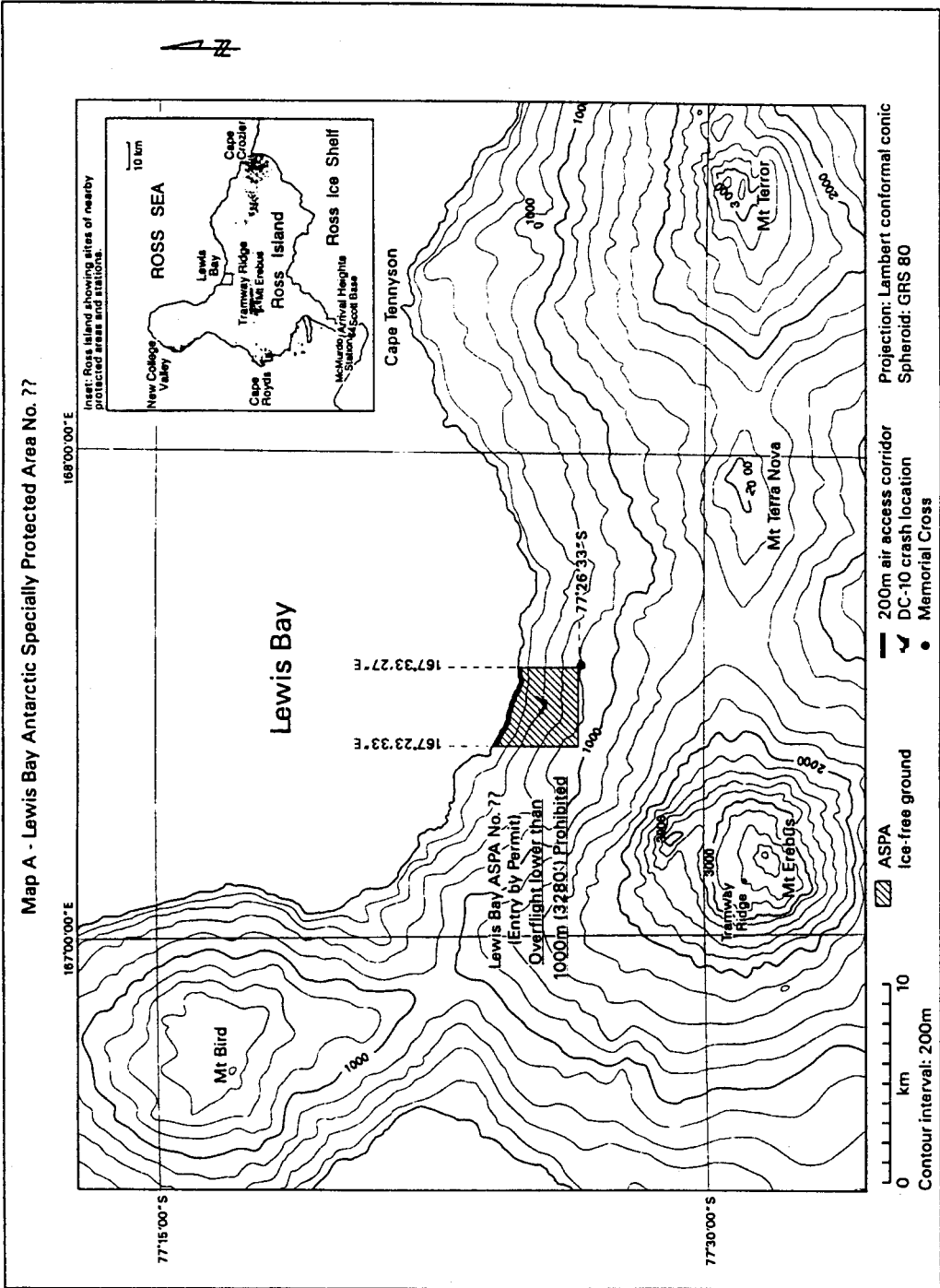
7(ix) Measures that are necessary that the aims and objectives of the Management Plan can continue to be met

None specified.

7(x) Requirements for Reports

Parties should ensure that the principal holder for each permit issued submit to the appropriate authority a report describing the activities undertaken. Such reports include, as appropriate, the information identified in the Visit Report form suggested by SCAR. Parties should maintain a record of activities and, in the Annual Exchange of Information, should provide summary descriptions of activities conducted by persons subject to their

jurisdiction, which should be in sufficient detail to allow evaluation of the effectiveness of the Management Plan. Parties should, wherever possible, deposit originals or copies of such original reports in a publicly accessible archive to maintain a record of usage in any review of the management plan.



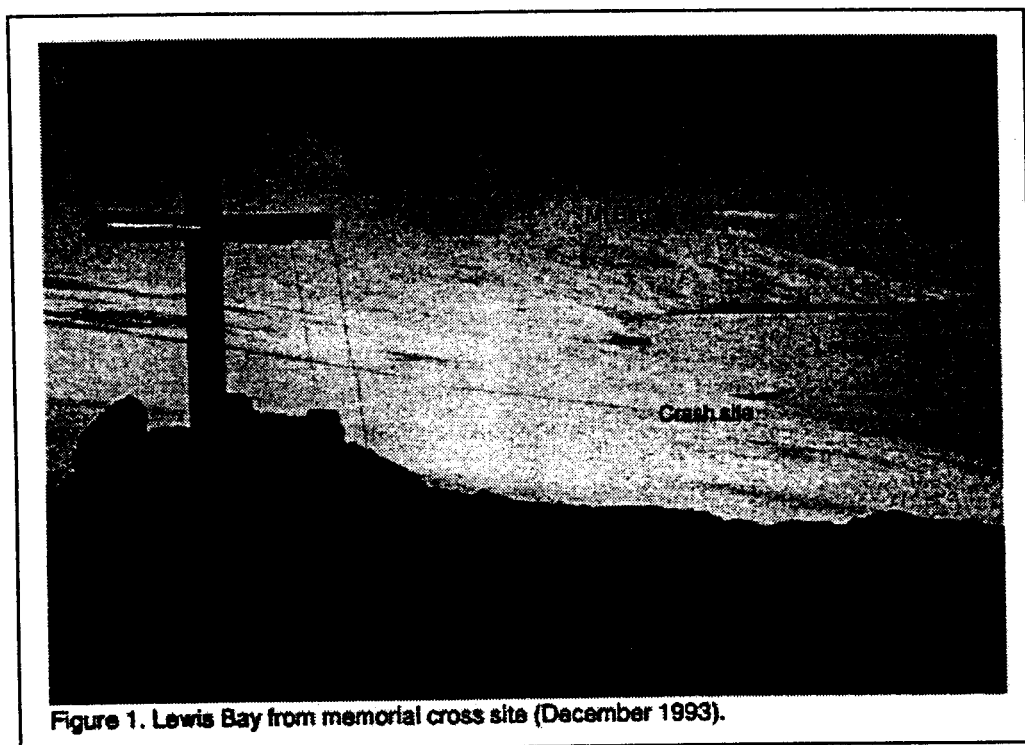


Figure 1. Lewis Bay from memorial cross site (December 1993).

MEASURE 3 (1997)

Antarctic Protected Areas System: Revised Descriptions and Management Plans for Sites of Special Scientific Interest (SSSI)

- SSSI 11: Tramway Ridge
- SSSI 12: Canada Glacier, Taylor Valley, Victoria Land (Annex A)
- SSSI 13: Potter Peninsula, 25 de Mayo Island (King George Island), South Shetland Islands (Annex B)
- SSSI 14: Harmony Point, Nelson Island, South Shetland Islands (Annex C)
- SSSI 15: Cierva Point, Danco Coast, Antarctic Peninsula (Annex D)
- SSSI 37: Botany Bay, Cape Geology, Victoria Land

The Representatives,

Recommend to their Governments the following Measure for approval in accordance with paragraph 4 of Article IX of the Antarctic Treaty:

1. For the following Sites of Special Scientific Interest, that the relevant Management Plans annexed to this Measure be inserted in the Annex to Recommendation XIII-8 to replace those plans previously annexed to this Recommendation:
 - SSSI 12: Canada Glacier, Taylor Valley, Victoria Land (Annex A)
 - SSSI 13: Potter Peninsula, 25 de Mayo Island (King George Island), South Shetland Islands (Annex B)
 - SSSI 14: Harmony Point, Nelson Island, South Shetland Islands (Annex C)
 - SSSI 15: Cierva Point, Danco Coast, Antarctic Peninsula (Annex D)
2. For SSSI No. 37 Botany Bay, Cape Geology, Victoria Land, that the Management Plan annexed to this Measure (Annex E) be approved and adopted.
3. For SSSI No. 11 Tramway Ridge, that the term 'restricted zone' be changed to 'prohibited zone'.

4. That the Consultative Parties ensure that their nationals comply with the mandatory provisions of the new and revised management plans.

**Management Plan for Site of
Special Scientific Interest (SSSI) No. 12
CANADA GLACIER, TAYLOR VALLEY, VICTORIA LAND**

1. Description of values to be protected

An area of 1 km² to the east side of Canada Glacier was originally designated in Recommendation XIII-8 (1985, SSSI No. 12) after a proposal by New Zealand on the grounds that it contains some of the richest plant growth (bryophytes and algae) in the southern Victoria Land Dry Valleys. As such, the Area is of exceptional intrinsic ecological value, and is also of scientific value to botanists, zoologists and microbiologists. The Area is designated primarily to protect the site's ecological values. It is also valuable as a reference site for other dry valley ecosystems. The boundaries of this site have been changed such that the Area now includes biologically rich communities that were previously excluded. The Area, located at an elevation of between 20 and 220 m, comprises gently to moderately sloping ice-free ground with summer ponds and small meltwater streams draining from the Canada Glacier to Lake Fryxell. Most of the plant growth occurs in a flush area close to the glacier in the central part of the Area. The composition and distribution of the plant communities in the Area are correlated closely with the water regime. Thus, water courses and water quality are important to the values of the site. The Area is unusual in that it receives higher levels of moisture compared with other parts of the south Victoria Land Dry Valleys, and is sheltered from strong winds by the nearby 20 m glacier face.

The Area has been well-studied and documented, which adds to its scientific value. However, the plant communities are fragile and vulnerable to disturbance and destruction by trampling and sampling. Damaged areas will be slow to recolonise. Sites damaged at known times in the past have been identified, which are valuable in that they provide one of the few areas in the Dry Valleys where the long-term effects of disturbance, and recovery rates, can be measured.

The Area requires long-term special protection because of its exceptional moss communities for the south Victoria Land Dry Valleys and thus ecological importance; its scientific values; the limited geographical extent of the ecosystem; the vulnerability of the Area to disturbance through trampling, sampling, pollution or alien introductions; and in view of the existing and increasing pressure from scientific, logistic and tourist activities in the region.

2. Aims and objectives

Management at Canada Glacier aims to:

- avoid degradation of, or substantial risk to, the values of the Area by preventing unnecessary human disturbance to the Area;
- allow scientific research on the ecosystem and elements of the ecosystem in particular moss communities while ensuring protection from over-sampling;
- allow other scientific research provided it is for compelling reasons

- which cannot be served elsewhere;
- minimise the possibility of introduction of alien plants, animals and microbes to the Area;
- allow visits for management purposes in support of the aims of the management plan.

3. Management Activities

The following management activities are to be undertaken to protect the values of the Area:

- Signs illustrating the location and boundaries with clear statements of entry restrictions shall be placed at appropriate locations at the boundaries of the Area to help avoid inadvertent entry.
- Signs showing the location of the Area (stating the special restrictions that apply) shall be displayed prominently, and a copy of this Management Plan shall be kept available, in all of the research hut facilities located in the Taylor Valley that are within 20 km of the Area.
- Brightly coloured markers, clearly visible from the air and posing no significant threat to the environment, shall be placed to mark the helicopter landing pad.
- Durable wind direction indicators should be erected close to the designated helicopter landing site. These should be replaced as needed and removed when no longer required.
- Markers, signs or structures erected within the Area for scientific or management purposes shall be secured and maintained in good condition.
- Visits shall be made as necessary (no less than once every five years) to assess whether the Area continues to serve the purposes for which it was designated and to ensure management and maintenance measures are adequate.
- National Antarctic Programmes operating in the region shall consult together with a view to ensuring these steps are carried out.

4. Period of Designation

Designated for an indefinite period.

5. Maps and Photographs

Map A: Canada Glacier, Taylor Valley, location map. Map specifications:
 Projection: Lambert conformal conic;
 Standard parallels: 1st 79° 18' 00" S; 2nd 76° 42' 00" S
 Central Meridian: 162° 30' 00" E Latitude of Origin: 78° 01' 16.2106" S;
 Spheroid: WGS84.
Inset: McMurdo Dry Valleys and Ross Island region, showing the location of McMurdo Station (US) and Scott Base (NZ), and the location of the other specially protected areas in the Dry Valleys (Barwick Valley SSSI-3, and Linnaeus Terrace SSSI-19).

Map B: Canada Glacier, protected area location image map. Specifications

are the same as those for Map A; the underlying image is Landsat Thematic Mapper Band 4, 6 January 1993, Row 115 Path 57, with an original pixel resolution of 30 m.

Map C: Canada Glacier, topographic map. Map specifications are the same as those for Map A. Contours are derived from the digital elevation model used to generate the orthophotograph in Map D. Precise area of moist ground associated with the flush is subject to variation seasonally and inter-annually.

Map D: Canada Glacier, site orthophotograph. Specifications are the same as those for Map A; the original orthophotograph was prepared at 1:2500 in colour with a pixel resolution of 0.25 m and a positional accuracy of <1 m. Photography USGS/DoSLI (SN7856) 22 November 1993.

Figure 1: Perspective view of the Canada Glacier protected area, combining orthophoto and Landsat images. The perspective is from an elevation of 485 m (1600 ft), 1.1 km out from the Area at a bearing of 95° SE.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

The designated Area encompasses most of the glacier forefield area on the east side of the lower Canada Glacier, on the north shore of Lake Fryxell (77°37'S, 163°03'E: Maps A and B). The south boundary of the Area is defined as the shoreline of Lake Fryxell, to the water's edge, extending about 1 km east from where the Canada Glacier toe meets Lake Fryxell. The west boundary of the Area follows the edge of the Canada Glacier. The SE corner is near the neck of a small peninsula extending into L. Fryxell. The peninsula, outside of the Area, is marked by a large rock (split) surrounded by a circle of rocks which was a benchmark for the 1985 NZ survey of the original SSSI. A wooden post marking Dry Valley Drilling Project Site 7 (1973) is about 10 m to the NW of this point. A moraine ridge extends from the SE corner upward and in a northerly direction: this ridge defines the eastern boundary of the Area. The ridge dips sharply before joining the featureless slope of the main Taylor Valley wall: the NE corner of the Area is in this dip and will be marked by a cairn. A cairn will also be placed on a knoll on the ridge 450 m from the SE corner point.

Above the central flush a slope of lateral moraine of fairly even gradient extends upward and parallel to the glacier for about 1 km. At the top of this slope is a small knoll (220 m) about 300 m from where the glacier emerges into the Taylor Valley: a cairn and signpost will mark the boundary of the Area at this point. The upper, northern, boundary of the Area extends from the Canada Glacier to the boundary markers on the knoll and thence declines in elevation in an easterly direction for 1.7 km to the NE boundary cairn. The broad area above this upper boundary — outside of the Area — serves as an access 'corridor' between L. Fryxell and L. Hoare.

The central flush area (Maps C and D) containing the richest stands of vegetation is close to the glacier edge, near a small, shallow pond. The flush area is gently sloping and very moist with numerous small ponds and rivulets in the summer. The slopes above this area are better drained, but vegetation colonises several small stream channels which extend parallel to the glacier from the upper boundary of the Area down to the flush. Undulating moraines assist accumulation of persistent snow patches on this slope, which may also provide moisture for plant growth. Stream channels, and associated vegetation, become less obvious with distance from the glacier. These slopes and the central flush are drained to the SE by Canada Stream, one of three streams which dominate the water input to Lake Fryxell. In the 1990–91 season Canada Stream had a maximum streamflow of 0.65 m³s⁻¹ with a peak daily mean flow of 0.34 m³s⁻¹, both occurring in December.

Three moss species have been identified from the flush area: *Bryum argenteum*, *Bryum pseudotriquetrum* and *Pottia heimii*. Lichen growth in the Area is inconspicuous, but two epilithic lichens, *Carbonea capsulata* and an unknown species of *Sarcogyne*, and *Lecanora expectans* and *Caloplaca citrina* may be found in a small area near the outflow of the pond near Canada Glacier. Chasmoendolithic lichens occur in many boulders. Over 37 species of freshwater algae have been described at the site, predominantly from the Cyanophyta. The upper part of Canada Stream superficially appears sparse in algal growth. However, abundant encrusting epilithophytes grow on the undersides of stones and boulders. Two algae, *Prasiola calophylla* and *Chamaesiphon subglobosus*, have been observed only in this upper part of the stream. Cyanobacterial mats are extensive in the middle and lower reaches of the stream. Mucilaginous colonies of *Nostoc commune* dominate wetter parts of the central flush, while oscillatoriacean felts cover much of the mineral fines. Epiphytic algae, dominated by *Nostoc*, are common over the surface of *Bryum argenteum* and *Pottia heimii*. The lower stream is similar in floral composition, although it is notable in that the alga *Tribonema elegans* is abundant while absent further upstream: this is the first record of this alga from Antarctica. *Phormidium* and *Gloeocapsa* species are common throughout the stream-course.

Invertebrates from six phyla have been described in the Area: the three main groups are Rotifera, Nematoda and Tardigrada, with Protozoa, Platyhelminthes, and Arthropoda also present.

Evidence of human activities is commonplace within the Area. The main forms of damage evident at sites of vegetation are paths and footprints, removal of core samples from bryophyte turfs, and removal of larger clumps of bryophyte turfs. A number of old markers exist in the flush area and there has been some site modification closeby in the form of small rock dams, soil pits and several old campsites — much of this was remediated in the 1995–96 season. A plastic greenhouse was erected within the Area close to the flush in 1979 for experimental growth of garden vegetables, but this was destroyed in 1983 by a winter storm. Remains of the greenhouse found in the Area have been removed.

6(ii) Restricted zones within the Area

None.

6(iii) Structures within and near the Area

The first New Zealand hut at Canada Glacier was relocated to a second site in 1989, and removed completely in 1995–96. The second site is now designated for essential camping associated with research, marked on Maps C and D. Paths marked by lines of rocks, areas cleared for use as campsites, an old helicopter pad, and several low rock structures associated with the first hut site have now been remediated. A series of at least four shallow pits (~1 m in depth) were dug close to the old hut site. The second hut site comprised two small buildings, several new campsites, and a new helicopter pad. A path exists between the site and the glacier edge, crossing a moist area of plant growth. The helicopter pad remains as the current designated landing site.

A rock weir had been constructed in the constricted part of Canada Stream prior to 1981; in 1990 a more substantial weir and 9-inch Parshall flume were installed nearby (Maps C and D). The flume is made of black fibreglass. The weir consists of polyester sandbags filled with alluvium from near the stream channel: areas disturbed during construction were restored and after one season were not evident. The upstream side of the weir is lined with vinyl-coated nylon. A notch has been built into the weir for relief in case of high flow. Clearance of seasonal snow from the channel has been necessary to prevent water from backing up at the weir. Data logging instrumentation and batteries are stored in a plywood crate located nearby on the north side of the stream.

Signposts and cairns mark the Area boundaries.

The US Fryxell Hut (20 m ASL) is located 1.5 km to the east, and Hoare Hut (65 m ASL) is located 3 km to the west of the Area (Maps A and B).

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected areas to Canada Glacier are Linnaeus Terrace (SSSI-19) 47 km west in the Wright Valley, and Barwick Valley (SSSI-3) 50 km to the NW (Inset, Map A).

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a Permit issued by appropriate national authorities. Conditions for issuing a Permit to enter the Area are that:

- it is issued only for scientific study of the ecosystem, or for compelling scientific reasons that cannot be served elsewhere, or for essential management purposes consistent with plan objectives such as inspection or review;
- the actions permitted will not jeopardise the ecological or scientific values of the Area;
- any management activities are in support of the aims of the Management Plan;

- the actions permitted are in accordance with the Management Plan;
- the Permit, or an authorized copy, shall be carried within the Area;
- a visit report shall be supplied to the authority named in the Permit;
- permits shall be issued for a stated period.

7(i) Access to and movement within the Area

Vehicles are prohibited within the Area and access shall be by foot or by helicopter. Helicopter access should be from south of the line marked on the accompanying site maps, and overflight within the Area less than 100 m Above Ground Level (AGL) north of this line is prohibited. Helicopters shall land only at the designated site (163° 02' 53" E, 77° 36' 58" S: Map B) and overflight of the Area should generally be avoided. Exceptions to these flight restrictions, which will only be granted for an exceptional scientific or management purpose, must be specifically authorised by Permit. Use of helicopter smoke grenades within the Area is prohibited unless absolutely necessary for safety, and then these should be retrieved. Visitors, pilots, air crew, or passengers *en route* elsewhere on helicopters, are prohibited from moving on foot beyond the immediate vicinity of the designated landing and camping site unless specifically authorised by a Permit.

Pedestrians travelling up- or down-valley shall not enter the Area without a Permit. Permitted visitors entering the Area are encouraged to keep to established routes where possible. Visitors should avoid walking on visible vegetation or through stream beds. Care should be exercised walking in areas of moist ground, where foot traffic can easily damage sensitive soils, plant and algal communities, and degrade water quality: walk around such areas, on ice or rocky ground, and step on larger stones when stream crossing is necessary. Care should also be taken of salt-encrusted vegetation in drier areas, which can be inconspicuous. Pedestrian traffic should be kept to the minimum necessary consistent with the objectives of any permitted activities and every reasonable effort should be made to minimise effects.

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

- Scientific research that will not jeopardise the ecosystem of the Area;
- Essential management activities, including monitoring.

In view of the importance of the water regime to the ecosystem, activities should be conducted so that disturbance to water courses and water quality is minimised. Activities occurring outside of the Area (e.g. on the Canada Glacier) which may have the potential to affect water quality should be planned and conducted taking possible downstream effects into account. Those conducting activities within the Area should also be mindful of any downstream effects within the Area and on Lake Fryxell.

7(iii) Installation, modification or removal of structures

Any structures erected or scientific equipment installed within the Area are to be specified in a Permit. Scientific equipment shall be clearly identified by country, name of the principal investigator and year of installation. All such items should be made of materials that pose minimal risk of contamination of the Area. Removal of specific equipment for which the

Permit has expired shall be a condition of the Permit.

7(iv) Location of field camps

Nearby permanent camps outside of the Area should be used as a base for work in the Area. Camping at the designated campsite (Maps B and C) may be permitted to meet specific essential scientific or management needs.

7(v) Restrictions on materials and organisms which can be brought into the Area

No living animals, plant material or microorganisms shall be deliberately introduced into the Area and precautions shall be taken against accidental introductions. No herbicides or pesticides shall be brought into the Area. Any other chemicals, including radio-nuclides or stable isotopes, which may be introduced for scientific or management purposes specified in the Permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted. Fuel is not to be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All materials introduced shall be for a stated period only, shall be removed at or before the conclusion of that stated period, and shall be stored and handled so that risk of their introduction into the environment is minimised.

7(vi) Taking or harmful interference with native flora or fauna

This is prohibited, except in accordance with a Permit. Where animal taking or harmful interference is involved this should, as a minimum standard, be in accordance with the SCAR Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica.

7(vii) Collection or removal of anything not brought into the Area by the Permit holder

Material may be collected or removed from the Area only in accordance with a Permit and should be limited to the minimum necessary to meet scientific or management needs. Material of human origin likely to compromise the values of the Area, which was not brought into the Area by the Permit Holder or otherwise authorised, may be removed unless the impact of removal is likely to be greater than leaving the material *in situ* : if this is the case the appropriate authority should be notified.

7(viii) Disposal of waste

All wastes, including all human wastes, shall be removed from the Area.

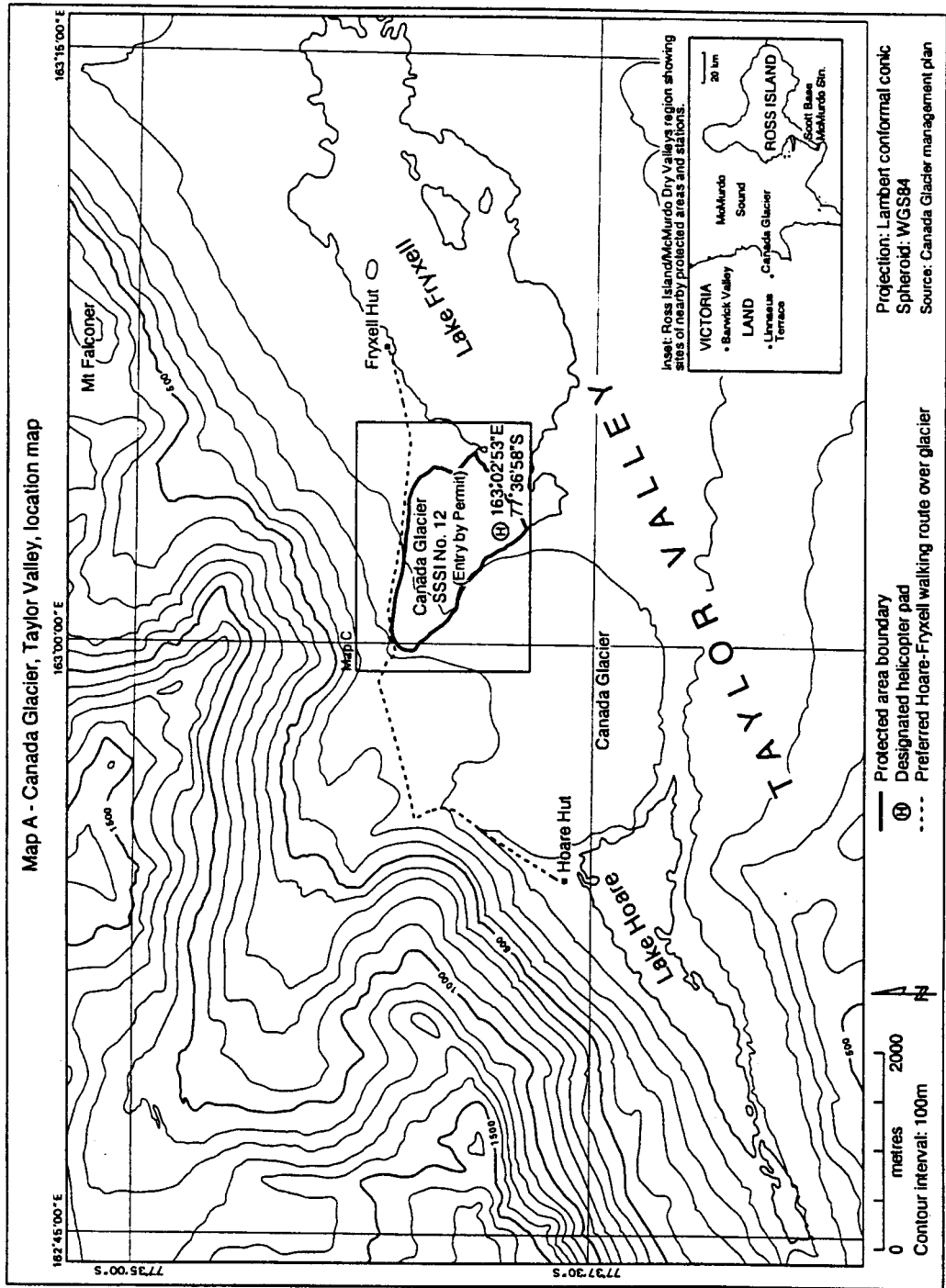
7(ix) Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met

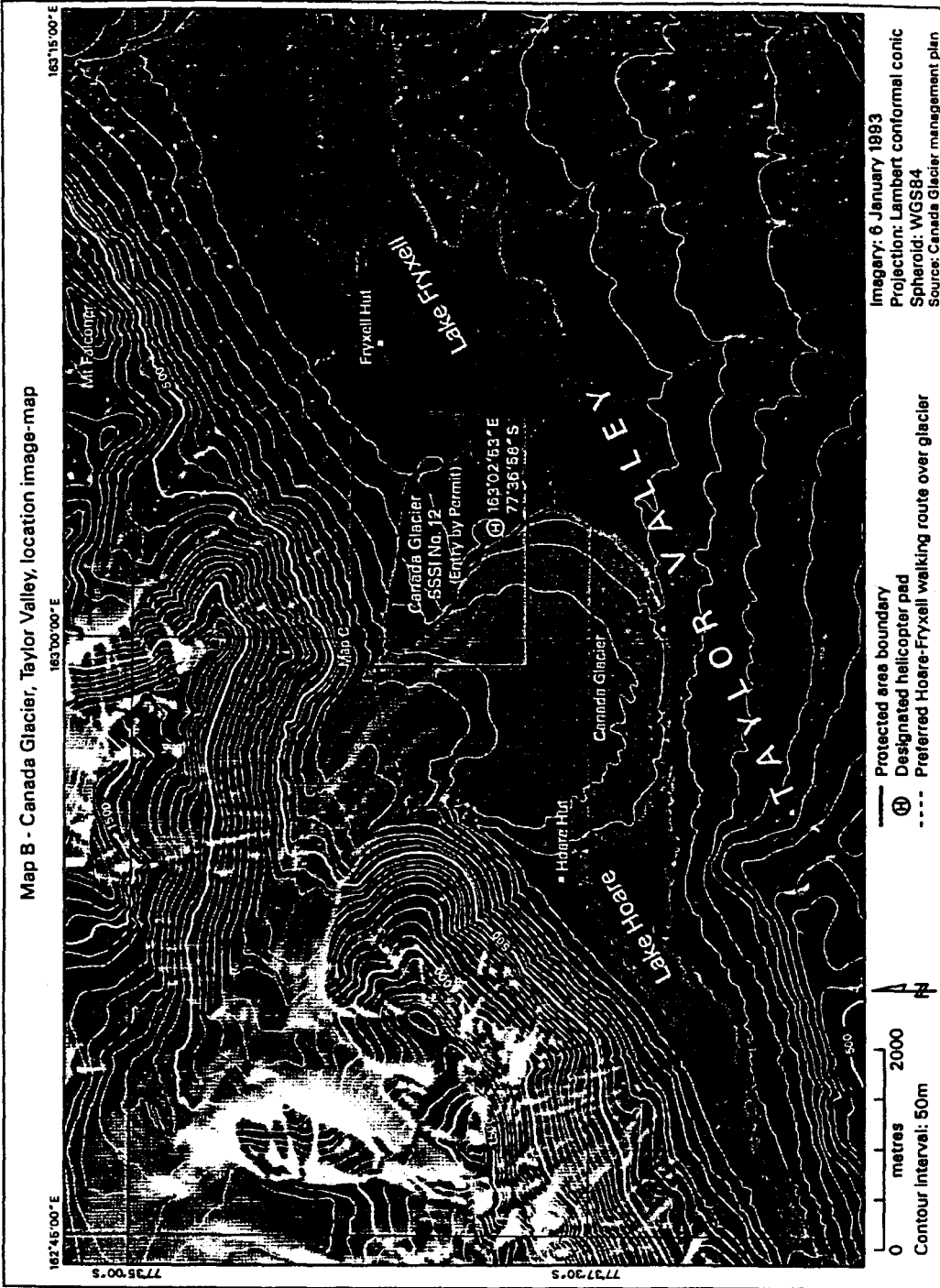
1. Permits may be granted to enter the Area to carry out biological monitoring and site inspection activities, which may involve the collection of small samples for analysis or review, to erect or maintain signposts, or for protective measures.
2. Any specific sites of long-term monitoring shall be appropriately marked.
3. To help maintain the ecological and scientific values of the plant communities found at the Area visitors shall take special precautions against introductions. Of particular concern are

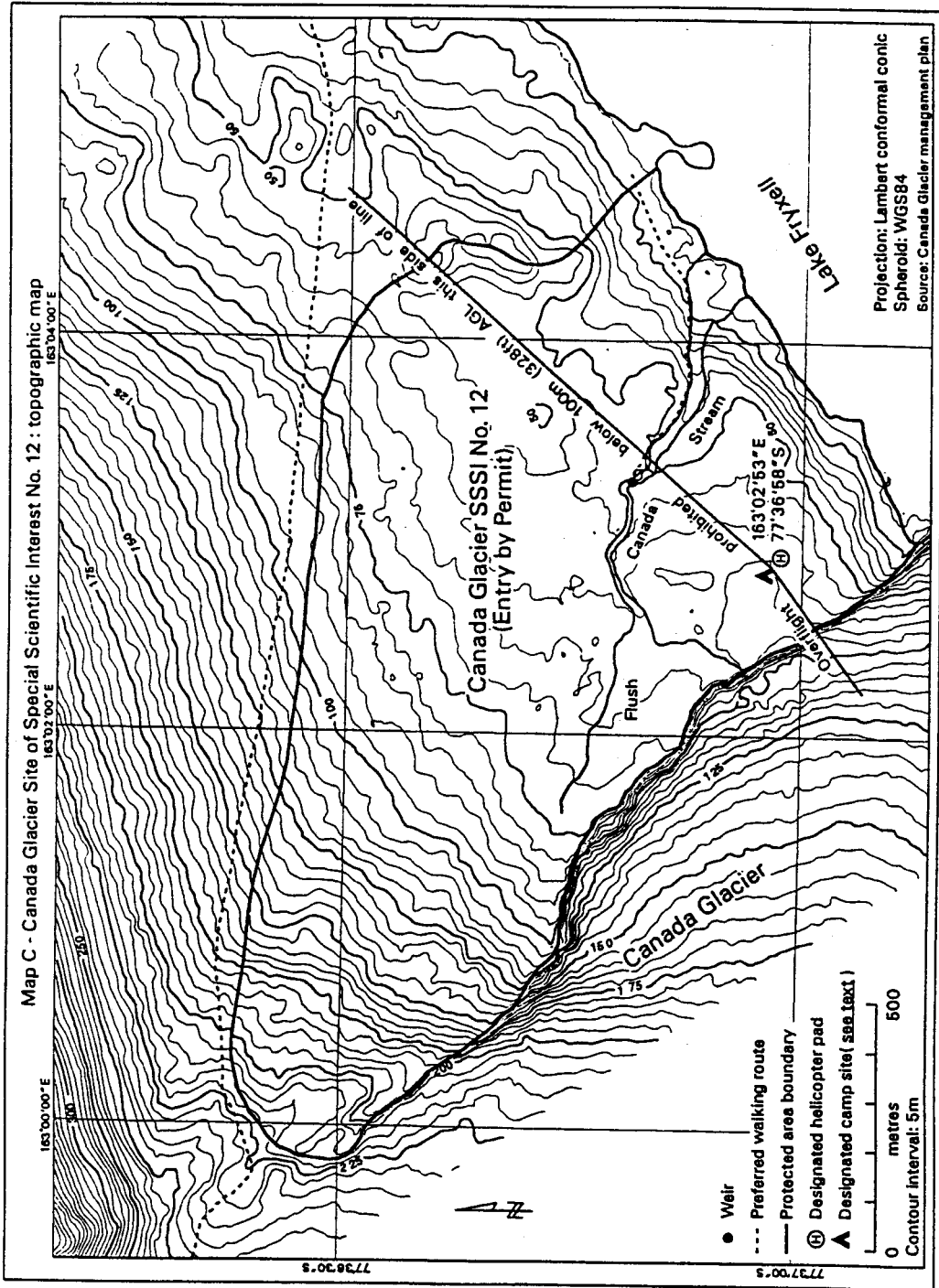
microbial or vegetation introductions sourced from soils at other Antarctic sites, including stations, or from regions outside Antarctica. To minimise the risk of introductions, visitors shall thoroughly clean footwear and any equipment to be used in the area — particularly camping and sampling equipment and markers — before entering the Area.

7(x) Requirements for reports

Parties should ensure that the principal holder for each permit issued submit to the appropriate authority a report describing the activities undertaken. Such reports should include, as appropriate, the information identified in the Visit Report form suggested by SCAR. Parties should maintain a record of such activities and, in the Annual Exchange of Information, should provide summary descriptions of activities conducted by persons subject to their jurisdiction, which should be in sufficient detail to allow evaluation of the effectiveness of the Management Plan. Parties should, wherever possible, deposit originals or copies of such original reports in a publicly accessible archive to maintain a record of usage, to be used both in any review of the management plan and in organising the scientific use of the Area.







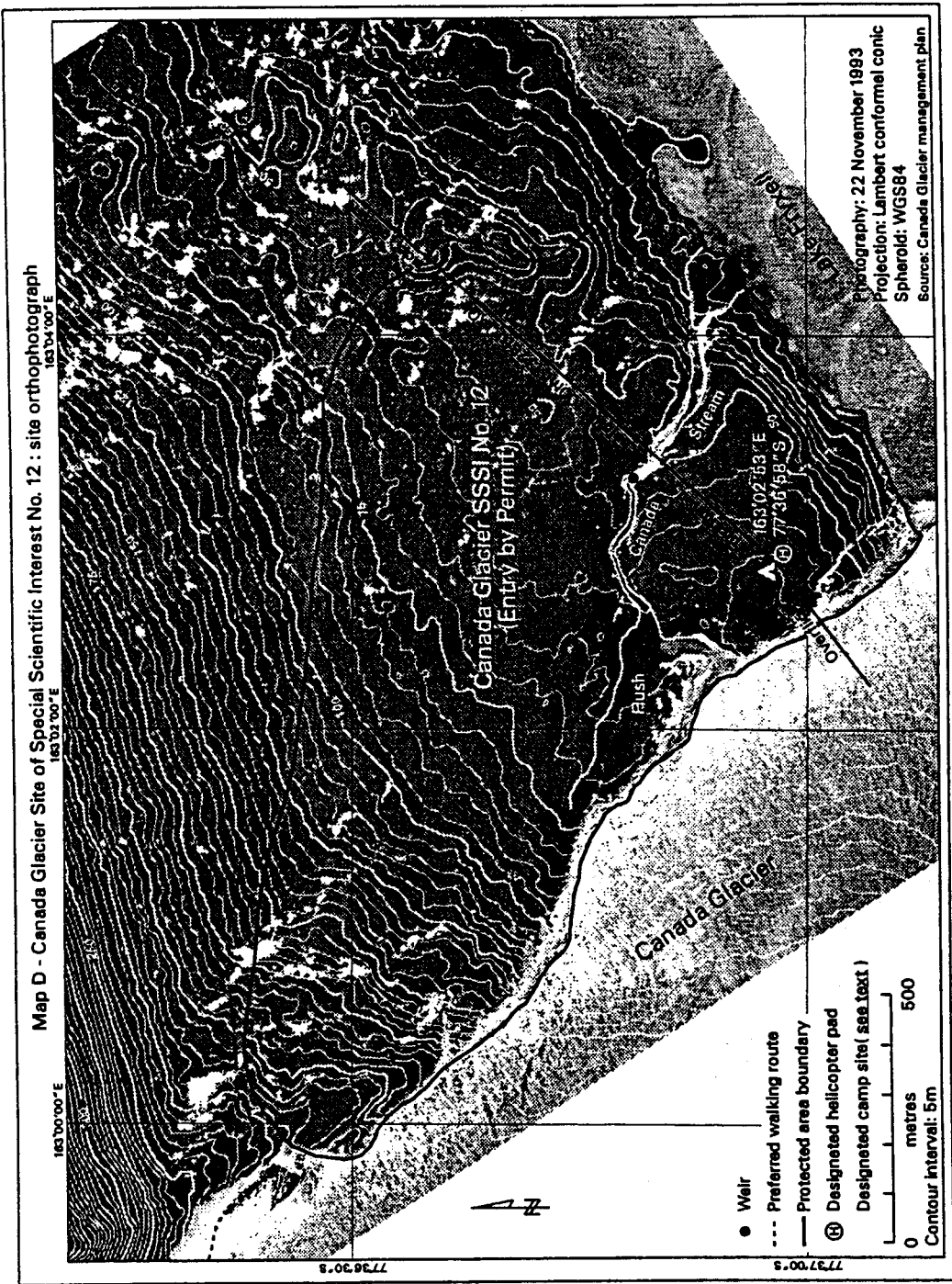


Figure 1 - Canada Glacier, perspective view



**Management Plan for Site of Special Scientific Interest (SSSI) No 13
POTTER PENINSULA
25 DE MAYO (KING GEORGE) ISLAND
SOUTH SHETLANDS ISLANDS**

1. Description of Values to be Protected

This area was originally designated as SSSI No. 13 in ATCM Recommendation XIII-8 after a proposal by Argentina because of its diverse avian and mammal fauna and locally rich vegetation, providing a representative sample of maritime Antarctic ecosystem. Coastal areas support large breeding colonies of ten seabird species, including three penguin species and three species of marine mammals.

The reasons for the original designation of the Area are still relevant. Scientific research on the breeding ecology of elephant seals and seabirds has been undertaken since 1982. This includes both the CCAMLR Ecosystem Monitoring Programme and basic biological and ecological research that must be developed without interferences by other human activities. Long-term research programmes could be endangered by accidental interference, especially during breeding periods.

2. Aims and Objectives

Management of Potter Peninsula aims to:

- Avoid major changes in the structure and composition of communities of flora and fauna;
- Prevent unnecessary human disturbance to the area;
- Permit scientific research which cannot be served elsewhere, and allow the continuity of the ongoing long-term biological and ecological research programmes established in the Area.

3. Management Activities

The following management activities will be undertaken to protect the values of the area:

- Because the area is close to a station permanently occupied, a marker board will be placed at the principal access point illustrating the location boundaries and stating entry restrictions;
- Within the Area those locations used for reasearch will be clearly marked.
- Priority pedestrian routes within the Area will be established for transit to sample sites.
- Collection of samples will be limited to the minimum required for approved scientific research.

- Visits shall be made as necessary to ensure management and maintenance measures are adequate.

4. Period of Designation

Designated for an indefinite period.

5. Maps

- Map 1 shows the location of Potter Peninsula in relation with the Antarctic Peninsula.
- Map 2 shows the location of Potter Peninsula in relation with 25 de Mayo (King George) Island. Map 3 shows the Protected Area in greater detail.

6. Description of the Area

6(i) Geographical co-ordinates and natural features of the Area

The site is located on the east side of Maxwell Bay, south-west of 25 de Mayo (King George) Island between Mirounga Point (the north-west most extreme point of Potter Peninsula) and the east side of Stranger Point (lat. 62° 15' S - long 58° 37' W). The site occupies the coastal zone of variable width up to 500 m from the shore line (low water mark) and rising to above 70m altitude at Stranger Point. It is mainly an area of raised beaches, mostly pebble-covered, backed by basalt cliffs, terminal or lateral moraines and small glaciers. The coastline is very irregular and alternates between small base and rocky headlands.

This area offers a great scientific value by the presence of many bird colonies (Adelie penguin, gentoo penguin, chinstrap penguin, Dominican gull, brown skua, Antarctic tern, sheathbill, giant petrel and cape petrel) and breeding groups of marine mammals (Crabeater seal, Weddell seal, Southern elephant seal). There is a relatively abundant development of lichen-dominated plant communities, especially on the succession of prominent rocks along the beach. Long-term research and research programmes could be endangered by accidental interference, destruction of vegetation and soil, and perturbation of breeding birds and mammals.

6(ii) Restricted zones within the Area

None

6(iii) Location of structures within the Area

Within the Area there is a small Argentine refuge used by research teams. The refuge measuring 3 by 2.5m, is built of metal sheets and glass-fibre roof. It can accommodate up to two persons. Approximately 500 metres outside the site is placed Jubany Station.

6(iv) Location of other Protected Areas within close proximity

SSSI No. 5, Fildes Peninsula lies about 20 km to the east direction. SSSI No. 8 Western Shore of Admiralty Bay lies 10 km to the north-east direction.

SSSI No. 14 Harmony Point, lies about 30 km to the WSW direction.

7. Permit conditions

Entry into the Area is prohibited except in accordance with a permit issued by appropriate national authorities.

Conditions for issuing a Permit to enter the Area are that:

- It is used to continue study for the natural history, biology and ecology of the flora and fauna of the area or for a compelling scientific purpose that cannot be met elsewhere;
- The actions permitted will not jeopardise the natural ecological system in the Area;
- Any management activities are in support of the objectives of the Management Plan;
- The actions permitted are in accordance with this Management Plan;
- The Permit, or authorised copy, must be carried within the Site of Special Scientific Interest.
- A report or reports are supplied to the authority that issued the Permit.

7(i) *Access to and movements within the Area*

The access to the Area is restricted to the Northern end, near the helipad. Marine access will be restricted to a landing site in front of the refuge. No vehicles or aircraft are permitted in the Area except under emergency.

Limitation on access to particular localities used by breeding birds and mammals for specific periods may be necessary.

7(ii) *Activities which are or may be conducted within the Area including restrictions on time and place*

Scientific study and monitoring of the populations of flora and fauna in the area and compelling scientific research which cannot be conducted elsewhere and which will not interfere with ongoing long-term research programmes or jeopardise the structure or dynamics of the ecosystem of the Area.

Essential management activities, including monitoring.

7(iii) *Installation, modification or removal of structures*

No additional structures are to be erected in the Area, or scientific equipment installed, except for essential scientific or management activities, as specified in a Permit.

7(iv) *Location of field camps*

Parties using the Area will normally be able to use Jubany Station. In the event that this is not possible, a camp site should be used near the existing station and outside the Area.

7(v) *Restriction on material and organisms which may be brought into the Area*

No living animals or plant material shall be deliberately introduced into the Area.

No poultry products, including food products containing uncooked dried eggs, shall be taken into the Area. No herbicides or pesticides shall be brought into the Area. Any other chemicals, which may be introduced for compelling scientific purpose specified in the permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted.

As far as possible the use of chemicals should be clearly documented for the benefit of later researchers.

Fuel, food and other material are not to be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All such material introduced are to be removed when no longer required. Permanent depots are not permitted.

7(vi) Taking or harmful interference with native flora and fauna

This is prohibited, except in accordance with a Permit. Where animal taking or harmful interference is involved this should be in accordance with the SCAR Code of Conduct for Use of Animals for Scientific Purposes in Antarctica, as a minimum standard.

7(vii) Collection or removal of anything not brought into the area by the permit holder

Biological specimens and samples may be collected and/or removed from the Area only according to a permit. Debris of human origin should be removed and reported to the authority that issued the permit. Dead biological specimens may be removed for pathological analysis.

7(viii) Disposal of waste

All non-human wastes shall be removed from the Area to the nearby research station. Human waste may be deposited in the sea.

7(ix) Measures that may be necessary to ensure that the aims and objectives of the management plan continue to be met

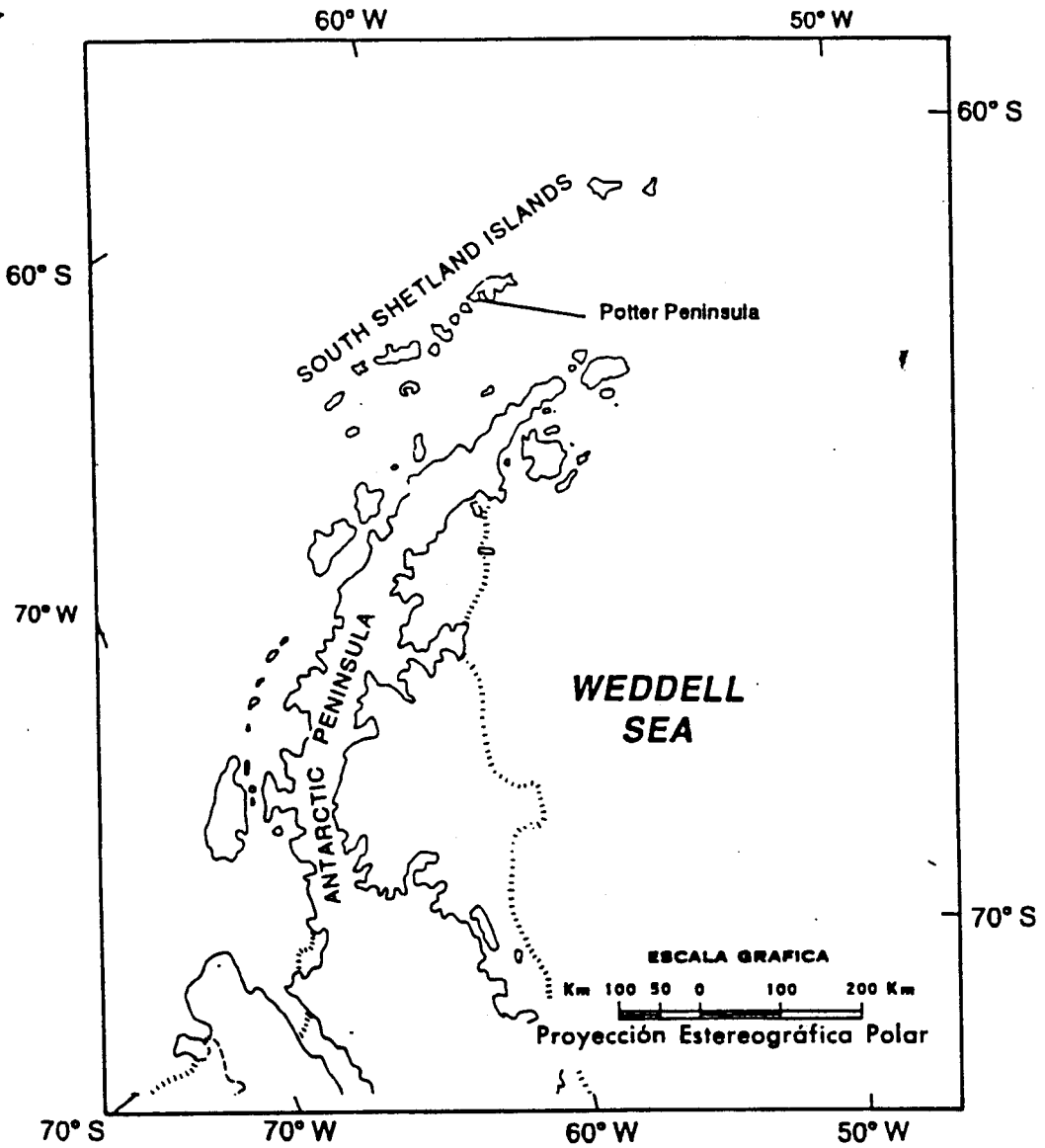
Permits may be granted to enter the area to carry out biological and ecological studies and monitoring, and site inspection activities, including the collection of small amounts of plant material and small numbers of animals for scientific purposes, to erect or maintain noticeboards and protective measures.

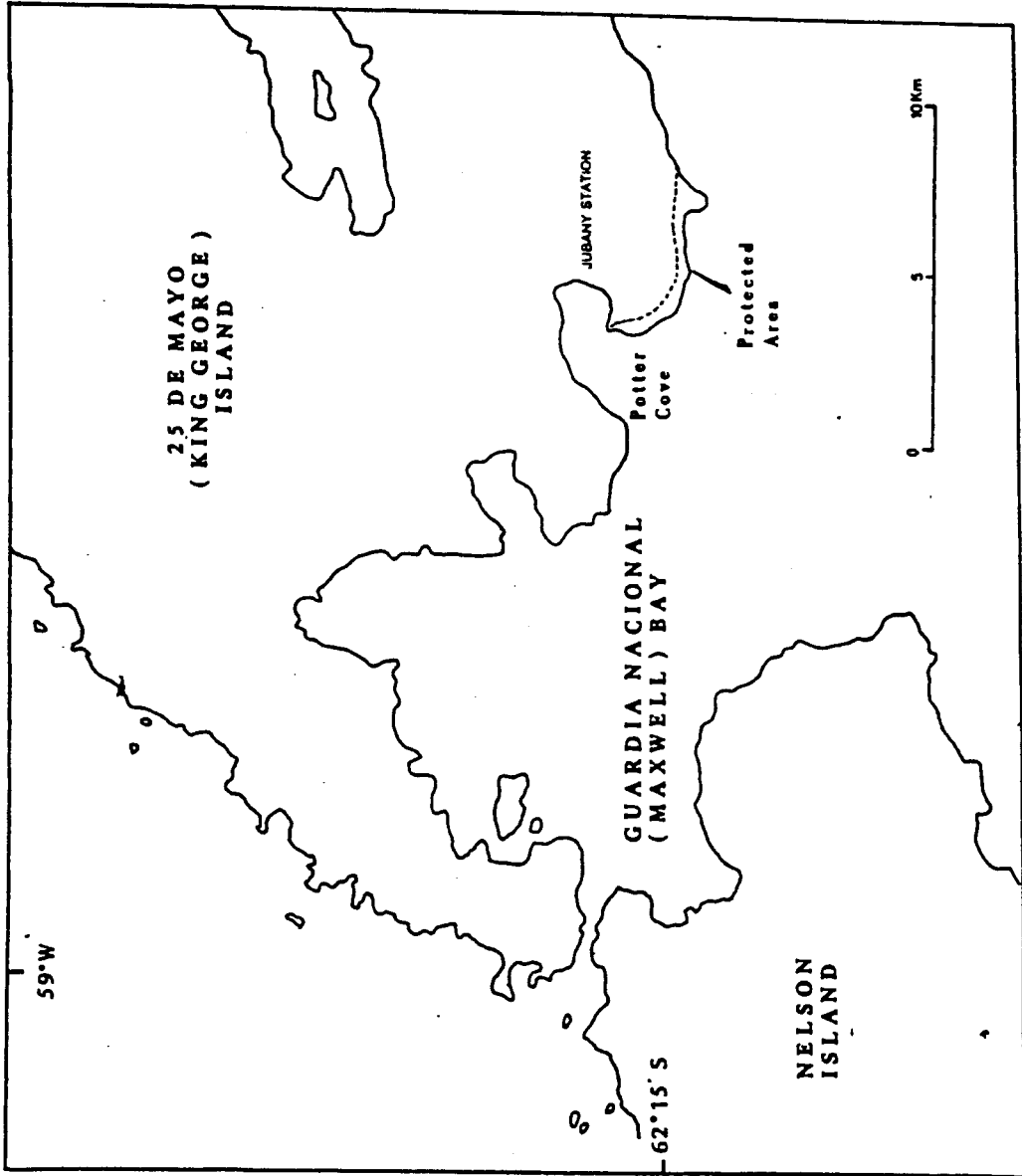
All scientific structures and instrumentation, including research markers, installed in the Area must be authorised in a permit and clearly identified by country, name of investigator and year of installation. Research markers and structures must be removed at or before the expiry of the Permit. If specific scientific projects cannot be concluded within the permitted time, applications must be made for an extension to leave the items in situ.

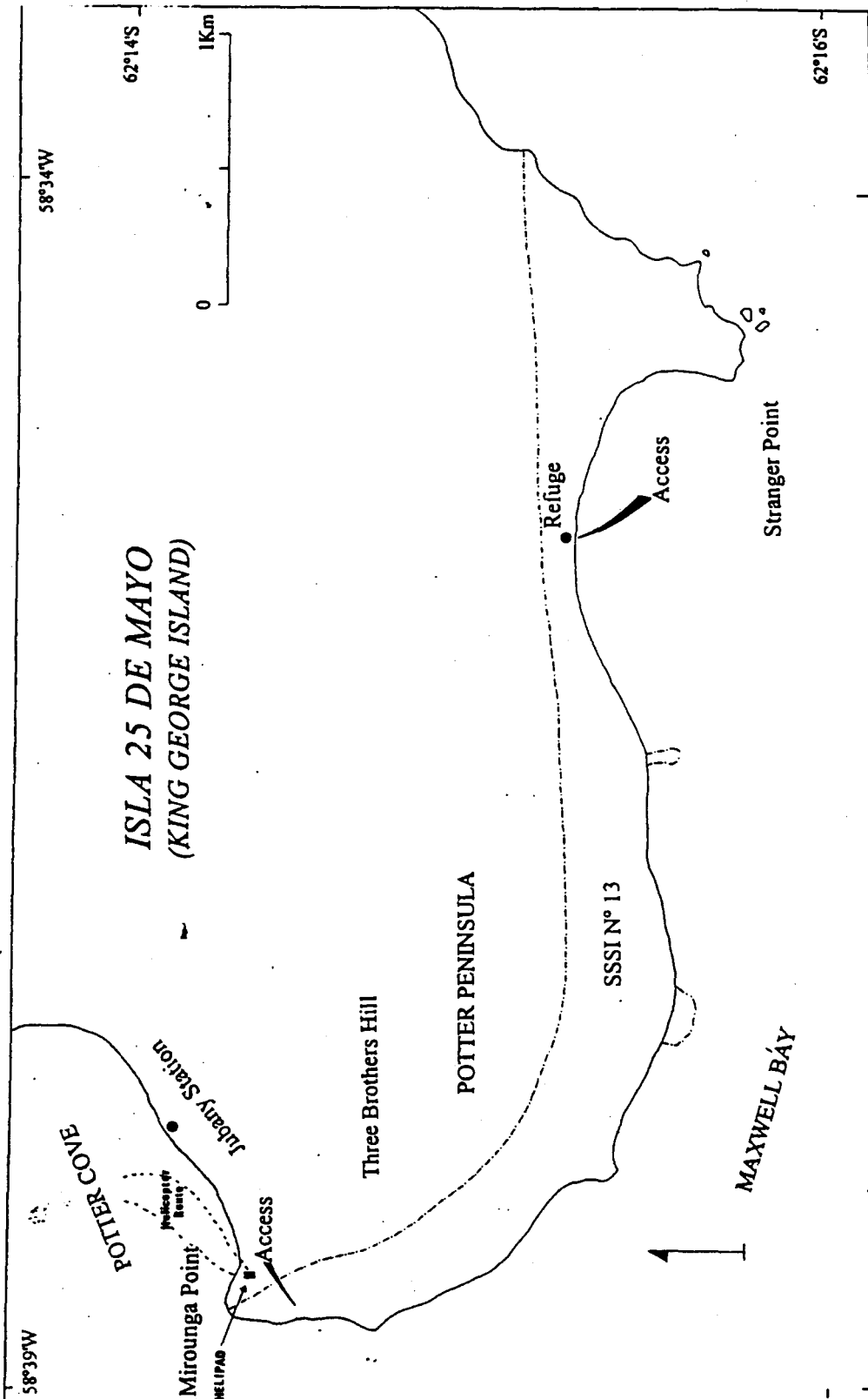
7(x) Requirements for reports

The principal permit holder for each issued permit shall submit a report of activities conducted in the Area. This report shall be submitted to the authority named in the Permit as soon as practicable. Such report should be stored indefinitely and made accessible to interested Parties, SCAR,

CCAMLR, and COMNAP if requested, to provide the documentation of human activities within the Area necessary for good management.







Management Plan for Site of Special Scientific Interest (SSSI) No. 14 HARMONY POINT, NELSON ISLAND SOUTH SHETLAND ISLANDS

1. Description of Values to be Protected

This area was originally designaed as SSSSI No. 14 in ATCM Recommendation XIII-8, after a proposal by Argentina and Chile, because of its diverse seabird community and extensive terrestrial vegetation cover and rich flora including mosses, lichens and two vascular plant species.

Ice free land supports large breeding colonies of 11 seabird species, and one of the largest single colonies of chinstrap penguin. The seabird colonies, and particularly the chinstrap penguin colony, are still important for scientific purposes, and have shown significant increases in the last decade. The Area supports a large giant petrel colony (500 breeding pairs), a species which is highly sensitive to any kind of human disturbance and is decreasing in many sites in Antarctica.

The Area is an excellent example of the South Shetland Islands maritime Antarctic seabird community and terrestrial ecosystem, allowing long term research without damage or interference.

2. Aims and Objectives

Management of Harmony Point aims to:

- Avoid major changes in the strcuture and composition of communities of flora and fauna;
- Prevent unnecessary human disturbance to the area;
- Permit scientific research which cannot be served elsewhere, and allow the continuity of the ongoing long-term biological and ecological research programmes established in the Area.

3. Management Activities

The following management activities will be undertaken to protect the values of the area:

- A marker board will be placed at the principal acess point illustrating the location, boundaries and stating entry restrictions;
- Access to the Area and paths will be marked;
- Preferred walking routes within the Area will be established for transit to sample sites;
- Collection of samples will be limited to the minimum required for authorised scientific research;
- Visits shall be made as necessary to ensure management and maintenance measures are adequate.

4. Period of Designation

Designated for an indefinite period.

5. Maps

Map 1: shows the location of Nelson Island in relation with the Antarctic Peninsula.

Map 2: shows the location of Harmony point on Nelson Island.

Map 3: shows the Protected Area in greater detail.

6. Description of the Area

6(i) Geographical coordinates and natural features of the Area

This Area is located in the west coast of Nelson Island, between 25 de Mayo (King George) Island to the Northeast and Robert Island to the Southwest (lat. 62° 18' S; 59° 14' W).

The Area includes Harmony Point and the Toe, the adjacent ice and surrounding marine zone within the rectangle showed on maps 2 and 3.

Geomorphologically Harmony Point presents three well defined units: an andesitic plateau, coastal andesitic outcrops and ancient sea levels (raised beaches). The plateau reaches 40 metres above sea level is its area is covered by detritus resulting from the destruction of andeistic rock by freeze/thaw action, with a well-developed vegetation of mosses and lichens.

Lakes and streams with a limited flow appear on the undulations. Some isolated andesitic rocks stand out from the glacier ice, and some of them are formed on the degalciated plateau (ancient nuntaks), evidencing that the past extension of the glacier covered Harmony Point.

There are three successive raised beaches, between the coast and the westward extremity and the glacier. These beaches are defined by pebble accumulations of variable height.

The Area holds breeding colonies of eleven seabird species: gentoo penguin 4,000 pairs, chinstrap penguin 12,000 pairs, giant petrel 500 pairs, cape petrel 300 pairs, blue eyed shag 110 pairs, sheathbill 110 pairs, brown skua 40 pairs, Dominican gull 120 pairs, Antarctic tern 30 pairs. Other seabirds nesting in the Area are Wilson storm petrel and black-bellied storm petrel.

There are some extensive areas covered by a very rich and diverse development of bryophytes and lichen-dominated plant communities, including two vascular plant species, especially in the areas less affected by recent perturbation or breeding activities. Moss turf subformations are located in wind protected and moist places, whilst lichen-dominated subformations occur in places with a high wind exposure.

6(ii) Restricted zones within the Area

There are no prohibited zones within the Area, but access to bird breeding areas should be restricted during the breeding season (September to March) and damage to vegetation should be avoided by limited access to the marked paths.

6(iii) Location of structures within the Area

There is a refuge measuring 4.5 by 3.5m, that can house three scientists, and a storage building. The installations are used only during spring and summer. There is an Argentine navigation light on the westmost point of Harmony Point.

6(iv) Location of other Protected Areas within close proximity

SPA No. 16, Coppermine Peninsula, Robert Island lies about 30 km south-west. SSSI No. 13 Potter Peninsula, 25 de Mayo (King George) Island lies about 30 km east-north-east. SSSI No. 5, Fildes Peninsula, 25 de Mayo (King George) Island lies about 23km north-north-east. SSSI No. 8, Western Shore of Laserre/Admiralty Bay, 25 de Mayo (King George) Island lies about 45km east-north-east.

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a permit issued by appropriate national authorities.

Conditions for issuing a Permit to enter the Area are that:

- It is issued to continue study of the natural history, biology and ecology of the flora and fauna of the area or for a compelling scientific purpose that cannot be met elsewhere;
- The actions permitted will not jeopardise the natural ecological system in the Area;
- Any management activities are in support of the objectives of the Management Plan;
- The actions permitted are in accordance with this Management Plan;
- The Permit, or authorised copy, must be carried within the Site of Special Scientific Interest;
- A report or reports are supplied to the authority that issued the Permit.

7(i) Access to and movements within the Area

Access to Harmony Point area from the sea, which is the preferred method, is restricted to the pebble beach 400m south-west to the refuge. There is a navigation light located in the westmost point of Harmony Point. Access to the navigation light is by boat from the coast at the south of the light. Special access points are not specified for the Toe, but access is limited to inflatable boats.

Aircraft landing should be avoided where practicable. Small planes could land on the glacier but flights over the Area are not allowed. Helicopters must not overfly any of the major bird breeding areas, and should land only

in the vicinity of the refuge or landing beach. Map 3 shows proposed helicopter flight route. It is forbidden to overfly the Area below 250m above the highest point except for access to the landing point specified above.

Pedestrians must use established routes, particularly during the bird breeding season.

Vehicles are prohibited in the area.

7(ii) Activities which are or may be conducted within the Area including restrictions on time and place

Scientific study and monitoring of the populations of flora and fauna in the area and compelling scientific research which cannot be conducted elsewhere and which will not interfere with ongoing long-term research programmes or jeopardise the structure or dynamics of the ecosystem of the Area.

Essential management activities, including monitoring.

7(iii) Installation, modification or removal of structures

No additional structures are to be erected in the Area, or scientific equipment installed, except for essential scientific or management activities, as specified in a Permit.

7(iv) Location of field camps

No additional structures are to be erected in the Area, or scientific equipment installed, except for essential scientific or management activities, as specified in a Permit.

7(v) Restriction on material and organisms which may be brought into the Area

No living animals or plant material shall be deliberately introduced into the Area.

No poultry products, including food products containing uncooked dried eggs, shall be taken into the Area.

No herbicides or pesticides shall be brought into the Area. Any other chemicals, which may be introduced for compelling scientific purpose specified in the permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted.

As far as possible the use of chemicals should be clearly documented for the benefit of later researchers.

Fuel, food and other material are not to be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All such material introduced are to be removed when no longer required. Permanent depots are not permitted.

7(vi) Taking or harmful interference with native flora and fauna

This is prohibited, except in accordance with a Permit. Where animal taking or harmful interference is involved this should be in accordance with the

SCAR Code of Conduct for Use of Animals for Scientific Purposes in Antarctica, as a minimum standard.

7(vii) Collection or removal of anything not brought into the area by the permit holder

Biological specimens and samples may be collected and/or removed from the Area only according to a permit. Debris of human origin should be removed and reported to the authority that issued the permit. Dead biological specimens may be removed for pathological analysis.

7(viii) Disposal of waste

All non-human waste shall be removed from the Area. Human waste may be deposited in the sea.

Waste resulting from research activities in the Area may be stored temporarily beside the refuge to await its removal from the Area at the first opportunity. Any such stored waste must be adequately contained, marked as waste and secured against accidental loss.

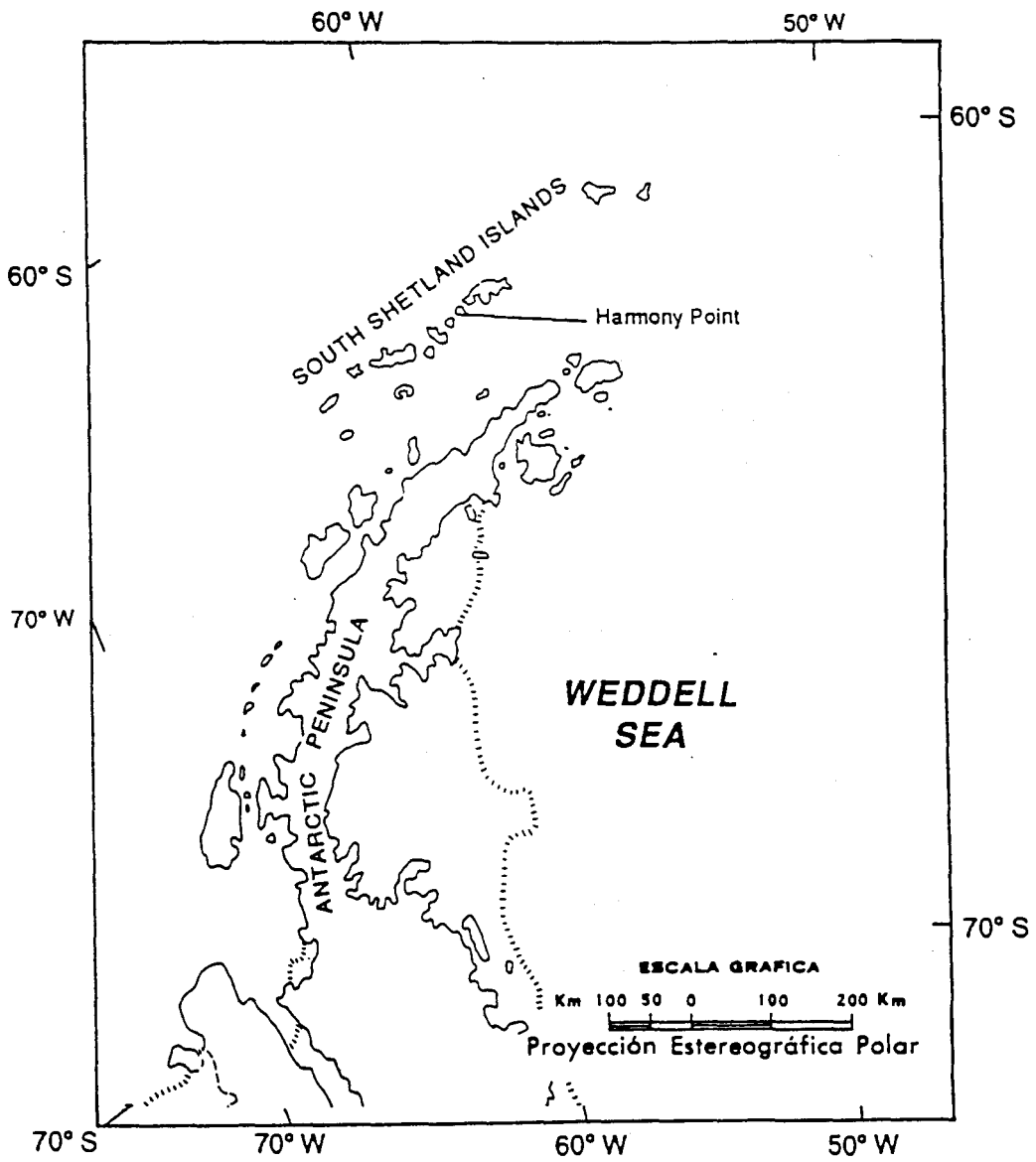
7(ix) Measures that may be necessary to ensure that the aims and objectives of the management plan continue to be met

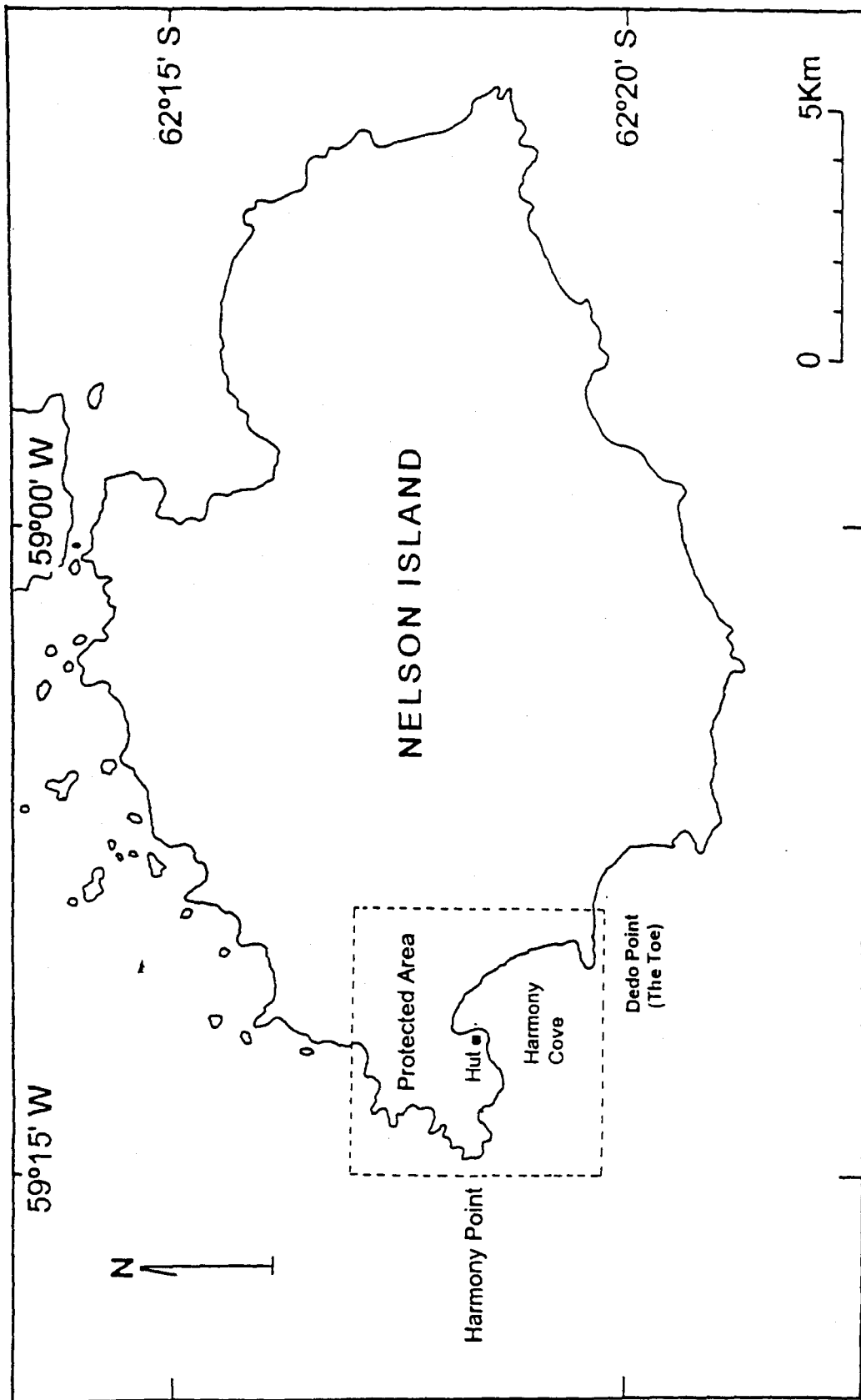
Permits may be granted to enter the area to carry out biological and ecological studies and monitoring, and site inspection activities, including the collection of small amounts of plant material and small numbers of animals for scientific purposes, to erect or maintain notice boards and protective measures.

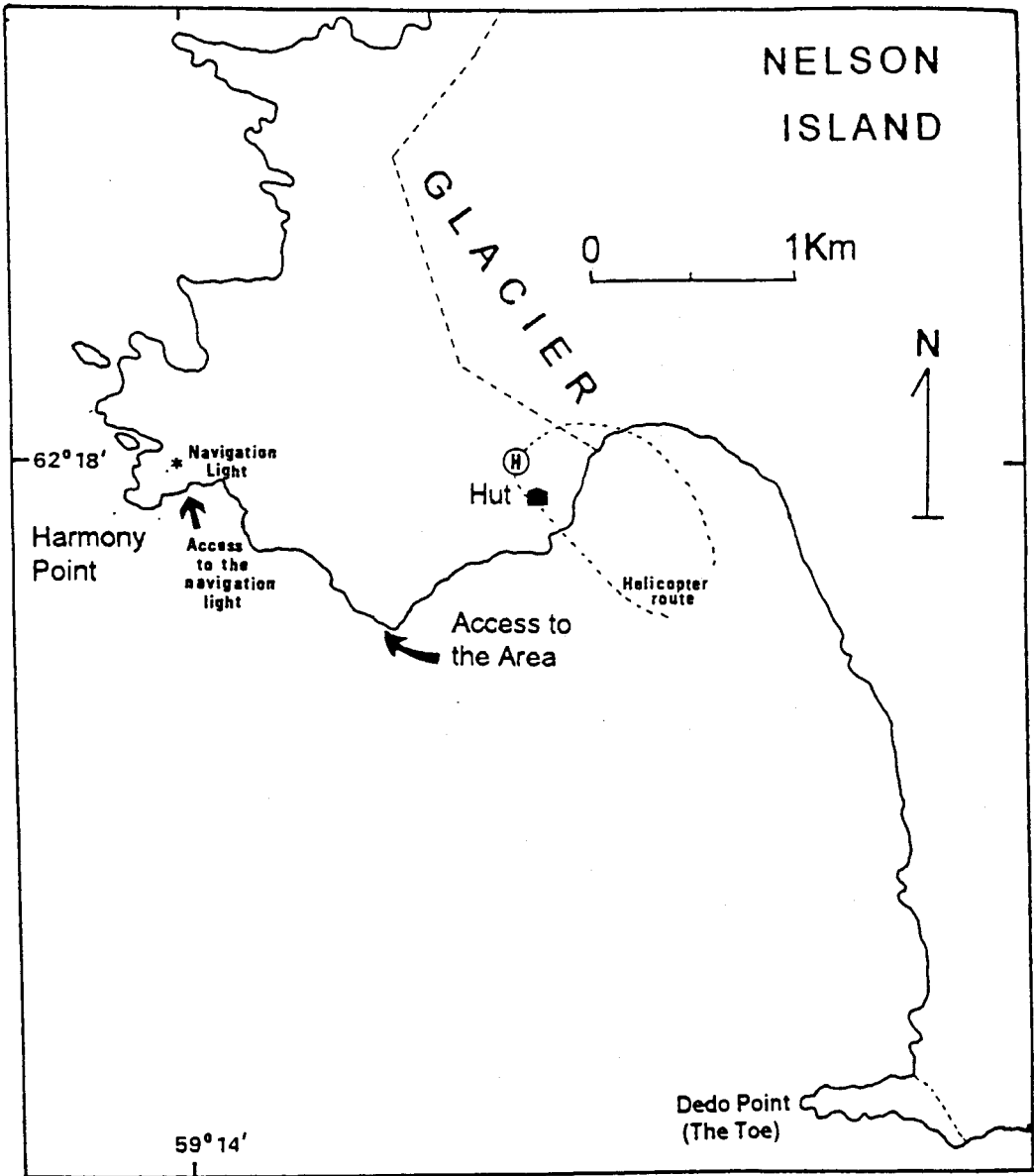
All scientific structures and instrumentation, including research markers, installed in the Area must be authorised in a permit and clearly identified by country, name of investigator and year of installation. Research markers and structures must be removed at or before the expiry of the Permit. If specific scientific projects cannot be concluded within the permitted time, applications must be made for an extension to leave the items in situ.

7(x) Requirements for reports

The principal permit holder for each issued permit shall submit a report of activities conducted in the Area. This report shall be submitted to the authority named in the Permit as soon as practicable. Such reports should be stored indefinitely and made accessible to interested Parties, SCAR, CCAMLR, and COMNAP if requested, to provide the documentation of human activities within the Area necessary for good management.







Management Plan for site of Special Scientific Interest (SSSI) No 15 CIERVA POINT, DANCO COAST, ANTARCTIC PENINSULA

1. Description of Values to be Protected

This area was originally designated as SSSI No. 15 in ATCM Recommendation XIII-8, after a proposal by Argentina, as an important example of well developed maritime vegetation and having breeding colonies of at least five bird species.

This area has a great scientific value due to the presence of important bird colonies (gentoo penguin, brown skua, blue-eyed shag, snow petrel, Dominican gull), an abundant development of plant cover, and a diverse flora that includes the two Antarctic flowering plant species and some liverworts and an associated invertebrate fauna. Its littoral area possesses abundant tidal pools inhabited by a large number of marine invertebrates. Long-term research programmes on terrestrial ecology and natural variability could be endangered by accidental interference, destruction of vegetation and soil, pollution of rock pools and perturbation of breeding birds.

2. Aims and Objectives

Management of Cierva Point aims to:

- Avoid major changes in the structure and composition of communities of flora and fauna;
- Protect long-term research programmes on terrestrial ecology and natural variability established in the Area;
- Prevent unnecessary human disturbance to the area;
- Utilise the Area as a monitoring site to assess direct and indirect effects of the neighbouring station.

3. Management Activities

The following management activities will be undertaken to protect the values of the area:

- A marker board will be placed at the principal access point illustrating the location boundaries and stating entry restrictions;
- Access to the Area and paths will be marked;
- Priority pedestrian routes within the Area will be established for transit to sample sites;
- Collection of samples will be limited to the minimum required for approved scientific research;

- Visits shall be made as necessary to ensure management and maintenance measures are adequate.

4. Period of Designation

Designated for an indefinite period.

5. Maps

Map 1 shows the location of Cierva Point in relation with the Antarctic Peninsula. Map 2 shows the location of Cierva Point and adjacent islands in relation to Danco Coast. Map 3 shows the area surrounding Primavera Station in detail to indicate access to the Protected Area.

6. Description of the Area

6(i) Geographical co-ordinates and natural features of the Area

Cierva Point (lat. 64° 10' S, lon. 60° 57' W) is in the north-west of the Antarctic Peninsula, on the south coast of Cierva Cove, at the north end of Hughes Bay. The site comprises Cierva Point, encompassing the land west on an imaginary line drawn from the southeast of the north side of the Point, through the summit of a flat hill of 540m high, to the southeast of the south side of the Point. Also included are Apéndice/Rivera/Sterneck Island, and José Hernández/Bofill/Midas Island and López/Moss Island, which lie mainly between José Hernández/Bofill/Midas Island and Cierva Point. Although the intertidal zone of each of these areas is included in the Area, the subtidal marine environment is not included.

Base Primavera (Argentina) and all its associated installations and areas of disturbance are excluded from the area.

The plant cover of lichen, moss and grass-dominated communities is very extensive. The dominant plant communities are lichen-dominated fellfield, *Polytrichum-Chorisodontium* moss turf and *Descampsia-Colobantus* subformation. Areas of more than a hundred square metres off the ground are covered by moss turves, with a peat depth of about 80 cm. This type of habitat allows the establishment of many bird colonies, including gentoo penguins, chinstrap penguins, blue-eyed shags, brown skuas, Wilson's storm petrels, sheathbills and kelp gulls.

6(ii) Restricted zones within the Area

None

6(iii) Location of structures within the Area

There are no vehicular routes, structures or refuges within the Area. Primavera Station (Argentina) located at the north west of the cape, is open in summers. It is composed of eight huts, and a place delimited for helicopter landings.

6(iv) Location of other Protected Areas within close proximity

None

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a permit issued by appropriate national authorities.

Conditions for issuing a Permit to enter the Area are that:

- It is issued to continue study of terrestrial ecology and natural variability of the area or for a compelling scientific purpose that cannot be met elsewhere;
- The actions permitted will not jeopardise the natural ecological system in the Area;
- Any management activities are in support of the objectives of the Management Plan;
- The actions permitted are in accordance with this Management Plan;
- The Permit, or authorised copy, must be carried within the Site of Special Scientific Interest;
- A report or reports are supplied to the authority that issued the Permit.

7(i) Access to and movements within the Area

There is only one access to the Area for helicopters. Helicopters may only land in the specified area ESE of the station. The aircraft route to be used is limited to a north approach and departure. Marine access is allowed to any point for any of the islands. Access will be by permit issued by a component authority and will only be allowed for activities which are in accordance with this management plan. Tourism or any kind of recreational activities are not permitted. Movement within the site should be by designated pedestrian routes. No vehicle access is permitted.

7(ii) Activities which are or may be conducted within the Area including restrictions on time and place

Scientific study and monitoring of the terrestrial ecosystem and natural variability in the area and compelling scientific research which cannot be conducted elsewhere and which will not interfere with ongoing long-term research programmes or jeopardise the structure or dynamics of the ecosystem of the Area.

Essential management activities, including monitoring.

7(iii) Installation, modification or removal of structures

No structures are to be erected in the Area, or scientific equipment installed, except for essential scientific or management activities, as specified in a Permit.

7(iv) Location of field camps

Parties should not normally camp in the Area. If it is essential for safety reasons, tents should be erected having regard to causing the least damage to vegetation and disturbance to fauna.

7(v) Restriction on material and organisms which may be brought into the Area

No living animals or plant material shall be deliberately introduced into the Area.

No poultry products, including food products containing uncooked dried eggs, shall be taken into the Area. No herbicides or pesticides shall be brought into the Area. Any other chemicals, which may be introduced for compelling scientific purpose specified in the permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted.

As far as possible the use of chemicals should be clearly documented for the benefit of later researchers.

Fuel, food and other material are not to be stored in the Area, unless required for essential purposes connected with the activity for which the permit has been granted. All such material introduced are to be removed when no longer required. Permanent depots are not permitted.

7(vi) Taking or harmful interference with native flora and fauna

This is prohibited, except in accordance with a Permit. Where animal taking or harmful interference is involved this should be in accordance with the SCAR Code of Conduct for Use of Animals for Scientific Purposes in Antarctica, as a minimum standard.

7(vii) Collection or removal of anything not brought into the area by the permit holder

Biological specimens and samples may be collected and/or removed from the Area only according to a permit. Debris of human origin should be removed and reported to the authority that issued the permit. Dead biological specimens may be removed for pathological analysis.

7(viii) Disposal of waste

All non-human wastes shall be removed from the Area to Primavera station. Human waste may be deposited in the sea.

7(ix) Measures that may be necessary to ensure that the aims and objectives of the management plan continue to be met

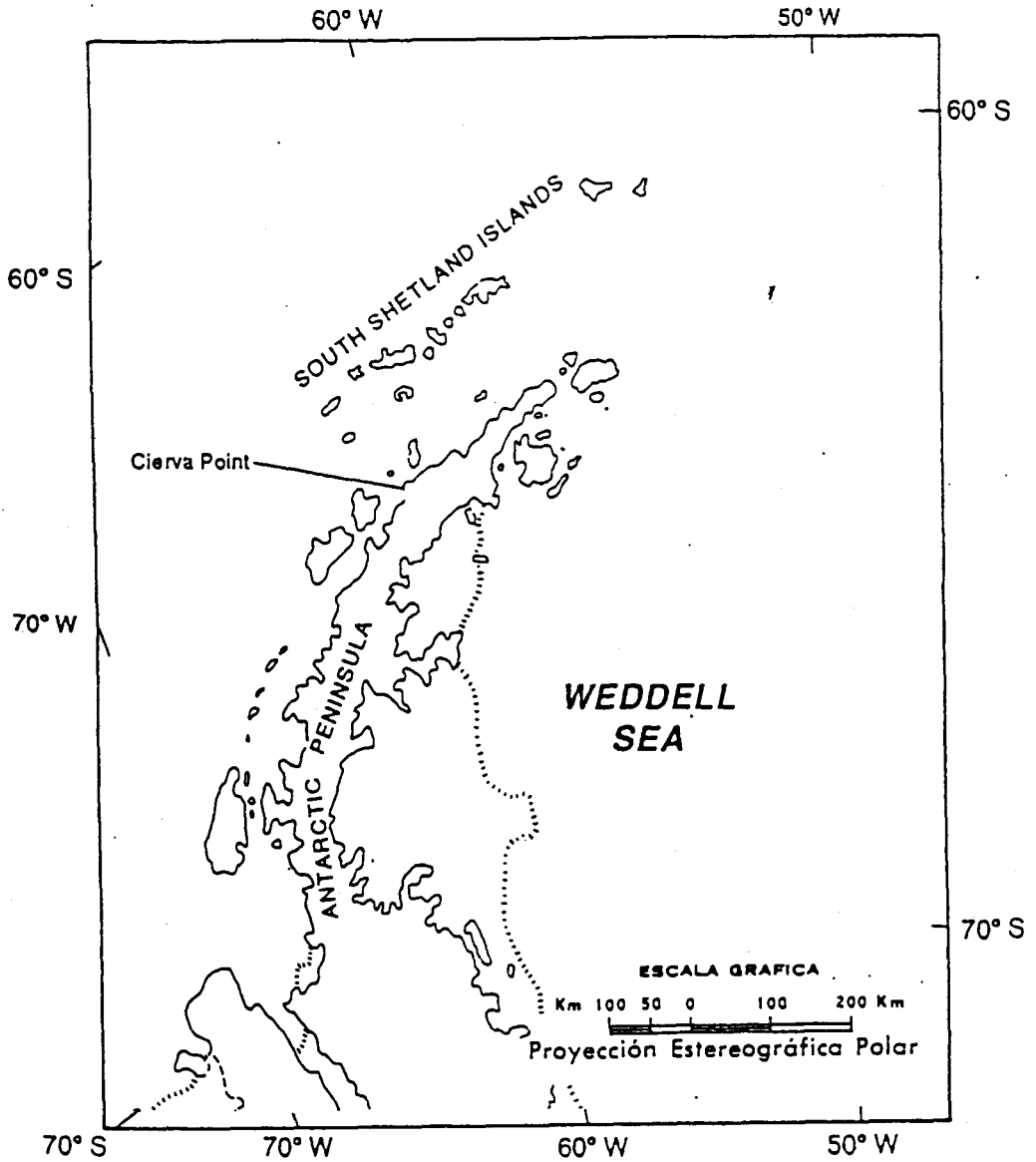
Permits may be granted to enter the area to carry out biological and ecological studies and monitoring, and site inspection activities, including the collection of small amounts of plant material and small numbers of animals for scientific purposes, to erect or maintain notice boards and protective measures.

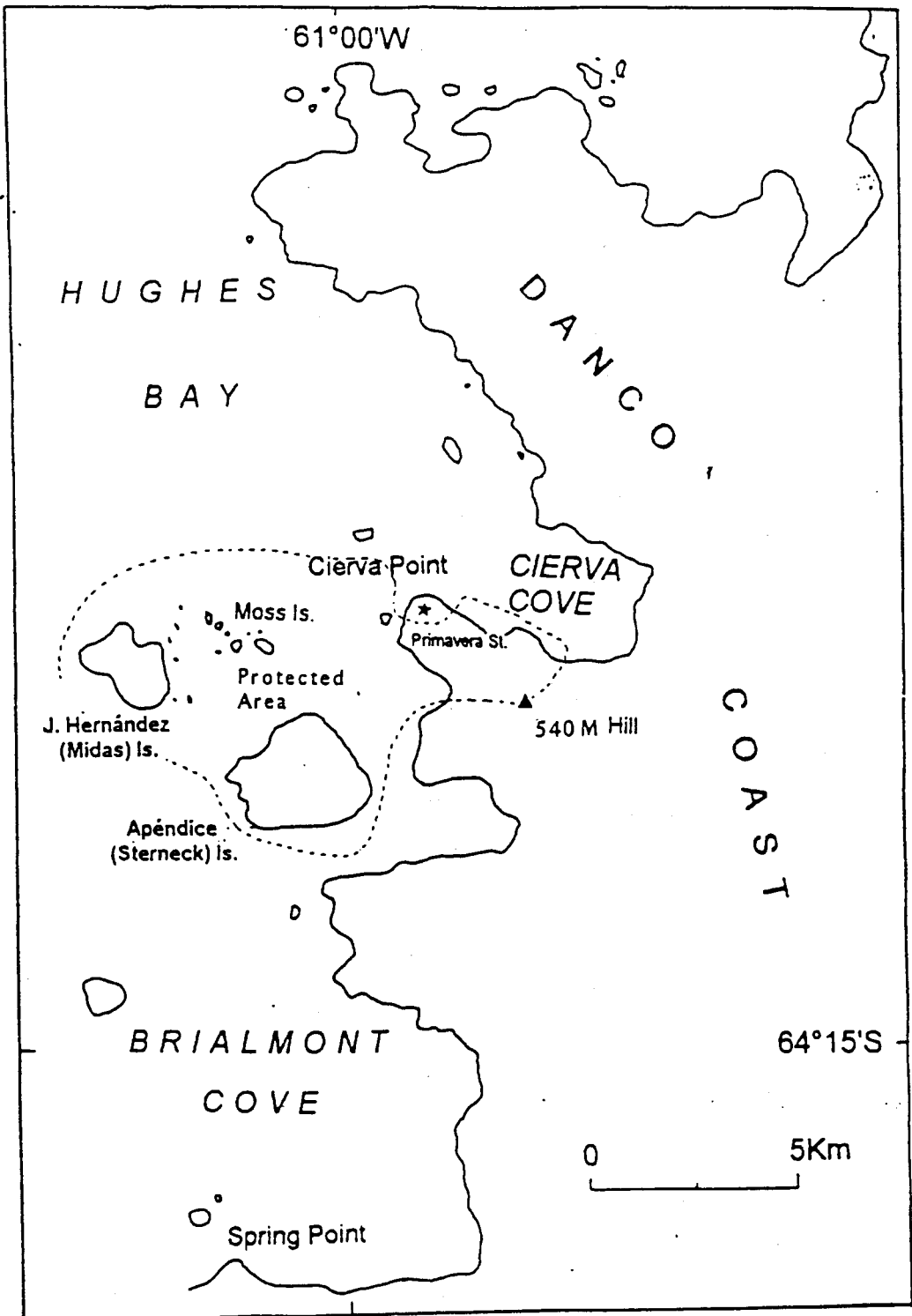
All scientific structures and instrumentation, including research markers, installed in the Area must be authorised in a permit and clearly identified by country, name of investigator and year of installation. Research markers and structures must be removed at or before the expiry of the Permit. If specific scientific projects cannot be concluded within the permitted time, applications must be made for an extension to leave the items on site.

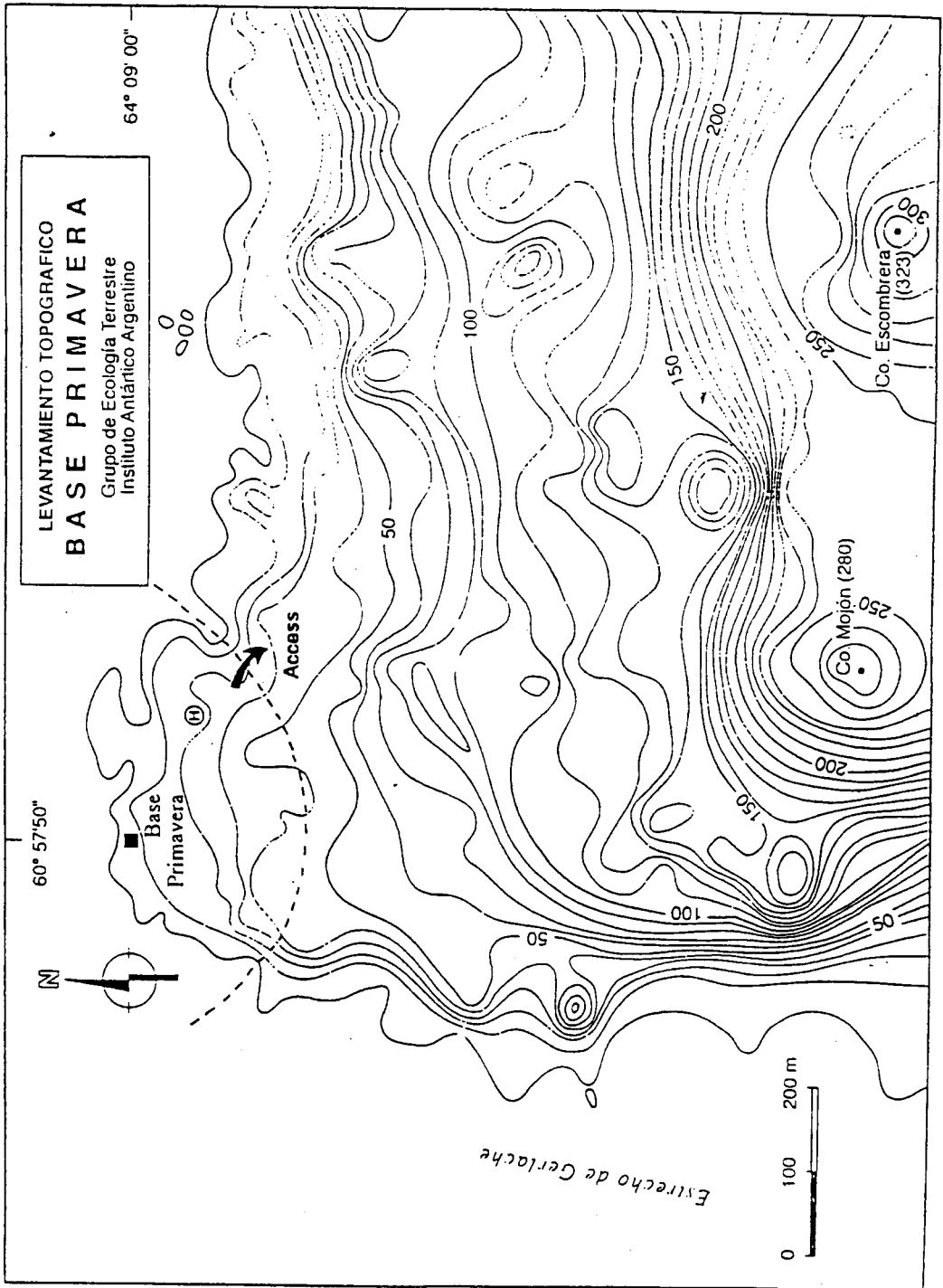
7(x) Requirements for reports

The principal permit holder for each issued permit shall submit a report of activities conducted in the Area. This report shall be submitted to the authority named in the Permit as soon as practicable. Such reports should be stored indefinitely and made accessible to interested Parties, SCAR,

CCAMLR, and COMNAP if requested, to provide the documentation of human activities within the Area necessary for good management.







**Management Plan for Site of Special Scientific Interest (SSSI)
No. 37: BOTANY BAY, CAPE GEOLOGY,
VICTORIA LAND**

1. Description of Values to be Protected

The Area at Botany Bay and Cape Geology (Granite Harbour, Victoria Land) has been proposed by New Zealand on the grounds that it is an extremely rich botanical refuge for such a high latitude location (162° 34' 00"E, 77° 00' 30"S), with a lichen and moss species diversity and abundance that is unique for Southern Victoria Land. In addition to a high diversity and abundance of lichens and mosses there are abundant growths of algae, large populations of invertebrates (collembola, mites, nematodes, rotifers) and a colony (in excess of 40 pairs) of South polar skua (*Catharacta maccormicki*). The area is the type locality for the collembolan *Gomphiocephalus hodgsoni* Carpenter.

The structure and development of the moss and lichen communities is similar to that found more than 10° of latitude further north, with several species at their known southern limit. The Area contains the most southerly record of an hepatic (*Cephaloziella exiliflora*). Of great significance is the size (up to 15cm diameter) of some lichen thalli (eg, *Umbilicaria aprina*). The boulder beach has rich populations of both epilithic and endolithic lichens.

In addition to the biological values described, the Area contains the remains of a rock shelter and associated artefacts of historical importance, known as 'Granite House', designated as Historic Site No. 67 in Measure 4 (1995). Constructed by members of the 1910-1913 British Antarctic Expedition, the shelter and associated artefacts are vulnerable to disturbance and are therefore managed as a Managed Zone within the Area, which is subject to access restrictions.

The limited geographical extent of the ecosystem, its unusual ecological features and importance, its exceptional scientific and historical value and the vulnerability of the Area to disturbance through trampling, sampling, pollution or alien introductions, are such that the Area requires long-term special protection.

2. Aims and Objectives

- avoid degradation of, or substantial risk to, the values of the Area by preventing unnecessary human disturbance to the Area;
- allow scientific research on the ecosystem and elements of the ecosystem in particular on lichen and moss species, algae, invertebrates and skuas while ensuring protection from over-sampling;
- allow other scientific research provided it is for compelling reasons which cannot be served elsewhere;
- preserve a part of the natural ecosystem as a reference area for the purpose of future comparative studies;
- minimise the possibility of introduction of alien plants, animals and microbes to the Area;

- allow visits to 'Granite House', but under strict control by Permit;
- allow visits for management purposes in support of the aims of the management plan.

3. Management Activities

The following management activities are to be undertaken to protect the values of the Area:

- Signs showing the location of the Area (stating the special restrictions that apply) shall be displayed prominently, and a copy of this Management Plan shall be kept available, in all of the research hut facilities located within 25 km of the Area;
- Signs illustrating the location, boundaries and clearly stating entry restrictions shall be placed at appropriate locations at the boundaries of the Area and Zones within to help avoid inadvertent entry;
- Markers, signs or structures erected within the Area for scientific or management purposes shall be secured and maintained in good condition;
- Visits shall be made as necessary (no less than once every five years) to assess whether the Area continues to serve the purposes for which it was designated and to ensure management and maintenance measures are adequate;
- National Antarctic Programmes operating in the region shall consult together with a view to ensuring these steps are carried out.

4. Period of Designation

Designated for an indefinite period.

5. Maps and Photographs

Map A: Botany Bay and Cape Geology, protected area topographic map.
Map specifications:

Projection: Lambert conformal conic;
Standard parallels: 1st 79° 20' 00" S; 2nd 76° 40' 00" S
Central Meridian: 162° 30' 00" E Latitude of Origin: 78° 01' 16.211" S;
Spheroid: WGS84.

Inset 1: Southern Victoria Land, Ross Sea and Ross Island, showing location of Granite Harbour.

Inset 2: Cape Geology location map, and Granite Harbour region.

Map B: Botany Bay and Cape Geology, protected area orthophotograph. Map specifications are the same as those in Map A. The original orthophotograph was prepared at 1:2500 with a positional accuracy of ± 1.25 m (horizontal) and ± 2.5 m (vertical) with an on-ground pixel resolution of 0.5 m. Photography: USGS/DoSLI (SN7851) 22 November 1993.

Map C: Managed Zone with 'Granite House' site orthophotograph,

derived from Map B. The richest areas of vegetation, sensitive to disturbance, are shown.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

Cape Geology is situated in the south-western corner of Granite Harbour, southern Victoria Land, at 162°32'52"E, 77°00'14"S, approximately 100 km north-west of Ross Island (Map A, Insets). The Area encompasses much of the catchment above Botany Bay and consists of raised boulder beach terraces, weathered rocky steppes and irregular rock platforms around Cape Geology, extending south to include a well-defined elevated cirque containing a small ice field. The bedrock geology at Cape Geology has been described as a porphyritic grey biotite-granite, with phenocrysts of orthoclase of reddish colour, casting the weathered rock with a reddish tinge.

The northwest corner of the Area is marked by a brass plaque in a boulder (M1, 2 m: Maps A and B) 400 m SW of Cape Geology. The west boundary is defined by a line extending first 260 m SSE from M1 to a large boulder (marked by a cairn) with terrier bolt (M2) at an elevation of 118 m on the ridge above the campsite; thence the boundary extends 250 m up this ridge to a point at 162 m elevation marked by an iron tube with bamboo pole. The west boundary extends a further 300 m up this ridge to a large pointed rock at 255 m elevation near the edge of the permanent ice field. The boundary then extends 150 m south across the ice field to the west edge of a prominent line of exposed rock and moraine in the SW corner of the Area at 325 m elevation. The south boundary follows this line of rock east until the exposure is buried by the ice-field, thence SE across the ice field for 500 m to the edge of a second and more prominent exposure at an elevation of just over 400 m (M3). The boundary follows the upper edge of this exposure and then crosses the ice field SE to an elevation of approximately 325 m where the ice-free eastern boundary ridge and the ice field converge. The east boundary follows the ridge crest for 1550 m in a NE direction to a large pointed rock on the ridge (M4, 392 m) where the east boundary turns to descend due north to the coast at the eastern extremity of the boulder beach of Botany Bay (M5, 5 m). The mean high water mark of the coastline of Botany Bay and Cape Geology forms the northern boundary of the Area.

The Area is extremely rich botanically for such a high-latitude location — it is also one of the richest sites in the whole of continental Antarctica. There is a high diversity and abundance of lichens (more than 30 species) and mosses (eight species), and the structure and development of these communities are similar to those found 10° of latitude further north. Some lichen thalli (e.g. *Umbilicaria aprina*) measure up to 15 cm diameter. The boulder beach has rich populations of both epilithic and endolithic lichens. The Area contains by far the most southerly record of an hepatic (*Cephaloziella exiliflora*) and the mosses *Bryoerythrophyllum recurvirostre* and possibly *Ceratodon purpureus*. There are abundant growths of algae (at least 85 taxa), although the algal flora is not considered particularly unusual for the locality. There are large populations of invertebrates (collembola, mites, nematodes, rotifers) and the area is the type locality for the collembolan *Gomphiocephalus*

hodgsoni Carpenter. There is a colony of between 40 – 50 breeding pairs (and numerous non-breeders) of the south polar skua (*Catharacta maccormicki*), which is approximately the same number present in 1911–12. No other bird species are known to breed in the Cape Geology area.

6(ii) Restricted and managed zones within the Area

Restricted Zone: An area directly above Botany Bay is designated a Restricted Zone in order to preserve part of the Area as a reference site for future comparative studies, while the remainder of the Area (which is similar in biology, features and character) is more generally available for research programmes and sample collection. The west boundary of the Restricted Zone is defined by a line from a marker (iron tube in rock, 20 metres from mean high water mark, elevation 8 m) at the west side of Botany Bay (Map A), extending SW for 170 m up to a second iron tube marker on the crest of the adjacent ridge (87 m). This boundary extends 100 m to a third iron tube and a cairn (98 m), thence 50 m to a large flat rock in the centre of the main flush (marked '1' on Maps A and B). The south boundary of the Restricted Zone extends from the flat rock in the flush in a straight line 820 m to the first of two prominent boulders closely adjacent to each other, approximately in the middle of the ice-free slopes above Botany Bay (marked '2' on Maps A and B at 165 m). The east boundary extends 300 m from there to a large rock at 135 m elevation, thence NE downslope to the NE boundary point (M5, 5 m). The north boundary of the Restricted Zone is the mean high water mark of Botany Bay and is coincident with the north boundary of the Area. Access to the Restricted Zone is allowed only for compelling scientific or management (such as inspection or review) purposes which cannot be served elsewhere in the Area.

Managed Zone: Situated at the coast at the northernmost tip of Cape Geology, a Managed Zone is designated to protect historic artifacts and plant communities within this vicinity, yet also to allow access to the rock shelter known as 'Granite House', which was designated as Historic Site No. 67 in Measure 4 (1995). The Managed Zone is an enclave of approximately 100 m by 80 m that surrounds a rock ridge leading from the coast at Cape Geology to the old shelter. The boundaries are marked on Map C, with the southernmost corner marked by a cairn on a prominent boulder overlooking the rock shelter. The shelter was constructed by members of the 1910-1913 British Antarctic Expedition, and used between December 1911 and January 1912 while the party carried out geological and biological exploration in the vicinity. The structure was built using a natural hollow in the rocks, with walls built up from granite boulders and a roof of seal skins: in December 1993 parts of the walls remained, but while several of the skins were present the roof had collapsed. Access to the Managed Zone may be allowed by Permit, subject to the conditions of this management plan.

6(iii) Structures within and near the Area

The only structures known to exist in the Area are 'Granite House', the boundary survey markers and signposts in appropriate locations.

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected area to Cape Geology is SSSI-3 at Barwick Valley, 50 km distant in a SW direction in the Victoria Land Dry Valleys.

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a Permit issued by appropriate national authorities. Conditions for issuing a Permit to enter the Area are that:

- outside of the Restricted and Managed Zones, it is issued only for scientific study of the ecosystem, or for compelling scientific reasons that cannot be served elsewhere, or for essential management purposes consistent with plan objectives such as inspection or review;
- access to the Restricted Zone is allowed only for compelling scientific or management reasons that cannot be served elsewhere in the Area;
- access to the Managed Zone may be permitted for scientific, management, historical, educational or recreational purposes;
- the actions permitted will not jeopardise the ecological, scientific or historic values of the Area;
- any management activities are in support of the objectives of the Management Plan;
- the actions permitted are in accordance with the Management Plan;
- the Permit, or an authorized copy, shall be carried within the Area;
- a visit report shall be supplied to the authority named in the Permit;
- permits shall be issued for a stated period.

7(i) Access to and movement within the Area

Vehicles are prohibited within the Area and access should be by foot. Helicopters are normally prohibited from landing within the Area: there is a designated site 60 m outside of the Area (162° 31' 55"E, 77° 00' 19"S: Map A). Access to the landing site should be from the open water / sea ice to the north of the Area. Overflight of the Area lower than 300 m (~1000 ft) above ground level is normally prohibited. When required for essential scientific or management purposes, transient overflight or landing may be allowed: conduct of such anticipated overflights or landings must be specifically authorised by Permit. Use of helicopter smoke grenades within the Area is prohibited unless necessary for safety, and all grenades should be retrieved. All helicopter landing or overflight lower than 300 m AGL is prohibited within the Restricted Zone.

Access into the Area should preferably be from the recommended camping area along a preferred walking route 10–20 m from the coast, which is relatively devoid of vegetation. Visitors should avoid walking on visible vegetation, or unnecessary disturbance to bird populations. Care should be exercised walking in areas of moist ground, where foot traffic can easily damage sensitive soils, plant and algal communities, and degrade water quality: walk around such areas, on ice or rocky ground. Pedestrian traffic should be kept to the minimum necessary consistent with the objectives of any permitted activities and every reasonable effort should be made to minimise effects.

Access to the Managed Zone should preferably be from the coast, following the ridge leading up to 'Granite House' (Map C). An alternative route may be used from the west of the Managed Zone if sea-ice travel is unsafe (Maps

A–C). Unless specifically authorised by Permit, visitors are prohibited from entering the historic shelter, and are limited to access and viewing from the rock ridge designated for access from the coast in order to prevent damage to the rich vegetation within the Managed Zone. Visitors shall not venture south of 'Granite House', unless specifically authorised by Permit. A maximum of 10 people is permitted to enter the Managed Zone at any one time, and a maximum of 5 people is allowed in the viewing area overlooking 'Granite House' at any one time (Map C).

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

- scientific research that will not jeopardise the ecosystem of the Area;
- essential management activities, including monitoring;
- limited visits to the Managed Zone for reasons other than science or management subject to the conditions described in this plan;
- activities with the aim of preserving or protecting the historic resources within the Area.

7(iii) Installation, modification or removal of structures

No structures are to be erected within the Area except as specified in a Permit. All scientific equipment installed in the Area must be authorised by Permit and clearly identified by country, name of the principal investigator and year of installation. All such items should be made of materials that pose minimal risk of contamination of the Area. Removal of specific equipment for which the Permit has expired shall be a condition of the Permit.

7(iv) Location of field camps

Camping within the Area is prohibited and should be at a site outside of the Area, 100 m from the NW corner (Map A), adjacent to the designated helicopter landing site. This camping site has been disturbed by previous activities and visitors should reoccupy these disturbed positions for tents and other facilities.

7(v) Restrictions on materials and organisms which can be brought into the Area

No living animals, plant material or microorganisms shall be deliberately introduced into the Area and precautions shall be taken against accidental introductions. No herbicides or pesticides shall be brought into the Area. Any other chemicals, including radio-nuclides or stable isotopes, which may be introduced for scientific or management purposes specified in the Permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted. Fuel is not to be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All materials introduced shall be for a stated period only, shall be removed at or before the conclusion of that stated period, and shall be stored and handled so that risk of their introduction into the environment is minimised.

7(vi) Taking or harmful interference with native flora or fauna

This is prohibited, except in accordance with a Permit. Where animal taking or harmful interference is involved this should, as a minimum standard, be in accordance with the SCAR Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica.

7(vii) Collection or removal of anything not brought into the Area by the Permit holder

Material may be collected or removed from the Area only in accordance with a Permit and should be limited to the minimum necessary to meet scientific or management needs. Material of human origin likely to compromise the values of the Area, which was not brought into the Area by the Permit Holder or otherwise authorised, may be removed unless the impact of removal is likely to be greater than leaving the material *in situ*: if this is the case the appropriate authority should be notified.

Unless specifically authorised by Permit, visitors are prohibited from interfering with or attempting restoration of 'Granite House' in any way, or from handling, taking or damaging any artifacts found within the Managed Zone. Evidence of recent changes, damage or new artifacts observed should be notified to the appropriate national authority. Relocation or removal of artifacts for the purposes of preservation, protection or to re-establish historical accuracy is allowable by Permit.

7(viii) Disposal of waste

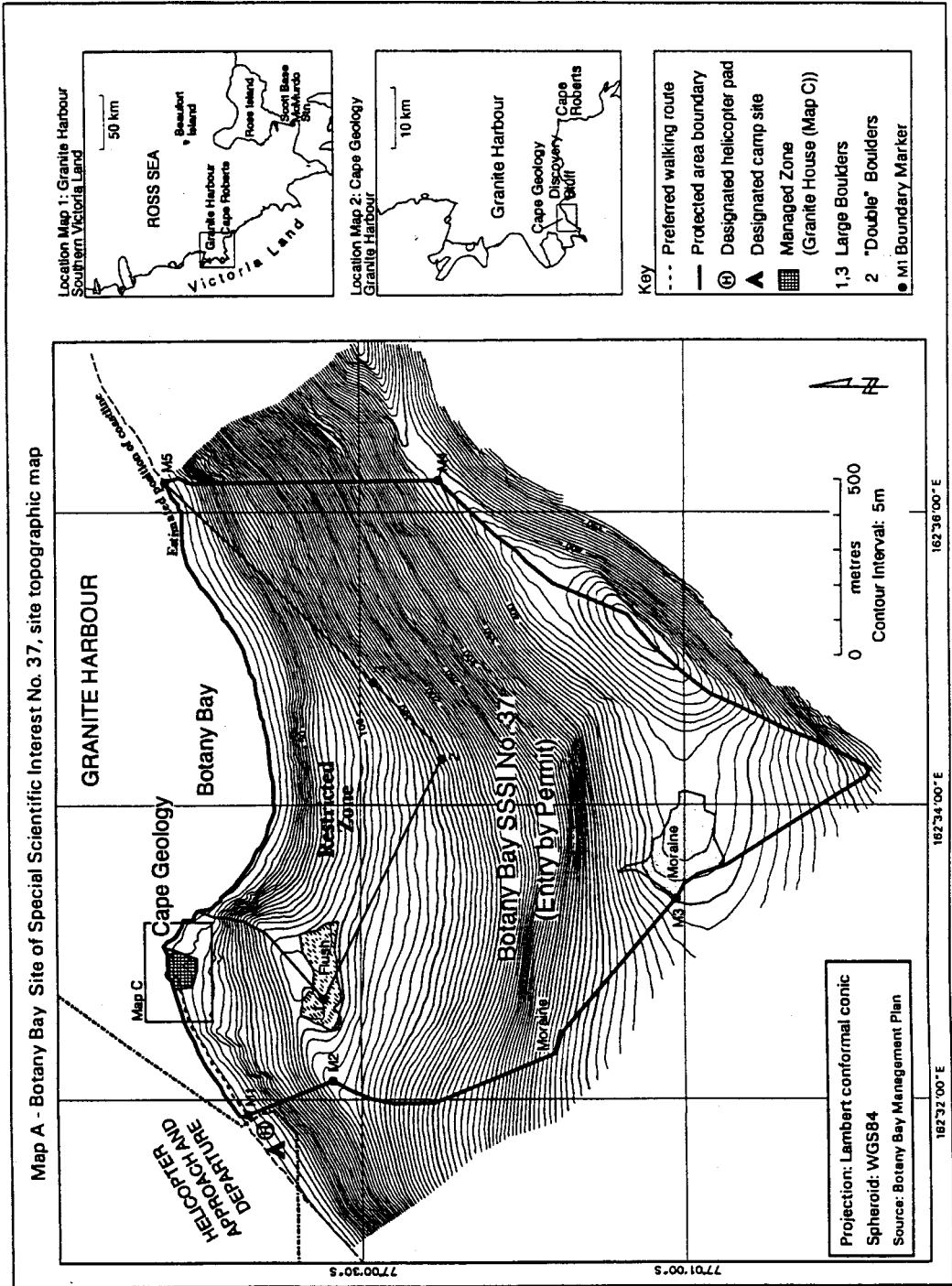
All wastes, including all human wastes, shall be removed from the Area.

7(ix) Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met

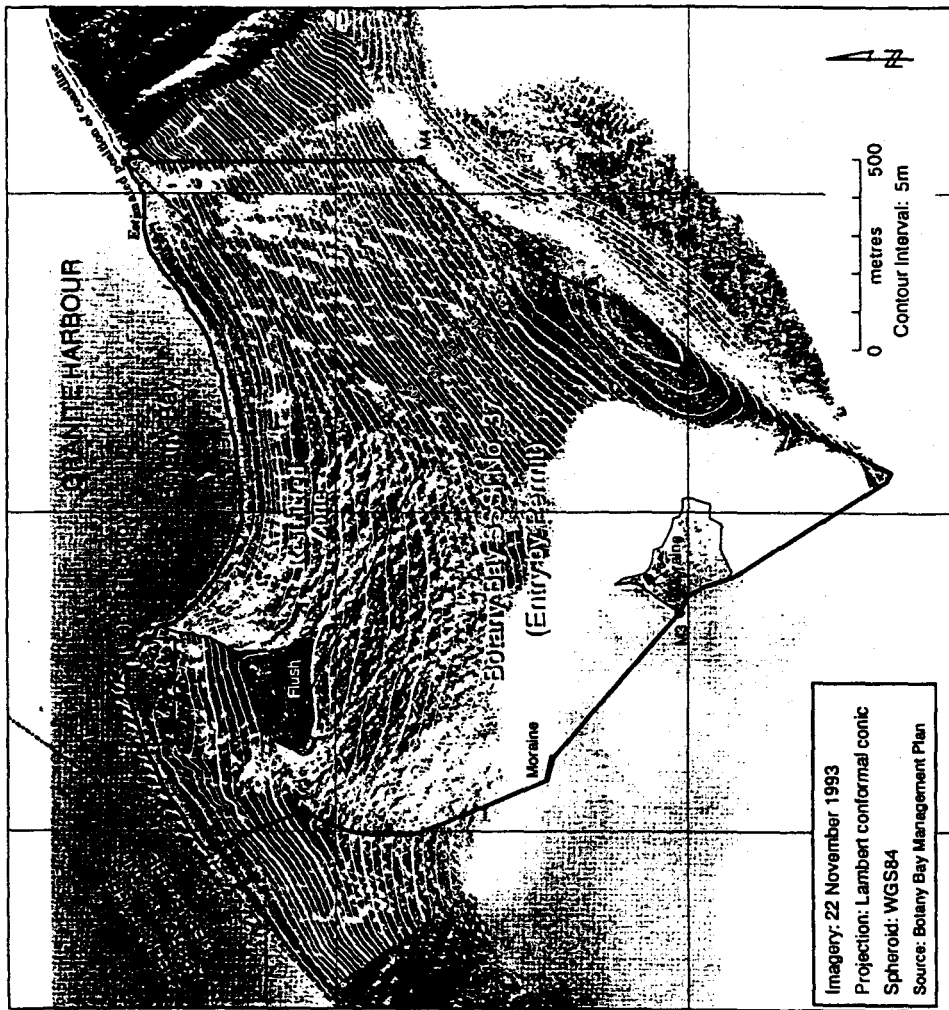
1. Permits may be granted to enter the Area to carry out biological monitoring and site inspection activities, which may involve the collection of small samples for analysis or review, to erect or maintain signposts, or for management activities, especially those associated with the Historic Site.
2. Any specific sites of long-term monitoring shall be appropriately marked.
3. To help maintain the ecological and scientific values of the isolation and relatively low level of human impact at the Area visitors shall take special precautions against introductions. Of particular concern are microbial or vegetation introductions sourced from soils at other Antarctic sites, including stations, or from regions outside Antarctica. To minimise the risk of introductions, visitors shall thoroughly clean footwear and any equipment to be used in the area — particularly sampling equipment and markers — before entering the Area.

7(x) Requirements for reports

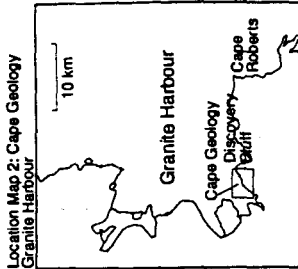
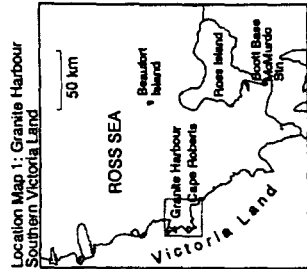
Parties should ensure that the principal holder for each permit issued submit to the appropriate authority a report describing the activities undertaken. Such reports should include, as appropriate, the information identified in the Visit Report form suggested by SCAR. Parties should maintain a record of such activities and, in the Annual Exchange of Information, should provide summary descriptions of activities conducted by persons subject to their jurisdiction, which should be in sufficient detail to allow evaluation of the effectiveness of the Management Plan. Parties should, wherever possible, deposit originals or copies of such original reports in a publicly accessible archive to maintain a record of usage, to be used both in any review of the management plan and in organising the scientific use of the Area.



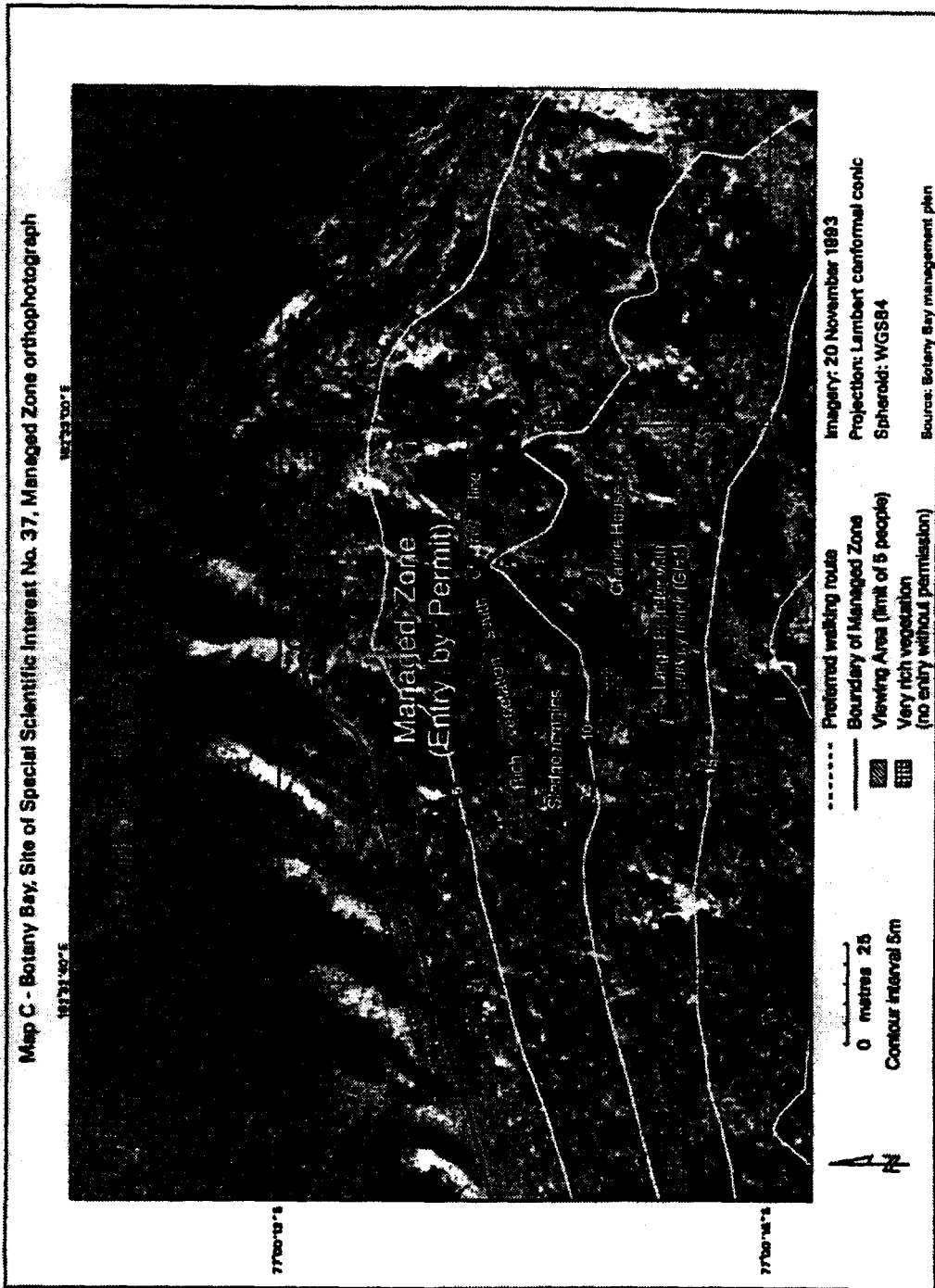
Map B - Botany Bay, Site of Special Scientific Interest No. 37, site orthophotograph



Imagery: 22 November 1993
 Projection: Lambert conformal conic
 Spheroid: WGS84
 Source: Botany Bay Management Plan



- Key**
- Preferred walking route
 - Protected area boundary
 - ⊕ Designated helicopter pad
 - ▲ Designated camp site
 - Managed Zone (Granite House (Map C))
 - 1,3 Large Boulders
 - 2 "Double" Boulders
 - M1 Boundary Marker



Tramway Ridge Site of Special Scientific Interest (SSSI) No. 11 Proposed Change to Restricted Zone

1. Introduction

A new management plan for Tramway Ridge (SSSI No. 11) was adopted by the XIX ATCM in Seoul in 1995 (Measure 2). This site contains a "Restricted Zone", where access is prohibited until agreed otherwise by a review of the management plan.

When preparing a new management plan for Botany Bay, Cape Geology, Victoria Land, New Zealand faced a question over terminology in attempting to describe a "Restricted Zone" proposed for the area. The science community supported controls on access to the proposed "Restricted Zone" at Botany Bay but favoured access to proposed zone to be "restricted" and not "prohibited", as at Tramway Ridge. The justification for allowing access was the presence of a liverwort within the zone that scientists did not want to place completely off-limits until a management plan review.

The access policy for the "Restricted Zone" proposed for Cape Geology would therefore be inconsistent with the "Restricted Zone" policy now adopted for Tramway Ridge. New Zealand is concerned that as far as possible Consultative Parties should attempt to achieve consistency in policy for zones of the same name within Antarctic protected areas.

2. A Prohibited Zone at Tramway Ridge SSSI No. 11

One possible way to achieve consistency is to change the name of the "Restricted Zone" on Tramway Ridge to a "Prohibited Zone" and to proceed with the proposal to call the zone for Botany Bay a "Restricted Zone". This proposed change in terminology would more accurately reflect the actual level of restriction/prohibition that applies, given that access to the "Restricted Zone" at Tramway Ridge is already strictly prohibited in order to preserve the northern half of the area as a reference site for future comparative studies.

New Zealand noted that the Protocol on Environmental Protection to the Antarctic Treaty provides for "prohibiting" in Antarctica, and within protected areas specifically. Annex V, Article 5.3(f) provides for the "identification of zones within the area, in which activities are to be prohibited, restricted, or managed for the purpose of achieving the aims and objectives" of the management plan. In this, the Protocol makes a specific distinction between "restricted" and "prohibited".

In June 1996, the SCAR Group of Specialists on Environmental Affairs and Conservation (GOSEAC) considered the question of zoning terminology. GOSEAC concluded that the use of the terms "Prohibited Zone" and "Restricted Zone" under Annex V would be appropriate from a scientific, technical and environmental standpoint.

3. Conclusion

In view of these points, New Zealand considers that it would be appropriate to change the management plan for SSSI No. 11 at Tramway Ridge, Mt Erebus, so that the current designation of the "Restricted Zone" be changed to "Prohibited Zone".

MEASURE 4 (1997)

Antarctic Protected Areas System: Historic Sites and Monuments: Memorial Cross, Lewis Bay, Ross Island.

The Representatives,

Recalling in particular Recommendation XI-3;

And also Recommendations I-9, V-4, VI-14, VII-9, XIII-7, XIII-16, XIV-8;

Recommend to their Governments the following Measure for approval in accordance with paragraph 4 of Article 9 of the Antarctic Treaty to add the following historic monument to the "List of Historic Monuments Identified and Described by the Proposing Government or Governments" annexed to Recommendation VII-9, thereby guaranteeing its full protection and respect as envisaged by the Recommendation noted above.

Memorial Cross for the 1979 Mount Erebus Crash Victims, Lewis Bay, Ross Island.

A cross of stainless steel which was erected in January 1987 on a rocky promontory three kilometres from the Mount Erebus crash site in memory of the 257 people of different nationalities who lost their lives when the aircraft in which they were travelling crashed into the lower slopes of Mount Erebus, Ross Island. The Cross was erected as a mark of respect and in remembrance of those who died in this tragedy.

MEASURE 5 (1997)

Antarctic Protected Areas System: Historic Sites and Monuments: Amendment Number 41: Stone Hut on Paulet Island

The Representatives,

Recalling the Measures adopted in Recommendations I-IX, V-4, VI-14, VII-9; and Resolution 8 (1995);

Recommend to their Governments the following Measure for approval in accordance with paragraph 4 of Article IX of the Antarctic Treaty:

That an amendment of the description of Historic Site Number 41, which is contained in the "List of Historic Monuments and Described by the proposing Government or Governments" annexed to Recommendation VII-9, be approved.

Amendment to Listing:

Site Number 41: Stone Hut on Paulet Island.

The following text should be added to the final part of the paragraph;

"...and the rock cairn built by the survivors of the wreck at the highest point of the island to draw the attention of rescue expeditions."

**ANNEX B:
DECISIONS**

ANNEX B: DECISIONS

DECISION 1 (1997)

Revised Rules of Procedure (1997)

The Representatives,

Desiring to amend the Rules of Procedure for Antarctic Treaty Consultative Meetings;

Decide:

That the "Revised Rules of Procedure (1997)" attached to this decision shall replace the existing Rules of Procedure for Antarctic Treaty Consultative Meetings with immediate effect.

REVISED RULES OF PROCEDURE (1997)

1. Meetings held pursuant to Article IX of the Antarctic Treaty shall be known as Antarctic Treaty Consultative Meetings. Contracting Parties entitled to participate in those Meetings shall be referred to as "Consultative Parties"; other Contracting Parties which may have been invited to attend those Meetings shall be referred to as "non-Consultative Parties."
2. The Representatives of the Commission for the Conservation of Antarctic Marine Living Resources, the Scientific Committee on Antarctic Research and the Council of Managers of National Antarctic Programs, invited to attend those Meetings in accordance with Rule 30, shall be referred to as "observers."

Representation

3. Each Consultative Party shall be represented by a delegation composed of a Representative and such Alternate Representatives, Advisers and other persons as each State may deem necessary. Each non-Consultative Party which has been invited to attend a Consultative Meeting shall be represented by a delegation composed of a Representative and such other persons as it may deem necessary within such numerical limit as may from time to time be determined by the Host Government in consultation with the Consultative Parties. The Commission for the Conservation of Antarctic Marine Living Resources, the Scientific Committee on Antarctic Research and the Council of Managers of National Antarctic Programs shall be represented by their respective Chairman or President, or other persons appointed to this end. The names of members of delegations and of the observers shall be communicated to the Host Government prior to the opening of the Meeting.

4. The order of precedence of the delegations shall be in accordance with the alphabet in the language of the Host Government, all delegations of non-Consultative Parties following after those of Consultative Parties, and all delegations of observers following after non-Consultative Parties.

Officers

5. A Representative of the Host Government shall be the Temporary Chairman of the Meeting and shall preside until the Meeting elects a Chairman.

6. At its inaugural session, a Chairman from one of the Consultative Parties shall be elected. The other Representatives of Consultative Parties shall serve as Vice-Chairmen of the Meeting in order of precedence. The Chairman normally shall preside at all plenary sessions. If he is absent from any session or part thereof, the Vice-Chairmen, rotating on the basis of the order of precedence as established by Rule 4, shall preside during each such session.

Secretariat

7. The Secretary shall be appointed by the Meeting on the proposal of the Chairman. The Secretary shall be responsible for providing secretarial services, and shall carry out such other tasks as the Meeting may require or direct.

Sessions

8. The opening plenary session shall be held in public, other sessions shall be held in private, unless the Meeting shall determine otherwise.

Committees and Working Groups

9. The Meeting, to facilitate its work, may establish such committees as it may deem necessary for the performance of its functions, defining their terms of reference.

10. The committees shall operate under the Rules of Procedure of the Meeting, except where they are inapplicable.

11. Working groups may be established by the Meeting or its committees.

Conduct of Business

12. A quorum shall be constituted by two-thirds of the Representatives of Consultative Parties participating in the Meeting.

13. The Chairman shall exercise the powers of his office in accordance with customary practice. He shall see to the observance of the Rules of Procedure and the maintenance of proper order. The Chairman, in the exercise of his functions, remains under the authority of the Meeting.

14. Subject to Rule 27, no Representative may address the Meeting without having previously obtained the permission of the Chairman and the Chairman shall call upon speakers in the order in which they signify their desire to speak. The Chairman may call a speaker to order if his remarks are not relevant to the subject under discussion.

15. During the discussion of any matter, a Representative of a Consultative Party may rise to a point of order and the point of order shall be decided immediately by the Chairman in accordance with the Rules of Procedure. A Representative of a Consultative Party may appeal against the ruling of the Chairman. The appeal shall be put to a vote immediately, and the Chairman's ruling shall stand unless over-ruled by a majority of the Representatives of Consultative Parties present and voting. A Representative of a Consultative Party rising to a point of order shall not speak on the substance of the matter under discussion.

16. The Meeting may limit the time to be allotted to each speaker, and the number of times he may speak on any subject. When the debate is thus limited and a Representative has spoken his allotted time, the Chairman shall call him to order without delay.

17. During the discussion of any matter, a Representative of a Consultative Party may move the adjournment of the debate on the item under discussion. In addition to the proposer of the motion, Representatives of two Consultative Parties may speak in favour of, and two against, the motion, after which the motion shall be put to the vote immediately. The Chairman may limit the time to be allowed to speakers under this Rule.

18. A Representative of a Consultative Party may at any time move the closure of the debate in the item under discussion, whether or not any other Representative has signified his wish to speak. Permission to speak on the closure of the debate shall be accorded only to Representatives of two Consultative Parties opposing the closure, after which the motion shall be put to the vote immediately. If the Meeting is in favour of the closure, the Chairman shall declare the closure of the debate. The Chairman may limit the time to be allowed to speakers under this Rule. (This Rule shall not apply to debate in committees.)

19. During the discussion of any matter, a Representative of a Consultative Party may move the suspension or adjournment of the Meeting. Such motions shall not be debated, but shall be put to the vote immediately. The Chairman may limit the time to be allowed to the speaker moving the suspension or adjournment of the Meeting.

20. Subject to Rule 15, the following motions shall have precedence in the following order over all other proposals or motions before the Meeting:

- a) to suspend the Meeting;
- b) to adjourn the Meeting;
- c) to adjourn the debate on the item under discussion;
- d) for the closure of the debate on the item under discussion.

21. Decisions of the Meeting on all matters of procedure shall be taken by a majority of the Representatives of Consultative Parties participating in the Meeting, each of whom shall have one vote.

Languages

22. English, French, Russian and Spanish shall be the official languages of the Meeting.

23. Any Representative may speak in a language other than the official languages. However, in such cases he shall provide for interpretation into one of the official languages.

Measures, Decisions, and Resolutions and Final Report

24. Without prejudice to Rule 21, Measures, Decisions and Resolutions, as referred to in Decision 1 (1995), shall be adopted by the Representatives of all Consultative Parties present and will thereafter be subject to the provisions of Decision 1 (1995).

25. The final report shall also contain a brief account of the proceedings of the Meeting. It will be approved by a majority of the Representatives of Consultative Parties present and shall be transmitted by the Secretary of the Meeting to Governments of all Consultative and non-Consultative Parties which have been invited to take part in the Meeting, for their consideration.

Non-Consultative Parties

26. Representatives of non-Consultative Parties, if invited to attend a Consultative Meeting, may be present at:

- a) all plenary sessions of the Meeting; and
- b) all formal Committees or Working Groups, comprising all Consultative Parties, unless a Representative of a Consultative Party requests otherwise in any particular case.

27. The relevant Chairman may invite a Representative of a non-Consultative Party to address the Meeting, Committee or Working group which he is attending, unless a Representative of a Consultative Party requests otherwise. The Chairman shall at any time give priority to Representatives of Consultative Parties who signify their desire to speak and may, in inviting Representatives of non-Consultative Parties to address the Meeting, limit the time to be allotted to each speaker and the number of times he may speak on any subject.

28. Non-Consultative Parties are not entitled to participate in the taking of decisions.

29. a) Non-Consultative Parties may submit documents to the Secretariat for distribution to the Meeting as information documents. Such documents shall be relevant to matters under

consideration at the Meeting.

- b) Unless a Representative of a Consultative Party requests otherwise such documents shall be available only in the language or languages in which they were submitted.

Antarctic Treaty System Observers

30. The observers referred to in Rule 2 shall attend the Meetings for the specific purpose of reporting on:

- a) in the case of the Commission for the Conservation of Antarctic Marine Living Resources, developments in its area of competence.
- b) in the case of the Scientific Committee on Antarctic Research:
 - i) the general proceedings of SCAR;
 - ii) matters within the competence of SCAR under the Convention for the Conservation of Antarctic Seals;
 - iii) such publications and reports as may have been published or prepared in accordance with Recommendations IX-19 and VI-9 respectively.
- c) in the case of the Council of Managers of National Antarctic Programs, the activities within its area of competence.

31. Observers may be present at:

- a) the plenary sessions of the Meeting at which the respective Report is considered;
- b) formal committees or working groups, comprising all Contracting Parties at which the respective Report is considered, unless a Representative of a Consultative Party requests otherwise in any particular case.

32. Following the presentation of the pertinent Report, the relevant Chairman may invite the observer to address the Meeting at which it is being considered once again, unless a Representative of a Consultative Party requests otherwise. The Chairman may allot a time limit for such interventions.

33. Observers are not entitled to participate in the taking of decisions.

34. Observers may submit their Report and/or documents relevant to matters contained therein to the Secretariat, for distribution to the Meeting as working papers.

Agenda for Consultative Meetings

35. At the end of each Consultative Meeting, the Host Government of that Meeting shall prepare a preliminary agenda for the next Consultative

Meeting. If approved by the Meeting, the preliminary agenda for the next Meeting shall be annexed to the Final Report of the Meeting.

36. Any Contracting Party may propose supplementary items for the preliminary agenda by informing the Host Government for the forthcoming Consultative Meeting no later than 180 days before the beginning of the Meeting; each proposal shall be accompanied by an explanatory memorandum. The Host Government shall draw the attention of all Contracting Parties to this Rule no later than 210 days before the Meeting.

37. The Host Government shall prepare a provisional agenda for the Consultative Meeting. The provisional agenda shall contain:

- a) all items on the preliminary agenda decided in accordance with Rule 35; and
- b) all items the inclusion of which has been requested by a Contracting Party pursuant to Rule 36.

Not later than 120 days before the Meeting, the Host Government shall transmit to all the Contracting Parties the provisional agenda, together with explanatory memoranda and any other papers related thereto.

Experts from International Organisations

38. At the end of each Consultative Meeting, the Meeting shall decide which international organisations having a scientific or technical interest in Antarctica shall be invited to designate an expert to attend the forthcoming Meeting in order to assist it in its substantive work.

39. Any Contracting Party may thereafter propose that an invitation be extended to other international organisations having a scientific or technical interest in Antarctica to assist the Meeting in its substantive work; each such proposal shall be submitted to the Host Government for that Meeting not later than 180 days before the beginning of the Meeting and shall be accompanied by a memorandum setting out the basis for the proposal.

40. The Host Government shall transmit these proposals to all Contracting Parties in accordance with the procedure in Rule 37. Any Consultative Party which wishes to object to a proposal shall do so not less than 90 days before the Meeting.

41. Unless such an objection has been received, the Host Government shall extend invitations to international organisations identified in accordance with Rules 38 and 39 and shall request each international organisation to communicate the name of the designated expert to the Host Government prior to the opening of the Meeting. All such experts may attend the Meeting during consideration of all items, except for those items relating to the operation of the Antarctic Treaty System which are identified by the previous Meeting or upon adoption of the agenda.

42. The relevant Chairman, with the agreement of all the Consultative Parties, may invite an expert to address the meeting he is attending. The Chairman shall at any time give priority to Representatives of Consultative Parties or non-Consultative Parties or observers referred to in Rule 30 who signify their desire to speak, and may in inviting an expert to address the Meeting limit the time to be allotted to him and the number of times he may speak on any subject.

43. Experts are not entitled to participate in the taking of decisions.

44. a) Experts may, in respect of the relevant agenda item, submit documents to the Secretariat for distribution to the Meeting as information documents.
- b) Unless a Representative of a Consultative Party requests otherwise, such documents shall be available only in the language or languages in which they were submitted.

Amendments

45. These Rules of Procedure may be amended by a two-thirds majority of the Representatives of Consultative Parties participating in the Meeting. This Rule shall not apply to Rules 24, 26, 28, 33, 38-41, and 43, amendments of which shall require the approval of the Representatives of all Consultative Parties present at the Meeting.

DECISION 2 (1997)

Consultative Status

The Representatives,

Recalling the decision of the First Special Antarctic Treaty Consultative Meeting;

Recalling also the Guidelines on Notification with respect to Consultative Status agreed at the XIVth Antarctic Treaty Consultative Meeting;

Noting the procedures agreed in Decision 1 (1995);

Decide:

1. To replace paragraphs 1 to 5 of the decision of the First Special Consultative Meeting with the following:

"1. An acceding state which considers itself entitled to appoint Representatives in accordance with Article IX, paragraph 2, shall notify the Depositary Government for the Antarctic Treaty of this view and shall provide information concerning its activities in the Antarctic, in particular the content and objectives of its scientific programme. The Depositary Government shall forthwith communicate for evaluation the foregoing notification and information to all other Consultative Parties.

2. Consultative Parties, in exercising the obligation placed on them by Article X of the Treaty, shall examine the information about its activities supplied by such an acceding state, may conduct any appropriate enquiries (including the exercising of their right of inspection in accordance with Article VII of the Treaty) and may, through the Depositary Government urge such a state to make a declaration of intent to approve the Recommendations adopted at Consultative Meetings in pursuance of the Treaty and subsequently approved by all the Contracting Parties whose Representatives were entitled to participate in those meetings. Consultative Parties may, through the Depositary Government, invite the acceding state to consider approval of the other Recommendations.

3. The Government which is to host the next Consultative Meeting in the context of its preparation of the Provisional Agenda for the Consultative Meeting in accordance with Rule 37 of the Rules of Procedure, shall include an appropriate item in the Provisional Agenda for consideration of the notification.

4. The Consultative Meeting shall determine, on the basis of all information available to it, whether to acknowledge that the acceding state in question has met the requirements of Article 9 paragraph 2 of the Antarctic Treaty and of Article 22 (4) of the Protocol on Environmental Protection and taking into account the Guidelines agreed at the XIV Antarctic Treaty Consultative Meeting. If agreed by the Representatives of all the Consultative Parties, such acknowledgement shall be recorded in a Decision of the Consultative Meeting and be notified by the host Government to the acceding state".

5. The procedure hereby established may be modified only by a unanimous decision of Consultative Parties."¹

2. That all other elements of the decision and Guidelines relating to Consultative Status shall remain unchanged.

**ANNEX C:
RESOLUTIONS**

ANNEX C: RESOLUTIONS

RESOLUTION 1 (1997)

Emergency Response Action and Contingency Planning

The Representatives,

Noting the provisions of Article 15 of the Environmental Protocol and related provisions of Annex IV on emergency response action and contingency planning.

Conscious that implementation of the provisions requires actions by the Parties;

Recognising that initiatives bearing on the provisions have been taken by COMNAP and IAATO;

Convinced that additional work on the subject needs to be done by the ATCM;

Recommend that:

1. That those Consultative Parties whose research stations and vessels operating in Antarctica are not covered by contingency plans should take the necessary steps to ensure that the operators of the stations and vessels introduce plans based on the 1992 Guidelines prepared by COMNAP.
2. That the Consultative Parties, individually or collectively, should to the extent possible carry out regular contingency exercises, both theoretical and practical on land and at sea, to test and thereby refine their contingency plans, and report on the results of the exercises to the ATCM. Exercises at sea should be carried out in accordance with the relevant maritime conventions.
3. In view of the relevance of work being done by IMO, that the IMO expert invited to attend ATCM XXII be requested to take part also in the discussion on this subject.
4. That COMNAP and IAATO submit Information Papers to ATCM XXII describing their respective Guidelines for contingency plans, the extent to which the plans have been put in place, and plans for future work.
5. That in the light of the above reports, discussions, papers and other available information, ATCM XXII should review the issue of emergency response action and contingency planning with a view to implementing further the provisions of Article 15, and the related provisions of Annex IV to the Protocol, on cooperative response action, and decide on further action.

RESOLUTION 2 (1997)

Comprehensive Environmental Evaluation (CEE): Methodology for Reviewing Activities for which a CEE has been Prepared

The Representatives,

Recalling Annex I, Article 3 of the Protocol on Environmental Protection to the Antarctic Treaty;

Noting that further guidance is desirable for following up on the implementation of activities for which CEEs have been prepared under Annex I of the Protocol on Environmental Protection to the Antarctic Treaty;

Encourage Consultative Parties to:

1. Include in their procedures for assessing the environmental impacts of their activities in Antarctica, provision for review of the activities undertaken following the completion of a CEE.
2. Adopt the following process for CEE follow-up:
 - (a) Review activities carried out following completion of CEE, including analysis of whether the activities were conducted as proposed, whether applicable mitigation measures were implemented, and whether the impacts of the activity were as predicted in the assessment;
 - (b) Record any changes to the activities described in the CEE, the reasons for the changes, and the environmental consequences of those changes; and
 - (c) Report to the Parties on the outcomes of (a) and (b) above.

RESOLUTION 3 (1997)

Standard Form for Advance Notification and Post-Visit Reporting on Tourism and Non-Governmental Activities in Antarctica

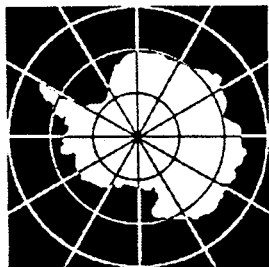
The Representatives,

Recalling Resolution 3 (1995) which agreed that there would be an advantage in standardised reporting of information on tourism and non-governmental activity in Antarctica;

Noting that Attachment A to Recommendation 1 (1994) outlines the requirements for Advance Notice of tourism and non-governmental activities, and that Resolution 3 (1995) outlines requirements for post-activity reports;

Recalling that Parties agreed at ATCM XX to trial a standard form for Advance Notification and Post-Visit Reporting during the 1996/97 Antarctic season. Recommend that:

A standard form be used for Advance Notifications and Post-Visit Reporting on tourism and non-governmental activities in Antarctica in order to obtain consistent information that will facilitate analysis of the scope, frequency and intensity of tourism and non-governmental activities.



PART THREE

**OPENING ADDRESSES
AND REPORTS FROM
ATCM XXI**

CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997

**ANNEX D:
OPENING
ADDRESSES**

ANNEX D: OPENING ADDRESSES

OPENING ADDRESS BY DR HORACIO E. SOLARI HEAD OF THE DELEGATION OF ARGENTINA

Mr Chairman

On behalf of the delegation of Argentina, I wish to congratulate you for your election as Chairman of the XXI Antarctic Treaty Consultative Meeting. It is an honour for us to work under your most able leadership. We are convinced that with your ability, expertise and serenity, we shall successfully conclude this meeting's activities.

Through you, Sir, I would like to thank the Government of New Zealand for having hosted our meeting in this beautiful city. Christchurch is so closely linked to the Antarctic continent that it is considered one of its natural gateways. I would also like to thank New Zealand for the warm welcome it has offered us, as well as for the excellent organisation of the meeting which, I am sure, will smooth the way for our discussions on a number of important subjects.

The conservation of the Antarctic's delicate ecosystems continues to be one of the main topics of concern and discussion. The imminent entry into force of the Protocol on Environmental Protection to the Antarctic Treaty is evidence of the clear direction and the responsibilities undertaken to protect the Antarctic Continent.

Argentina continues doing its utmost to carry out the necessary actions to effectively implement the provisions of the Protocol. We therefore wish to point out that the Working and Information Papers submitted to this meeting by my country's delegation deal primarily with the subject of environmental protection.

The particular geographic location of Argentina which, in addition, is one of the gateways to the Antarctic, has led to my country's special interest in protecting the Antarctic environment and its dependent and associated ecosystems. Consequently, Argentina has continued developing its scientific research programmes and international cooperation activities, with special emphasis on the aspects that deal with the protection of the Antarctic environment. We believe that this is a new contribution to the operation of the Antarctic Treaty, to its permanent consolidation and to the attainment of its purposes and objectives.

Argentina also wishes to express its deep appreciation to the Consultative Parties for their continued support to the offer made by Buenos Aires to be the headquarters of the Antarctic Treaty Secretariat.

My delegation is convinced that genuine negotiations will lead to the successful establishment of the Antarctic Treaty Secretariat, including the designation of Buenos Aires as its seat.

Let me underline in this respect the almost unanimous support to the proposal that Buenos Aires be designated as headquarters of the Secretariat, and the fact that other Parties have waived their right to submit alternative seats in order to support Argentina's offer.

This overwhelming support has persisted over the years. It is therefore not at all appropriate for the consolidation of the spirit of cooperation which has always prevailed in our meetings, that in this specific case, the will of such an overwhelming majority be thwarted.

Non interference of matters alien to the Antarctic within our fora has been a common and necessary practice for over 35 years and it is, at the same time, one of the essential elements of the success of the Antarctic Treaty System as well as of its effectiveness, even during times of great international tensions such as, for instance, during the Cold War. This healthy practice must therefore be preserved.

Also worthy of note is the consensus among the Consultative Parties aimed at achieving a weighted geographic balance as regards the headquarters of the various components of the Antarctic Treaty System. Consequently, the candidacy of Buenos Aires is highly reasonable and appropriate.

For the reasons mentioned above, my country is not willing to analyse any other alternative regarding the geographic location of the Secretariat. On the other hand, however, it is fully willing and able to consider all other aspects related to the establishment of the Secretariat in Argentina.

We hope that this Consultative Meeting will be the appropriate framework in which the converging will of the great majority of the Consultative Parties comes into being regarding the resolution of this subject, so essential for a smooth and more effective operation of the Antarctic Treaty system. Argentina reiterates that it is willing to do its utmost to reach a solution that includes the designation of Buenos Aires as headquarters of the Secretariat.

Thank you very much Mr Chairman.

**OPENING ADDRESS BY
MS GILLIAN BIRD
HEAD OF THE DELEGATION OF AUSTRALIA**

Mr Chairman

The Australian delegation is pleased to be in New Zealand for the Twenty-First Antarctic Treaty Consultative Meeting, especially this year which sees a significant anniversary for both the New Zealand and Australian Antarctic

programmes. We look forward to working with you and our colleagues in these excellent facilities in the beautiful surrounds of Christchurch.

As this meeting commences, the 1996/97 Australian Antarctic summer programme has just concluded. The last voyage of the season returned to Hobart three weeks ago concluding a very successful season which included a major marine geological science component, and completion of part of the World Ocean Circulation Experiment.

In 1997, Australia is celebrating the 50th anniversary of the Australian National Antarctic Research Expeditions (ANARE). On 26 December 1947, a small group of men flew the Australian flag and set up camp at Atlas Cove on Heard Island as part of the first ANARE. Subsequently, in 1954 the Australian Government established Mawson station, which is now the longest continuously operated station south of the Antarctic Circle. In 1997, Australia not only commemorates 50 years of involvement in, and commitment to, Antarctic research, but reaffirms its commitment to continuing a quality programme of research in Antarctica and the sub-Antarctic. A number of activities have been planned to celebrate our Jubilee, including a science symposium in Hobart in July this year. We look forward to welcoming many of our Antarctic colleagues to that symposium.

These anniversaries also remind us of how far we have all come in our relationship with the Antarctic and now, at our Twenty-First Meeting and with the ratification of the Madrid Protocol drawing nearer, we can take pride in our achievements. Nevertheless, still more work needs to be done to solve the problems involved in protecting the unique Antarctic environment and the management of developing industries such as tourism and fishing.

The Australian delegation is greatly heartened by ratifications of the Madrid Protocol achieved since we last met. The objectives we all share of bringing the Protocol into force is now within reach. Australia hopes that those countries which have yet to announce their ratification will be encouraged by the recent ratifications and join us in bringing the Protocol into force as soon as possible. With the prospect of the entry into force of the Protocol, my delegation looks forward to working constructively on the preparations for the establishment of the Committee for Environmental Protection and a smooth transition from the Transitional Environmental Working Group.

Mr Chairman,

Another issue of fundamental importance which my delegation would like to see resolved as soon as possible is agreement on the location of the Antarctic Treaty Secretariat to the Treaty system. If agreement is not reached on this important matter in the near future, my Government will be pleased to offer Hobart as a suitable alternative, even, if necessary, on an interim basis.

The liability regime is another important issue which must be resolved. It is six years since the Protocol was adopted and although we support the

continuation of discussion under the excellent guidance of Professor Wolfrum at this meeting, Australia would like to see the discussion on liability moved to formal negotiations, hopefully at the Twenty-Second Antarctic Treaty Consultative Meeting in Norway. Australia remains firmly committed to finalising quickly this important component of the Madrid Protocol.

In conclusion, the Australian delegation is delighted to be meeting again with our Antarctic Treaty colleagues and would like to thank New Zealand for organising the Twenty-First Antarctic Treaty Consultative Meeting. We hope that the issues I have mentioned above will attract constructive discussion at this meeting, and look forward to all Parties working together to further develop the Treaty system.

OPENING ADDRESS BY THE HEAD OF THE DELEGATION OF BRAZIL

Mr Chairman

On behalf of the Brazilian delegation I wish to express our gratitude to the Government of New Zealand for its warm and generous hospitality. We are also deeply grateful for the invaluable support provided for all delegations and the impeccable preparation of the meeting, which this year takes place in such a pleasurable city as Christchurch.

The Brazilian delegation is convinced that the XXI Antarctic Treaty Consultative Meeting will foster important results, which, in their turn, will positively have a significant effect on furthering the consolidation of the Antarctic Treaty system. Moreover, my delegation believes that the present meeting will reflect, as always, the spirit of harmony and co-operation that has always guided the search for solutions within the Antarctic Treaty System.

In this regard, we recognise the efforts brought about by the Group of Experts on Liability for Damage to the Antarctic Environment, whose accomplishments will be reflected in Annex VI of the Madrid Protocol. The outcome of its task will certainly satisfy the expectations of the Parties in matters related to the prevention of negative impacts to the Antarctic environment as well as the adoption of safer and appropriate measures in its reparation, whenever a damage may occur, without compromising the continuation of scientific research of financially less favoured Parties.

The continuance of the working sessions of the Transitional Environmental Working Group (TEWG) will be of fundamental importance to this meeting, since its deliberations will significantly contribute to the Committee for Environmental Protection (CEP), which will soon be established. The CEP will constitute an important element to be added to the Antarctic Treaty System, bearing the same significant role as other important institutions such as SCAR and CCAMLR.

Another issue of general interest in which our Delegation hopes that progress is achieved during this meeting is the establishment of a Secretariat for the Antarctic Treaty. It is important to point out that a Secretariat will expedite the operativeness of the Treaty in a general sense and facilitate the necessary discussions and exchange of information for the preparation of Consultative Meetings.

The Brazilian Government is conscious of the utmost importance of environmental protection in Antarctica as well as its associated ecosystems. Thus numerous measures have been internally adopted to standardise procedures, to train and educate personnel in environmental matters, to better equip facilities and to promote the development of research projects related to environmental monitoring.

The creation of the ASMA of Admiralty Bay, adopted at the last Consultative Meeting in Utrecht, will give grounds for the adoption of mechanisms to foster the development of scientific research activities based in the principles of environmental protection of the area and its associated ecosystems. In this sense, consistent work, presently in progress, will define environmental monitoring parameters aimed at assessing sites of scientific and historic interest. My delegation wishes to express its gratefulness to the other Parties with specific interest in the Admiralty Bay area for their confidence in the indication of Brazil as the coordinator of the implementation of the Management Plan. The activities therein, which will be carried out on a jointly coordinated basis, will fully satisfy their expectations.

Finally Mr Chairman, may I express with great satisfaction, on behalf of the Government of Brazil and therefore on behalf of my delegation, our full commitment to the provisions of the Antarctic Treaty and the Madrid Protocol, and our full conviction of the responsibilities that we share with the other fellow members in the Antarctic community.

OPENING ADDRESS BY AMBASSADOR OSCAR PINOCHET DE LA BARRA HEAD OF THE DELEGATION OF CHILE

Mr Chairman and Representatives

Let me begin by congratulating our Chairman on being chosen to preside over this meeting. Mr Chairman, you represent a country with an honourable history of involvement in the Antarctic, part of which I have had the pleasure to observe first-hand.

I still remember the seventh ATCM in 1972 which saw the deferment of the rash and indeed negative initiative that would have allowed the economic exploitation of Antarctica, particularly in terms of petroleum.

The legitimate doubts held at the time enabled the decision to be deferred for 17 years, which permitted the Consulting Parties to draw up - in part,

here in New Zealand - an agreement in economic exploitation which was ultimately unsuccessful. On the contrary, it ultimately resulted in the present Protocol on Protection of the Antarctic Environment and the freedom to dedicate ourselves to our true objectives in the polar continent: peace and science.

Ladies and Gentlemen,

We are in the preparatory stages of launching the international instrument that we referred to a moment ago (ie the Environmental Protocol), which the Consultative Committee is about to deal with once more. Our efforts are focused on clearly specifying the most efficient and practical means of protecting Antarctica from the dangers of pollution.

An important initial step is to define the terms "minor" and "transitory", as well as to determine the degree of uniformity that should be given to our assessments.

We can also ask ourselves a number of questions that do not always have an answer, such as "What sort of Antarctic science do we wish to develop during the next fifty years?". "How can we work together to make such science cheaper and advance into the interior of the continent using modern and expensive technology?". "Is it possible to develop "clean" energy, such as wind and solar power?". "If the bridge countries are in a good position to preserve the Antarctic environment, how can they be specifically organised to this end for the benefit of all?". "What simple administrative structure would the Environmental Committee require?". "How can the Antarctic Specially Managed Areas (ASMAs) be created without disturbing the spirit of the Antarctic Treaty?". "Hasn't the time arrived to inform mankind of the significance of and progress achieved by the Antarctic structure?".

Not all of these are questions; the truth is that since 1961 we have learned a number of interesting facts, such as the following: Antarctica is a special continent that requires special treatment; we are not there for our own selfish purposes but rather for the purposes of protection and conservation for the benefit of all; scientific co-operation has brought about peace in the Antarctic; and the polar continent should continue to be an ecological symbol. And of course there are other points that are just as important.

Mr Chairman and Representatives,

When we consider the nature of the problems and insecurities that dominated the Antarctic regions in the 1940s, we can say without complacency that we cannot be other than happy with the successes achieved since then.

In this latter part of the twentieth century, mankind has found a part of the planet in which it can put into practice many of its dreams of peace and international cooperation. It is certain that the southern ice offers us a source of fresh water for times of need; it is certain that the thinning of the ozone layer is exacerbating this serious problem and forcing us to deal with it; it is certain that Antarctic science is already starting to be of use to those living

in other parts of the world; however, and above all, it is certain that Antarctica has, apart from all this, a spiritual dimension that we are beginning to appreciate, with a wealth of beauty and a clean environment that it is our responsibility to preserve.

The generation of the twentieth century has made all this possible, and it falls to the generation of the twenty-first century to carry on and build upon the realisation of this dream.

OPENING ADDRESS BY MR LIU ZHENMIN HEAD OF THE DELEGATION OF CHINA

Mr Chairman

On behalf of the Chinese Delegation, I would like to congratulate you on your election as the Chairman of the Twenty-first session of the Antarctic Treaty Consultative Meeting. We are very pleased to come to the beautiful city of Christchurch. May I take this opportunity to thank the Government of New Zealand for hosting this important meeting and for her kind hospitality.

The Protocol on Environmental Protection to the Antarctic Treaty has established comprehensive principles for the protection of the Antarctic environment. Almost six years have passed since the signing of the Protocol and the time is now coming for its entry into force. The Chinese Delegation believes that, for the full and effective implementation of the Protocol, further deliberation in the coming years of the following issues is critical:

- Clarification on the criteria for evaluation of Environmental Impact Assessment
- Cooperation among States Parties in planning and conduct of activities in Antarctica
- Relationship of the Protocol with other environmental treaties.

The Protocol on Environmental Protection provides for a Committee for Environmental Protection (CEP) to be established once the Protocol enters into force. We hope that consensus will be reached on the establishment of the CEP at an early date, so as to create a centrepiece of the Antarctic Treaty's environmental management regime as soon as possible.

The Chinese Government approved the Protocol in 1994. We are in the process of establishing related regulations. With a view to enhancing the responsibility of everyone for the protection of the Antarctic environment, environmental education and training have always been the priority matter of the Chinese Antarctic expedition programme. Last year, the Chinese Antarctic and Arctic Administration established oil spill contingency plans for both the Chinese Great Wall Station in Antarctica and Chinese Zhongshan

Station in Antarctica. We have also initiated an educational and public awareness programme in Antarctic environmental protection across the country. All these have shown our firm commitments to the effective implementation of the Protocol.

To follow-up the implementation of the Protocol, the important work before us is to continue the consultation on the Liability Annex to the Protocol so as to reach consensus at an early date. Great progress has been made in this regard under the able leadership of Professor Ruediger Wolfrum. We would like to restate that as provided for in Articles 2 and 3 of the Protocol, the Antarctic is designated as a natural reserve devoted to peace and science. The delicate balance between the protection of the environment and scientific activities is underlined in the provisions of the Protocol. This balance should be reflected in the Liability Annex as well.

As the Protocol enters into force, the administrative responsibilities within the Antarctic Treaty System will be greatly increased. The creation of a small and effective secretariat becomes all the more necessary and a matter of urgency. We hope that all Parties concerned will cooperate closely with each other and reach consensus at an early date.

Mr Chairman,

China's commitment to the Antarctic Treaty as a Consultative Party is reflected not only in its efforts in the protection of the Antarctic environment, but also in its active participation in successive Antarctic expeditions. My colleague will report on some of our scientific activities in Antarctica to ATCM at an appropriate occasion.

We will have a lot to do in this meeting. The Chinese Delegation believes, under your able leadership, this meeting will be of a great success.

Thank you.

**OPENING ADDRESS BY
MR JOSÉ OLMEDO MORÁN
HEAD OF THE DELEGATION OF ECUADOR**

Mr Chairman

On behalf of the Delegation of Ecuador, I wish to congratulate you on your election to chair the XXI Antarctic Treaty Consultative Meeting. I am convinced that under your leadership we shall attain very positive results that will lead to the protection of the white continent from the predatory activities prevailing in many regions of our planet. Through you, we also wish to express our appreciation to the Government of New Zealand for its kind hospitality and for the efficient organisation of this event.

As a Consultative Party to the Antarctic Treaty, and aware of its

responsibilities, Ecuador regularly attends this meeting as well as others of transcendental importance to the Antarctic community. We have observed with optimism the international efforts aimed at protecting the Antarctic environment. As one of the Latin American countries directly connected to the Antarctic, we recognise its importance to our peoples; we therefore believe that it is our responsibility to ensure that the activities carried out therein are framed within the guidelines and procedures provided for by the Protocol on Environmental Protection to the Antarctic Treaty. The Protocol was ratified by Ecuador on January 4 1993, the second Consultative Party to do so.

Unfortunately, due to internal difficulties, last year we were not able to carry out an expedition to the Antarctic; however, the present Government is aware of the importance of maintaining its presence in the continent and, therefore, it is developing preparatory activities to send its seventh expedition by the end of the next southern summer. Ecuador will thus be able to continue its regular projects, particularly the environmental impact studies being carried out at the "Pedro Vicente Maldonado" Ecuadorian Station.

Ecuador is a peace loving country which respects the environment and, consequently, it is developing an awareness campaign regarding the Antarctic scenic and artistic values which includes a musical CD "Ecuador Canta a la Antártica", which will be circulated among the Consultative Parties. We also wish to reaffirm our intention to continue working for the benefit of the Antarctic continent in order to protect its environment and, above all, to persist in the hope that in the next century, man will continue to enjoy this privileged bastion of nature.

Mr Chairman, we wish to express our hope that these discussions be as fruitful as possible.

**OPENING ADDRESS BY
AMBASSADOR HEIKKI PUURUNEN
HEAD OF THE DELEGATION OF FINLAND**

Mr Chairman

Allow me to congratulate you on behalf of the Finnish Delegation on your election as Chairman of the XXI ATCM. Let me also express our gratitude to the Government of New Zealand for hosting this meeting and for its kind hospitality.

Mr Chairman,

After the previous ATCM in Utrecht we have completed our internal procedures necessary for the acceptance of the Protocol on Environmental Protection to the Antarctic Treaty. In that connection, a national Act on the Environmental Protection to the Antarctic Treaty has been issued and the Penal Code has been amended in order to ensure compliance with the Protocol.

Along with that process we have also approved a number of Recommendations and Measures adopted at the ATCM after Finland became a Consultative Party to the Treaty. As far as the remaining Recommendations of those meetings are concerned, I have now the pleasure of informing you that my Government is in the position to approve also those Recommendations. The depositary will in due course be formally informed if this approval.

Now that the Protocol is about to enter into force we look forward to the establishment of the Committee for Environmental Protection. We find it very important that the Committee will be able to exercise its functions effectively. This would be enhanced by a small and cost effective Antarctic Secretariat. Therefore, issues relating to its establishment should also be given serious consideration.

The Antarctic environment would be afforded additional protection by an effective liability regime for environmental damage. The Legal Experts' Working Group and its Chairman have put a lot of effort into their work on the draft Liability Annex. We hope that the Working group will soon be able to present us the results of its work.

Mr Chairman,

In the coming season, Finland will send a group of researchers to her station, Aboa, in Queen Maud Land. The research to be carried out by the Finnish scientists and will be focussed on geosciences and air chemistry. In addition, an automatic weather station at Aboa and buoys in the Weddell Sea are continuously being used in meteorological research. The weather station is connected to the GTS network of the WMO.

Our next expedition will again be conducted in the framework of Nordic logistical cooperation. In this connection, I would also like to mention that Finland, Sweden and Norway are cooperating in the implementation of the Madrid Protocol.

We aim to continue also scientific cooperation in Antarctic in the form of ozone sounding at the Argentinian Marambio research station.

Mr Chairman,

In Antarctica the Finnish scientists have the advantage of the scientific and logistical experience that they have gained in the Arctic. Similarly, the experience gained in Antarctica is valuable in the Arctic research. We are convinced that a bi-polar focus would benefit us all. I note therefore with appreciation the recently established interaction between the Arctic and Antarctic cooperation. Now that the Arctic Council has been established it is important to further deepen the fruitful cooperation in matters relating to the two polar regions.

**OPENING ADDRESS BY
MR JEAN-FRANCOIS DOBELLE
HEAD OF THE DELEGATION OF FRANCE**

Mr Chairman

Allow me first of all to congratulate you on the occasion of your election as Chairman of this Consultative Meeting. My delegation also wishes to extend its thanks to the Government of New Zealand for its hospitality and for the measures taken to ensure a successful meeting.

In this context, I wish to stress the importance attached by France to the conclusion of an Annex to the Madrid Protocol which will set the conditions for defining liability in instances of environmental damage in Antarctica. My delegation wishes to underscore the fact that the signatories of this Protocol are not committed solely to preparing emergency plans, provided for in Article 15, but also to setting the rules governing the responsibility of operators in Antarctica by virtue of Article 16. Operators are not necessarily States; sometimes they may be individuals, as in the case of tour operators. But whatever the circumstances, and because they are directly responsible for possible damage, operators' activities should be regulated by a group of common rules governing liability. The same may be said of the very credibility of our undertaking when we signed the Madrid Protocol. The two obligations stemming from Articles 15 and 16 should be taken into account in the draft Annex on liability. On this occasion, I wish, on behalf of the French delegation, to thank Professor Wolfrum for his tireless efforts to finalise the work which began some three years ago, whilst expressing the hope that such work will come to fruition soon, if this meeting so decides.

Another important issue is the creation of a permanent Antarctic Treaty Secretariat. France has repeatedly stated that, while it was not itself a candidate for hosting the Secretariat on its territory, it was not opposed to any bid which has been or may be presented to designate future headquarters. France will concur with any proposal likely to achieve a consensus and hopes that this question will be discussed openly and with the will necessary to reach such a consensus, in a spirit devoid of prejudice. The Madrid Protocol will soon come into force. In this context, France wishes to stress the importance of finally solving an issue which has been pending for a number of years.

The prospect of the Madrid Protocol coming into force is also linked to the setting up of the Environment Committee which will take over from the Transitional Group due to hold discussions during the course of our meeting. This group will require rules of procedure and working guidelines, and it is our hope that such rules and guidelines will be adopted at the next Consultative Meeting.

Mr Chairman,

Several decisions were taken during prior meetings regarding procedural issues, and in-depth debates were staged to improve the Consultative

Meeting's working methods. The French delegation is convinced that such decisions make it possible, today, to decide upon the substantive issues which I have raised and to which France will contribute in a spirit of positive cooperation. Please rest assured that France, under your leadership, will spare no effort in cooperating fully on these various issues.

**OPENING ADDRESS BY
AMBASSADOR DR JOCHEN TREBESCH
HEAD OF THE DELEGATION OF THE FEDERAL
REPUBLIC OF GERMANY**

Mr Chairman

On behalf of the German delegation I would like, first of all, to congratulate you on your election to the chair of the XXIst Consultative Meeting of the Antarctic Treaty Parties. At the same time I would like to express our deep appreciation to the Government of New Zealand for hosting this Consultative Meeting here in Christchurch and for its excellent preparations.

Germany notes with great satisfaction that since the XXth Consultative Meeting in Utrecht there have been further ratifications of the 1991 Protocol on Environmental Protection. We invite the remaining States to follow suit so that the Protocol can enter into force as soon as possible.

The Madrid Protocol is of increasing importance for the development of the Antarctic Treaty System. We should use the interim period before it comes into effect to achieve as much progress as possible in meeting its practical requirements. One of these matters is the establishment of the Committee for Environmental Protection.

In other areas, too, we will have to think in terms of the challenges ahead. Germany is committed to undertake all efforts to improve the effectiveness of the Antarctic Treaty System where necessary and desirable.

A crucial task in fostering effective environmental protection is to elaborate a liability regime regarding environmental damage in the Antarctic. Several meetings of legal experts from the Consultative Parties have explored this complex issue. We hope that major steps can be made at this Consultative Meeting so that the draft of an Annex on Liability can soon be presented to the Consultative Parties for final discussion.

Another challenge is that of organisational improvements to ensure that we continue to preform our duties responsibly. This is especially true with respect to the establishment of a small and cost effective Antarctic Treaty Secretariat.

Mr Chairman,

Convinced that New Zealand's thorough preparations and hospitality will

facilitate our work and with full confidence in your leadership, the German delegation wishes to assure you its full support in your efforts to make our deliberations at this Consultative Meeting fruitful and successful.

OPENING ADDRESS OF DR A.E. MUTHUNAYAGAM, HEAD OF THE DELEGATION OF INDIA

Mr Chairman

At the outset, I would like to express our deep appreciation to the Ministry of Foreign Affairs and Trade of the Government of New Zealand for hosting the XXI Antarctic Treaty Consultative Meeting and for the warm hospitality extended to all of us in this beautiful city of Christchurch, which is a gateway to Antarctica for expeditions of several nations.

I take this opportunity to reiterate India's commitment to the Antarctic Treaty as a Consultative Party and in assuring of our constructive contribution to the future of the cause of this unique Treaty.

1996 has been a historic year in several aspects with respect to the Indian Antarctic Programme. The XVI Indian Antarctic Expedition was launched. This has since returned after successful accomplishment of the scientific, logistics and environmental tasks. Our continued endeavour to use Antarctica as a uniquely positioned laboratory to address issues of global, and national concern has prompted us to frame a clear cut science strategy to be pursued by the nation in the coming decade. As a part of this science portfolio, we are embarking upon bilateral scientific cooperation with several countries in various domains of polar sciences. This will be in consonance with the international campaigns under the aegis of SCAR.

I also take this opportunity to inform the ATCM delegates that we are in the process of establishing an exclusive Polar Research Laboratory called the Antarctic Study Centre at Goa. This Centre which is designed to become a national database repository in Antarctic Research shall also function as the nodal operating agency for all scientific, logistic and environmental activities of India in Antarctica.

True to the spirits of the Antarctic Treaty, coupled with a genuine concern to protect and uphold the pristine nature of mankind's last frontier on earth, India an original votary to the Protocol on Protection to Antarctic Environment has ratified the same in April, last year. We earnestly hope that the process of ratification on this Protocol by all countries will be completed shortly. While the establishment of the Committee on Environmental Protection under the Protocol is a welcome move, however, a cautious approach has to be adopted in not restricting the essential scientific and logistic activities of any member nation. During the current session the 7th offering pertaining to Liability Annex is being discussed. We hope that the deliberations yield a commonly accepted Liability Annex which takes

into account the practical realities and financial capabilities of the various Treaty Parties who are using Antarctica as a pedestal to conduct science for the benefit of humankind.

Soon after the ratification of the Protocol by India, we have created an Environmental Management Group for Antarctica which dispatched a special Environment Task Force (ETF) in the just concluded Sixteenth Antarctic Expedition. ETF has carried out commendable tasks in restoring the natural surroundings and environs around the Indian station, 'Maitri' in Antarctica.

In all these and other matters figuring in the Agenda, I assure our whole-hearted cooperation to arrive at positive decisions through consensus. We indeed look forward to a very fruitful outcome of this meeting under your chairmanship.

Thank you.

OPENING ADDRESS BY THE HEAD OF THE DELEGATION OF ITALY

Mr Chairman,

First of all, I would like to congratulate you on your election as Chairman of the XXI Antarctic Treaty Consultative Meeting. I would also like to thank the Government of New Zealand for hosting this meeting in the beautiful city of Christchurch. As you know, this city has an important part in the Italian Antarctic Research Programme, being our gateway to Antarctica. We greatly appreciate the support given to us by New Zealand in our Antarctic missions.

Among the many items in the Agenda for this meeting three have a special importance for the future activities within the Antarctic Treaty System. I am referring to the establishment of a Secretariat, to the Liability Annex and to the establishment of the Committee on Environmental Protection as required by the Madrid Protocol. Of course, there are many other items of importance, but we believe that those mentioned deserve special attention.

The establishment of the Secretariat remains a critical question for the operation of the Antarctic Treaty System. My delegation believes that further efforts should be made to break the impasse facing us on this matter. A compact and viable Secretariat would be a great help in the exchange of information among Parties and in the organisation of the Treaty meetings. The establishment of the Committee on Environmental Protection will be another good reason why a Secretariat is needed.

The protection of the Antarctic environment has always been an important concern of all Parties. Now that only one Party still has to ratify the Madrid Protocol and we are consequently very close to its entry into force, we can expect at this meeting substantive discussions on the Committee on Environmental Protection. While its composition and tasks are indicated

clearly in the Protocol, a number of questions need perhaps more detailed discussion and my delegation looks forward to taking an active part in them.

The Working Group on Liability has made substantial progress towards an acceptable final version of the Liability Annex, under the able guidance of Professor Wolfrum. However no final text has been yet agreed upon and we hope that this important component of the Madrid Protocol will see the light here in Christchurch. In view of the imminent entry into force of the Protocol, a successful completion of the work on this Annex is urgent.

Mr Chairman

Italy has been a member of the Antarctic Community for more than fifteen years. We remain fully committed to the Antarctic Treaty and we hope that this meeting in your beautiful country, so close to Antarctica, will mark an important step forward in the life of the Antarctic Treaty System.

Thank you.

**OPENING ADDRESS BY
MR TOSHIHIDE TSUMAGARI
HEAD OF THE DELEGATION OF JAPAN**

Mr Chairman

The Japanese delegation is very pleased to come to New Zealand for the Antarctic Treaty Consultative Meeting. We look forward to working with you and our colleagues in the excellent facilities of this brand new convention centre in this attractive city of Christchurch.

In enhancing efforts to protect the environment, that of the Antarctic is of special concern. We can be duly proud of our achievements in the protection of the environment of the Antarctic through this on-going series of Antarctic Treaty Consultative Meetings.

As we are all aware, the environment of Antarctica could be easily affected by any intervention from the outside. As a member state of the ATCM, Japan is always mindful of how to raise the awareness of the importance of protecting the environment of Antarctica among the Japanese people.

One such example is the exhibition on Antarctica, which will be held at the National Science Museum in this Japanese summer. My delegation believes that this exhibition will positively contribute to raising the awareness, especially among the youth of Japan towards the protection of the Antarctic.

Collaboration among consultative parties has proven essential for the protection of Antarctica. We believe that soon to come into force of Protocol to the Antarctic Treaty on Environmental Protection should be one of the main concerns of all participants. As one of the contracting parties, Japan is

also well aware of this fact. Since the last meeting at Utrecht, my country has made substantial progress towards ratifying the Protocol. We have been making efforts to enact domestic implementing legislation for the Protocol, which is the final procedure under the Japanese law system to ratify the Protocol. We hope it will not be too long before Japan's ratification of the Protocol is announced, and we hope that the timely establishment of domestic implementation laws of other member states will also be carried out to ensure that the protocol is duly enacted.

Although the Protocol will be an effective tool in promoting the protection of the environment of the Antarctic, equal importance should be placed on the liability of the Protocol to the Antarctic Treaty on Environmental Protection. Under the chairmanship of Professor Rüdiger Wolfrum from Germany, we are pleased to take part in the constructive discussions for ensuring further protection of the Antarctic environment.

We also note that the setting up of a system for sharing common data among consultative parties becomes essential to expand information exchange. We consider this sharing system contributes not only to the enhancement of the cooperation among consultative countries, but also to the reinforcement of ties within the Antarctic Treaty system. Such a system would particularly enable the operations of the Secretariat to be more systematic, although the establishment of Secretariat itself is another subject at this meeting. We are willing to cooperate with our colleagues to make substantial progress regarding these matters.

The Japanese delegation is pleased to have the honour of working together with our colleagues to solve any and all issues facing us, under your enlightened chairmanship, and we sincerely hope that this meeting will end in success.

**OPENING ADDRESS BY
AMBASSADOR YOON-KYUNG OH
HEAD OF THE DELEGATION OF THE REPUBLIC OF
KOREA**

Mr Chairman

On behalf of the delegation of the Republic of Korea, I would like to congratulate you on your election as Chairman of the XXIst Antarctic Treaty Consultative Meeting. I would like to assure you of my delegation's full support and co-operation in the deliberations of the important issues facing this meeting. I would also like to take this opportunity to express my appreciation to the Government of New Zealand for hosting this meeting, and thank the people of this beautiful garden city of Christchurch for their hospitality.

Mr Chairman

I am pleased to note that we are coming ever closer to the entry into force of the Protocol on Environmental Protection to the Antarctic Treaty and its five Annexes, to which my delegation attaches great importance. This will revitalise the Antarctic Treaty System as a whole by setting up the Committee for Environmental Protection (CEP). We all expect that the Committee will play a major role in protecting Antarctica as a natural reserve, devoted to peace and scientific research. Therefore, adequate attention and care should be paid at the meeting in charting the future role of the CEP as well as in identifying key environmental issues pending the entry into force of the Protocol. My delegation will give its greatest attention to the practical preparation for the establishment of the Committee.

Also of particular concern to my delegation is the finalisation of the draft Annex on Environmental Liability to the Protocol, which has been the subject of much discussion by the Antarctic Treaty Parties for the past four years. The complexity of the issue indeed warrants a considerable amount of time and patience, and we strongly hope that the differences, among the Parties will be substantially narrowed down under the able guidance of Professor Rüdiger Wolfrum.

Mr Chairman,

The Korean Government continues to support the early establishment of a cost-effective Secretariat to ensure the efficient operation of the Antarctic Treaty System, in general, and the Protocol, in particular. At this juncture, let me just remind you of the spirit of cooperation among the Antarctic Treaty Parties, which has made the Treaty System a uniquely successful mechanism for the peaceful use of the continent ever since its inception in 1961. This example of peaceful cooperation based on the Parties' concerted efforts has proved that nations can effectively work together for the international peace as well as for their mutual benefit. Recalling this spirit, my delegation would like to call on each Party to make renewed and constructive efforts to build a consensus on the location of the Antarctic Secretariat at the earliest possible date. To this end, we should give a positive impetus to our continued efforts at resolving different views and consolidating the tradition of cooperation among the Parties.

Lastly, I would like to take this opportunity to report that the Republic of Korea has signed a series of bilateral agreements with the Parties concerned on promoting and assuring co-operation in the Antarctic over the past few years. In accordance with the spirit and tradition of the Antarctic Treaty, the Republic of Korea will jointly develop and coordinate scientific, technological, logistic and environmental research projects with other countries.

Mr Chairman,

The delegation of the Republic of Korea reiterates its pleasure at being here. We are confident that your vast experience and strong leadership will help guide to another successful outcome.

Thank you.

**OPENING ADDRESS BY
MR J.P.H. BOSMAN
HEAD OF THE DELEGATION OF THE NETHERLANDS**

Mr Chairman, ladies and gentlemen,

May I begin by saying that I consider it a privilege to be invited to take part in a meeting in this splendid country. The fact that Abel Tasman, the Dutchman who, "discovered" New Zealand in 1642, chose not to remain must be accounted a serious mistake on his part. On the other hand, Tasman's return afforded my country the privilege of becoming the repository for the world's oldest cartographic depiction of New Zealand; it forms part of a map of the world set into a floor mosaic in the Royal Palace in Amsterdam in 1648. Any attempt to find Antarctica on this map would prove fruitless: the success of our collective aim of preserving this continent intact is due in part to the fact that we only discovered its existence comparatively recently.

This is the second time it has proved possible to distribute a considerable proportion of the conference documentation beforehand: the documentation in question consists of no less than 24 working papers and 15 information papers. The time devoted at previous ATCMs to consideration of organisational matters has proved worthwhile. The division of recommendations into measures, resolutions and decision, the revision and annotation of the conference agenda and the guidelines on document distribution are all equally valuable improvements because each in its own way contributes to an awareness of what we are actually about. We therefore wholeheartedly support the proposal by France and New Zealand to incorporate the guidelines in the Rules of Procedure.

We are about to witness the entry into force of the Environmental Protocol. Let us hope that this is the last ATCM that is not preceded by a meeting of the Committee for Environmental Protection. A glance at the working papers that have been submitted reveals that virtually all of them concern the Protocol, eg, Establishment issues of the CEP, Emergency Response Action in the event of natural or man-made disasters, Port (or Department) State Jurisdiction, CEE methodology, a large number of management plans, as well as a guide to formulating such plans.

At previous ATCMs we were condemned to deliver opening addresses that were inspiring and well-intentioned but, as we did not know what documents would be discussed, at the same time rather tenuous. On this occasion I can be brief: the work is there to be done, so let us get down to it.

Thank you.

OPENING ADDRESS BY THE HEAD OF THE DELEGATION OF NEW ZEALAND

Mr Chairman

The entry into force of the Madrid Protocol is imminent. New Zealand welcomes this historic occasion. The hard work now begins to bring the Protocol regime to life. It must become a practical and realistic instrument for the protection of Antarctica. As a first step, we must establish the Committee for Environmental Protection on a sound footing. A key task for us in Christchurch is to consider and define the functions and responsibilities of the CEP. New Zealand views the Committee as the ATCM's scientific, environmental and technical advisory body on the Protocol. Its work should be mandated by the ATCM. We hope that Parties will select as their CEP representatives specialists with relevant skills and experience.

We hope that ATCM XXI will identify some priority areas for the CEP's work. New Zealand regards early work on a comprehensive State of the Antarctic Environment Report as one such priority. Progress on standardising Environmental Impact Assessment is another. We also want to see much greater use of the Antarctic Specially Managed Area concept to develop our management of particularly sensitive parts of Antarctica. We shall be making proposals in this area.

We hope that Parties will agree to allow the Transitional Environmental Working Group/CEP to progress its work intersessionally, even in the absence of a secretariat mechanism. The operation of the Experts' Group on Liability offers a good example of how this might be done. We will assist in whatever ways we can with this.

We look forward to continuing our progress at Christchurch on the elaboration of the Liability Annex to the Protocol. This is a key area of unfinished business. We hope that it will not be long before we can embark on formal negotiation of this Annex, with the participation of observers and interested groups.

The qualities of foresight, leadership and commitment that have produced the successes of the Treaty's first four decades will be required if the System is to remain an innovative and dynamic means of governance for Antarctica in the twenty-first century. The world is changing rapidly. New perspectives and agendas are developing in the environmental area as nations address the challenge of sustainably managing the world's resources. The Antarctic Treaty has been innovative in the past in this area. We are confident that it can continue to provide strong environmental leadership in the future.

We must begin to look beyond the Protocol and consider the next generation of key issues for Antarctica. Parties will also consider at Christchurch how best to further the development of the Antarctic Treaty System. We need to do more work on eco-system management: developments in the management

by CCAMLR of the marine resources in the Southern Ocean around Antarctica are posing broader questions of vital importance to us all. The growth of tourism and adventure activities, the rapid development of civilian air activities and increasing educational usages, are among the many new challenges that the Treaty faces.

We cannot necessarily resolve all these problems ourselves. We should look to involve other nations in the work of the Treaty System, broadening its membership to reflect better the dynamic world in which we live. For its part, New Zealand will continue to develop an Antarctic dimension to its relationship with its friends and partners in the Asia/Pacific region.

We would like other Parties to take a proactive approach and encourage wider subscription to the Treaty. We feel also that it is timely to consider our current approach to Consultative status. The changing nature and dynamics of the Treaty System and the growing international recognition of the critical significance of Antarctica in global processes suggest the need for a new interpretation of what constitutes commitment to our common cause of protecting and managing Antarctica.

We look forward to the opportunity provided by our special Heads of Delegation meeting of taking a strategic focus and sharing ideas on the problems, challenges and opportunities facing the Treaty System.

We will also welcome discussion on the organisation and management of ATCMs now that the CEP is being established. It is timely to look again at the frequency of the Meetings and to consider their duration. We need to consider how best to organise the work of the working groups of the ATCM, and how best to utilise the experience and knowledge available within SCAR and CCAMLR. We need also to find ways of making better use of the expertise available within COMNAP by providing clearer direction and guidance to the Council.

Mr Chairman

As a Southern Hemisphere Antarctic Gateway country, New Zealand has a special affinity with Antarctica. We will remain committed to working with our neighbours and friends to ensure that it continues to be a continent devoted to peace and science.

**OPENING ADDRESS BY
AMBASSADOR JON BECH
HEAD OF THE NORWEGIAN DELEGATION**

Mr Chairman

My delegation wishes to express its appreciation to the Government of New Zealand for providing such excellent facilities for the XXI ATCM and to the city of Christchurch for its generous hospitality. As hosts for the next

Antarctic Treaty Consultative Meeting, we have much to learn from the way this year's meeting has been planned and arranged.

We look forward to significant progress on many important issues on the agenda, particularly in relation to the Environmental Protocol and the establishment of the Committee on Environmental Protection (CEP). We have noted with great satisfaction that virtually all Consultative Parties have ratified the Protocol. We are confident that the Protocol will be in force shortly, and that all parties will give full legal and practical effect to the Protocol and live up to the principles contained in it. But much still remains to be done in developing the Protocol as a practical and dynamic instrument for the protection of the Antarctic environment.

We believe that progress can also be made at this meeting as regards i.a. tourism, environmental impact assessment, environmental monitoring, protecting areas and exchange of scientific data.

We would also like to see significant progress on the liability regime to which we committed ourselves when the Protocol was adopted in 1991. Despite the substantial progress made by the working group under the very able chairmanship of Professor Wolfrum we still do not have agreement on rules for liability. It should be appreciated that while the question of liability is a most difficult and complex one and an issue that depends on the work of the legal experts, it is an issue we all have to address. We should now look for constructive and pragmatic ways to advance this work further, possibly by reducing the items to be settled now. Much time and effort has already been spent on this one issue, and we should try to finish the work on the liability regime within reasonable time.

Mr Chairman

The Norwegian delegation believes that the establishment of a permanent Secretariat is essential both to the functioning of the Madrid Protocol and to the Antarctic Treaty System in general. Secretarial services are essential to give the ATS and the CEP the necessary support. It is therefore of vital importance that the Secretariat is in place by the time the Protocol enters into force. The one remaining issue concerns the location of such a Secretariat. Renewed constructive and pragmatic efforts are needed to achieve a consensus decision as regards the site for the Secretariat. If the present impasse prevails at this meeting, maybe the time has come to start afresh in looking for alternative locations that can be acceptable to all consultative parties. The lack of a permanent secretariat causes considerable problems for our work and hampers progress on many issues. In practical terms I am afraid that the time is coming near where some of the Consultative Parties may have to renounce the responsibility of arranging an ATCM for lack of resources and expertise and the support and advice of a permanent secretariat. This is a situation we should try to avoid and it is therefore imperative that a solution to the secretariat issue is found immediately. We can not allow this issue to drag on indefinitely.

Mr Chairman

Antarctica is a continent dedicated to peace, environmental protection and science. Impressive progress has been made in many areas in research in different parts of Antarctica, thus proving the Continent's importance in many scientific fields. Norway, together with Sweden and Finland, has been pleased to take active part in these activities through the latest Nordic Antarctic Research Expedition in Dronning Maud Land from December 1996 to March 1997. In this connection, Norway carried out an inspection which gave me first hand insight into how well the Antarctic cooperation is functioning.

Let me in conclusion, Mr Chairman, assure you of our commitment to ensuring the success of this meeting and our pleasure of seeing you in the chair. In this connection, we are happy to offer the services of Professor Olav Orheim as chair of the TEWG. We look forward to working with you and your colleagues.

**OPENING SPEECH BY
AMBASSADOR CARMEN E. SILVA
HEAD OF THE DELEGATION OF PERU**

Mr Chairman

On behalf of the Peruvian Delegation allow me to congratulate you on your election as Chairman of this important meeting and to convey, through you, our warmest thanks to the Honourable Government of New Zealand for its kind hospitality. We are sure that the decisions adopted in this Forum will contribute to the strengthening of the Antarctic Treaty System, and we wish to collaborate in the discussions leading towards this objective.

The Delegation of Peru is aware of Antarctica's great importance as a peace zone, free of nuclear weapons and devoted to scientific research. In this context, my Delegation considers that protecting this environment for further generations is a great challenge, which demands a concerted effort in order to consolidate the mechanisms of the Antarctic System.

The preservation of Antarctica is of special importance to my country as our ecosystem is inextricably linked to that of the White continent. Therefore, it cannot be indifferent to activities that could affect it. Thus, Peru is currently developing scientific research programmes in order to gain a better knowledge of the Antarctic space, and in this manner contribute to the studies that are currently being carried out by other countries.

Since its admission as a Consultative Party to the Antarctic Treaty in 1989, Peru has sent eight scientific expeditions and built a research station called "Machu Picchu" in the Bahia del Almirantazgo, located in the Isla Rey Jorge. The construction and maintenance of this base, through annual scientific expeditions, is an example of my country's interest in contributing to the development of Antarctic science.

The VIII Peruvian Scientific Expedition to Antarctica was carried out thanks to the decision taken by my country's government and the cooperation of various agencies related to the National Commission on Antarctic Affairs, a national mechanism in charge of Antarctic Policy. The IX Expedition has been scheduled for the next Southern summer, with the participation of the research ship "Humboldt", a pioneer of the Peruvian expeditions to that continent.

Mr Chairman

Peru awaits with particular interest for the entry into force of the Protocol to the Antarctic Treaty on Environmental Protection, an instrument which must guarantee the preservation of the Antarctic ecosystem. My country is aware of the need to have adequate mechanisms in order to safeguard the Antarctic resources and to settle any disputes that may arise. This is the reason why it was among the first countries that ratified that Protocol, in March 1993.

In the light of the above considerations, Peru hopes that during this XXI Meeting the necessary 26 endorsements for the entry into force of the Protocol will be completed.

Finally, on behalf of my Delegation, I would like to express once more, to the organisers of the XXI Consultative Meeting of the Antarctic Treaty, our sincere appreciation for their warm reception and hospitality.

OPENING ADDRESS BY DR WALDEMAR FIGAJ HEAD OF THE DELEGATION OF POLAND

Mr Chairman

First of all I wish to congratulate you on your election as Chairman of the Twenty First Antarctic Treaty Consultative Meeting. On behalf of the delegation of Poland I would like to express our appreciation for the warm and cordial welcome given to us by the Government of New Zealand and by the official representatives of the city of Christchurch.

Mr Chairman

Poland attaches great importance to Antarctic issues. Our involvement in Antarctic matters is long and impressive for a country, which does not belong to the Southern hemisphere. Three months ago, we celebrated the centenary of the first Antarctic expedition to winter in Antarctica, in which two Polish explorers took part - Henryk Arctowski and Antoni Dobrowolski. They joined Adrian de Gerlache de Gomery, the famous organiser of the "Belgica" Antarctic Expedition.

Since 1977 Polish Antarctic research has been continuous in many fields, including climatology, oceanography, biology, ecology, geomorphology and geology. Research at our permanent station "Henryk Arctowski" is closely

related to international programmes, co-ordinated by SCAR.

Our studies undertaken during the many cruises of the research vessel, "Professor Siedlecki", contributed to a better understanding of the whole Antarctic ecosystem.

Henryk Arctowski station has been modernised recently and we hope that it will serve science for another twenty years. Poland and Brazil have initiated the first Antarctic Specially Managed Area (ASMA) at Admiralty Bay. Arctowski station is facing the challenge of admitting around three thousand tourists a year. It shows how important are our ATCM's efforts to minimise environmental impacts of diverse human activities in Antarctica.

In this respect Poland is in favour of the prompt establishment of the Committee for Environmental Protection, which is required by the Environmental Protocol. We hope that the Protocol, after its ratification by all ATCP countries will improve the effectiveness of the Antarctic Treaty and will give us a clear direction of further activities of the ATCM.

We are also pleased to see that the impact of human activities on the ecosystem is closely and effectively monitored by the Commission for the Conservation of Antarctic Marine Living Resources. In addition to CCAMLR efforts in this area, Poland arranges for additional, national inspections of fishing activities in the Convention area.

We have noted substantial progress in the work of the TEWG and the Group on Liability. In our opinion a liability regime should be effective and realistic, taking into account specific conditions of human activities in Antarctica.

With regard to the issue of the establishment of a permanent Secretariat, our delegation is of the opinion that it is essential to have executive support for our activities.

Our delegation Mr Chairman, would like to express its willingness to actively cooperate with other ATCM delegations and we are looking forward to a fruitful meeting.

OPENING ADDRESS BY THE HEAD OF THE RUSSIAN DELEGATION

Mr Chairman

I would like to take this opportunity to congratulate you on your nomination as a Chairman of the XXI Antarctic Treaty Consultative Meeting.

I also would like to express my deepest gratitude to the Government of New Zealand that allowed us to gather in the beautiful city of Christchurch.

As one of the initiators of the Antarctic Treaty, Russia is presently making a great effort to strengthen the Antarctic Treaty System as well as to advance

its main principle, according to which the Southern Region of our Planet should become a region of peace, fruitful scientific research and constructive international cooperation.

Antarctic territories and the surrounding seas free of economic activity play a key role in the global changes of our planet. For this reason, research is a priority task in our national Antarctic programme.

During the thirty-eight-year old history of the Antarctic Treaty, we have taken numerous important steps towards the collective effort of its Members, ie the conservation of Antarctic territories and their pristine nature. These steps include the ratification of the Madrid Protocol on Environmental Protection in 1991. Last year in Utrecht, the Russian delegation noted that Russia began to take steps towards the ratification of the Protocol. Substantial work had been done during this time in preparing regulatory requirements and rectifying of financial matters that will arise after the Protocol becomes effective in Russia. This work is now complete. The Russian Parliament has ratified the Protocol and the Ratification Deposition will be submitted shortly.

Fully understanding the Protocol's importance in strengthening the Antarctic Treaty System, and without waiting for the Protocol to become effective formally, Russia for several years already has been working on implementing the Preventive Environmental measures in our stations and seasonal sites, using to do so our own resources as well as international cooperation.

We hope that the Protocol will become effective formally in the nearest future. That will require of all Members to double their present efforts in the conservation of unique Antarctic resources for future generations. We cannot overlook the fact that Antarctic territories have become a huge scientific laboratory for the benefit of the humanity. Therefore, the Antarctic Environmental Protection Programme has to take precedence over any research that may be undertaken in Antarctic territories according to the Antarctic Treaty.

Russia continues to support the idea of an Antarctic Treaty Secretariat that will undoubtedly further improve the coordination of its Members in the wide spectrum of their work, and first and foremost in the smooth operation aspects of the Protocol that deal with the wider exchange of information pertaining to environmental issues and measures aiming at the conservation of the unique Antarctic ecosystem as well as the exchange of information among the Members of the Antarctic Treaty System.

The problem of tourism and non-governmental activities in Antarctic became topic of serious discussions at the last ATCM. Obviously, this problem will be one of the focal points of this meeting. It should be noted that Russia does not organise any tourist activity in the Antarctic territory, and the Russian expedition has no connections with any tourist organisations. This being said, Russian stations have rules governing the visit of station facilities and the access to specially protected regions.

The most active part of any practical activity of the Members of the Antarctic Treaty is associated with scientific expeditions. They have to carry out the direct implementation of the Protocol Environmental Policies, interaction with tourists and other organisational aspects that invariably occur in the course of scientific programmes and logistics operations. Therefore, the Russian delegation fully supports the idea to organise a scientific-technical and logistic Committee within the ATCM structure.

The delegation of the Russian Federation would like to express its readiness to engage in further active cooperation with the other ATCM delegations, to achieve better understanding of mutual efforts and to attain constructive results in all issues that we have to consider.

OPENING ADDRESS BY DR FRANCOIS HANEKOM HEAD OF THE DELEGATION OF SOUTH AFRICA

Mr Chairman

On behalf of the South African delegation, I would like to extend our congratulations to you on your election as Chairperson of the XXIst Antarctic Treaty Consultative Meeting. Through you Sir, I wish to express my sincere thanks to the Government and people of New Zealand for hosting the meeting in Christchurch. My delegation will take back to South Africa the warmth of your hospitality and friendship, which make our visit to New Zealand very special. The close cooperation between South Africa and New Zealand in Antarctica, which establishes a further special link between our two countries, make this visit even more worthwhile.

As my distinguished colleagues are aware, we live in a constantly changing world. No more has this been apparent than in South Africa where the challenges of transformation and paradigm shifts have come to preoccupy all areas of the nation's public life. In this connection, not even South Africa's activities in Antarctica have been exempt from political transparency, public accountability and fiscal responsibility. Consultation and dialogue have constituted the tools by which South Africa has come to address such issues.

One significant change, which I wish to bring to the meeting's attention, is that South Africa now has a new base in Antarctica. It is one of the first to be built following the guidelines initiated under the Madrid Protocol. As with any such change, this development had many challenges and we have brought some of our solutions to these challenges as a contribution to this particular meeting.

As an original signatory to the Treaty, a non-claimant gateway and environmentally sensitive country, we are committed to the effective implementation of the CEP. In this regard the setting up of the Secretariat is of vital importance. For this reason, we are concerned about the current impasse. If no solution to this question can be found, serious consideration should be given to an acceptable alternative, based on a consensus decision.

Should a decision in this regard not be reached soon, my Government would consider proposing an alternative location.

As regards the work of the Legal Experts Group on Liability, my delegation remains committed to the process that would establish a regime to further strengthen the objectives of the Protocol for comprehensive protection of the Antarctic environment. Although my delegation is encouraged by the progress made by the Group thus far under the guidance of Professor Wolfrum, we believe that some direction from the ATCM is required in order to ensure that further consideration of the issues involved would produce the desired results.

We also bring to you a particular problem South Africa is facing in terms of illegal fishing activities in its Exclusive Economic Zone, which is also part of CCAMLR. By effectively acknowledging this issue, the ATCM has an opportunity to show the international community that it is an international regime, which should be taken seriously and that it attaches high priority to the effective implementation of one of its daughter instruments (CCAMLR).

Mr Chair, my delegation also sees education and training as key processes in enhancing the relevancy and future credibility of the Antarctic Treaty, one of the most enduring of international political-legal instruments.

It is my delegation's opinion, Mr Chairperson, that the issues we have highlighted above are equally relevant to the Antarctic Treaty System as a whole.

We remain convinced that the many political and environmental challenges facing the Antarctic Consultative Parties can only be resolved through dialogue and coordinated action.

We urge all ATCPs to exert their considerable expertise and good humour to address our many challenges and to ensure that the Antarctic Treaty System remains relevant within a changing world.

Thank you.

**OPENING ADDRESS BY
AMBASSADOR CARLOS A. ZALDIVAR
HEAD OF THE DELEGATION FROM SPAIN**

Mr Chairman

I would like, first of all, to congratulate you for your election as Chairman of this XXI Antarctic Treaty Consultative Meeting. I also wish to express my gratitude to the Government of New Zealand and the Christchurch authorities for welcoming us in this pleasant city.

Also, we should all congratulate ourselves for the progress made since our last meeting in the ratification of the Madrid Protocol. We may say that one

of the Antarctic international cooperation stages is about to conclude and that this meeting takes up the responsibility of preparing the international community to start a new cooperation stage, both more intense and committed.

In this vein, three tasks stand out. These are the establishment of the Committee on Environmental Protection as set forth in the Madrid Protocol, the establishment of the Secretariat and the completion of the Annex on Liability.

We have been working earnestly on these issues in previous meetings. The specific task ahead of us in this meeting is to make sure these tasks are finalised, that is, that we reach our final conclusions.

It would be highly desirable for the Secretariat to be established as soon as the Madrid Protocol has come into force and, to do so, there is only one possibility: to consummate the almost unanimous consensus which is for Buenos Aires to become the headquarters.

Regarding the establishment of the Environmental Protection Committee, the circumstances are calling for its rules of procedure to be finalised. The same holds true for the Annex on Liability.

There certainly are a number of other issues we should address and where progress can be made. But every moment in history is fashioned around its own meaning, and in the history of the Antarctic the purpose of this XXI ATCM is to make sure the Madrid Protocol takes off as soon as it has been fully ratified.

Mr Chairman, the Spanish delegation trusts that under your guidance we will accomplish these goals, and we hereby offer you our full cooperation.

**OPENING ADDRESS BY
AMBASSADOR WANJA TORNBERG
HEAD OF THE DELEGATION OF SWEDEN**

Mr Chairman

On behalf of the Delegation of Sweden, I wish to thank the Government of New Zealand for hosting the XXIst ATCM in this attractive and friendly city of Christchurch. Under your chairmanship we can look forward to very constructive and fruitful discussions.

It is unfortunate that the Protocol on Environmental Protection has still not been ratified by all Parties but the indications are that it will be so by the XXIIInd ATCM. This is encouraging but I'd like to stress the importance of that Parties also enact domestic implementing legislation. This is necessary to ensure the full protection for the Antarctic environment under the Protocol.

Sweden believes that the establishment of a Secretariat is essential to ensure

the functioning of the Protocol and the Antarctic Treaty System in general. Considering the delay in deciding upon a Secretariat some kind of interim secretarial services are needed to give TEWG and later the CEP necessary support.

Regarding the Liability Annex we feel that we have made substantial progress in our deliberations. As we now come closer to the time of the entry into force of the Protocol on Environmental Protection it is vital that the WG on liability prepares a draft negotiating text to the XXIIInd ATCM at Tromso when a Diplomatic Conference should be called. It is important that a liability regime is realistic, takes into account the difficult conditions in Antarctica and does not unduly jeopardise science programmes.

Concluding we like to reiterate our pleasure to be here in Christchurch and to work with you for the success of this meeting.

**OPENING ADDRESS BY
DR MIKE RICHARDSON
HEAD OF THE DELEGATION OF THE UNITED
KINGDOM**

Mr Chairman

On behalf of the UK delegation I thank the Government of New Zealand for hosting the XXIst ATCM in Christchurch. I feel sure that the Antarctic spirit which is so much in evidence in this important gateway city to Antarctica will encourage us in our discussions, and decisions.

We congratulate the USA and Finland on their ratification of the Environmental Protocol and we look forward now to the timely ratifications by Russian and Japan, and the early entry into force of the Protocol.

My opening address to the XXth ATCM noted that a certain degree of inertia had set in to the Antarctic Treaty Consultative Meetings. We are pleased to note as a result of New Zealand's able preparations for the meeting positive steps have been taken to overcome this inertia. We particularly welcome the decision to hold a Heads of Delegation meeting to address the problem. We must ensure that on entry into force of the Protocol the Committee for Environmental Protection has a clear steer as to its role.

Too often in recent years the decisions which, in our opinion, should have been taken by the Consultative Parties have, unwittingly or deliberately, been delegated to others - or have not been addressed at all. The net result has been a gradual weakening of the effectiveness of the ATCM. We must ensure that we, as Consultative Parties, fully address the agenda we have set ourselves and make decisions in a timely manner. To do otherwise is an abdication of our responsibility towards the governance of Antarctica.

One of the problems of the last few ATCMs has been the lack of substantive

Working Papers, and the over abundance of Information Papers. In an effort to reverse this trend, the UK delegation took the decision to reduce its Information Papers to the minimum and to concentrate efforts on four Working Papers each of which contain substantive proposals. These, we hope, can be used as a focus for discussions and hopefully decisions on some priority issues. The papers are on:

- Emergency Response Action and Contingency Planning;
- Proposals for Improving the Protected Area System;
- Proposals for Education and Training; and
- Enhancing Compliance with the Protocol through Departure State Jurisdiction.

The first of these we see as particularly important. Despite the obligations set out in the Protocol's Article 15 and Annex IV, and despite the increasing number of tourist ships now visiting Antarctica, little has been done since the adoption of the Protocol to address this crucial issue. Yet there is a growing inevitability of a major maritime accident in Antarctica. We must begin to examine and take action on the commendable work done by COMNAP and presented to us back in Venice in 1992. Further delay on this matter is unwarranted and indefensible.

We note the considerable work that has been done by the Experts Group on liability. We were pleased to host an intersessional meeting of the Group of Experts in Cambridge in October last year. The UK is committed to the introduction of an Annex on Liability and we will continue to play an active role in the discussions which we believe before too long will require a policy steer.

Mr Chairman, the United Kingdom delegation looks forward to a profitable and productive meeting under your chairmanship.

**OPENING ADDRESS BY
MR R. TUCKER SCULLY
HEAD OF THE DELEGATION OF THE UNITED STATES
OF AMERICA**

Mr Chairman

I would like to congratulate you on your election to the Chair of this meeting. We are fortunate to have an individual of your experience and proven ability to lead us through our substantive agenda. For me, it is also a pleasure to see you back in the forum of the Antarctic Treaty.

On behalf of my delegation, I would also like to thank the Government of New Zealand and the City of Christchurch for the kind hospitality which has been shown to us during this 21st Antarctic Treaty Consultative Meeting.

I am also pleased to report that my government has become the most recent Antarctic Treaty Consultative Party to ratify the Protocol on Environmental Protection to the Antarctic Treaty. Twenty-four Antarctic Treaty Consultative

Parties have now ratified. Only two more ratifications are necessary to bring this Protocol into force. We look forward to entry into force in the near future and believe that here in Christchurch we can begin start-up work for the Protocol in earnest.

The Antarctic Treaty has been in force for over thirty-five years, during which time it has fulfilled its promise to the world of ensuring that Antarctica has continued to be used exclusively for peaceful purposes, without weapons and without conflict, in the interests of science and to the benefit of all humankind. We welcome the Protocol, not only in its innovative provisions to protect the environment of Antarctica, but also as further development of the unique, peaceful system of international governance that the Treaty has fostered for Antarctica.

As part of my government's lengthy process of ratifying the Protocol, we have taken great care to establish clear legal authority to carry out all of the Protocol's obligations. The United States was one of the first governments to develop and use an environmental review process to assess possible environmental impacts as part of its procedure for reaching decisions with regard to proposed government activities. As a leader in this process, we are happy to share our experiences and we have prepared an information paper to that end. We are convinced that this procedure assists decision makers to have more full information at hand before they must make their final decisions on how to go forward with an activity. We believe that this system, when extended to Antarctica, will help all operators, whether governmental or not, to determine the best way to plan their activities. We look forward to the establishment of the Committee on Environmental Policy which will provide helpful advice to the Antarctic Treaty Parties and to the Consultative Meeting.

Mr Chairman, we support an open and transparent Antarctic Treaty System. For this reason, we welcome the decisions that were made some years ago to make documents publicly available. We believe that observers and experts have advice and knowledge which helps us, and welcome their attendance at these meetings.

We also continue to support the establishment of a modest Secretariat to assist the work of the Antarctic Treaty System. We note that when the Protocol on Environmental Protection enters into force there will be an increased demand for Secretariat services. We hope that ways can be identified, perhaps through the electronic exchange of information, to facilitate the work of implementing the Protocol, pending - and after - the final establishment of the Treaty Secretariat. In this regard, my government continues to support that establishment in Buenos Aires.

Mr Chairman, we note that the Experts Group working on an annex to the Protocol on Environmental Protection on liability has continued to meet both in connection with Antarctic Treaty Consultative Meetings and in intersessional meetings. We are concerned that this group has not as yet reached consensus on key aspects of how to proceed, and may need to consider taking different directions in order to reach a successful conclusion.

It is imperative that any annex or annexes on liability take into account aspects of international cooperation in the areas of scientific research, environmental practices and logistical operations. Participants in these meetings should bear in mind that the objective is to reach agreement on a document that all Consultative Parties will be able to ratify. The United States has proposed a draft text which we believe meets that objective.

Mr Chairman, this agenda before us offers the opportunity to look ahead to the operation of the Antarctic Treaty Consultative mechanism, with the prospect of the Protocol on Environmental Protection in place, to ensure that it remains a dynamic and responsive mechanism. It also includes the ongoing work of promoting and supporting the scientific research - which is the pre-eminent activity in Antarctica - and of preserving the unspoiled character of the laboratory Antarctica offers for science. This latter concentration upon practical implementation and realisation of the inspiring objectives of the Antarctic Treaty is the System's greatest strength. It is this spirit we hope to bring to our agenda, both for the here and now issues, and for those issues relating to the future of the Antarctic Treaty System.

In conclusion, I reiterate our pleasure in being in this beautiful City of Christchurch and our commitment to cooperation to ensure the success of this meeting.

Thank you.

OPENING ADDRESS BY THE HEAD OF THE DELEGATION OF URUGUAY

Mr Chairman

On behalf of the delegation of Uruguay I wish to express our appreciation to the people and authorities of Christchurch for their warm and cordial hospitality as well as for the excellent organisation of our meeting.

We have before us two intensive weeks of work during which we shall attempt to synthesise past experiences and future responsibilities with regard to the Antarctic.

My country attaches the greatest importance to safeguarding the Antarctic environment, not only because of its intrinsic values or its importance to science but also because Uruguay is, geographically, very near the Antarctic Continent. We are therefore pleased to know that the Madrid Protocol will soon come into effect; it is an essential instrument that Uruguay has complied with for many years. Its entry into force will simply be a formality leading us to the effective protection to which we are all committed.

Notwithstanding the above, we believe that environmental protection can be harmoniously and rationally reconciled with the primary objective of our presence in the Antarctic: peace and science. We therefore fully adhere to the principle of international scientific cooperation as the cornerstone that

cannot be undermined, at the risk of violating the very essence of the Treaty. We must listen with the greatest attention to the scientific community and to the managers of Antarctic programmes, who have made us aware of the very special realities of a region that does not admit purely theoretical approaches; we must therefore double our efforts to arrive at a Liability Annex that reflects these realities. In that exercise we may need to reflect about the scope of the instrument that we are developing and about the consequences it may have on scientific cooperation and on Antarctic science itself. No legal liability regime should end up virtually limiting scientific activities and related logistics, especially with regard to those countries that carry them out under great financial hardship.

My country believes that the Antarctic Peninsula can become a priority region for close cooperation in the interest of protecting, as effectively as possible, the area visited by the largest amount of people, both tourists and scientists. We therefore believe that it is essential to consider the possibility of developing joint response plans to possible incidents, in compliance of Article 15 of the Madrid Protocol. Individual efforts, regardless of their quality, may be ineffective. It is only through joint work that we will have the best vehicle to protect the Antarctic environment: prevention.

Uruguay believes that the Treaty needs a Permanent Secretariat, and is convinced that it will make the Antarctic Treaty System more operational. We also believe that there is a need for an appropriate balance among Antarctic institutions, which is why we have always maintained that the headquarters of the Antarctic Treaty should be in Latin America.

Finally, Mr Chairman, we believe the Antarctic Treaty should continue benefiting from the contribution by SCAR and COMNAP, which have provided us with specific approaches aimed at understanding the challenges we face as a result of the activities carried out in the Antarctic.

OPENING ADDRESS BY THE REPRESENTATIVE OF CANADA

Mr Chairman

On behalf of Canada I am pleased to congratulate you on your election as Chairman of this meeting of the Antarctic Treaty. My country also expresses its gratitude to the Government of New Zealand for its hospitality in hosting this meeting, for thorough arrangements and communications in preparation for our discussions, and for the excellent facilities that have been provided. It is fitting, also, that the practice of holding ATCM meetings in the countries of the Consultative Parties in succession brings us once again to one of the countries closest to Antarctica, in a city which has been the departure point for many historical explorations and present-day activities in Antarctica, and the site of a significant centre for Antarctic scientific information obtained through the efforts of many countries.

Canada continues its modest but, we hope, constructive involvement in

Antarctic affairs, through the participation of Canadian scientists in subject areas where our north polar scientific expertise can be particularly useful, and in the policy and international relations area where the Antarctic Treaty System and its evolution is not only an example of international cooperation and environmental protection important to Canadian principles and objectives but also of value in ensuring the growth of knowledge about the polar regions that has particular importance to Canada. In that regard, we are pleased to note that the agenda of the ATCM meetings now include as a regular item "relevance of developments in the Arctic and the Antarctic". An increasing number of the issues and topics important to international governance and scientific activities in Antarctica have bi-polar and global relevance; Canada looks forward to these discussions and hopes to participate constructively in them.

A development during the past year which will have significance to inter-governmental activities in the polar regions has been the formal establishment of the Arctic Council, in which governments of all nations with territories north of the Arctic Circle are members. The Arctic Council will facilitate international cooperation in northern circumpolar regions, and in some subjects will be the appropriate body to provide liaison with the Antarctic Treaty on matters of bi-polar significance. Canada has agreed to chair the Arctic Council for the first two years.

Mr Chairman, Canada wishes you and all delegates success in our forthcoming discussions. The Antarctic Treaty System has responsibility for management of a large and important part of the planet, in the interests of all humankind and natural ecosystems. The Treaty System is also a successful example, although not without difficulties, of the development of consensus-based international policy to carry out a shared responsibility and foster a sense of caring for all parts of our planetary home. Canada is pleased to be part of this growth and this sense of caring.

**OPENING ADDRESS BY
MR ALIOCHA NEDELTCHEV
HEAD OF THE DELEGATION OF THE REPUBLIC OF
BULGARIA**

Mr Chairman

On behalf of the Bulgarian delegation I would like to congratulate you on your election as Chairman of the XXIst Antarctic Treaty Consultative Meeting. I avail myself of this opportunity to thank the Government of New Zealand for hosting this meeting and to express to the people of Christchurch our appreciation for their kind hospitality.

Mr Chairman

Since the Bulgarian delegation has already had the possibility to present to the Plenary its request for Consultative Status under the Antarctic Treaty, I

would like to confine this intervention to other issues of common interest.

First of all my Government attaches great importance to the need to enhance the protection of the Antarctic environment. We note with appreciation that only two more ratifications are necessary to bring the Protocol on Environmental Protection to the Antarctic Treaty into force. Bulgaria has already stated its firm intention to submit this Protocol for ratification in order to accede to it as soon as possible. This intention is formally endorsed by the Decision of the Council of Ministers (390/9 April 1997).

We are pleased to note that more than 35 years the Antarctic Treaty is ensuring that Antarctica has been used exclusively for peaceful purposes to the benefit of all mankind. In our view this success was possible because of the spirit of cooperation among the Antarctic Treaty Parties. This delegation believes that the imminent entry into force of the Protocol will increase the scope of cooperation and, thus, the demand for establishment of a cost-effective Secretariat.

Another important issue on our agenda is the elaboration of an Annex to the Madrid Protocol on liability. My delegation hopes that, despite the complexity of the topic, fruitful deliberations should lead to a successful conclusion of the draft.

The Bulgarian delegation welcomes the decision to hold a Heads of Delegation meeting to address vital issues of the future operation of the Antarctic Treaty System. We believe that delegations will find the appropriate ways and means to increase significantly the effectiveness of the ATCM.

In conclusion, Mr Chairman, I would like to reiterate my delegation's commitment to the spirit of cooperation which, without any doubt, will ensure the success of the present meeting.

Thank you.

**OPENING ADDRESS BY
MR VASSILIOS PATRONAS
HEAD OF THE DELEGATION FROM GREECE**

Mr Chairman

On behalf of the Greek Delegation, I would like to congratulate you on your election as Chairman of the XXI Antarctic Treaty Consultative Meeting. May I also, through you Mr Chairman, express my gratitude to the Government of New Zealand for hosting this meeting in the beautiful city of Christchurch and also my thanks for its warm hospitality.

Mr Chairman

The Agenda of the present meeting contains many interesting items, including matters related to the protection of the environment in the Antarctic region.

In this respect, my Delegation is pleased to note that the number of ratifications of the Environment Protocol has been increased. Article 13 of the said Protocol provides that the Parties should notify all other Parties of the measures they have taken to implement this Protocol by adopting, among others, relevant domestic legislation. Greece having ratified the Protocol, works for the adoption of such legislation.

As to the elaboration of the Liability Annex, my Delegation is very happy to see that the Group of Legal Experts on Liability chaired by Professor Dr R. Wolfrum of Germany, has made considerable progress.

Liability is always a thorny question to deal with. However, despite the inevitable difficulties, we are confident that this exercise will be successfully concluded and this will constitute in our view, a significant step towards the progressive development of international law in this field.

Another important item on the Agenda is that of the ATCM structure after the establishment of the Committee for Environmental Protection. My Delegation believes that the legal aspects of this question should be carefully examined and therefore the establishment of a new working group looking at legal issues would be of valuable assistance.

Finally Mr Chairman, I would like to inform this meeting that Greece, and especially the National Centre for Marine Research in collaboration with other Greek institutions, has prepared a National Programme for Antarctica for 1996-2000. The realisation of this programme is now in progress.

**ANNEX E:
REPORTS OF
ATS (5a)**

ANNEX E: REPORTS OF ATS (5a)

UNITED STATES OF AMERICA

Status of

ANTARCTIC TREATY

Signed at Washington December 1, 1959
by Argentina, Australia, Belgium, Chile,
France, Japan, New Zealand, Norway, South
Africa, the Union of Soviet Socialist
Republics, the United Kingdom of Great
Britain and Northern Ireland, and the
United States of America

<u>State</u>	<u>Date of deposit of instrument of ratification</u>	<u>Date of deposit of instrument of accession</u>	<u>Date of entry into force</u>
Argentina	June 23, 1961		June 23, 1961
Australia	June 23, 1961		June 23, 1961
Austria		August 25, 1987	August 25, 1987
Belgium	July 26, 1960		June 23, 1961
Brazil		May 16, 1975	May 16, 1975
Bulgaria		Sept. 11, 1978	Sept. 11, 1978
Canada		May 4, 1988	May 4, 1988
Chile	June 23, 1961		June 23, 1961
China		June 8, 1983	June 8, 1983
Colombia		Jan. 31, 1989	Jan. 31, 1989
Cuba		Aug. 16, 1984	Aug. 16, 1984
Czech Republic ⁷		Jan. 1, 1993	Jan. 1, 1993
Denmark		May 20, 1965	May 20, 1965
Ecuador		Sept. 15, 1987	Sept. 15, 1987
Finland		May 15, 1984	May 15, 1984
France	Sept. 16, 1960		June 23, 1961
Germany ¹		Feb. 5, 1979	Feb. 5, 1979
Greece		Jan. 8, 1987	Jan. 8, 1987
Guatemala		July 31, 1991	July 31, 1991
Hungary		Jan. 27, 1984	Jan. 27, 1984

[Antarctic Treaty]

- 2 -

State	Date of deposit of instrument of ratification	Date of deposit of instrument of accession	Date of entry into force
India		Aug. 19, 1983	Aug. 19, 1983
Italy		Mar. 18, 1981	Mar. 18, 1981
Japan	Aug. 4, 1960		June 23, 1961
Korea, DPR of		Jan. 21, 1987	Jan. 21, 1987
Korea, Rep. of		Nov. 28, 1986	Nov. 28, 1986
Netherlands		Mar. 30, 1967 ²	Mar. 30, 1967
New Zealand	Nov. 1, 1960		June 23, 1961
Norway	Aug. 24, 1960		June 23, 1961
Papua New Guinea		Mar. 16, 1981 ⁵	Sept. 16, 1975 ⁶
Peru		Apr. 10, 1981	Apr. 10, 1981
Poland		June 8, 1961	June 23, 1961
Romania		Sept. 15, 1971 ³	Sept. 15, 1971
Russian Federation	Nov. 2, 1960		June 23, 1961
Slovak Republic ⁷		Jan. 1, 1993	Jan. 1, 1993
South Africa	June 21, 1960		June 23, 1961
Spain		Mar. 31, 1982	Mar. 31, 1982
Sweden		Apr. 24, 1984	Apr. 24, 1984
Switzerland		Nov. 15, 1990	Nov. 15, 1990
Turkey		Jan. 24, 1996	Jan. 24, 1996
Ukraine		Oct. 28, 1992	Oct. 28, 1992

[Antarctic Treaty]

- 3 -

<u>State</u>	<u>Date of deposit of instrument of ratification</u>	<u>Date of deposit of instrument of accession</u>	<u>Date of entry into force</u>
United Kingdom of Great Britain & Northern Ireland	May 31, 1960		June 23, 1961
United States of America	Aug. 18, 1960		June 23, 1961
Uruguay		Jan. 11, 1980 ⁴	Jan. 11, 1980

1 On October 2, 1990, the Embassy of the Federal Republic of Germany informed the Department of State "that, through the accession of the German Democratic Republic to the Federal Republic of Germany with effect from October 3, 1990, the two German states will unite to form one sovereign state, which, as a contracting party to the Antarctic Treaty, will remain bound by the provisions of the Treaty and subject to those recommendations adopted at the 15 consultative meetings which the Federal Republic of Germany has approved. From the date of German unity, the Federal Republic of Germany will act under the designation of 'Germany' within the framework of the antarctic system....".

Prior to unification, the German Democratic Republic and the Federal Republic of Germany had acceded to the Treaty on November 19, 1974 and February 5, 1979, respectively.

2 The Netherlands accession is for the Kingdom in Europe, Suriname and the Netherlands Antilles. Aruba as a separate entity as of January 1, 1986.

[Antarctic Treaty]

-4-

3 The Romanian instrument of accession was accompanied by a note of the Ambassador of the Socialist Republic of Romania, dated September 15, 1971, containing the following statement of the Council of State of the Socialist Republic of Romania:

"The Council of State of the Socialist Republic of Romania states that the provisions of the first paragraph of the article XIII of the Antarctic Treaty are not in accordance with the principle according to which the multilateral treaties whose object and purposes are concerning the international community, as a whole, should be opened for universal participation."

4 The instrument of accession by Uruguay accompanied by a Declaration, a copy of which is attached, with translation.

5 Date of deposit of notification of succession.

6 Date of independence.

7 Effective date of succession. Czechoslovakia deposited an instrument of accession to the Treaty on June 14, 1962. On December 31, 1992, at midnight, Czechoslovakia ceased to exist and was succeeded by two separate and independent states, the Czech Republic and the Slovak Republic.

Department of State,

Washington, May 8, 1997.

PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY
Signed at Madrid on October 4, 1991*

State	Date of Signature	Date of deposit of Ratification, Acceptance or Approval	Date of deposit of Accession	Date of entry into force	Date of Acceptance ANNEX V**	Date of entry into force of Annex V
CONSULTATIVE PARTIES						
Argentina	Oct. 4, 1991	Oct. 20, 1993 ³				Apr. 6, 1994(A)
Australia	Oct. 4, 1991	Apr. 6, 1994				June 7, 1995 (B)
Belgium	Oct. 4, 1991	Apr. 26, 1996			Apr. 26, 1996(A)	
Brazil	Oct. 4, 1991	Aug. 15, 1995				
Chile	Oct. 4, 1991	Jan. 11, 1995				
China	Oct. 4, 1991	Aug. 2, 1994			Jan. 26, 1995(AB)	
Ecuador	Oct. 4, 1991	Jan. 4, 1993				
Finland	Oct. 4, 1991	Nov. 1, 1996			Nov. 1, 1996 (AB)	
France	Oct. 4, 1991	Feb. 5, 1993			Apr. 26, 1995 (B)	
Germany	Oct. 4, 1991	Nov. 25, 1994			Nov. 25, 1994(A)	
India	July 2, 1992	Apr. 26, 1996				
Italy	Oct. 4, 1991	Mar. 31, 1995			May 31, 1995(A)	
Japan	Sept. 29, 1992					
Korea, Rep. of	July 2, 1992	Jan. 2, 1996			June 5, 1996 (B)	
Netherlands	Oct. 4, 1991	Apr. 14, 1994				
New Zealand	Oct. 4, 1991	Dec. 22, 1994			Oct. 21, 1992 (B)	
Norway	Oct. 4, 1991	June 16, 1993			Oct. 13, 1993(B)	
Peru	Oct. 4, 1991	Mar. 8, 1993			Mar. 8, 1993(A)	
Poland	Oct. 4, 1991	Nov. 1, 1995				
Russian Federation	Oct. 4, 1991					
South Africa	Oct. 4, 1991	Aug. 3, 1995			June 14, 1995(B)	
Spain	Oct. 4, 1991	July 1, 1992			Dec. 8, 1993(A)	
Sweden	Oct. 4, 1991	Mar. 30, 1994			Mar. 30, 1994(A)	
United Kingdom	Oct. 4, 1991	Apr. 25, 1995			Apr. 7, 1994(B)	
United States	Oct. 4, 1991	Apr. 17, 1997			May 21, 1996 (B)	
Uruguay	Oct. 4, 1991	Jan. 11, 1995			Apr. 17, 1997 (A)	
						May 15, 1995(B)

The following denotes earliest date relating either to Annex V or Rec.XVI-10 ***:
A Acceptance Annex V
B Approval of XVI-10

-2-

State	Date of Signature	Date of Ratification, Acceptance or Approval	Date of deposit of Accession	Date of entry into force	Date of entry into force of Annex
NON-CONSULTATIVE PARTIES					
Austria	Oct. 4, 1991				
Bulgaria					
Canada	Oct. 4, 1991				
Colombia	Oct. 4, 1991				
Cuba					
Czech Rep. 1, 2	Jan. 1, 1993				
Denmark	July 2, 1992				
Greece	Oct. 4, 1991		May 23, 1995		
Guatemala					
Hungary	Oct. 4, 1991				
Korea, DPR of	Oct. 4, 1991				
Papua New Guinea					
Romania	Oct. 4, 1991				
Slovak Rep. 1, 2	Jan. 1, 1993				
Switzerland	Oct. 4, 1991				
Turkey					
Ukraine					

* Signed at Madrid on October 4, 1991; thereafter at Washington until October 3, 1992.

The Protocol will enter into force initially on the thirtieth day following the date of deposit of instruments of ratification, acceptance, approval or accession by all States which were Antarctic Treaty Consultative Parties at the date on which this Protocol was adopted. (Article 23)

** Adopted at Bonn on October 17, 1991.

*** Adopted at XVth Consultative Meeting--Bonn 1991

1. Signed for Czech & Slovak Federal Republic on Oct. 2, 1992 - Czechoslovakia accepts the jurisdiction of the International Court of Justice and Arbitral Tribunal for the settlement of disputes according to Article 19, paragraph 1. On December 31, 1992, at midnight, Czechoslovakia ceased to exist and was succeeded by two separate and independent states, the Czech Republic and the Slovak Republic.

2. Effective date of succession in respect of signature by Czechoslovakia which is subject to ratification by the Czech Republic and the Slovak Republic.

3. Accompanied by declaration with informal translation, copy of which is attached at Tab A.

Department of State,
Washington, May 8, 1997.

SELTDEP #45

Approval as notified to the Government of the United States of America, of measures relating to the furthestance of the principles and objectives of the Antarctic Treaty

	16 Recommendations adopted at First Meeting (Cambrera 1981)	10 Recommendations adopted at Second Meeting (Buenos Aires 1982)	11 Recommendations adopted at Third Meeting (Grenada 1984)	28 Recommendations adopted at Fourth Meeting (Santiago 1986)	9 Recommendations adopted at Fifth Meeting (Paris 1988)	16 Recommendations adopted at Sixth Meeting (Tokyo 1970)
	Approved	Approved	Approved	Approved	Approved	Approved
Argentina	ALL	ALL	ALL	ALL	ALL	ALL
Australia	ALL	ALL	ALL	ALL	ALL	ALL
Belgium	ALL	ALL	ALL	ALL	ALL	ALL
Brazil (1983)+	ALL	ALL	ALL	ALL	ALL	(except 10)
Chile	ALL	ALL	ALL	ALL	ALL	ALL
China (1985)+	ALL	ALL	ALL	ALL	ALL	(except 10)
Ecuador (1990)+						
Finland (1989)+						
France	ALL	ALL	ALL	ALL	ALL	ALL
Germany (1981)+	ALL	ALL	(except 8)	(except 1-11 and 13-19)	(except 5* and 6)	(except 9 and 10)
India (1983)+	ALL	ALL	ALL	ALL	ALL	ALL
Italy (1987)+	ALL	ALL	(except 8**)	(except 19)	ALL	(except 9 and 10)
Japan	ALL	ALL	ALL	ALL	ALL	ALL
Korea, Rep. (1989)	ALL	ALL	ALL	ALL	ALL	ALL
Netherlands (1980)+	ALL	ALL	ALL	ALL	ALL	ALL
New Zealand	ALL	ALL	ALL	ALL	ALL	ALL
Norway	ALL	ALL	ALL	ALL	ALL	ALL
Peru (1989)+	ALL	ALL	ALL	ALL	ALL	ALL
Poland (1977)+	ALL	ALL	ALL	ALL	ALL	ALL
Russia	ALL	ALL	ALL	ALL	ALL	ALL
South Africa	ALL	ALL	ALL	ALL	ALL	ALL
Spain (1988)+	ALL	ALL	ALL	ALL	ALL	ALL
Sweden (1980)+						
U.K.	ALL	ALL	ALL	ALL	ALL	ALL
Uruguay (1985)+	ALL	ALL	ALL	ALL	ALL	ALL
U.S.A.	ALL	ALL	ALL	ALL	ALL	ALL

* IV-6, IV-10, IV-12, and V-5 terminated by VIII-2

** Accepted as interim guideline

+ Year attained Consultative Status. Acceptance by that State required to bring into force Recommendations of meetings from that year forward.

Approval as notified to the Government of the United States of America of measures relating to the furtherance of the purposes and objectives of the Antarctic Treaty

	9 Recommendations adopted at Seventh Meeting (Wellington 1972)	14 Recommendations adopted at Eighth Meeting (Oslo 1975)	8 Recommendations adopted at Ninth Meeting (London 1977)	9 Recommendations adopted at Tenth Meeting (Washington 1978)	3 Recommendations adopted at Eleventh Meeting (Buenos Aires 1981)	9 Recommendations adopted at Twelfth Meeting (Canberra 1983)
	Approved	Approved	Approved	Approved	Approved	Approved
Argentina	ALL	ALL	ALL	ALL	ALL	ALL
Australia	ALL	ALL	ALL	ALL	ALL	ALL
Belgium	ALL	ALL	ALL	ALL	ALL	ALL
Brazil (1983)*	ALL	ALL	ALL	ALL	ALL	ALL
Chile	(except 5)	ALL	ALL	ALL	ALL	ALL
China (1985)*	ALL	ALL	ALL	ALL	ALL	ALL
Ecuador (1990)*	(except 5)	ALL	ALL	ALL	ALL	ALL
Finland (1989)*	ALL	ALL	ALL	ALL	ALL	ALL
France	ALL	ALL	ALL	ALL	ALL	ALL
Germany (1981)*	(except 5)	(except 1, 2, and 5)	ALL	ALL	ALL	ALL
India (1983)*	ALL	ALL	ALL	ALL	ALL	ALL
Italy (1987)*	ALL	ALL	ALL	(except 1 and 9)	ALL	ALL
Japan	(except 5)	ALL	ALL	ALL	ALL	ALL
Korea, Rep. (1988)	ALL	ALL	ALL	(except 1 and 9)	ALL	ALL
Netherlands (1990)*	ALL	ALL	ALL	ALL	ALL	ALL
New Zealand	ALL	ALL	ALL	ALL	ALL	ALL
Norway	ALL	ALL	ALL	ALL	ALL	ALL
Peru (1989)*	ALL	ALL	ALL	ALL	ALL	ALL
Poland (1977)*	ALL	ALL	ALL	ALL	ALL	ALL
Russia	ALL	ALL	ALL	ALL	ALL	ALL
South Africa	ALL	ALL	ALL	ALL	ALL	ALL
Spain (1988)*	ALL	ALL	ALL	(except 1 and 9)	ALL	ALL
Sweden (1988)*	ALL	ALL	ALL	ALL	(except 1)	ALL
U.K.	ALL	ALL	ALL	ALL	ALL	ALL
Uruguay (1985)*	ALL	ALL	ALL	ALL	ALL	ALL
U.S.A.	ALL	ALL	ALL	ALL	ALL	ALL

* IV-6, IV-10, IV-12, and V-5 terminated by VIII-2

*** Accepted as interim guideline

+ Year attained Consultative Status. Acceptance by that State required to bring into force Recommendations of meetings from that year forward.

Approval as notified to the Government of the United States of America, of measures relating to the attainment of the objectives and objectives of the Antarctic Treaty

	16 Recommendations adopted at Thirteenth Meeting (Brussels 1983)	10 Recommendations adopted at Fourteenth Meeting (Rio de Janeiro 1987)	22 Recommendations adopted at Fifteenth Meeting (Paris 1989)	13 Recommendations adopted at Sixteenth Meeting (Geneva 1991)	4 Recommendations adopted at Seventeenth Meeting (Venice 1992)	1 Recommendation adopted at Eighteenth Meeting (Kyoto 1994)
	Approved	Approved	Approved	Approved	Approved	Approved
Argentina	ALL	ALL	ALL	ALL except XVI-10	ALL	
Australia	ALL	ALL	ALL	ALL		
Belgium	ALL	ALL	ALL			
Brazil (1983)*	ALL	ALL	ALL			
Chile	ALL	ALL	ALL	ALL		
China (1985)*	ALL	ALL	ALL	ALL		
Ecuador (1990)*						
Finland (1989)*						
France	ALL	ALL except 2, 14-16, 18-22	ALL except 1, 12, 13	ALL except 1 and 4	ALL	ALL
Germany (1991)*	ALL	ALL	ALL	ALL	ALL	ALL
India (1983)*	(except 10 to 13)	(except 3, 4, 8, 10, 11, 22)	(except 4, 6, 7, 8, 9 & 10)	(except 2, 3)		
Italy (1987)*	ALL	ALL	ALL	ALL	ALL	ALL
Japan	ALL	ALL	ALL	ALL	ALL	
Korea, Rep. (1989)*	ALL	ALL	ALL	(except 12)	(except 1)	
Netherlands (1990)*	ALL	ALL	ALL	ALL	ALL	
New Zealand	ALL	ALL	ALL	ALL	ALL	
Norway	ALL	ALL	ALL	ALL	ALL	
Peru (1989)*	ALL	ALL	ALL	ALL	ALL	
Poland (1977)*	ALL	ALL	ALL	ALL	ALL	
Russia	ALL	ALL	ALL	ALL	ALL	ALL
South Africa	ALL	ALL	ALL	ALL	ALL	ALL
Spain (1989)*	ALL	ALL	ALL	ALL	ALL	ALL
Sweden (1988)*	ALL	ALL	ALL	ALL	ALL	ALL
U.K.	ALL	ALL	ALL	ALL	ALL	ALL
Uruguay (1985)*	ALL	(except 2)	ALL	ALL	ALL	ALL
U.S.A.	ALL	ALL	ALL	ALL	ALL	ALL
			(except 3, 4, 6, 10, 11)	(except 4, 6, 9)		
			(except 1-5, 9-11, 14)	(except 4, 6, 9, 10)		

* IV-4, IV-10, IV-12, and V-5 terminated by VIII-2

--- Accepted as interim guideline

+ Year attained Consultative Status. Acceptance by that State required to bring into force Recommendations or Measures of meetings from that year forward

Approval as notified to the Government of the United States of America... of measures relating to the furtherance of the objectives and objectives of the Antarctic Treaty

	1 Measure adopted at Nineteenth Meeting (Buenos Aires 1981)	2 Measures adopted at Twentieth Meeting (Utrecht 1984)	Measure adopted at Twenty-First Meeting ()	Measure adopted at Twenty-Second Meeting ()	Measure adopted at Twenty-Third Meeting ()
Argentina	Approved	Approved	Approved	Approved	
Australia					
Belgium					
Brazil (1983)*					
Chile					
China (1985)*					
Ecuador (1990)*					
Finland (1989)*					
France					
Germany (1981)*					
India (1983)*					
Italy (1987)*					
Japan					
Korea, Rep. (1989)*					
Netherlands (1990)*					
New Zealand					
Norway					
Peru (1989)*					
Poland (1977)*					
Russia					
South Africa					
Spain (1988)*					
Sweden (1988)*					
U.K.					
Uruguay (1985)*					
U.S.A.					
			ALL		
				ALL	

* Year attained Consultative Status. Acceptance by that State required to bring into force Recommendations or Measures of meetings from that year forward
Office of the Assistant Legal Adviser for Treaty Affairs
Department of State

UNITED KINGDOM

REPORT SUBMITTED TO THE XXIST ANTARCTIC TREATY CONSULTATIVE MEETING BY THE DEPOSITARY GOVERNMENT OF THE CONVENTION FOR THE CONSERVATION OF ANTARCTIC SEALS (UNITED KINGDOM) IN ACCORDANCE WITH RECOMMENDATION XIII-2, PARAGRAPH 2(d)

1. This report covers events regarding the Convention for the Conservation of Antarctic Seals (CCAS) from May 1996 to the present. Events prior to May 1996 were reported to the XVII^Ith, XIXth and XXth Antarctic Treaty Consultative Meetings (see Annex B, Annex F and Annex F of the respective Final Reports).
2. Following the decision at the informal meeting of Contracting Parties in Tasmania in October 1993 that Parties should comply fully with the reporting requirement of Article 5 (Capture and Killing of Seals) of the Convention, the UK as depositary reminded Parties of this obligation by Diplomatic Note on 1 August 1996. The results are reproduced as Annex A to this report.
3. As agreed at the above informal meeting the UK as depositary will remind Parties that returns for 1997 (for the period 1 March 1996 to 28 February 1997) should be transmitted to the UK and SCAR by 30 June 1997.
4. Since the XXth Antarctic Treaty Consultative Meeting there have been no accessions to the Convention for the Conservation of Antarctic Seals. A list of countries which were original signatories of the Convention, and of countries which have subsequently acceded, is attached (Annex B to this Report).

CONVENTION FOR THE CONSERVATION OF ANTARCTIC SEALS (CCAS)

Synopsis of reporting in accordance with Article 5 and the Annex:
 Capture and killing of seals during period 1 March 1995 to 29
 February 1996.

<u>Contracting Party</u>	<u>Captured</u>	<u>Killed</u>
Argentina	Nil	Nil
Australia	Nil	Nil
Belgium	Nil	Nil
Brazil	Nil	Nil
Canada	Nil	Nil
Chile	* 160	Nil
France	Nil	Nil
Germany	Nil	Nil
Italy	Nil	Nil
Japan	Nil	Nil
Norway	Nil	Nil
Poland	** Nil	Nil
Russia	** Nil	Nil
South Africa	Nil	Nil
UK	Nil	Nil
USA	Nil	Nil

* Period 1 July 1995 - 30 June 1996. 160 Antarctic Fur Seals (Arctocephalus gazella). 154 cubs (73 male, 81 female) weighed and released. 4 cubs and 2 juveniles (4 male, 2 female) captured and freed from nets

** Period 1 July 1995 - 30 June 1996

Polar Regions Section
 South Atlantic and Antarctic Department
 Foreign and Commonwealth Office
 London SW1A 2AH

CONVENTION FOR THE CONSERVATION OF ANTARCTIC SEALS

London, 1 June - 31 December 1972
(The Convention entered into force on 11 March 1978)

<u>State</u>	<u>Date of signature</u>	<u>Date of Deposit Ratification or Acceptance (A)</u>
Argentina ¹	9 June 1972	7 March 1978
Belgium	9 June 1972	9 February 1978
New Zealand	9 June 1972	Not ratified
Norway	9 June 1972	10 December 1973
South Africa	9 June 1972	15 August 1972
Russia ^{2 3 4}	9 June 1972	8 February 1978
United Kingdom ²	9 June 1972	10 September 1974 ²
United States of America ²	28 June 1972	19 January 1977
Australia	5 October 1972	1 July 1987
France ²	19 December 1972	19 February 1975 (A)
Chile ¹	28 December 1972	7 February 1980
Japan	28 December 1972	28 August 1980 (A)

ACCESSIONS

<u>State</u>	<u>Date of Deposit of Instrument of Accession</u>
Poland	15 August 1980
Germany, Federal Republic of ²	30 September 1987
Canada	4 October 1990
Brazil	11 February 1991
Italy	2 April 1992

1. Declaration or Reservation
2. Objection
3. The instrument of ratification included the Channel Islands and the Isle of Man
4. Former USSR

CONVENTION ON THE CONSERVATION OF ANTARCTIC MARINE LIVING RESOURCES (CCAMLR)

(Canberra, 20 May 1980)

(Convention entered generally into force on 7 April 1982)

Participant	Signature	Date of Deposit of Instrument of Ratification, Accession, Acceptance or Succession	Date Entry into Force
Argentina °	11 Sep 1980	28 May 1982	27 Jun 1982
Australia °	11 Sep 1980	6 May 1981	7 Apr 1982
Belgium °	11 Sep 1980	22 Feb 1984	23 Mar 1984
Brazil °		28 Jan 1986	27 Feb 1986
Bulgaria		1 Sep 1992	30 Sep 1992
Canada		1 Jul 1988	31 Jul 1988
Chile °	11 Sep 1980	22 Jul 1981	7 Apr 1982
European Community °		21 Apr 1982	21 May 1982
Finland		6 Sep 1989	6 Oct 1989
France °	16 Sep 1980	16 Sep 1982	16 Oct 1982
Germany °	11 Sep 1980	23 Apr 1982	23 May 1982
Greece		12 Feb 1987	14 Mar 1987
India °		17 Jun 1985	17 Jul 1985
Italy °		29 Mar 1989	28 Apr 1989
Japan °	12 Sep 1980	26 May 1981	7 Apr 1982
Korea, Republic of °		29 Mar 1985	28 Apr 1985
Netherlands		23 Feb 1990	25 Mar 1990
New Zealand °	11 Sep 1980	8 Mar 1982	7 Apr 1982
Norway °	11 Sep 1980	6 Dec 1983	5 Jan 1984
Peru		23 Jun 1989	23 Jul 1989
Poland °	11 Sep 1980	28 Mar 1984	27 Apr 1984
Russian Federation °	11 Sep 1980	26 May 1981	7 Apr 1982
South Africa °	11 Sep 1980	23 Jul 1981	7 Apr 1982
Spain °		9 Apr 1984	9 May 1984
Sweden °		6 Jun 1984	6 Jul 1984
Ukraine °		22 Apr 1994	22 May 1994
United Kingdom °	11 Sep 1980	31 Aug 1981	7 Apr 1982
United States of America °	11 Sep 1980	18 Feb 1982	7 Apr 1982
Uruguay °		22 Mar 1985	21 Apr 1985

° Members of the CCAMLR Commission

13 November 1996

SCAR REPORT TO XXI ATCM

**Report Under Recommendation XIII-2
Professor A C Rocha-Campos, President,
Scientific Committee on Antarctic Research**

SCAR is pleased to participate in this meeting and looks forward to contributing towards its success.

The year 1996-97 since XX ATCM has been a busy year for SCAR. The XXIV SCAR Meeting was held in Cambridge, United Kingdom, 5-16 August 1996, when many important decisions concerning organization, functioning and strategy were taken, including the SCAR relationship with the ATCM. All the SCAR Working Groups and some Groups of Specialists met in Cambridge and some workshops were held. The most important of these activities, including those relevant to the work of the Antarctic Treaty System, are reported here.

The Full Membership of SCAR has not changed. The closer relations with the Council of Managers of National Antarctic Programmes (COMNAP) are strengthening cooperation, leading to more effective execution of scientific research in the Antarctic.

SCAR continues to be active in initiating, promoting and coordinating a diversity of scientific activities, but only a few can be briefly noted here.

The SCAR Global Change Programme has re-structured its organization to coordinate all SCAR global change research in the Antarctic. There are now seven individual programmes within the overall Global Change Programme. The SCAR Global Change Programme Office is operational at the Cooperative Research Centre for the Antarctic and Southern Ocean Environment, University of Tasmania, Hobart, with a full-time Programme Coordinator in post. The Programme Office also acts as the formal institutional linkage between SCAR and the International Geosphere-Biosphere Programme (IGBP)/ World Climate Research Programme (WCRP) through the System of Analysis, Research and Training (START) framework. The Group of Specialists has now assumed the role of the START Regional Committee for the Antarctic.

The Group of Specialists on Environmental Affairs and Conservation (GOSEAC) met in Puerto Iguazú, Argentina, during June 1996 and will meet in Bremerhaven, Germany, during July 1997. The work of GOSEAC is increasingly relevant to the Protocol on Environmental Protection to the Antarctic Treaty. The combined report of the two SCAR-COMNAP workshops on environmental monitoring in the Antarctic has been distributed to all Antarctic Treaty Parties. A joint SCAR-COMNAP Working Paper, listing the key conclusions of the workshops and making six recommendations will be tabled at this meeting. SCAR strongly believes that the object of such monitoring should be to provide efficiently, effectively and at minimum cost, a continuing index of the health of the Antarctic terrestrial and aquatic ecosystems at both local and regional levels.

The Groups of Specialists on Structure and Evolution of the Antarctic Lithosphere and on Cenozoic Palaeoenvironments of the Southern High Latitudes have been closed, having completed their objectives. However, the ANTOSTRAT project will continue for two years to provide advice to the Ocean Drilling Program. The Group of Specialists on Southern Ocean Ecology has also been closed and the EASIZ programme will continue to operate under the SCAR Global Change Programme.

The development of the Antarctic Master Directory (AMD) at the International Centre for Antarctic Information and Research (ICAIR) here in Christchurch, New Zealand, is progressing. A demonstration of the AMD to Antarctic Treaty Parties is planned for the first week of this meeting. The SCAR-COMNAP *ad hoc* Planning Group on Antarctic Data Management has been replaced by a Joint Committee on Antarctic Data Management to support Antarctic data management and development of the AMD.

These are some of the highlights of SCAR's diverse activities. SCAR is planning to table two Working Papers (one jointly with COMNAP) and six Information Papers (one jointly with COMNAP) at this meeting. In these and other ways SCAR wishes to maintain its input of scientific advice to the Antarctic Treaty System.

Report under Recommendation XIII-2

1. Introduction

Since XXATCM in Utrecht, The Netherlands, May 1996, the XXIV SCAR Meeting was held in Cambridge, United Kingdom, 5-16 August 1996 when all the SCAR Working Groups met during the first week and the SCAR Delegates met during the second week. During the SCAR Meeting, the SCAR and COMNAP Executives held a joint meeting.

The membership of SCAR is unchanged at 25 Full Members and 7 Associate Members (see Appendix 1). The membership of the Executive Committee (Appendix 2) and the Chief Officers of SCAR subsidiary groups (Appendix 3) changed at the SCAR Meeting as a result of elections. In addition, the Groups of Specialists on Structure and Evolution of the Antarctic Lithosphere, on Cenozoic Palaeoenvironments of the Southern High Latitudes and on Southern Ocean Ecology have been closed. The SCAR-COMNAP *ad hoc* Planning Group on Antarctic Data Management has also been closed and has been replaced by a Joint Committee on Antarctic Data Management.

The Group of Specialists on Southern Ocean Ecology was co-sponsored by the Scientific Committee on Oceanic Research (SCOR) and provided a direct link in relation to research in the Southern Ocean. SCAR is currently preparing a proposal for closer liaison with SCOR and the Intergovernmental Oceanographic Commission (IOC) to improve coordination in Southern Ocean research, identifying gaps and any potential overlaps in programme cover to ensure maximum efficiency and effectiveness, particularly in terms of global change

studies.

Professor Rüdiger Wolfrum attended the XXIV SCAR Meeting and gave a valuable presentation on the current state of negotiations towards a sixth annex on environmental liability to the Protocol on Environmental Protection to the Antarctic Treaty. Subsequently, SCAR was invited to participate in the intersessional meeting of the Legal Expert Group and presented a statement of the SCAR position in relation to the proposed annex. SCAR would welcome the opportunity to continue to participate in these discussions in order to provide scientific advice as required to assist the Experts in their deliberations.

SCAR also welcomed Professor Magnus Magnusson, President of the International Arctic Science Committee (IASC), to the XXIV SCAR Meeting. It was agreed that there should be closer collaboration between SCAR and IASC scientists on matters of mutual scientific interest. In pursuit of this, the Executive Secretaries of SCAR and IASC met to consider the most likely areas of cooperation and identified aspects of global change research, in particular polar ice budget studies and the effects of increased UV radiation, as having the greatest potential for collaboration.

A list of papers to be presented to XXI ATCM is given at Appendix 6.

2. SCAR-COMNAP Cooperation

SCAR and COMNAP continue to maintain routine contact through their Secretariats. A joint meeting of the SCAR and COMNAP Executive Committees was held during the XXIV SCAR and COMNAP VIII meetings in Cambridge, United Kingdom, during August 1996. The SCAR Executive Committee will meet in Capetown, South Africa, alongside the COMNAP IX Meeting during August 1997.

3. Environmental Affairs and Conservation

The Group of Specialists on Environmental Affairs and Conservation held its eighth meeting (GOSEAC VIII) in Puerto Iguazú, Argentina, during June 1996, and will hold its ninth meeting (GOSEAC IX) in Bremerhaven, Germany, during July 1997. Many topics were discussed, including the draft report of the two joint SCAR-COMNAP Workshops on environmental monitoring, a "Management Plan Handbook" for protected areas, and five new management plans for protected areas.

The combined report of the two environmental monitoring workshops, the first in Oslo, Norway, during October 1995, and the second at College Station, Texas, USA, during March 1996, was distributed to all Antarctic Treaty Parties in November 1996. The key conclusions and recommendations of the workshops will be tabled as a joint SCAR-COMNAP Working Paper at this meeting. A final draft of the *Guide to the Preparation of Management Plans for Antarctic Specially Protected Areas* will also be tabled at this meeting. New management plans for protected areas were approved by SCAR Delegates as follows:

Recommendation SCAR XXIV-1**Concerning management plans for protected areas**

Considering the need for effective protection of the Antarctic environment and in furtherance of the stated SCAR objectives of conservation, SCAR *recommends* that National Committees forward to XXI ATCM via their governments the management plans for the following existing and proposed protected areas:

SSSI No 12: Canada Glacier, Taylor Valley, Victoria Land

SPA No 5: Beaufort Island, McMurdo Sound, Ross Sea

New Area: Cape Evans, Ross Island

New Area: Cape Geology and Botany Bay, Granite Harbour, Victoria Land

New Area: Lewis Bay, Mount Erebus, Ross Island

4. Antarctic Data

The Antarctic Master Directory (AMD) is now established at the International Centre for Antarctic Information and Research (ICAIR) here in Christchurch, New Zealand. The SCAR-COMNAP *ad hoc* group on Antarctic Data Management was closed at XXIV SCAR has been replaced by a SCAR-COMNAP Joint Committee on Antarctic Data Management. This Group will support Antarctic data management and the development of the AMD; the first meeting of the Group will take place in Christchurch during the first week of XXI ATCM. The development of the AMD is progressing well and Version 1.0 of the Antarctic Master Directory (AMD) DIF Authoring Tool (a Users Guide and Reference Manual complete with install/set-up diskettes) has been distributed by ICAIR.

5. The Antarctic and Global Change

The Group of Specialists on Global Change and the Antarctic (GLOCHANT) held its fourth annual meeting in Madison, Wisconsin, United States, during April 1996. The SCAR Global Change Programme Office, hosted by the Cooperative Research Centre for the Antarctic and Southern Ocean Environment at the University of Tasmania in Hobart, Australia, now has a full-time Programme Coordinator providing support for the programme. There are now seven individual programmes that operate under the umbrella of the Global Change Programme:

- Antarctic Ice Margin Evolution (ANTIME)
- Antarctic Sea-Ice Processes and Climate (ASPECT)
- Biological Investigations of Terrestrial Antarctic Systems (BIOTAS)
- Ecology of the Antarctic Sea-Ice Zone (EASIZ)
- Ice Sheet Mass Balance and Sea-level (ISMASS)
- International Trans-Antarctic Scientific Expeditions (ITASE)
- Palaeoenvironments from Ice Cores (PICE)

All of these programme will contribute to the relevant programmes of the International Geosphere-Biosphere Programme (IGBP) and the World Climate Research Programme (WCRP) through the system for Analysis, Research and Training (START) framework. Workshops were held during the year by the ISMASS and ITASE Programmes.

The membership of the Group of Specialists has been reconstituted to include the Chairmen of the preceding programmes and representatives from three other international programmes. The new Group of Specialists will now form the START Regional Committee for the Antarctic.

6. Antarctic and Solar-Terrestrial Sciences

The First Regional Observing Study of the Troposphere (FROST) project is now in its most productive phase. It has assembled the largest Antarctic atmospheric data set for any three month period. Evaluation of the analyses of Antarctic forecasts has been provided to the responsible agencies and this has allowed forecasting to be improved. The World Meteorological Organization (WMO) Global Telecommunications System has been monitored extensively by the FROST project and, as a result, the performance of the System has been noticeably enhanced.

A one-day symposium on Antarctic Stratospheric Ozone, held during the XXIV SCAR Meeting, illustrated the substantial progress being made towards a better understanding of the chemistry and dynamics of the phenomenon. New spectrometers using starlight are able to detect the chemistry of ozone destruction during the Antarctic winter before the return of the sun. The escape of ozone-depleted air from the Antarctic into lower latitudes can now be forecast using existing meteorological data so that advance warning can be provided for those days when consequent increased ultra-violet radiation can be expected in Australia, New Zealand and South America. There is no indication, as yet, that the tide of springtime ozone depletion in the Antarctic has been turned.

Three major Antarctic experiments to provide spatial and temporal information about geospace are now yielding data. A network of automatic geophysical observatories is gathering data on magnetometry, riometry and on Very Low Frequency (VLF) radio waves. A network of high frequency radars is observing the horizontal vector velocity of the ionosphere over tens of millions of square kilometres, allowing the electric field to be deduced and mapped into deep space. The third component of the overall system is provided by the ground-based observations at many permanent stations in the Antarctic providing a unique coordinated set of experiments in the Antarctic that forms a major international ground-based facility. This system is supported by the Antarctic Geospace Observatory Network (AGONET) database that is hosted by Italy.

Antarctic astronomy continues to be an expanding field where sites at high altitude in the continental interior of Antarctica offer unique conditions for infrared and submillimetre astronomy that are up to an order of magnitude better than other sites in the world. This area of research is forecast to be an important part of Antarctic science in the future.

7. Earth Sciences and Glaciology

The Cape Roberts Drilling Project, to investigate the history of uplift of the Transantarctic Mountains and the climatic history of the last 100 million years, was scheduled to commence drilling in October 1996, but the catastrophic deterioration of the sea ice forced postponement for one year.

A Field Geology Workshop in the South Shetland Islands is planned for January 1998 to enable experts from the many countries undertaking geological research in the South Shetland Islands to visit outcrops together and discuss field relationships to achieve a shared understanding of geological significance.

An earth science expedition to Dronning Maud Land is planned for the 1997-98 austral summer. The major aims will be to characterise the Grenvillian and Pan-African events and to develop techniques for distinguishing them.

The Working Group on Geology considered that the descriptions of many protected areas lacked proper appreciation of their geological significance. It was agreed that the appropriate member of the Group would provide the relevant information and SCAR delegates adopted the following recommendation:

Recommendation SCAR XXIV-6

Concerning geological maps of protected areas

Recognizing that the exposed bedrock geology and surficial deposits constitute an integral part of the Antarctic environment; and

Mindful of the need to be able to assess properly the geological significance of any specially protected or specially managed area;

SCAR *recommends* that National Committees preparing management plans for specially protected or specially managed areas should provide a geological map where appropriate, showing bedrock outcrops and surficial deposits, as an integral part of the proposal.

The Working Groups on Solid-Earth Geophysics and on Glaciology held a workshop on Seismic Acquisition on Antarctica. The workshop noted the successful use of oversnow streamers for rapid and effective seismic data acquisition. A proposal to develop an oversnow seismic database was welcomed.

The Groups of Specialists on Cenozoic Palaeoenvironments of the Southern High Latitudes, and on Structure and Evolution of the Antarctic Lithosphere were closed at XXIV SCAR, having completed their planned programmes. Delegates agreed that the successful ANTOSTRAT project should continue for a further two years as a programme under the joint Working Groups on Geology and on Solid-Earth Geophysics. The programme would provide specialist advice to the Ocean Drilling Program (ODP) proposals in the Southern Ocean and would continue to maintain the Seismic Data Library System (SDLS).

Much of the glaciological research in the Antarctic contributes directly to global change studies (see section 5) but there is much other research in progress. Long-term time-series observations of ice-ocean interaction and bottom-melting rates are being made in the Filchner-Ronne Ice Shelf Programme (FRISP) using improved hot water drilling technology. An international glaciological traverse of the ice-cap of King George Island was achieved under the Glaciology of the South Shetland Islands (GLASS) programme. The West Antarctic Ice Sheet (WAIS) programme to determine the history and stability of the ice sheet now includes a component of marine Earth Sciences to obtain subject related evidence from marine sediments. The International Programme for Antarctic Drifting Buoys (IPAB) is providing a very useful dataset on sea ice dynamics, as well as ocean-ice-atmosphere interaction that link directly to atmospheric studies. The recent

declassification of Antarctic aerial and spaceborne imagery acquired in the early 1960s is providing an opportunity to gauge changes in the ice sheet that have occurred in the past 30 years.

8. Life Sciences

At XXIV SCAR, Delegates proposed to close the Group of Specialists on Southern Ocean Ecology, subject to the agreement of SCOR as co-sponsor. This agreement was received subsequently and the closure implemented. The Group had operated successfully for 10 years and had established the Ecology of the Antarctic Sea-Ice Zone (EASIZ) programme which has now entered its operational phase. The EASIZ programme will continue as a constituent programme of the SCAR Global Change Programme. The Group had highlighted the need for closer liaison with SCOR and SCAR is now investigating with SCOR and IOC the best way to achieve this.

The Working Group on Biology formally established a Subcommittee on Evolutionary Biology of Antarctic Organisms. The Subcommittee will assist in developing and executing integrated and coordinated research programmes on evolutionary biology and biodiversity of Antarctic organisms.

The Group of Specialists on Seals held a workshop on developing standard methods for census techniques for Antarctic seals. The Antarctic Pack Ice Seals (APIS) programme is planning a coordinated census of seals in all pack ice regions during the 1998-99 Antarctic field season. The census of seals will be performed from ships, with and without helicopter support, and by fixed-winged aircraft. In addition to the census, data on ice characteristics as well as the other biological components of the ecosystem will also be collected.

The Bird Biology Subcommittee has held two workshops, on quantitative methods for studies of seabirds-at-sea and on alternative marking methods for penguins. The main conclusion of the latter was that conventional flipper-banding studies should only be embarked upon with great care. The Subcommittee noted that South Africa was no longer able to provide financial support to the Central Data Bank for Antarctic Bird Banding; the Subcommittee resolved to request funding from SCAR. The Subcommittee also noted with considerable concern the downward population trends in albatrosses and some penguins to the extent that some species were in the process of being recognised as under global threat, in terms of IUCN's Red List criteria.

The Biological Investigations of Terrestrial Antarctic Systems (BIOTAS) Programme is now a constituent programme of the SCAR Global Change Programme. Two workshops, on algal taxonomy and on field instrumentation, are planned for 1998.

The 7th SCAR Symposium on Antarctic Biology will be held at Canterbury University, Christchurch, New Zealand, 1-5 September 1998. The theme for the symposium is "Antarctic ecosystems: models for wider understanding".

APPENDIX 1: Membership of SCAR (March 1997)

<i>Full members</i>	<i>Date of admission to Associate Membership</i>	<i>Date of admission to Full Membership</i>
Argentina		3 February 1958
Australia		3 February 1958
Belgium		3 February 1958
Chile		3 February 1958
France		3 February 1958
Japan		3 February 1958
New Zealand		3 February 1958
Norway		3 February 1958
South Africa		3 February 1958
Russia (formerly Union of Soviet Socialist Republics)		3 February 1958
United Kingdom		3 February 1958
United States of America		3 February 1958
Germany (incl. former German Democratic Republic)		22 May 1978
Poland		22 May 1978
India		1 October 1984
Brazil		1 October 1984
China		23 June 1986
Sweden	(24 March 1987)	12 September 1988
Italy	(19 May 1987)	12 September 1988
Uruguay	(29 July 1987)	12 September 1988
Spain	(15 January 1987)	23 July 1990
Netherlands	(20 May 1987)	23 July 1990
Korea, Republic of	(18 December 1987)	23 July 1990
Finland	(1 July 1988)	23 July 1990
Ecuador	(12 September 1988)	15 June 1992

Associate Members

Peru	14 April 1987
Switzerland	16 June 1987
Estonia	15 June 1992
Pakistan	15 June 1992
Canada	5 September 1994
Ukraine	5 September 1994
Bulgaria	5 March 1995

ICSU Union Members

IGU	International Geographical Union
IUBS	International Union of Biological Sciences
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
IUPAC	International Union of Pure and Applied Chemistry
IUPS	International Union of Physiological Sciences
URSI	Union Radio Scientifique Internationale

APPENDIX 2: SCAR Executive Committee (March 1997)

President

Professor A C Rocha-Campos
Instituto de Goesciencias, Universidade de São Paulo,
Rua do Lago 562, CEP 05508-900, São Paulo SP, Brazil
Telephone: + 55 11 818 4125 Fax: + 55 11 818 4129
E-mail: acrcampo@usp.br

Past President

Dr R M Laws CBE ScD FRS
SCAR Secretariat, Scott Polar Research Institute,
Lensfield Road, Cambridge, CB2 1ER, United Kingdom
Telephone: + 44 1223 362061 Fax: +44 1223 336549

Vice-Presidents

Professor O Orheim
Norsk Polarinstitutt, PO Box 5072 Majorstua
0301 Oslo, Norway
Telephone: + 47 2 295 9500 Fax: + 47 2 295 9501
E-mail: orheim@npolar.no

Professor P G Quilty
Australian Antarctic Division, Channel Highway, Kingston
Tasmania 7050, Australia
Telephone: + 61 02 323305 Fax: + 61 02 323351

Dr R H Rutford
Geosciences Program, The University of Texas at Dallas, PO Box 830688
MS: FO 21, Richardson, TX 75083-0688, United States of America
Telephone: + 1 972 883 6470 Fax: + 1 972 883 2537
E-mail: rutford@utdallas.edu

Secretary

Dr F J Davey
Institute of Geological and Nuclear Sciences, PO Box 1320
Wellington, New Zealand
Telephone: + 64 4 473 8208 Fax: + 64 4 471 0977
E-mail: fred.davey@gns.cri.nz

Executive Secretary

Dr P D Clarkson
SCAR Secretariat, Scott Polar Research Institute,
Lensfield Road, Cambridge, CB2 1ER, United Kingdom
Telephone: + 44 1223 362061 Fax: + 44 1223 336549
E-mail: execsec@scar.demon.co.uk

APPENDIX 3: SCAR Chief Officers (March 1997)

WORKING GROUPS

Biology

Dr P D Shaughnessy (Chairman), CSIRO Division of Wildlife and Ecology, PO Box 84, Lyneham, ACT 2602, Australia.

Professor S Chown (Secretary), Department of Zoology and Entomology, Pretoria University, Pretoria 0002, South Africa.

Dr J Cooper (Chairman of the Bird Biology Subcommittee), Percy Fitzpatrick Institute of African Ornithology, University of Cape Town, Rondebosch 7700, South Africa.

Professor B Battaglia (Chairman of the Subcommittee on Evolutionary Biology of Antarctic Organisms), Dipartimento di Biologia, Università degli Studi Padova, Via Trieste 75, 35121 Padova, Italy.

Geodesy and Geographic Information

Mr A Clarke (Secretary), Australian Government Analytical Laboratories, PO Box 65, Belconnen, ACT 2616, Australia.

Geology

Professor J R Krynauw (Secretary), Department of Geology and Applied Geology, University of Natal, Private Bag X10, Dalbridge 4014, South Africa.

Glaciology

Professor Dr H Miller (Chairman), Alfred-Wegener-Institut für Polar und Meeresforschung, Columbusstraße, Postfach 120161, D-2850 Bremerhaven, Germany.

Human Biology and Medicine

Dr D J Lugg (Chairman), Antarctic Division, Channel Highway, Kingston, Tasmania 7050, Australia.

Physics and Chemistry of the Atmosphere

Dr D H Bromwich (Chairman), Byrd Polar Research Center, The Ohio State University, 125 South Oval Mall, Columbus OH 43210-1308, USA.

Solid-Earth Geophysics

Dr D Damaske (Secretary), Bundesanstalt für Geowissenschaften und Rohstoff (BGR), PO Box 510153, D-300 Hanover 51, Germany.

Solar-Terrestrial and Astrophysical Research

Professor A D M Walker (Chairman), Department of Physics, University of Natal, King George V Avenue, Durban 4000, South Africa.

Joint Working Groups on Geology and Solid-Earth Geophysics

Dr A K Cooper (Chairman of the ANTOSTRAT Programme), Pacific Branch of Marine Geology, US Geological Survey, MS 99, 345 Middlefield Road, Menlo Park, CA 94025, USA.

GROUPS OF SPECIALISTS

Seals

Dr D B Siniff (Convenor), Ecology Building, University of Minnesota, 1987 Upper Buford Circle, St Paul, MN 55108, USA.

Dr J L Bengtson (Secretary), National Marine Mammal Laboratory, NOAA/NMFS, 7600 Sand Point Way NE, Seattle, WA 98115, USA.

Antarctic Environmental Affairs and Conservation

Dr D W H Walton (Convenor), British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 0ET, United Kingdom.

Global Change and the Antarctic

Professor C R Bentley (Convenor), Geophysical and Polar Research Center, University of Wisconsin, Weeks Hall, 1215 West Dayton Street, Madison, Wisconsin 53706-1692, USA.

Dr I D Goodwin (Programme Coordinator), SCAR Global Change Programme Office, Antarctic CRC, GPO Box 252C, Hobart 7001, Tasmania, Australia.

SCAR-COMNAP Joint Committee on Antarctic Data Management

Mr A Clarke (SCAR Representative), Australian Government Analytical Laboratories, PO Box 65, Belconnen, ACT 2616, Australia.

APPENDIX 4: Acronyms and Abbreviations

AGONET	Antarctic Geospace Observatory Network
AMD	Antarctic Master Directory
ANTOSTRAT	Antarctic Offshore Stratigraphy Programme
ANTIME	Antarctic Ice Margin Evolution
APIS	Antarctic Pack Ice Seals programme
ASPECT	Antarctic Sea-Ice Processes and Climate
ATCM	Antarctic Treaty Consultative Meeting
BIOTAS	Biological Investigations of Terrestrial Antarctic Systems
COMNAP	Council of Managers of National Antarctic Programmes
DIF	Directory Interchange Format
EASIZ	Ecology of the Antarctic Sea-Ice Zone
FRISP	Filchner-Ronne Ice Shelf Programme
FROST	First Regional Observing Study of the Troposphere
GLASS	Glaciology of the South Shetland Islands programme
GLOCHANT	Group of Specialists on Global Change and the Antarctic
GOSEAC	Group of Specialists on Environmental Affairs and Conservation
IASC	International Arctic Science Committee
ICAIR	International Centre for Antarctic Information and Research
IGBP	International Geosphere-Biosphere Programme
IOC	Intergovernmental Oceanographic Commission
IPAB	International Programme for Antarctic Drifting Buoys
ISMAS	Ice Sheet Mass Balance and Sea-level
ITASE	International Trans-Antarctic Scientific Expeditions
IUCN	World Conservation Union
ODP	Ocean Drilling Program
PICE	Palaeoenvironments from Ice Cores
SCAR	Scientific Committee on Antarctic Research
SCOR	Scientific Committee on Oceanographic Research
SDLS	Seismic Data Library System
START	System for Analysis, Research and Training
UV	Ultra-violet
VLF	Very Low Frequency
WAIS	West Antarctic Ice Sheet
WCRP	World Climate Research Programme
WMO	World Meteorological Organization

APPENDIX 5: Recent SCAR Publications

The *SCAR Bulletin* continues to be published quarterly within *Polar Record* and No 125, April 1997, included the Report of the XXIV SCAR Delegates Meeting. *SCAR Reports* and various newsletters are published irregularly as required.

The following volume was published in 1996:

Monitoring of Environmental Impacts from Science and Operations in Antarctica. M C Kennicutt II, J C A Sayers, D W H Walton and G Wratt (compilers). Cambridge, SCAR, x + 124 pages; ISBN 0 948277 17 3; 1996.

APPENDIX 6: Papers Scheduled to be Tabled at XXI ATCM

<i>Paper Subject Type</i>		<i>Submitted by</i>	<i>Agenda Item</i>
Info	SCAR Report to XXI ATCM	SCAR	5.a)v)
WP	Guide to the Preparation of Management Plans	SCAR	6.f)
Info	Management of Antarctic Data	SCAR-COMNAP	11.
Info	SCAR Global Change Programme	SCAR	12.
Info	Scientific Research in the Antarctic	SCAR	12.
Info	Biological Diversity in the Antarctic	SCAR	12.
WP	Monitoring of Environmental Impacts	SCAR-COMNAP	14.
WP	State of the Antarctic Environment Report	SCAR	14.

STATEMENT BY THE CCAMLR OBSERVER AT THE XXIst ATCM

CCAMLR welcomes the opportunity to inform the Consultative Parties of recent developments in its work.

2. Among recent important developments in the work of CCAMLR are the opening of a number of new fisheries in the Convention Area and the introduction of a common and integrated management approach for these fisheries, further improvements to the System of Inspection and the Scheme of International Scientific Observation, new initiatives aimed at reducing the incidental mortality of seabirds in longline fisheries and also in relation to monitoring marine debris in Antarctic waters. These and other activities are briefly described below.

MEMBERSHIP

3. Since the XXth ATCM Uruguay has become a full Member of the Commission. CCAMLR now comprises 23 Members and six Acceding States. The Republic of Namibia has expressed interest in participating in the work of CCAMLR, and its Ministry of Fisheries and Marine Resources is presently studying the prospect of Namibia's acceding to the Convention. A map of the CCAMLR Convention Area and a list of current CCAMLR Members and Acceding States are attached (Appendices A and B).

FISHERIES IN THE 1995/96 AND 1996/97 SEASONS

Krill

4. The reported catch of krill (*Euphausia superba*) in the 1995/96 season totalled 95 053 tonnes, which represents an approximate decrease of 20 percent compared with the total taken in the 1994/95 season (118 714 tonnes). The 1995/96 catches were almost exclusively taken by Japan, Poland and Ukraine, for the most part in Subareas 48.1 and 48.3.

5. An acoustic survey of krill stocks in the Eastern Indian Ocean sector of the Convention Area (Division 58.4.1), carried out by Australia, gave a biomass estimate of 6.67 million tonnes. Based on this estimate, a precautionary annual catch limit of 775 000 tonnes of krill was established by the Commission for this division.

6. In 1996/97, fishing for krill is also open in Area 48 (Atlantic Antarctica) and Division 58.4.2 (Sodruzhestva Sea and Prydz Bay), with precautionary catch limits of 1.5 million and 445 thousand tonnes respectively.

Other Fisheries

7. The total reported catch of finfish in the Convention Area in the 1995/96 season was 8 826 tonnes, which was less than that taken in the 1994/95 season. The catches comprised mainly (99 percent) Patagonian toothfish (*Dissostichus eleginoides*). The majority of catches were taken by Chile and France in Subarea

48.3 and Division 58.5.1 respectively. Six other Members reported catches of Patagonian toothfish - Argentina, Bulgaria, Japan, Republic of Korea, Russia, Ukraine and the United States. No catches were reported from the four fisheries for other finfish species which were open and for which total allowable catches (TACs) were allocated.

8. Reported crab catches from the experimental fishery for *Paralomis spinosissima* in Subarea 48.3 totalled 497 tonnes. The company involved in this fishery does not intend to continue its operations during the 1996/97 season.

9. A catch of 52 tonnes of squid, *Martialia hyadesi*, was reported from Subarea 48.3 during a seven-day experimental fishing survey. This represents the first significant catch of squid in the Convention Area.

10. Several notifications of intent to initiate new fisheries in the 1996/97 season were received and considered by the Commission and the Scientific Committee. A set of conservation measures establishing precautionary catch limits and other fishing regulations was adopted by the Commission for the 1996/97 season in respect of new fisheries for:

- Toothfish (*Dissostichus eleginoides* and *D. mawsoni*) in Statistical Division 58.4.3;
- Toothfish (*Dissostichus eleginoides* and *D. mawsoni*) in Statistical Subarea 48.6;
- Toothfish (*Dissostichus eleginoides* and *D. mawsoni*) in Statistical Subareas 88.1 and 88.2;
- Toothfish (*Dissostichus eleginoides* and *D. mawsoni*) in Statistical Subareas 58.6 and 58.7 and in Statistical Division 58.4.4;
- Deep-water finfish species in Statistical Division 58.5.2; and
- Squid (*Martialia hyadesi*) in Subarea 48.3.

11. Some of these fisheries have already commenced and others are about to do so. The data which Members are required to submit from these fisheries include five-day or ten-day catch and effort reports and also monthly fine-scale effort and biological data reports.

MANAGEMENT OF NEW FISHERIES IN THE CONVENTION AREA

12. During the last few years the Commission has developed and implemented a number of conservation measures for new and exploratory fisheries.

13. The purpose of these measures is to obtain information from the very beginning of the fishery in order to evaluate its potential and geographical distribution, and its impact on target as well as dependent and related species. This information provides a basis for the development of data collection and research/fishery operation plans for the 'exploratory' stage of a fishery. The above-mentioned measures aim to prevent exploratory fishing from expanding faster than the acquisition of information necessary to ensure that the fishery can and will be conducted in accordance with precautionary principles for the conservation of resources.

14. For all areas where new fisheries will operate during the 1996/97 season, particularly those targeting Patagonian toothfish, a common and integrated approach to fisheries management is being developed. A new fishery shall be deemed to have demonstrated commercial potential if a total catch in this fishery reaches a certain limit. For Statistical Division 58.4.3 and Subareas 88.1 and 88.2 this limit is 1 980 tonnes, while for Statistical Subareas 58.6, 58.7 and Division 58.4.4 it is 2 200 tonnes. Once a total catch reaches the catch limit, the fishery for this subarea or division shall be closed. Any further management of this fishery will be conducted in accordance with regulations applied to exploratory fisheries.

15. As part of the development a new regulation, in addition to precautionary limits, was introduced for new fisheries for toothfish during the 1996/97 season. This regulation requires that fishing in any fine-scale rectangle (0.5° latitude by 1.0° longitude) shall cease when the reported catch reaches 100 tonnes. Fishing in any fine-scale rectangle is restricted to one vessel at any particular time. This ensures the distribution of catch and fishing effort over a wide geographic area in a way that should reduce the risk of localised over-fishing and augment the collection of data for stock assessment.

16. At last year's meeting, the Commission decided that the above-mentioned approach to new fisheries may require review in order to ensure effective management of new fisheries, and their subsequent development and the accrual of information from them during their expository phases. The need for regular scientific reviews of fisheries development was also recognised.

17. The Commission will continue the development of a common and integrated approach to new and expository fisheries as a matter of priority. The establishment of a procedure for resuming lapsed or closed fisheries would also be a part of this development.

CCAMLR SCHEME OF INTERNATIONAL SCIENTIFIC OBSERVATION

18. The placement of international scientific observers on board commercial fishing vessels of CCAMLR Members in the Convention Area has become a widely-used practice since the introduction of the Scheme of International Scientific Observation in 1993.

19. During the 1995/96 season, international scientific observers were placed on 16 vessels which were fishing for Patagonian toothfish in Subarea 48.3. The data collected by the observers were submitted to CCAMLR.

20. The quantity and quality of data deriving from this scheme are extremely high and have enabled stock assessments to be improved considerably. The data also proved particularly useful in assessing the effectiveness of measures taken to mitigate seabird by-catch in longline fisheries.

21. The Scheme operates on the basis of bilateral arrangements between Members designating and receiving observers. For the following fisheries several Conservation Measures require that a scientific observer designated under the Scheme, or, in some cases, a national observer be placed on board each fishing vessel:

- All longline fisheries for Patagonian toothfish, *Dissostichus eleginoides*;
- Fishery for grey rockcod, *Lepidonotothen squamifrons* in Statistical Division 58.4.4; and
- All new fisheries (ie. those operating under Conservation Measure 31/X).

22. Following a decision at CCAMLR-XV, each Member nominated a technical coordinator for the national observer program who is responsible for advance notification to the Secretariat of all observers designated and the duration of their programs, the timeliness of the submission of reports on observations, and answering data queries from the Secretariat.

23. In order to assist national technical coordinators and scientific observers in planning observation programs and recording data, a new revised edition of the *Scientific Observers Manual* was prepared. In addition to guidelines for scientific observation, this edition contains a set of logbook forms with instructions for recording the results of observations. The Manual will be published in all four official languages of the Commission later this year.

ECOSYSTEM MONITORING PROGRAM

24. The work of the Scientific Committee on the conceptual model of ecosystem monitoring and management has mainly been focused this year on improving our understanding of the processes and linkages between harvested species, dependent species, the environment and the fishery.

25. Progress has been made on the analysis of biological indices, as part of the CCAMLR Ecosystem Monitoring Program (CEMP), particularly regarding the identification of anomalies and trends. Work is continuing on the qualitative presentation of CEMP results and means of incorporating them into the CCAMLR management strategy for Antarctic marine living resources.

26. The Scientific Committee has approved a number of new standard techniques for CEMP which relate to the attachment of instruments, data collection using time-depth recorders and methods for monitoring petrels.

PREVENTION OF INCIDENTAL MORTALITY OF SEABIRDS DURING FISHING OPERATIONS

27. Over the past few years a significant decline has been recorded in populations of several species of seabirds, particularly albatrosses. This decline has been widely attributed to longline fishing operations. Seabirds feed on longline baits, become hooked and drown. CCAMLR has joined the worldwide effort to tackle this problem.

28. The Scheme of International Scientific Observation allows for the collection of data required to assess the problem of incidental mortality of seabirds and the effectiveness of CCAMLR's mitigation measures.

29. CCAMLR has initiated the exchange of information on incidental mortality with a number of international fisheries organisations. In particular, CCAMLR was pleased to note the establishment by the Commission for the Conservation

of Southern Bluefin Tuna (CCSBT) of the Working Group on Ecologically Related Species (ERSWG), whose terms of reference include investigating interactions between tuna longline fisheries and seabirds. CCAMLR has encouraged other international organisations with similar responsibilities to follow this example.

30. As part of its continuing efforts to minimise seabird mortality in longline fisheries, in 1996 CCAMLR published an educational book for fishermen, *Fish the Sea not the Sky*, which explains how to avoid by-catch of seabirds when fishing with bottom longlines. Funds were provided for this purpose by the Australian Antarctic Foundation.

31. CCAMLR Members have undertaken to make every possible effort to ensure that this book will be made available on board every fishing vessel under their flags in the Southern Ocean. The book is also being widely distributed to many international fisheries organisations as well as international and national agencies with a vested interest in the protection of seabirds and fisheries management.

32. The CCAMLR Coordinating Group on Incidental Mortality of Seabirds Arising from Longline Fisheries (WG IMALF) continues to work intersessionally.

MARINE DEBRIS

33. The results of several surveys aimed at monitoring the incidence of marine debris in the Convention Area have been reported. At the last year's meeting, the Commission expressed its concern that current survey data indicate an increase in the amount of marine debris in the Southern Ocean and that fishing vessels may well be the main source of such pollution.

34. The Commission has decided to undertake an educational initiative to counteract this trend. The Secretariat was requested to prepare, in consultation with its Members, appropriate materials to form the basis of a campaign to reduce marine debris in the area. An ad hoc working group has been established to undertake this task by correspondence, and the Secretariat has also approached other international and national organisations with similar interests to request for assistance.

SYSTEM OF INSPECTION

35. In the 1995/96 season, thirty-two inspectors were designated by Members in accordance with the CCAMLR System of Inspection, and five inspections were carried out. All five inspections demonstrated general compliance with conservation measures, although some infringements were noted.

36. The Commission also considered information provided by Members in accordance with Articles X and XXII of the Convention. This information included Members' reports on vessels of Contracting Parties and States which are not Party to the Convention being sighted in the Convention Area.

37. Of extreme concern to the Commission was further evidence of illegal fishing activities in the Convention Area. In accordance with Members' reports

received in 1996 and 1997, the extent of illegal fishing activities in the Convention Area poses a serious problem. The reports received from Members also indicated another potentially serious problem, that of the reflagging of vessels.

38. The presence of vessels of non-Members of CCAMLR fishing in the Convention Area has also been considered by the Commission. These vessels are not necessarily bound by CCAMLR Conservation Measures, such as those which provide for the submission of data on catches. As agreed by the Commission, its Chairman has written to the Governments of the Flag States of such vessels to convey a firm message that such activities undermine the effectiveness of CCAMLR's conservation approach.

39. In order to increase the effectiveness of the CCAMLR System of Inspection, Members have been requested by the Commission to provide information on all fishing vessels (i) which are on its register and have been renamed; (ii) which have assumed registration; or (iii) which have left their registration and have been reflagged elsewhere.

40. The Commission has also recognised that the effectiveness of the System of Inspection can be improved by obtaining information on the position of vessels as well as on their movements in and out of the Convention Area and between CCAMLR Statistical Areas.

41. Several CCAMLR Members have already established satellite-based monitoring of their vessels in waters under their own national jurisdictions or conducted pilot studies on the evaluation of different vessel monitoring systems (VMS). Some have decided to use their own national VMS to monitor their flag vessels in the Convention Area and to communicate during the intersessional period on the operation of these systems.

42. Further progress was made this year towards increasing the ability of Inspectors to exercise their duties. The Commission adopted two amendments to the System of Inspection dealing with the submission of supplementary information and reports by inspectors, and also with 'indicators of fishing' covering all methods of fishing currently in use in the Convention Area.

COOPERATION WITHIN THE ANTARCTIC TREATY SYSTEM

43. The report of the CCAMLR Observer at the XXth ATCM was discussed by the Commission. The Scientific Committee also considered the report of its observer at the XXIVth meetings of SCAR. In reviewing the numerous items of interest to CCAMLR presented in these reports, the following observations were made:

- (i) The Commission is awaiting the ATCM's advice on the precise definition of 'marine area' as referred to in Annex V of the Protocol on the Environmental Protection to the Antarctic Treaty; and
- (ii) The disbandment of the SCAR/SCOR Group of Specialists on Southern Ocean Ecology could substantially reduce the scope of collaboration work between SCAR scientists and the CCAMLR

Working Group on Ecosystem Monitoring and Management
(WG-EMM).

44. It was noted that SCAR made a formal request to CCAMLR for information on planned research cruises involving harvested commercial species (Recommendation SCAR XXIV-2). The CCAMLR Secretariat has arranged for the required information to be sent to SCAR via e-mail for incorporation into its planned electronic bulletin board.

45. The Commission also noted a draft proposal of SCAR to ATCM-XXI on the preparation of the state-of-the-environment report to the Antarctic Treaty's Committee for Environmental Protection. The Commission considered that no action on this matter should be taken until it had been clarified by the ATCM. It was decided, however, that the Commission should consult with the Scientific Committee before any CCAMLR involvement in the compilation of such a report is agreed.

46. In the 1996/97 intersessional period, CCAMLR Members did not make any further proposals for protecting CEMP sites. At present, two CEMP sites located on the South Shetland Islands (Seal Islands and Cape Shirreff) are protected in accordance with CCAMLR's existing procedures. In accordance with CCAMLR regulations, the management plan for the Seal Islands CEMP Sites is to be reviewed this year.

COOPERATION WITH OTHER ORGANISATIONS

47. CCAMLR continues to be active in promoting wider awareness of its objectives and work within relevant international organisations and forums. During the 1995/96 and 1996/97 intersessional periods CCAMLR was represented at meetings of a number of international organisations. In addition to SCAR, observers from ASOC, CCSBT, FAO, IOC, IUCN, IWC and SCOR also attended the Fifteenth Meeting of CCAMLR.

48. At its Fifteenth Meeting, the Scientific Committee proposed that closer links be developed between the CCAMLR Working Group on Fish Stock Assessment (WG-FSA) and CCSBT's Working Group on Ecologically Related Species (ERSWG) in relation to issues of fishery-seabird interactions. As the result of this initiative, a reciprocal arrangement is being put in place for representatives from both organisations to participate in the meetings of the WG-FSA and ERSWG.

49. Cooperation with IWC and IUCN was further strengthened by inviting these organisations to send observers to the 1997 meeting of the CCAMLR Working Group on Ecosystem Monitoring and Management (WG-EMM).

MEMBERS OF CCAMLR (as of April, 1997)

Argentina
Australia
Belgium
Brazil
Chile
European Community
France
Germany
India
Italy
Japan
Korea, Republic of
New Zealand
Norway
Poland
Russian Federation
South Africa
Spain
Sweden
Ukraine
United Kingdom of Great Britain and Northern Ireland
United States of America
Uruguay

**STATES PARTY TO THE CONVENTION BUT NOT MEMBERS OF
THE COMMISSION**

Bulgaria
Canada
Finland
Greece
Netherlands
Peru

COMNAP REPORT TO XXI ATCM, MAY 1997

1. INTRODUCTION

1.1 National programs of science and logistics have continued in Antarctica through another operating season. The 1996/97 summer was an overall successful season with only minor casualties and no fatalities recorded. The activities on the Atlantic side of the continent were blessed with good weather most of the time, but ice conditions were very difficult. Several cruises were delayed or had to be rerouted because of severe ice in Weddell Sea area. On the whole the scientific programmes were carried out according to plan. Some national operators were also involved in major construction works such as improving waste water treatment systems or replacing energy generators with more efficient and environmentally less harmful systems. The new South African base, SANAE IV at Vesleskarvet, was opened in the 1996/97 season.

There has been a high degree of international cooperation in the field both logistically and in the scientific programmes. Today it is a rule rather than an exception that scientists from two or more nations work together in Antarctica. In the spirit of the discussions at ATCM XX there is also a closer interaction developing with the tourist operators which could make operations in the future safer and more efficient for both sides. A major effort by the operators has been devoted to the implementation of environmental measures, assessments as well as monitoring, and the introduction of more modern and better technology. In all of these activities close contacts among the national operators on a practical level has been of utmost importance.

1.2 The national operators have continued to work together in many areas of common interests, including the topics in this report. The annual meetings of COMNAP, the Council of Managers, and SCALOP, the Standing Committee on Antarctic Logistics and Operations, provide the essential opportunity for direct personal contact and association, as well as the forum and basis for collective efforts. In August 1996 the eighth meeting of COMNAP/SCALOP was held in Cambridge in conjunction with XXIV SCAR. Members from twenty-five national programs participated. The Seventh Symposium on Antarctic Logistics and Operations was included, together with a trade exhibit. The current membership of COMNAP/SCALOP appears on the last page of this report. The 1997 meeting COMNAP IX, will be held in Cape Town in August.

1.3 This report to the XXIst ATCM is submitted by COMNAP pursuant to agenda topic 5, Operation of the Antarctic Treaty System; Reports, and to Recommendation XIII-2.

2. SCIENCE SUPPORT

The COMNAP reports to ATCM in 1995 and 1996 called attention to several major scientific projects that feature international cooperation in Antarctica. A brief report of current progress is given along with mention of other similar projects selected from among many possible examples.

2.1 In December 1996 ice core drilling operations at Dome C were commenced as part of EPICA, the European Project of Ice Coring in Antarctica. The drilling will be resumed next season. Meanwhile, EPICA site surveys have been successfully accomplished in Dronning Maud Land, including ground traverses and airborne radar measurements. EPICA engages most of the European operators.

Another major international programme is the Cape Roberts Project. The goal is to recover deep sediment cores for the sea floor in the southwestern Ross Sea with the sea ice being used as a platform. The planned drilling was not possible during the 1996-97 season, as a result of unusual sea ice conditions. Some equipment testing was carried out on site.

The international team at Vostok has continued the deep ice core drilling. The depth of the hole has now reached 3523 metres, illuminating the paleoclimate record 500 thousand years back in time. Scientists have continued to examine the indications of a subglacial lake at Vostok. It is located at a depth of 3750 metres below the ice surface with a water depth of approximately 650 to 700 metres. Further studies are planned for next season.

The AMANDA Project (Antarctic Muon and Neutrino Detector Array) has so far successfully installed 382 optical modules in 14 long strings buried in the ice at depths from 800 to 2200 metres at the South Pole. Scientists from several countries are collaborating in this unique neutrino telescope project which is already producing valuable data.

2.2 The scientific projects mentioned above involve international cooperation both in science and logistics on a big scale. In addition, there are numerous cases where scientists from different countries are working together or contributing to a common goal. Typically such coordination is required for measurements and monitoring programmes that cover big geographical areas and run over long periods of time. Stratospheric ozone measurements, seismic profiling, monitoring of seal populations and auroral radar experiments are just a few illustrations of areas where such collaboration has taken place during the previous season. It is especially in the Peninsula area that many nations are working closely together.

It is also worth noting that the cooperation of Antarctic managers has facilitated the involvement and contribution from new nations with relatively limited operations in Antarctica. The Netherlands are contributing to Antarctic science with primary logistics from other European operators. Another example is Ukraine which has taken over the former UK station Faraday, now named Vernadsky Station.

2.3 National programs are involved in the science projects of SCAR, especially through the work of individual investigators. COMNAP continues to work with SCAR toward the goal of making international cooperation in Antarctic science more efficient. Again in 1996, when the annual meeting of COMNAP was held in conjunction with SCAR, there was a special session at which the SCAR Chief Officers briefed the COMNAP/SCALOP members on major programs that depend on substantial international cooperation and logistic support.

2.4 1996/97 was an important year for infrastructure development in Antarctica. The new South African station SANAE IV was inaugurated. A new waste water treatment plant was installed at Neumeyer and a new facility, the Bonner Laboratory, was opened at Rothera. A new energy system based on butane gas has been installed at the Swedish station Wasa. These are just a few examples.

As mentioned above, the ice conditions in the Weddell Sea region turned out to be exceptionally difficult in the 1996/97 season. It affected the science programmes and hampered logistic support especially for stations far south in the Weddell Sea, such as Halley and Belgrano II. In unusual situations like this, close direct contacts between managers, sharing observations about weather and ice and helping each other in unforeseen logistic difficulties become extremely valuable.

3. OPERATIONS, LOGISTICS AND TECHNOLOGY

3.1 The 1996 meetings in Cambridge included special sessions of SCALOP where management officials and other specialists in logistics and operations shared experience and discussed common interests. The growth and extent of bilateral and multilateral collaboration in science support and logistics was noted. SCALOP is doing a special survey to show in greater detail the current level of involvement among the national operators.

3.2 The SCALOP Working Group on Antarctica Air Operations continues to meet annually to share information and to review the implementation of measures adopted by ATCM Rec. XV-20 to improve air safety in Antarctica. The Second Edition of The Antarctic Flight Information Manual, in its improved size and printing style, was published in November 1995. Amendment No. 7 was distributed in December 1996.

3.3 The Seventh Symposium on Antarctic Logistics and Operations was conducted by SCALOP during the XXIV SCAR/COMNAP VIII meetings in Cambridge, England, in August 1996. This two-day event successfully served to provide a forum for exchanges of information, discussion and the presentation of new ideas, best available techniques (BATs) and achievements in a wide range of Antarctic activities. Twenty-eight papers were presented that had been selected from sixty submitted abstracts, according to the six topic themes as follows:

- Remote Sensing and the Use of Satellites for Science Support;
- Deep Drilling Technologies;
- Significant and Proven Developments in Operations, Logistics and Science Support;
- Energy Conservation;
- Best Available Technologies for Waste Management and the Protection of the Antarctic Environment;
- Science Operation Planning and Resource Allocation.

The Symposium attracted a large audience including many SCAR participants. The Symposium Proceedings are in the process of being published.

3.4 There was a four-day commercial trade exhibition at Cambridge in association with the SCALOP Seventh Symposium. As was previously reported, there is a distinct and growing industry related to Antarctic (polar) operations and logistics. At Cambridge the trade exhibits included more than 30 international companies representing:

- Shipyards, marine support and shipping agents;
- Aviation engineering and operations;
- Vehicle and sledge manufacturers;
- Special mechanical and electronic engineering designers and fabricators;
- Book publishers;
- Clothing manufacturers;
- Building and temporary shelter manufacturers;
- Logistic support providers and contractors;
- Rope manufacturers;
- Manufacturers of waste management equipment and machinery.

4. ENVIRONMENTAL MANAGEMENT AND IMPLEMENTATION

4.1 COMNAP reviewed its environmental management activities at its annual meeting in Cambridge in August 1996. To encourage the sharing of environmental management information between national programmes, it established an Antarctic Environmental Officers Network (AEON) and a COMNAP Environmental Coordinating Group.

AEON is a network of Antarctic programme environmental officers and managers. The objectives of the network are to:

- Exchange information and ideas about practical and technical environmental issues in Antarctica;
- Promote the mutual understanding and practical application of the Environmental Protocol;
- Respond to requests from COMNAP for advice on environmental issues.

The Environmental Coordinating Group provides a linkage between AEON and COMNAP, and is the steering group for COMNAP environmental interests such as responding to ATCM requests and liaising with SCAR.

The activities undertaken in this area in the past 12 months have included:

- The establishment of an AEON homepage of the World Wide Web;
- Working with SCAR on the preparation of a report to ATCM on the environmental monitoring workshops and follow-up action;
- Preparation of a review of past and present monitoring activities for presentation to the ATCM as an Information Paper;
- Preliminary work on the development of an Antarctic environmental monitoring handbook.

Consideration is being given to running a workshop(s) on practical implementation of environmental monitoring and environmental impact

assessment. These would follow on from the development of the monitoring handbook and encourage exchange of experience built up in EIA since the signing of the Antarctic Environmental Protocol.

4.2 A Working Paper presented jointly by SCAR and COMNAP on Monitoring of Environmental Impacts from Science and Operations in Antarctica reports on the conclusions drawn from the results of two workshops, and provides several recommendations for further steps to be taken.

5. INFORMATION MANAGEMENT

5.1 The Antarctic Master Directory (AMD) is now established at the International Centre for Antarctic Information and Research (ICAIR) in Christchurch, New Zealand. Data set descriptions about Antarctic scientific data are being entered into the AMD using the Directory Interchange Format (DIF) of the International Directory Network (IDN). A search interface to the AMD, based on the World Wide Web (WWW), is being developed by ICAIR and for those without access to the WWW alternative information products will be provided.

Following XXIII SCAR, 1994, SCAR and COMNAP issued a call to their members to establish National Antarctic Data Centres (NADCs). Together with AMD, the NADCs form the key component of the SCAR-COMNAP Antarctic Data Directory System (ADDS). Currently eight countries have formally designated NADCs and a further six NADCs have been informally identified. An inaugural NADC Managers' Workshop will be held during the first week of XXI ATCM for the purpose of training the national data managers in the technical aspects of operating within the AMD framework. The workshop will mark the transition of the AMD and NADC network into an operational system.

With the design of the ADDS and the establishment of the AMD, the SCAR-COMNAP ad hoc Planning Group on Antarctic Data Management has completed the tasks for which it was formed. Effective from April 1997, the Planning Group has been replaced by a SCAR-COMNAP Joint Committee on Antarctic Data Management (JCADM) to provide ongoing oversight in the area of Antarctic data management and the development of the AMD/ADDS.

5.2 AMEN

During the past year COMNAP has continued to develop the use of the home page on the Internet World Wide Web as the principal means of distributing documents and information. Since May of 1996, 15 Notices have been issued and posted on the website for access by members. Reports of meetings and draft documents for review have similarly been distributed.

The AMEN website includes an on-line reporting system. As previously reported, the Advance Exchange of Operational Information can be posted by each national program and edited as necessary to be maintained current.

The Antarctic Station Handbook has most recently been added as a second function of the on-line report part of the COMNAP website. A demonstration of the system and assistance to members in entering information into both of these on-line reports will be held in Cape Town during COMNAP IX in August 1997.

6. INTERACTION WITH TOURISM

6.1 During the past year the national program operators and the Antarctic tourism operators have continued expanding their practical cooperative relationship. At the August 1996 COMNAP meeting in Cambridge, a representative of IAATO addressed the COMNAP and SCALOP members and described some of the concerns by tour operators. In the discussion it was apparent that there are several areas of mutual concern and that a new initiative should be taken to provide a forum for additional discussion and exchange of experiences.

6.2 Members of the COMNAP Working Group met with IAATO members in New York on 21 March 1997. The meeting provided very useful and far-ranging discussion that included: improving the procedures for station visits, expanding the use of written material on research programs, a review of the current level and further opportunity for national program personnel to be transported or otherwise supported by tour vessels, and the present and future requirements for data collection. It was noted that the standard forms for advance notification and post-season reporting, that had been adopted by XX ATCM for a one year trial, were being used by tour operators.

6.3 COMNAP and IAATO representatives have proposed to continue the pattern of two meetings each year; during the second half of March to focus on the experiences of the season just completed, and in July at a special session of the annual IAATO meeting.

COUNCIL OF MANAGERS OF NATIONAL ANTARCTIC PROGRAMS

Officers

CHAIRMAN: Anders Karlqvist (Sweden)

Members of the Executive Committee

MEMBER: Oscar Pinochet de la Barra (Chile)

MEMBER & CHAIRPERSON ELECT: Gillian Wratt (New Zealand)

CHAIRMAN: Erick Chiang (United States)
(Standing Committee on Antarctic Logistics and Operations)

EXECUTIVE SECRETARY: Al Fowler (to October 1997)
Jack Sayers (from October 1997)

Secretariat

To October 1997: c/- American Geophysical Union
2000 Florida Avenue NW
Washington, DC 20009
USA

From October 1997: Hobart, Australia

Members: MNAP (M); SCALOP (S)

Argentina	(M) Brig Gen Jorge Leal (M) Dr Carlos A Rinaldi (S) Mr Luis Fontana (S) Col Carlos Fernandez
Australia	(M) Mr Rex Moncur (S) Mr Jack Sayers
Belgium	(M) Mr Serge Caschetto
Brazil	(M) RADM Antonio Carlos da Camara Brandao (S) Capt Herz Aquino de Queiroz
Bulgaria	(M) Dr Christo Pimperev (S) Mr Nikolay Stanchev
Canada	(M) Dr Peter Suedfeld (S) Mr Olav Loken

Chile	(M) Amb Oscar Pinochet de la Barra (S) Eng Patricio Eberhard
China	(M) Mr Chen Liqi (S) Mr Jia Genzheng
Ecuador	(M) Capt Jose Olmedo (S) Capt Fernando Zurita Fabre
Finland	(M) Prof Pentti Malkki (S) Mrs Riitta Mansukoski
France	(M) Mr Pierre Lise (M) Dr Roger E Gendrin (S) Mr Patrice Godon
Germany	(M) Prof Max M Tilzer (S) Dr Heinz Kohnen
India	(S) Mr A K Chugh (M) Mr Prabh Das
Italy	(M) Dr Mario Zecchelli (S) Dr Antonino Cucinotta
Japan	(M) Mr Wataru Iwamoto (M) Dr Takeo Hirasawa (S) Dr Kazuyuki Shiraishi
Netherlands	(M) Dr Jan H Stel (S) Mr Raymond M L Schorno
New Zealand	(M) Ms Gillian Wratt (S) Mr Julian Tangaere
Norway	(M) Dr Olav Orheim (M) Dr Jan-Gunnar Winther (S) Dr Jan-Erling Haugland
Peru	(M) Amb Jorge Colunge (S) Mr Octavio Vizcarra
Poland	(M) Prof Stanislaw Rakusa-Suszczewski (S) Dr Seweryn M Zalewski
Republic of Korea	(M) Dr Byong-Kwon Park (S) Mr Kyung In Lee
Republic of South Africa	(M) Mr Dirk van Schalkwyk (S) Mr Richard N Skinner

Russia	(M) Mr Valery A Martyshchenko (M) Mr Valery V Lukin (S) Dr Valery Klovov
Spain	(M) Dr Juan Ramón Vericad (S) Mr Alberto Castejon
Sweden	(M) Prof. Anders Karlqvist (M) Dr Olle Melander (S) Mr Ulf Hedman
Ukraine	(M) Mr Poitr Ghozik (S) Mr Juriy Oskret
United Kingdom	(M) Mr Barry Heywood (M) Dr Dougal Goodman (acting) (S) Mr John Hall
United States	(M) Prof Cornelius W Sullivan (S) Mr Erick Chiang
Uruguay	(M) Gen Julio C Ruggiero (S) Col Av Manuel Vilar (S) Col Jacinto Acuna

**ANNEX F:
REPORTS OF
ATS (5b)**

ANNEX F: REPORTS OF ATS (5b)

REPORT OF THE ANTARCTIC AND SOUTHERN OCEAN COALITION (ASOC)

**Under Article III (2) of the Antarctic Treaty
XXI Antarctic Treaty Consultative Meeting**

Agenda Item 5(b)

Since the XX ATCM in Utrecht, ASOC and its member groups have participated in and monitored components of the Antarctic Treaty System. ASOC member groups have continued to provide educational and public information materials on the Antarctic Treaty System to government and legislative officials, scientists, professional groups, the media and the public in many countries.

PROTOCOL RATIFICATION

Our primary focus during the past year has been working with individual Parties to achieve ratification of the Protocol. More than five and a half years have now elapsed since the signing of the Protocol, and although the past year has seen two further ratifications, two Consultative Parties (Japan and Russia) still have not completed their ratification processes. We are aware that both countries have made substantial progress towards ratification, and the possibility exists that the Protocol will enter into force within four months. ASOC urges Japan and Russia to make the commitment necessary to complete ratification at the earliest possible date.

ASOC also calls upon those Non Consultative Parties which are active in Antarctica, or from which activities in Antarctica are organised, to ratify and implement the Protocol as soon as possible. In particular we recommend that Bulgaria, Canada and Ukraine take the necessary legal steps to bring the Protocol into force for their countries.

PROTOCOL IMPLEMENTATION

We urge all Parties to take the necessary steps at the ATCM to enable actual implementation of the Protocol during the 1997/98 Antarctic summer season. This means addressing the procedural issues necessary for Protocol implementation, including establishment of the Committee on Environmental Protection (CEP), ensuring that domestic regulations are fully operative, putting into place the process for reviewing environmental impact assessments, and implementing the Annex V provisions for establishing and managing protected areas.

The practical implementation of the Protocol is as important as the fact of ratification. Given the rapid increase in Antarctic tourism, ASOC reiterates the urgent need for adequate prior EIAs by operators and Parties and their review

by the TEWG/CEP. In particular, we are concerned about the possible cumulative impacts of such activities. A large proportion of tourist expeditions still proceed to Antarctica without any prior, let alone adequate, EIA. We are especially concerned since we understand that the number of tourists which will visit the Antarctic in the 1997/98 season is expected to exceed all previous seasons, including several large boats carrying in excess of 400 passengers. We do, however, acknowledge and welcome the fact that a number of tourist operators are producing EIAs, and anticipate that this number will increase now that the US has enacted domestic legislation which requires prior EIA for all activities.

In September, ASOC participated in the IUCN workshop on the Minimisation and Management of Cumulative Impacts in the Antarctic, which built on the results of the SCAR/COMNAP workshops on environmental monitoring. ASOC submits that the recommendations will be useful to the ATS as it continues to grapple with the need to address and take account of cumulative impacts when planning activities and preparing EIAs.

SCIENCE AND TECHNOLOGY

ASOC continues to focus significant attention and resources on science. ASOC scientists participated in the meetings of SCAR and some of its Groups, such as GOSEAC, Seals, and Biology. We note the need for adequate resources to be provided by the Treaty system if SCAR is realistically to be able to provide the advice sought of it.

It is our belief that the best available environmentally sound technologies should be introduced into Antarctic operations as early as possible. These should include renewable energy and minimum impact waste disposal systems. For technologies as yet untested in Antarctic conditions, Parties could undertake in-situ testing as part of their research programmes.

CCAMLR

In the broader context of the Antarctic Treaty system, ASOC maintains its keen interest in CCAMLR's progress towards precautionary management and conservation of Antarctica's marine living resources. ASOC is very concerned that nations have begun to bow to domestic economic pressures at the expense of conservation, and have attempted to gain consensus for catch levels which are economically beneficial, without regard to the state of the fishery. ASOC submits that practical application of the significant theoretical advances in CCAMLR's approach to management in recent years is being threatened by unresolved bilateral issues between some Parties, and by the overwhelming commercial realities of the burgeoning Patagonian toothfish (black hake) fishery. In this fishery CCAMLR faces a challenge which is threatening to negate its reputation as a credible conservation and fisheries management regime.

ASOC urges that actions to ensure sound management and enforcement of these fisheries should, wherever possible, be taken in a truly international manner.

ASOC is also extremely concerned over the reports of substantial illegal fishing, particularly in the South Atlantic and the Western Indian Ocean Sector of the

Southern Ocean, whose totals appear to have exceeded the legal catch. This is especially dangerous since this fishing is now occurring throughout most of the Southern Ocean. We welcome the efforts of several nations to address this problem, but believe that ultimately CCAMLR must take steps as an organization to address it. This must include the creation of an enforcement regime with measures sufficiently severe to curb these illegal activities. ASOC calls on those members whose vessels have taken part in illegal fishing to take all necessary steps to enforce the rules against their fishers, and encourages all members to take steps to encourage non-member nations with Southern Ocean fisheries (in particular, Namibia, Portugal, Panama and Vanuatu) to join CCAMLR.

ASOC is disappointed that the problem of seabird mortality in the longline fishery has not yet been adequately resolved. Efforts to date to reduce albatross mortality, while showing some success, have resulted in a consequential increase in petrel mortality. ASOC urges Members to take steps to ensure that the incidental mortality of all seabirds is further reduced. ASOC notes that incidental seabird mortality is heightened by the illegal longline fishery, and cannot be adequately addressed until the illegal fishery is dealt with.

We look to Parties to both the Protocol and CCAMLR to integrate Protocol-type measures in CCAMLR. It is important to ensure that CCAMLR is kept up to date and consistent with the newer and more rigorous environmental protection initiatives of the Protocol.

INTERNATIONAL WHALING COMMISSION

This also applied to the International Whaling Commission (IWC). ASOC has continued its policy of sending an observer to the annual IWC meetings. ASOC is very concerned that despite the Resolutions passed at the 1996 meeting and previous meetings of the IWC, recommending that scientific whaling should not be permitted in Sanctuaries, large-scale "scientific" whaling is still being conducted by Japan in the Southern Ocean Whale Sanctuary. In both the 1995/96 and 1996/97 seasons 440 Minke whales were killed, up from 330 in previous years.

CLIMATE CHANGE

Looking beyond issues arising within Antarctica, ASOC remains concerned about the impacts on Antarctica of global environmental problems such as stratospheric ozone depletion and anthropogenic climate change. Over the past year there has been increasing evidence that global warming is having an impact on Antarctica's systems. The consequences of climate change can be seen most dramatically in the physical geography and biological inhabitants of the Antarctic. Seemingly small changes in temperature have already changed the physical aspects of the region, affecting the populations of seals, penguins, krill and native flora.

ASOC member organisation Greenpeace mounted an expedition to Antarctica in January to monitor the impacts of climate change in the region. ASOC has prepared a short information paper on this issue, and a full report from the expedition will be made available. ASOC urges all governments that have carried

out any research in the Antarctic that is pertinent to climate change to make the data available prior to the Kyoto meeting of the Climate Convention in December.

We urge Parties to ratify those Treaties and Protocols, specifically the Montreal Protocol and the Climate Change Convention, directed to controlling or minimising these problems, to use their particular knowledge of Antarctica to raise awareness of the issues in appropriate fora, and to promote further action to ensure the long term protection of the Antarctic environment.

ASOC looks forward to working with delegates at this XXI ATCM, and to the successful resolution of some of the more contentious issues addressed in this report.

REPORT OF THE INTERNATIONAL ASSOCIATION OF ANTARCTICA TOUR OPERATORS (IAATO)

The International Association of Antarctica Tour Operators (IAATO) is pleased to present a report of its activities to the XXI ATCM, Christchurch, New Zealand, 19-30 May 1997 in relation to Article III(2) of the Antarctic Treaty.

IAATO focused its activities in several areas over the last year, including: (1) increasing the level of cooperation and standardization among its members; (2) recruiting new members to the Association; (3) and conducting effective environmental impact assessments for member activities in the Antarctic. IAATO is dedicated to appropriate, safe and environmentally sound private-sector travel to the Antarctic. Its members are further committed to operate within the parameters of the Antarctic Treaty, Environmental Protocol, relevant national legislation and other international agreements.

1. INTRODUCTION

1.1 Founded by seven private tour operators in 1991, the International Association of Antarctica Tour Operators (IAATO) has grown significantly in the past year to now include 23 member and associate members in Australia, Canada, Chile, Germany, Japan, The Netherlands, New Zealand, the United Kingdom and the United States.

1.2 The number of shipborne travellers to Antarctica on commercially organized expeditions in 1996/97 austral summer (7,322) was about 30 percent less than in the previous year (9,212) primarily because the single larger cruise vessel currently active in the Antarctic (*Marco Polo*) did not operate in 1996/97. Land-based tourism (91) and overflights (3,448) continued at approximately the same levels as 1995/96. An overview of the season and projection for the future is given in XXI ATCM/IP75.

1.3 All 13 tour vessels operating in Antarctica during the 1996/97 austral summer were operated by IAATO members.

1.4 IAATO held its annual meeting 10-12 July 1996 in Arlington, Virginia, USA. The IAATO Executive Committee met in Arlington, Virginia on 13 July 1996 and in New York City on 22 March 1997.

1.5 IAATO members value the opportunity to participate at this Antarctic Treaty Consultative Meeting and other international venues. Formal and informal liaison with national Antarctic programs as well as scientific and environmental organizations is an important objective of IAATO and its members. IAATO is particularly pleased at the constructive and ongoing dialogue with COMNAP.

Since the XX ATCM at Utrecht, April-May 1996, IAATO representatives hosted, attended or participated in a number of meetings and workshops, as listed below:

- IAATO Annual Meeting, 10-12 July 1996, Arlington, Virginia
- 8th Annual Antarctic Tour Operators Meeting, 11 July 1996, National

- Science Foundation, Arlington, Virginia
- Conference on Arctic Guidelines, 17-18 August 1996, World Wildlife Fund, Cambridge, UK
- Conference on Polar Tourism: Environmental Implications and Management SPRI, 18-21 August, Cambridge, UK
- COMNAP Annual Meeting, August 1996, Cambridge, UK
- Workshop on Cumulative Environmental Impacts in Antarctica IUCN, 18-21 September 1996, Washington, DC
- Workshop on Antarctic Environmental Impact Assessment IAATO, 27-29 September 1996, Warrenton, Virginia
- Workshop on How to Implement Guidelines for Arctic Tourism, 7-10 March 1997, Longyearbyen, Svalbard
- Public, Private, Governmental: IAATO and the Protection of the Antarctic Environment, Antarctic Society lecture, 5 March 1997, Washington, DC
- COMNAP-IAATO: Issues of Common Interest and Concern, 21 March 1997, New York City

2. FIELD COORDINATION

IAATO compiled and distributed Vessel Call Data as part of its annual operational information exchange. An approved radio schedule was also instituted. Field communication is essential for the exchange of general information, coordination of visits to individual sites and to provide for effective emergency response. Several tour vessels have introduced e-mail on board as a means of facilitating communication among vessels and scientific stations.

3. ENVIRONMENTAL IMPACT ASSESSMENT

3.1 IAATO members have submitted a variety of information on the potential environmental impact of their activities, including permit applications, Preliminary Environmental Evaluations, Environmental Audits and Initial Environmental Evaluations. A list of EIAs conducted by tour operators is included in XXI/IP74.

3.2 IAATO organized and hosted, "IAATO Workshop on Environmental Assessment, Building the Frame", on 27-29 September 1996, at Airlies Center, Warrenton, Virginia. Representatives from the US National Science Foundation, US Environmental Protection Agency, IAATO members, and independent consultants attended.

3.3 The workshop began work on an environmental impact assessment of commercially organized shipborne Antarctic tourism to the Antarctic Peninsula and South Shetland Islands by IAATO Members. The workshop concluded that the most effective way of addressing potential environmental impacts, particularly cumulative impacts, would be to conduct an EIA on overall activities in the Peninsula by IAATO-member companies with substantially similar operations. Draft terms of reference for this programmatic Environmental Impact Assessment are included in XXI/IP74.

4. PROCEDURES TO PREVENT THE INTRODUCTION OF ALIEN SPECIES

4.1 Following the concern expressed at the XX ATCM (Final Report, Items 17/19, para 124), IAATO members continue the practice of safeguarding against introduction of alien species to Antarctica. Recognizing that tourists are a highly mobile population in the Antarctic, visiting a number of sites within a short time, increased measures have been instituted to safer operations.

4.2 Boot washing stations are standard on all tour vessels, where all visitors are required to clean their boots before and after each landing. This measure is to eliminate soil or seeds from footwear as a result of visits ashore, avoiding accidental transfer of non-native organisms to the Antarctic or within sites within the Antarctic Treaty area.

4.3 As a further step to avoid introduction of non-native species, tour vessels do not discharge ballast water in Antarctica taken on north of the Antarctic convergence.

5. REPORTING OF TOURISM AND NON-GOVERNMENTAL ACTIVITIES

5.1 Following the XX ATCM (Final Report, item 9, para 15), IAATO members adopted forms for Advance Notification and Post-Season Reporting for trial use during the 1996-1997 season. Comments to increase their utility in the field are being compiled.

5.2 IAATO welcomes the use of a single form, which facilitates studies of the scope, frequency and intensity of tourist activities. In particular, IAATO looks forward to working with New Zealand and the United States to institute a database version of the form as proposed in XXI ATCM/IP7.

5.3 A draft standard list of sites visited by commercially-organized Antarctic tourists is appended to this report for comment. This list is intended as a tool to improve the evaluation of the scope, frequency and intensity of visitation by eliminating the use of duplicate place names.

6. SITE ASSESSMENT, LANDING CRITERIA AND STANDARD LIST OF LANDING SITES

6.1 IAATO members renewed their support for appropriate studies that will contribute to accurate site assessment and monitoring, including the Antarctic Site Inventory project being conducted by Oceanites. IAATO looks forward to the prompt publication of the valuable data collected so far on Antarctic visitor sites.

6.2 Members discussed the need to collect and make better use of systematic basic descriptive information on specific sites and to immediately institute, in the absence of more systematic data, additional measures to assess the environmental sensitivity of specific sites. Following its Bylaws, IAATO continues to manage site visits so that no more than 100 people are ashore at any one site at

any one time. Expedition leaders coordinate final tour schedules so that no two ships are in the same place at the same time.

6.3 How landing sites are selected is a key mitigating factor in reducing potential environmental impacts of brief visits ashore by Antarctic tourists. Such criteria for selecting and managing site visits include frequency of past visitation, presence of flying birds (especially nesting giant petrels), vegetation cover, and ongoing science being conducted at the site. An outline of the site selection process is included in XXI ATCM/IP74.

7. EDUCATION AND TRAINING

7.1 While each individual tour operator conducts its own training programs and hires according to its own standards, IAATO collects systematic information on the qualifications and experience of the field staff employed by its members. According to IAATO By-Laws, members are required to hire staff who as a whole have at least 75 percent previous Antarctic experience. The 175 staff members employed during the 1996-97 Antarctic season by IAATO members had, on average, seven years of Antarctic experience (ranging from 1 - 35).

7.2 The Office of the Secretariat publishes IAATO News, a regular newsletter containing reports on Antarctic tourism, the Antarctic Treaty System and other topics relevant to its members, field staff and passengers. It has also published its By-Laws, Membership Directory, Guidance for Visitors to the Antarctic and Guidance for Organising and Conducting Tourism and Non-Governmental Activities in the Antarctic (Recommendation XVIII-1). To receive copies of these publications or be added to the IAATO mailing list, please contact the Secretariat.

7.3 To further its educational mission, an IAATO Web Site (<http://www@iaato.com>) is in development. The site is scheduled to go online July 1997.

8. IMPLEMENTATION OF RECOMMENDATION XVIII-1

8.1 IAATO members distributed copies of Recommendation XVIII-1 (which is available in English, French, Spanish, Russian, German and Japanese) to all its passengers, staff and crew. The Recommendation is an integral part of conservation briefings.

8.2 *Slide Presentation:* IAATO distributed a draft slide presentation to XX ATCM (INF 101) in order to illustrate the visual material which is used on tour vessels as part of the briefing on Recommendation XVIII-1. A slide presentation was also given at the Annual Meeting of the National Science Foundation/Tour Operators in July 1996. After minor revision, the IAATO slide set was implemented for onboard briefings. Copies of the 42-slide set are available from the IAATO Secretariat.

8.3 *Medical Emergency Contingency:* IAATO distributed a Medical Emergency Contingency Plan at XX ATCM (INF 76). The plan was successfully instituted during the 1996-97 operating season with the Punta Arenas office of Adventure Network International acting as an emergency contact station for IAATO-member

vessels.

8.4 *Standard Inventory of Medical Supplies:* A vital aspect of tourism in Antarctica is that of medical care and capabilities of clients/passengers, whether it be shipborne tourism or land-based. IAATO has contracted an outside consultant to review the medical equipment, physician qualifications and medical inventories of member companies and make recommendations for industry-wide standards.

8.5 *Amended SOPEPs for Antarctic Operations:* All IAATO-member companies have Shipboard Oil Pollution Emergency Plans (SOPEP) in place that satisfy regulation 26 of Annex I of MARPOL. An outside contractor has been hired to provide amendments to these plans in light of operational considerations and requirements of the Environmental Protocol.

8.6 *Standard Emergency Equipment for Zodiac, Helicopter Operations:* As a means of ensuring safety for tour operations involving zodiacs (inflated boats) and helicopters, standard operating procedures include safety kits for each zodiac, and an elaborate inventory of equipment for helicopter operations.

9. 1996-97 SCIENTIFIC AND ENVIRONMENTAL RESEARCH INITIATIVES

IAATO member companies continued to provide logistic and scientific support to national Antarctic programs and Antarctic organizations in 1996-97. Members welcome the opportunity to assist and look forward to continuing collaboration with national Antarctic programs - a cost effective and regular platform of opportunity for science and logistics. Antarctic travellers benefit from the exposure to science on board tour vessels, and most projects cause minimal disruption to tour schedules. An announcement of assistance is tabled as a separate paper at XXI ATCM.

9.1 Russia

Mario Gavriilo, a Russian biologist from Russian Antarctic Expedition travelled on the Kapitan Khlebnikov on its circumnavigation cruise around Antarctica, a 66-day voyage from 24 November 1996 to 27 January 1997.

Support of research activities at Bellingshausen Station included transport of seven scientists, assistance with logistics, arrangements and transport of provisions and other cargo, and through liaising with Argentine immigration to expedite visas.

In cooperation with the volunteer international environmental works organization, the VIEW Foundation, the third season was conducted in a long-term clean-up project at Bellingshausen Station, involving the clearing and retrograde of abandoned equipment and hazardous oil products.

9.2 Germany

Three scientists were transported to or from the Antarctic Peninsula. Six scientists and equipment were transported to Jubany Station. Scientists were transported to and from Ardley Island.

9.3 Poland

Two scientists and samples were transported to/from Arctowski Station. Eight scientists and equipment were transported to Arctowski Station.

9.4 Argentina

Cargo was transported to Brown Station for ongoing refurbishment program (Governor of Tierra del Fuego transported to station to assist).

9.5 United Kingdom

Two scientist transported to and from Arctowski Station. Scientist transported from Arctowski Station to Ushuaia.

9.6 United States

Four scientists transported to or from King George Island. Scientist transported to Palmer Station. Oceanites personnel transported to various sites for its monitoring program.

9.7 France

An icebreaker operating as a tour vessel, Kapitan Khlebnikov, assisted the resupply vessel Astrolabe in reaching Dumont D'Urville Station.

9.8 Other Support

Tour vessels also supported a variety of other projects (while travelling to or from Antarctica), including transport of personnel and equipment to or from the South Georgia Whaling Museum and the sub-Antarctic islands of New Zealand.

9.9 Other Initiatives

IAATO members and tour passengers continued to support the Humpback Whale Catalog by providing fluke identification photos to Allied Whale, College of the Atlantic, Bar Harbor, Maine. In addition, experienced biologist staff collected census data, recorded whale sightings and provided other valuable information.

9.10 Financial Contributions

In addition to support for science programs, tour operators and passengers continued their tradition of direct financial contributions to organizations active in Antarctica, including the Scott Polar Research Institute, UK Antarctic Heritage Trust, New Zealand Antarctic Heritage Trust, South Georgia Whaling Museum, Humpback Whale Identification Project, and Whale and Dolphin Society. The cumulative totals for the above amount to some US\$21,030 and DM3,253,40.

REPORT OF THE INTERNATIONAL HYDROGRAPHIC ORGANISATION (IHO) PRESENTED BY THE NEW ZEALAND HYDROGRAPHER TO THE XXI ANTARCTIC TREATY CONSULTATIVE MEETING (ATCM) IN CHRISTCHURCH, NEW ZEALAND 19-30 MAY 1997

1. BACKGROUND

The IHO's permanent Working Group on Cooperation in Antarctica (PWGCA) has rendered reports annually to the ATCM since its establishment in 1992. This report serves to update developments since the last report rendered to the XX ATCM in Utrecht in 1996.

2. THE IHO XV CONFERENCE

The IHO Conference is held quinquennially in Monaco. The XV Conference took place 14-25 April 1997. The conference endorsed a proposal to redesignate the PWGCA as a regional commission; its title is now the IHO's Hydrographic Committee on Antarctica. Full membership of the Committee is confined to those IHO Member States (MS) who contribute to the international (INT) chart scheme through surveying and/or charting activity and whose national governments have acceded to the Antarctic Treaty. Twenty-four MS are presently registered as full members of the Committee; Ukraine is an associate member pending her election to the IHO.

3. COOPERATION WITH INTERNATIONAL ORGANISATIONS

3.1 Throughout its existence the Committee (formerly the Group) has encouraged close liaison and cooperation with any national or international organisation with a professional interest in Antarctica and continues to be pleased to welcome representatives of those organisations to its biennial meetings. Liaison with the Council of Managers of National Antarctic Programmes (COMNAP) has proved to be particularly valuable. It was through COMNAP that the International Association of Antarctic Tour Operators (IAATO) provided detailed annual statistics going back to 1980 which indicated a year on year increase in cruise ships and tourists visiting Antarctica. When we analysed and plotted that data, we discovered that cruise ships were regularly visiting four sites which are not presently included in the large scale INT chart scheme. Moreover, we have ascertained that adequate survey data does not presently exist to support the production of these additional large scale charts. This fact highlights the continuing need for national governments to fund adequately those national hydrographic services with an Antarctic surveying and charting capability. In 1995 the XIX ATCM emphasised this fact with its formal endorsement of Resolution 1.

3.2 The provision of the IAATO statistics has also served to highlight the XIX ATCM Resolution 3 (1995) concerning the need for tourist and non-governmental operators to provide to their relevant national authorities details of Antarctic visits. Such data can prove to be extremely valuable to the IHO in its continuing

commitment to contribute to the safety of life at sea through the provision of adequately resourced hydrographic surveying activity to support the production of INT charts of Antarctica.

3.3 Cooperation has also continued with the Scientific Committee for Antarctic Research (SCAR) and the IHO has released to SCAR its "Underseas Features Names Gazetteer" for the use of that organisation.

4. CHART PRODUCTION

IHO MS are continuing their steady progress in chart production. Thirty-three charts of the INT chart scheme are now scheduled to be produced by the year 2000.

5. CONCLUSION

The IHO is pleased to assure ATCM that the twenty MS involved in the work of the Antarctic Committee will continue the high level of commitment demonstrated to date. These IHO MS continue to look to ATCM for positive action in support of the Seoul Resolutions 1 and 3 (1995) with respect to the continued funding of national hydrographic surveying and charting programmes, and in the provision of data which is relevant and valuable to these programmes. Working together, the IHO MS will continue to support the safety of life at sea in Antarctica.

STATEMENT BY THE REPRESENTATIVE OF THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IOC), ATCM XXI, CHRISTCHURCH, NEW ZEALAND, 19-30 MAY 1997

The Intergovernmental Oceanographic Commission (IOC) was founded in 1960 within UNESCO. The Commission has functional autonomy within UNESCO and serves the members of the UN family in their implementation of joint programmes relating to ocean research and observations. From the Commission's 125 Member States, two-thirds are developing countries. The Commission implements programmes within three subject areas:

- Marine Sciences
- Ocean Services
- Training, Education and Mutual Assistance/Capacity Building

In 1967 the IOC established the Intergovernmental Committee for the Southern Ocean (IOC-SOC) in order to promote and coordinate oceanographic observations and research in the Southern Ocean.

In 1992 the United Nations Conference on the Environment and Development (UNCED) called on the IOC to take a lead in establishing the Global Ocean Observing System (GOOS). GOOS aims to meet the needs:

- (i) for forecasting climate variability and change;
- (ii) for assessing the state of health of the marine environment and its resources, including the coastal zone; and
- (iii) for supporting an improved decision-making and management process which take into account potential natural and man-made changes in the environment and their effects on human health and resources.

In 1993 a comprehensive report called "The Southern Ocean: A Review of Activities in Relation to IOC Programmes" was issued and was made available to ATCM.

The IOC Assembly held a Southern Ocean Forum in conjunction with the sixth session of the IOC Committee for the Southern Ocean and accepted the invitation of the Director of the Alfred Wegener Institute for Polar and Marine Research to have the first session of the Forum and the sixth session of the Committee in Bremerhaven, Germany from 9 to 13 September 1996. The Forum provided an opportunity to scientists and operators working under the UN system, the Antarctic Treaty system or the International Council of Scientific Unions to share common views and formulate joint actions for the benefit of all Member States in investigation and exploration of the Southern Ocean.

The proposals of the Forum were subsequently considered by the sixth session of the IOC Regional Committee for the Southern Ocean with a view to formulating draft recommendations on the future IOC activities in the Southern Ocean. The IOC Executive Council at its twenty-ninth session (24 September - 4

October 1996) acted to redefine the role of the IOC Regional Committee for the Southern Ocean because of the great changes in the appreciation of the scientific importance of the Southern Ocean since the IOC Committee for the Southern Ocean was established in 1967.

SIXTH SESSION OF THE IOC REGIONAL COMMITTEE FOR THE SOUTHERN OCEAN

The Sixth Session of the IOC Regional Committee for the Southern Ocean was held in Bremerhaven, Germany 12-13 September 1996. In the Regional Committee for the Southern Ocean, 10 Member States were present including Argentina, Brazil, Chile, France, Germany, Russia, South Africa, the UK and the USA, as well as representatives of WMO, WCRP, IWC, COMNAP, and ICSU/SCOR. It was regretted that SCAR was not able to attend.

TWENTY-NINTH SESSION OF THE IOC EXECUTIVE COUNCIL

The IOC Executive Council noted that the First Southern Ocean Forum reviewed present knowledge, gaps and needs for future ocean research and related services in the Southern Ocean as well as the international framework for cooperation. IOC Executive Council emphasised that the Southern Ocean is unique in its physical and biological characteristics; that its study is of great importance for understanding the world's climate and climate change, as well as for the global cycling of carbon and other elements; and that it is a potential source of marine living resources. IOC Executive Council approved the recommendations of the Sixth Session of the IOC Regional Committee for the Southern Ocean. In view of the many important developments of great relevance to the Southern Ocean that have occurred since the establishment of the IOC Regional Committee for the Southern Ocean in 1967, the IOC Executive Council decided to revise the terms of reference of the IOC Regional Committee for the Southern Ocean by Resolution EC-XXIX.6 "Southern Ocean Forum and Regional Committee for the Southern Ocean", to better reflect the present role of the Committee in view of those developments.

Election of the Chairman and Vice-Chairman of the IOC-SOC

The IOC-SOC unanimously elected Dr Max Tilzer, Director of the Alfred-Wegener Institute for Polar and Marine Research, as the Chairman of the Committee. The IOC-SOC agreed not to elect a Vice-Chairman but rather to create an advisory group to advise and assist the Chairman.

The composition of the advisory group as agreed by the Committee is:

- Mr Carlos Daniel Carbone (Argentina)
- Dr John Church (Australia)
- Dr Aleksandr Klepikov (Russia)
- Dr Eric Lindstrom (USA)
- Dr Julian Priddle (UK)

The group will work mainly by correspondence (via Internet).

REPORT OF THE WORLD CONSERVATION UNION (IUCN) UNDER ARTICLE III (2) OF THE ANTARCTIC TREATY TO XXI ANTARCTIC TREATY CONSULTATIVE MEETING, MAY 1997

IUCN, the World Conservation Union, is a unique partnership of States, government agencies and non-governmental organisations. Founded in 1948, it now has 880 members, including 173 state and government agency members from 133 countries.¹ In addition, over 8000 volunteer scientists and practitioners contribute to fulfilling IUCN's mission through six global Commissions.

The Union's mission is:

"to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature to ensure that any use of natural resources is equitable and ecologically sustainable".

IUCN provides a "neutral forum" for the discussion of issues by bringing both GOs and NGOs to the table to consider problems and devise strategies to facilitate conservation of nature throughout the world. The elements of IUCN's policy and programme are agreed by the triennial World Conservation Congress² of members and their execution is coordinated by an international Secretariat. IUCN's six Commissions, bodies of volunteer experts from all over the world, make a major contribution to the development and execution of the programme. With its long experience and worldwide networks of experts, IUCN is in a unique position to offer advice to the Antarctic Treaty Parties on such issues as protected area designation and management, environmental monitoring, environmental legislation and liability for environmental damage. Two of the IUCN Commissions, those on Protected Areas and on Environmental Law, are currently making significant contributions to IUCN's Antarctic programme.

IUCN has been concerned with Antarctic conservation issues for over 36 years. In 1991, six months before the Protocol on Environmental Protection to the Antarctic Treaty was signed in Madrid, it published the Strategy for Antarctic Conservation. Many elements of this Strategy were incorporated in the Protocol and its annexes.

In 1992 two workshops were held in partnership with SCAR's Group of Specialists on Environmental Affairs and Conservation (GOSEAC), on conservation management and research in the sub-Antarctic islands and on protected area policy and management.

In 1993 a workshop on Antarctic environmental education and training was held, again in partnership with GOSEAC. The Proceedings of all these workshops have now been published and are available, and the recommendations from these workshops have been endorsed by the Antarctic Treaty.

A fourth technical workshop was held in Washington, DC in September 1996, entitled "Cumulative Environmental Impact in Antarctica: Minimisation and

Management". The workshop built on the results from the SCAR/COMNAP workshops on environmental monitoring, focusing on aspects relevant to cumulative impacts. The outcome should be useful in a practical way to the ATS in general, as Protocol implementation will require a much better understanding of this concept, and specifically to national, non-governmental and commercial operators and to the Antarctic scientific community. Both summary and full reports of this workshop are being tabled at this ATCM.

Following the adoption of a new Resolution on Antarctica and the Southern Ocean, and the endorsement of IUCN's Antarctic programme for 1997-1999 by the World Conservation Congress (IUCN's General Assembly), held at Montreal in October 1996, IUCN's Antarctic Advisory Committee (AAC) was reconstituted, with the mandate to provide guidance on the programme and to contribute to its implementation. The AAC was first established in 1994 as a means of focussing IUCN's involvement with Antarctic conservation issues.

The AAC is made up of 12 members, appointed in their personal capacities by IUCN's Director-General, for their expertise in matters relating to the conservation of Antarctica, the sub-Antarctic islands and the Southern Ocean. AAC members have been chosen from a diverse professional background: academia, governmental conservation agencies, non-governmental organisations and private consultancies. The AAC is chaired by Ms Beth Clark, based in the United States, with the support of vice-chair, Mr John Cooper (South Africa).

The blue "Background Document" of IUCN's AAC is being tabled at this ATCM. It includes IUCN's 1996 Resolution on Antarctica and the Southern Ocean, IUCN's Antarctic programme 1997-1999, and the Recommendations from the first three SCAR/IUCN workshops.

The AAC's primary objectives are:

- to develop and promulgate policy advice on Antarctic conservation, with particular emphasis on the ratification and implementation of the Protocol, including contributing to the development of a liability annex to the Protocol and to the development of an effective environmental impact assessment process; and input to CCAMLR especially its work in ecosystem management;
- strengthening the system of establishing and managing protected areas in the Antarctic and Sub-Antarctic, and the development of an integrated strategy for conservation in the Subantarctic and cool temperate islands and their associated waters;
- follow through on the recommendations from the SCAR/IUCN workshops and the IUCN Workshop on Cumulative Impacts;
- represent IUCN at relevant Antarctic and Subantarctic fora, including ATCM, CCAMLR and SCAR;
- depending on available resources, organising seminars, technical sessions or workshops relevant to Antarctic and Subantarctic conservation.

IUCN draws delegates attention to a questionnaire being circulated at this ATCM on formal education courses offered by Parties. After the ATCM, we intend to circulate this questionnaire to COMNAP, Antarctic Environmental Officers and SCAR. We will compile the information received for tabling at ATCM XXII. IUCN has tabled a paper on the UN List of Protected Areas and draws delegates' attention to the listed Antarctic protected areas. We urge delegates to review this listing and give comments to the IUCN Observer at this ATCM.

IUCN continues to place a high priority on helping the Antarctic Treaty System to maintain and enhance its effectiveness in conserving and protecting the Antarctic region. As always, IUCN puts its resources and expertise at the service of the ATCM towards this end.

ANNEX

1. Antarctic Resolution

IUCN RESOLUTION

1.110 ANTARCTICA AND THE SOUTHERN OCEAN

The World Conservation Congress of the International Union for the Conservation of Nature (IUCN) at its 1st Session in Montreal, Canada, 14-23 October 1996 adopted **Resolution 1.110**:

Antarctica and the Southern Ocean

Recalling Recommendations 17.52, 17.53, 18.75, and 19.95 and Resolutions 15.40, 16.8, 18.74 and 19.96 of the 15th, 16th, 17th 18th and 19th Sessions of the General Assembly of IUCN;

Noting with concern that a number of these Recommendations and Resolutions have not been fully implemented;

Recognising that Antarctica has many internationally significant values: it is a critically important ecosystem and plays an important role in influencing global climate and oceanic circulation; it is important for monitoring and other research which provide greater understanding of the natural environment and ecological processes, including those modified by human activity; it has great value as the world's largest remaining wilderness area; and it has significant intrinsic and inspirational values;

Noting that the Protocol on Environmental Protection to the Antarctic Treaty, adopted by the Antarctic Treaty Parties in Madrid, Spain in October 1991 commits Parties to the comprehensive protection of the Antarctic environment and dependent and associated ecosystems, designates Antarctica as a natural reserve devoted to peace and science and, *inter alia*, prohibits any activity relating to mineral resources other than scientific research;

Congratulating the governments of Argentina, Australia, Belgium, Brazil, Chile, China, Ecuador, France, Germany, India, Italy, the Netherlands, New Zealand, Norway, Peru, Poland, the Republic of Korea, South Africa, Spain, Sweden,

United Kingdom, and Uruguay who have ratified the Protocol on Environmental Protection;

Conscious that all Antarctic Treaty Consultative Parties who signed the Protocol in Madrid must ratify it before it can take effect;

Aware that conservation measures in the Subantarctic must be strengthened;

Emphasising the importance of the conservation of the ecosystems of the circum-Antarctic seas and the need to ensure that any use of their living resources is sustainable;

Remembering that IUCN has a long involvement with Antarctic Conservation activities and during the 1994-1996 triennium established an Antarctic Advisory Committee which ensured that IUCN had an effective voice at various Antarctic fora, and held a workshop on cumulative impacts of human presence in Antarctica.

The World Conservation Congress at its 1st Session in Montreal, Canada, 14-23 October 1996:

1 *Calls Upon* Japan and Russia to ratify urgently the Protocol on Environmental Protection;

2 *Urges* all States Party to the Antarctic Treaty:

- a) to enact without delay the necessary national legislation to ensure domestic implementation of the Provisions of the Protocol;
- b) to ensure that their domestic law provides the necessary jurisdiction over their nationals for acts committed in Antarctica contrary to the Antarctic Treaty and the Environmental Protocol;
- c) to establish the Committee for Environmental Protection at the forthcoming XXI ATCM in Christchurch, New Zealand;
- d) to make greater efforts towards the prompt completion, adoption and implementation of a Liability Annex pursuant to Article 16 of the Protocol on Environmental Protection, and applying to all activities in Antarctica in the area covered by the Protocol which might result in damage to the Antarctic environment;
- e) to rescind the decision that Experts cannot be invited and to invite IUCN to provide expert advice and participate in the meetings of the group of legal experts which is negotiating the Liability Annex to the Protocol;
- f) to redouble their efforts to resolve urgently the remaining disagreements over the location of an Antarctic Treaty Secretariat since the current impasse is detrimental to the implementation of the Antarctic Treaty, the Environmental Protocol and the effective

protection of the Antarctic environment;

- g) to endorse in principle the conclusions and relevant recommendations of the IUCN International Workshop on Cumulative Impacts at the Christchurch ATCM;

3 *Calls upon* all Parties to the Antarctic Treaty and all others active in Antarctica to pay particular attention to:

- a) minimising environmental impacts, including direct, indirect and cumulative impact;
- b) establishing and safeguarding a comprehensive network of protected areas, including adequate representation of the principal habitats and the biological diversity of the Antarctic region;
- c) preventing the deposition of wastes and facilitating the removal of wastes which have already been deposited;
- d) establishing and enforcing stringent regulations governing the conduct of all persons visiting Antarctica whether scientists, logistic and other support personnel or tourists;

4 *Urges* the Governments concerned to adopt all necessary measures to ensure the conservation of Subantarctic islands ecosystems, especially the production and implementation of management plans, the eradication, where practicable, of alien species and the reduction of the incidental mortality of seabirds using the islands, especially albatrosses, from long-line fisheries;

5 *Calls upon* parties to the Convention on the Conservation of Antarctic Marine Living Resources to take all steps necessary to conserve the marine ecosystems and component species of the Southern Ocean;

6 *Requests* the Council and Director-General, within available resources:

- a) to ensure that IUCN activities during the 1996-1999 triennium focus on maximising the Union's contribution to more effective conservation efforts in the Antarctic and Subantarctic, and in particular on topics which draw on the core competencies of IUCN in relation to environmental law, protected areas and species conservation;
- b) to encourage ratification and implementation of the Antarctic Environmental Protocol and the completion, ratification and implementation of the annex on liability;
- c) to ensure effective contributions from IUCN to relevant Antarctic and Subantarctic fora including *inter alia* the meetings of the Antarctic Treaty Consultative Parties;

- d) to ensure effective collaboration with IUCN members with expertise in this region;
- e) to strengthen and consolidate the Antarctic Advisory Committee of IUCN and provide it with an adequate funding base and funded secretariat support;

7 *Recommends that* the Antarctic Advisory Committee should:

- a) develop and promulgate policy advice on Antarctic conservation, with particular emphasis on:
 - i) ratification and implementation of the Protocol;
 - ii) development and implementation of a Liability Annex to the Protocol;
 - iii) input to the Convention on the Conservation of Antarctic Marine Living Resources, and especially its work on ecosystem management;
- b) contribute to public awareness, through seminars and technical sessions relevant to Antarctic and Subantarctic conservation, including on biodiversity and publications relevant to Antarctic and Subantarctic conservation;
- c) follow through on recommendations from the three SCAR/IUCN workshops on Antarctic conservation, policy and protection, and from the IUCN workshop on Cumulative Impacts in Antarctica;
- d) develop effective collaborations with IUCN members with expertise in this region;

8 *Calls upon IUCN members* to mobilise resources to enable this Recommendation to be implemented.

Note: This recommendation was adopted by consensus. The delegations of the State members Norway and the United Kingdom indicated that had there been a vote they would have abstained. The delegation of the State member Germany indicated that it had not participated in discussion of the Recommendation nor would it have participated in any voting.

¹ The following ATCPs are state members of IUCN:

Argentina, Australia, Belgium, Brazil, Ecuador, Finland, France, Germany, India, Italy, Netherlands, New Zealand, Norway, Russia, South Africa, Spain, Sweden, United Kingdom, USA.

The following ATCPs have government agencies which are members of IUCN:

Chile, Japan, Korea, Rep. of, Uruguay.

The following NCPs are state members of IUCN:

Canada, Denmark, Greece, Guatemala, Switzerland, Turkey

The following NCPs have government agencies which are members of IUCN:

Austria, Bulgaria, Colombia, Hungary, Papua New Guinea, Romania

² Prior to 1996, the IUCN World Conservation Congress was called the IUCN General Assembly.

REPORT OF THE WORLD METEOROLOGICAL ORGANISATION (WMO) IN RELATION TO ARTICLE III (2) OF THE ANTARCTIC TREATY

OVERVIEW

Antarctica and its surrounding Southern Ocean is one of the two large regional sinks of heat in the world. It is an area of intense interaction between the ocean and the atmosphere, and accordingly it plays a significant role in the formation of global weather and climate.

The Antarctic Basic Synoptic Network of meteorological observations is an important element of the World Weather Watch coordinated by the World Meteorological Organisation (WMO). The operation and maintenance of this network and the timely transmission of the observational data by means of the Global Telecommunications System are essential. They provide meteorological data for global weather analysis and prediction models and research, including the monitoring of climate change and the environment.

The inclusion of Automatic Weather Stations in the Antarctic Basic Network has led to a substantial increase in the availability of synoptic weather data from the Antarctic continent. The launch of an International Programme for Antarctic Buoys (IPAB), under the auspices of the World Climate Research Programme, has provided a network of drifting buoys within the seasonal sea ice zone of the Southern Ocean, which supplies data for operational and research purposes. Meteorological data over the Southern Ocean is also obtained from voluntary observing ships, the number of which may be increased with assistance from the International Association of Antarctic Tour Operators.

The current basic synoptic network in the Antarctic comprises 35 staffed stations, including 14 upper-air stations and more than 60 active Automatic Weather Stations (AWS). Twelve of the staffed Antarctic stations carry out environmental monitoring of carbon dioxide, ozone and other trace constituents to determine their effect on global change.

In view of the importance of climate research in the Antarctic, a Catalogue of Antarctic Climate Data was recently produced by the WMO Executive Council on Antarctic Meteorology on the basis of contributions provided by Australia, China, France, Italy, Japan, New Zealand, Poland and the Russian Federation.

In carrying out its Antarctic activities, WMO collaborates with other international organisations in particular with the Antarctic Treaty Consultative Meeting (ATCM), the Scientific Committee for Antarctic Research (SCAR), the Council of Managers of National Antarctic Programmes (COMNAP) and the Intergovernmental Oceanographic Commission (IOC). This cooperation will be continued to ensure a coordinated and cost effective implementation of the scientific and technical programmes in the Antarctic.

WMO EXECUTIVE COUNCIL WORKING GROUP ON ANTARCTIC METEOROLOGY

Considering that there is a need for meteorological and other environmental data from the Antarctic for the full implementation of the World Weather Watch and monitoring of climate change and depletion of the ozone layer over the Antarctic. The WMO Executive Council Working Group on Antarctic Meteorology (WMO EC-WGAM) is maintained with the following terms of reference:

- (a) To promote the execution of the resolutions of Congress and the Executive Council in the area from 60°S to 90°S;
- (b) To provide guidance in the development of the relevant parts of the WMO Long-Term Plan;
- (c) To coordinate programmes of surface and upper-air meteorological observations in the Antarctic;
- (d) To develop the most appropriate schemes for collection and dissemination of meteorological data for operational purposes;
- (e) To develop and recommend regional coding practices which are to be applied in the Antarctic;
- (f) To study problems relating to instruments and methods of observation peculiar to the Antarctic;
- (g) To discuss questions and make recommendations on meteorological research and operations related to the Antarctic;
- (h) To maintain active contacts with other groups or bodies such as SCAR, JSC, COMNAP, IOC, WMO's technical commissions, etc., with regard to aspects of Antarctic meteorology of particular relevance to their functions;
- (i) To provide, as necessary, to the Antarctic Treaty Consultative Meetings, through its Chairman or other representative, information on meteorological activities in the Antarctic.

The sixth session of the WMO EC-WGAM was held 1-5 November 1993. During the intersessional period activities of the EC Working Group on Antarctic Meteorology are mainly carried out by correspondence. In accordance with recommendations of the Executive Council, the chairman of the WMO EC-WGAM maintained close cooperation with other international organisations, and codes related to the Antarctic through active participation in the meetings of SCAR, COMNAP and ATCM, and the presentation of the main aspects of the WMO Antarctic activities to those meetings. Further international cooperation and coordination of research and operational activities in the Antarctic is necessary for the improvement of observational networks, telecommunications and research studies in the Antarctic. WMO EC welcomed the invitation of the Intergovernmental Oceanographic Commission (IOC) to establish closer links

between WMO and IOC in the development of the coordinated plans for research and monitoring in the Southern Ocean. Some items raised during discussion at SCAR, IOC, COMNAP and ATCM sessions will be considered by the WMO EC-WGAM at its seventh session in 1998.

An annual exchange of information has been coordinated by the WMO Executive Council Working Group on Antarctic Meteorology since 1994. Argentina, Australia, Brazil, China, Chile, France, Germany, India, Japan and New Zealand responded in 1996 to the call for an update on the details of national Antarctic Meteorology programmes.

Catalogues of Climate Data are also produced by the WMO EC-WGAM. The latest version was produced in 1996 on the basis of contributions provided by Australia, China, France, Italy, Japan, New Zealand, Poland and the Russian Federation. It was provided to Dr Steven Smith, Director, International Centre for Antarctic Information and Research (ICAIR) in Christchurch, New Zealand. In addition there was interest from Dr Claire Hanson, National Snow and Ice Data Centre (NSIDC), University of Colorado, Boulder, USA.

Research into many aspects of Antarctic climatology has been initiated by a number of international bodies. WMO and ICSU jointly initiated the World Climate Research Programme which has a significant Antarctic component, particularly with respect to sea ice as a climate "memory" and feedback system. The International Oceans Commission (IOC) extended the World Ocean Circulation Experiment (WOCE) in recent years to include atmosphere-ice-ocean interactions in high southern latitudes. The WMO Executive Council Working Group on Antarctic Meteorology intends to maintain close contact with these international bodies in order to be able to provide suitable advice to the WMO Executive Council on future policy with respect to research, aircraft and shipping operations in Antarctica and the Southern Ocean, particularly south of latitude 60°S.

XXIV MEETING OF THE SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH (SCAR)

The Chairman of the WMO Executive Council Working Group on Antarctic Meteorology participated in the XXIV session of SCAR in Cambridge, UK, 4-16 August 1996, as the WMO Representative. Of most importance to ATCM were the five recommendations drafted by the Physics and Chemistry of the Atmosphere (PACA) Working Group of SCAR, with assistance from WMO, namely:

Ship-borne meteorological observations

Noting the value of observations from all Antarctic shipping for Antarctic and global operational meteorological analyses; WMO urges National Operators to ensure that basic meteorological observations from research vessels are inserted at least six-hourly into the WMO Global Telecommunications System.

Automatic weather stations

Noting that regular real-time data from the interior of Antarctica are essential

for Antarctic and global analyses and research: WMO requests that national operators of Automated Geophysical Observatories (AGOs) and Automatic Weather Stations ensure that basic and regular meteorological observations are inserted at least three-hourly into the Global Telecommunications System via overpassing polar orbiting satellites.

Upper air soundings

Noting the supreme importance of upper air observations from Antarctica in general and the interior of the continent in particular now that only the Station at South Pole remains in operation; WMO requests National Operators to consider establishing a radiosonde program when any new station is built more than 250 km from an existing station with an upper atmosphere sounding routine.

Southern Oscillation and El Nino

Noting the substantial impact of the Southern Oscillation and El Nino phenomena on the climate of West Antarctica; WMO recommends that National Operators consider deploying Automatic Weather Stations on West Antarctica and drifting buoys in the Pacific Sector of the Southern Oceans where there is a huge data void.

WMO Global Telecommunications System

Noting the progress being made by the WMO Working Group on Antarctic Meteorology in conjunction with the WMO Working Group on Antarctic Telecommunications; WMO recommends that National Operators collaborate to rectify the problems with the Global Telecommunications System identified by the SCAR FROST project.

WORLD INTELLECTUAL PROPERTY ORGANISATION

The World Meteorological Organisation has recently been made aware that the Intellectual Property Organisation (WIPO) is considering a draft Treaty on Intellectual Property in Respect of Databases. The draft treaty is of particular concern to WMO, especially in the context of, and its possible conflict with Resolution 40 at the 12th WMO Congress - "WMO Policy and Practice for the Exchange of Meteorological and Related Data and Products, including Guidelines and Relationships in Commercial Meteorological Activities".

A hallmark of the WMO activities is the free and unrestricted exchange of meteorological data and information products. Such free exchange of meteorological data and products is essential to the effective and efficient provision of meteorological services to protect life and property. The availability of weather forecasts and climate prediction is made possible by National Meteorological and Hydrological Services through this international free exchange of data and information, coordinated by WMO. It is hoped that this will not, in any way be impeded by the proposed treaty. It is appropriate to say that there is generally a strong emphasis in the free exchange of data and information relating to the geophysical disciplines.



PART FOUR

**ADDITIONAL DOCUMENTS
FROM ATCM XXI**

CHRISTCHURCH, NEW ZEALAND, 19 - 30 MAY 1997

**ANNEX G:
LIST OF
DOCUMENTS
FOR ATCM XXI**

ANNEX G: LIST OF DOCUMENTS FOR ATCM XXI

LIST OF WORKING PAPERS

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
1	New Zealand	Rules of Procedure for Antarctic Treaty Consultative Meetings (ATCMs): Corrected Version	7	English	S,R,F	22 April
1 Rev 1	New Zealand	Rules of Procedure for Antarctic Treaty Consultative Meetings (ATCMs): Corrected Version	7	English	S,R,F	27 May
2	New Zealand	Committee for Environmental Protection (CEP): Establishment Issues (A New Zealand Discussion Paper)	7	English	S,R,F	22 April
2 Rev 1	Netherlands/ New Zealand/ South Africa	Committee for Environmental Protection (CEP): Establishment Issues	7	English	S,R,F	19 May
3	New Zealand	Historic Sites and Monuments	6f	English	S,R,F	22 April
4	New Zealand	Management Plan (Proposed Antarctic Specially Protected Area) for Historic Sites No.16 and 17 (containing the historic "Terra Nova" hut of Captain R F Scott and its precincts) Cape Evans, Ross Island (77 degrees 38' 10"S, 166 degrees 25' 04"E)	6f	English	S,R,F	22 April
4 Rev 1	New Zealand	Management Plan for Specially Protected Area (SPA) No. 25 for Historic Sites No.16 and 17 (containing the historic "Terra Nova" hut of Captain R F Scott and its precincts) Cape Evans, Ross Island (77 degrees 38' 10"S, 166 degrees 25' 04"E)	6f	English	S,R,F	23 May
4 Rev 2	New Zealand	Management Plan for Specially Protected Area (SPA) No. 25 for Historic Sites No.16 and 17 (containing the historic "Terra Nova" hut of Captain R F Scott and its precincts) Cape Evans, Ross Island (77 degrees 38' 10"S, 166 degrees 25' 04"E)	6f	English	S,R,F	30 May
5	New Zealand	Management Plan for Specially Protected Area (SPA) No.5 Beaufort Island, McMurdo Sound, Ross Sea	6f	English	S,R,F	22 April
5 Rev 1	New Zealand	Management Plan for Specially Protected Area (SPA) No.5 Beaufort Island, McMurdo Sound, Ross Sea	6f	English	S,R,F,	23 May
5 Rev 2	New Zealand	Management Plan for Specially Protected Area (SPA) No.5 Beaufort Island, McMurdo Sound, Ross Sea	6f	English	S,R,F,	28 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
6	New Zealand	Management Plan for a new Site of Special Scientific Interest (SSSI) No. XX, Botany Bay, Cape Geology, Victoria Land	6f	English	S,R,F	22 April
6 Rev 1	New Zealand	Management Plan for a Site of Special Scientific Interest (SSSI) No. 37, Botany Bay, Cape Geology, Victoria Land	6f	English	S,R,F	23 May
6 Rev 2	New Zealand	Management Plan for a Site of Special Scientific Interest (SSSI) No. 37, Botany Bay, Cape Geology, Victoria Land	6f	English	S,R,F	29 May
7	New Zealand	Management Plan for Site of Special Scientific Interest (SSSI) No.12 Canada Glacier, Taylor Valley, Victoria Land	6f	English	S,R,F	22 April
7 Rev 1	New Zealand	Management Plan for Site of Special Scientific Interest (SSSI) No.12 Canada Glacier, Taylor Valley, Victoria Land	6f	English	S,R,F	29 May
7 Rev 2	New Zealand	Management Plan for Site of Special Scientific Interest (SSSI) No.12 Canada Glacier, Taylor Valley, Victoria Land	6f	English	S,R,F	23 May
8	United Kingdom	Report Submitted to the XX1st Antarctic Treaty Consultative Meeting by the Depository Government of the Convention for the Conservation of Antarctic Seals (United Kingdom) in Accordance with Recommendation XIII-2, Paragraph 2(d)	5iv	English	S,R,F	22 April
9	United Kingdom	Emergency Response Action and Contingency Planning	11	English	S,R,F	22 April
9 Rev 1	United Kingdom	Emergency Response Action and Contingency Planning	11		Spanish only	27 May
10	United Kingdom	Proposals for Improving the Protected Area System	6f	English	S,R,F	22 April
11	Chile	Desastres Naturales En La Antartica	11	Spanish	E,R,F	22 April
12	Chile	Contaminacion Del Oceano Austral	14	Spanish	E,R,F	22 April
12 Rev 1	Chile	Contaminacion Del Oceano Austral	14	Spanish	E,R,F	20 May
13 (also WP 38)	New Zealand/ South Africa	Comprehensive Environmental Evaluation, Further Initiatives in Implementation Methodology	6b	English	S,R,F	22 April
14	United Kingdom	Proposals for Education and Training in Antarctica	13	English	S,R,F	22 April

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
15	New Zealand	Management Plan for a new Antarctic Specially Protected Area (ASPA) No. 2. Lewis Bay, Mount Erebus, Ross Island	6f	English	S,R,F	22 April
15 Rev 1	New Zealand	Management Plan for Specially Protected Area (SPA) No. 26. Lewis Bay, Mount Erebus, Ross Island	6f	English	S,R,F	23 May
15 Rev 2	New Zealand	Management Plan for Specially Protected Area (SPA) No. 26. Lewis Bay, Mount Erebus, Ross Island	6f	English	S,R,F	29 May
16	Germany	Inspections of Ships by Port States	6e	English	S,R,F	22 April
17	New Zealand	Tramway Ridge Site of Special Scientific Interest No.11, Proposed Change to Restricted Zone	6f	English	S,R,F	22 April
18	SCAR	Guide to the Preparation of Management Plans for Antarctic Specially Protected Areas	6f	English	S,R,F	22 April
19	SCAR	State of the Antarctic Environment Report	14	English	S,R,F	22 April
20	SCAR, COMNAP	Monitoring of Environmental Impacts of Scientific Activities and Operations in Antarctica	14	English	S,R,F	22 April
21	Chile	Gestión Ambiental Antártica	6e	Spanish	E,R,F	22 April
22	United Kingdom	Enhancing Compliance with the Protocol: Departure State Jurisdiction	6e	English	S,R,F	22 April
23	Italy	Joint Environmental Management of Research Activities	6b	English	S,R,F	22 April
24	France/New Zealand	Proposition d'amendement du règlement intérieur de la Réunion Consultative des Parties au Traité sur l'Antarctique	7	French	E,R,S	22 April
25	New Zealand	Standard Format for Reporting on Tourist and Non-Governmental Activities in Antarctica	9	English	F,S,R	18 May
26 (also IP 121)	New Zealand	Inspection Handbook: Examination of Compliance with Antarctica (Environmental Protection) Act 1994 of New Zealand's National Antarctic Activities	6a	English	F,S,R	18 May
27	Argentina	Monumento Histórico N°41 - Incorporación Del Cairn de Piedra de la Isla Paulet	6f	Spanish	E,F,R	18 May
28	Germany	Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty	6g	English	F,S,R	18 May
29	Argentina	Plan de Manejo Para el Sitio de Especial Interés Científico N° 15 "Punta Cierva", Costa Danco, Península Antártica	6f	Spanish	E,F,R	18 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
29 Rev 1	Argentina	Plan de Manejo Para el Sitio de Especial Interes Cientifico N° 15 "Punta Cierva", Costa Danco, Peninsula Antartica	6f	Spanish	E.F.R.	30 May
30	Argentina	Plan de Manejo Para el Sitio de Especial Interes Cientifico N° 13 "Peninsula Potter", Isla 25 de Mayo (King George), Islas Shetland del Sur	6f	Spanish	E.F.R.	18 May
30 Rev 1	Argentina	Plan de Manejo Para el Sitio de Especial Interes Cientifico N° 13 "Peninsula Potter", Isla 25 de Mayo (King George), Islas Shetland del Sur	6f	Spanish	E.F.R.	30 May
31	Argentina and Chile	Plan de Manejo Para el Sitio de Especial Interes Cientifico N° 14 "Punta Armonia", Costa Occidental De La Isla Nelson, Islas Shetland del Sur	6f	Spanish	E.F.R.	18 May
31 Rev 1	Argentina and Chile	Plan de Manejo Para el Sitio de Especial Interes Cientifico N° 14 "Punta Armonia", Costa Occidental De La Isla Nelson, Islas Shetland del Sur	6f	Spanish	E.F.R.	30 May
32	New Zealand	Working Paper on the Need for a State of the Antarctic Environment Report	14	English	S.F.R.	18 May
33	The Netherlands	Amendment of the Rules of Procedure	7	English	S.F.R.	18 May
34	New Zealand	Report on Intersessional Work	6b	English	S.F.R.	20 May
35	New Zealand	Further understanding of the terms "Minor" and "Transitory"	6b	English	S.F.R.	20 May
36	New Zealand	Understanding of EIA Processes	6b	English	S.F.R.	20 May
37	United Kingdom	Compliance with the Protocol: Maritime Insurance	6a	English	S.F.R.	21 May
38 (also WP15)	New Zealand	Comprehensive Environmental Evaluation (CEE): Methodology for Implementation of Activities for which a CEE has been Prepared	6b	English	S.F.R.	23 May
39	Secretariat	Report of the Transitional Environmental Working Group to the XXI ATCM		English	S.F.R.	29 May
40	Secretariat	Report of Working Group I to the ATCM XXI		English	S.F.R.	30 May
Appendix to WP40	Secretariat	Corrected and Revised Rules of Procedure (1977)		English	S.F.R.	
41	Secretariat	Report of Working Group II to the ATCM XXI		English	S.F.R.	30 May

LIST OF INFORMATION PAPERS

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
1	Belgium	Centieme Anniversaire De L'Expedition Antarctique Du Commandant A. de Gerlache (Belgique) 1897-1899	13	French	E,S,R	22 April
2	New Zealand	Agenda Item 6: Protocol on Environmental Protection to the Antarctic Treaty (a) "General Matters and Implementation by ATCPs"	6a	English		22 April
3	United States	Guidelines for Environmental Review - Experiences from the US Antarctic Program	6b	English	F,S,R	22 April
4	New Zealand	Antarctic Stratigraphic Drilling East of Cape Roberts in Southwest Ross Sea, Antarctica - Update of Activities	12	English		22 April
5	New Zealand	Follow-up to the Final Comprehensive Environmental Evaluation - Antarctic Stratigraphic Drilling East of Cape Roberts in Southwest Ross Sea, Antarctica (1996/97 Activities)	6b	English		22 April
6	Chile	Informe Sobre Protección del Medio Ambiente	6a	Spanish		22 April
7	New Zealand	Reporting of Tourist and Non-Governmental Activities in Antarctica: Antarctic Tourism Data: Prototype Post-Visit Data Entry Tool	9	English		22 April
8	Chile	Medio Siglo de Ciencia Antártica	12	Spanish		22 April
9	Chile	Divulgacion de los Valores Educativos de la Antartica	13	Spanish		22 April
10	Chile	Discurso del Representante de Chile	3	Spanish		22 April
10 Rev 1	Chile	Discurso del Representante de Chile	3	Spanish		22 May
11	South Africa	Environmental, Health and Safety Management System (EHSMS) - Follow up Report 1997 on the Implementation of the Final Comprehensive Environmental Evaluation (CEE) for SANAE IV, Queen Maud Land, Antarctica	6b	English		22 April
12	Germany	Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty	6g	English	F,S,R,	22 April
13	France	See IP 25	9	French		22 April
14	France	See IP 24	12	French		22 April

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
15 plus book	United Kingdom	Implementation of the Protocol on Environmental Protection to the Antarctic Treaty	6a	English		22 April
16	France/Italy	Concordia	12	French	S,R,F	18 May
17	Argentina	Plan de Manejo de Residuos Y De Proteccion Del Medio Ambiente en Base Marambio	6d	Spanish	E,R,F	18 May
18	Chile	Sistema de Informacion Geografico Multidisciplinario Para La Peninsula Fildes, Isla Rey Jorge, Antartica	11	Spanish	E,R,F	18 May
19	Chile	Sistema de Informacion de Datos Cientificos Antarticos (SIDCA)	11	Spanish	E,R,F	18 May
20	New Zealand	A Model IEE for an Antarctic Tourism Cruise	9	English		18 May
21	Italy	An Environmental Overview of the Italian Terra Nova Station	6b	English		18 May
22	New Zealand	New Joint Scientific and Related Initiatives Between New Zealand and South Africa	12	English	S,F,R	18 May
23	IHO	Report of the International Hydrographic Organisation (IHO) to be Presented by the New Zealand Hydrographer to the XXI Antarctic Treaty Consultative Meeting (ATCM) in Christchurch, New Zealand, 19-30 May 1997	5b	English		18 May
24	France	Le Programme Europeen de Forage Glaciaire au Dôme C Présenté par la France	12	French	E,S,R	18 May
25	France	Activites Touristiques à la base Française Dumont-d'Urville	9	French	E,S,R	18 May
26	Republic of Korea	International Collaborations on Scientific Activities on King George Island	12	English		18 May
27	Republic of Korea	Environmental Monitoring at the Korean Station <i>King Sejong</i> on King George Island	14	English		18 May
28	Germany	Research Projects in Order to Implement the Approvals Procedure of the Act Implementing the Environmental Protection Protocol	6a	English		18 May
29	Germany	Opening Address by Ambassador Dr Jochen Trebesch, Head of the Delegation of the Federal Republic of Germany	3	English		18 May
30	Canada	Opening Address by the Representative of Canada	3	English		18 May
31	SCAR/COMNAP	Management of Antarctic Data	11	English		18 May
32	SCAR	SCAR Global Change Programme (SCAR GCP)	12	English		18 May
33	SCAR	Scientific Research in the Antarctic	12	English		18 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
34	SCAR	Biological Diversity in the Antarctic	12	English		18 May
35	SCAR	SCAR Report to XXI ATCM	5a(v)	English		18 May
36	Argentina	Revision Ambiental De Las Actividades Argentinas En Bahia Esperanza, Peninsula Antartica	6b	Spanish	E	18 May
37	Norway	Report of the Norwegian Antarctic Inspection Under Article VII of the Antarctic Treaty, December 1996	10	English		18 May
38	Norway	A Description of Norwegian Procedures Developed in Accordance with Article I of Annex I to the Protocol on Environmental Protection to the Antarctic Treaty and Norwegian Regulations Relating to Protection of the Environment in Antarctica	6b	English		18 May
39	Brazil	Opening Address of the Head of the Brazilian Delegation to the XXI Antarctic Treaty Consultative Meeting	3	English		18 May
39 Rev 1	Brazil	Opening Address of the Head of the Brazilian Delegation to the XXI Antarctic Treaty Consultative Meeting	3	English		20 May
40	Brazil	Antarctic Specially Managed Area of Admiralty Bay	6f	English		18 May
41	WMO	Statement by the Representative of the World Meteorological Organisation (WMO), ATCM-XXI, Christchurch, New Zealand, 19-30 May 1997	3	English		18 May
42	IOC	Statement by the Representative of the Intergovernmental Oceanographic Commission (IOC), ATCM-XXI, Christchurch, New Zealand, 19-30 May 1997	3	English		18 May
43	WMO	Report of the World Meteorological Organisation (WMO) in Relation to Article III(2) of the Antarctic Treaty ATCM-XXI, Christchurch, New Zealand, May 1997	5b	English		18 May
44	WMO	Antarctic Stratospheric Ozone - Current Status Report	12	English		18 May
44 Rev 1	WMO	Antarctic Stratospheric Ozone - Current Status Report	12	English		26 May
45	IOC	Report on the 6th Session of the IOC Regional Committee for the Southern Ocean and the 1st Southern Ocean Forum	12	English		18 May
46	Secretariat	Environmental Impact Assessment Circulation of Information (According to Resolution 6, 1995)		English		18 May
47	The Netherlands	Opening Address by Mr J P H Bosman, Head of Delegation of The Netherlands	3	English		18 May
47 Rev 1	The Netherlands	Opening Address by Mr J P H Bosman, Head of Delegation of The Netherlands	3	English		19 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
48	The Netherlands	Approval of Recommendations by The Netherlands	7	English		18 May
49	WMO	WMO Networks in Support of Antarctic Operations and Research	11	English		18 May
50	Australia	Major Initiatives in Australian Antarctic Science, 1994-97	12	English		18 May
51	Australia	Introduction of Disease into Antarctic Birds	6c	English		18 May
52	Australia	50th Anniversary of Australian National Antarctic Research Expeditions	12	English		18 May
53	New Zealand	ATCM XXI - Opening Address	3	English		18 May
54	Argentina	Informe Sobre El Transito De Turismo Antartico A Traves de Ushuaia 1996/97	9	Spanish	E	18 May
55	Argentina	Elementos para la interpretación de los Procedimientos de Evaluación de Impacto Ambiental contenidos en el Anexo I del Protocolo de Madrid	6b	Spanish	E	18 May
56	New Zealand	An Environmental Code of Conduct for the McMurdo Dry Valleys	6a	English		19 May
57	New Zealand	A Summary of Environmental Impact Assessments (EIAs), Audits/Reviews and Related Documents Prepared for Activities in Antarctica	6b	English		19 May
57 Rev I	Secretariat	A Summary of Environmental Impact Assessments (EIAs), Audits/Reviews and Related Documents Prepared for Activities in Antarctica	6b	English		19 May
58 (book)	Bulgaria	Bulgaria in Antarctica		English		19 May
59 (book)	Bulgaria	Bulgarian Antarctic Research Life Sciences		English		19 May
60	IUCN	Letter to Dr Rudiger Wolfrum re Liability	6g	English	F	19 May
61	IUCN	Cumulative Environmental Impacts in Antarctica: Minimisation and Mangement	6b, 6c, 6f, 11, 15	English		19 May
62	ASOC	Report of the Antarctic and Southern Ocean Coalition (ASOC) under Article III(2) of the Antarctic Treaty	5b	Spanish	E,F	19 May
63	ASOC	Commentary on Chairman's Seventh Offering Annex on Environmental Liability	6g	English	F,S,R,	19 May
64	IUCN	Antarctic Environmental Education and Training: Request for Information	13	English		19 May
65	IUCN	1996 United Nations List of Protected Areas	6f	English		19 May
66	ASOC	Greenpeace 1996/97 Antarctic Expedition Report	10	English		19 May
67	COMNAP	COMNAP Summary of Existing Environmental Monitoring Activities in Antarctica	14	English		19 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
68	Australia	Opening Statement by Ms Gillian Bird, Head of the Delegation of Australia	3	English		19 May
69	Chile	Patrulla Naval Antartica De Chile	11	Spanish	E	19 May
70	Ecuador	Discurso de Apertura del Representante del Ecuador, CPFG-EM José Olmedo Morán	3	Spanish	E	19 May
71	France	D'Ouverture De M. Jean-Francois Dobelle, Chef De La Delegation Francaise	3	French	E	20 May
72 (see also IP82)	IUCN	Report of the World Conservation Union (IUCN)	5b	English		19 May
73	New Zealand	Annotated Agenda	4	English		19 May
74	IAATO	Environmental Impact Assessments for Antarctic Tourist Activities	6b	English		19 May
75	IAATO	Overview of Antarctic Tourism Activities: A Summary of 1996-1998 and Five Year Projection 1997-2002	9	English		19 May
76	Norway	Relevance of Developments in the Arctic and the Antarctic	8	English		19 May
77	CCAMLR	Statement by the CCAMLR Observer	5ii	English	S	19 May
78	Italy	Opening Address of the Italian Head of Delegation	3	English		19 May
79	Russia	Glaciological and Geophysical Research at Vostok Station within 1996-97	12	English		19 May
80	Russia	Contribution to Further Understanding of the Terms "Minor" or "Transitory" Impacts: Russian Viewpoint: Brief Version	6b, 14	English		19 May
81	Poland	Opening Address by Head of the Delegation of Poland	3	English		19 May
82	IUCN	Report of the World Conservation Union (IUCN) (Additional information)	5b	English		19 May
83	IAATO	Compulsory Insurance Under Liability Regimes	6g	English	F,S,R	20 May
84	Norway	Opening Address by the Representative of Norway	3	English		20 May
85	Greece	Opening Address by the Greece Head of Delegation	3	English		20 May
86	China	Opening Address by Head of the Delegation of China	3	English		20 May
87	China	Oil Spill Contingency Plan for Chinese Zhongshan Station in Antarctica	6e	English		20 May
88	China	Oil Spill Contingency Plan for Chinese Great Wall Station in Antarctica	6e	English		20 May
89	China	The Measures being adopted for Antarctic Environmental Protection by Chinese Antarctic and Arctic Administration (CAA)	6b	English		20 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
90	United States	Antarctic Ship-Borne Tourism - Status and Trends	9	English		20 May
91	Peru	Opening Speech by Ambassador Carmen E. Silva, Head of the Delegation of Peru	3	English	S	20 May
92	ASOC	Environmental Compensation Funds and the Antarctic	6g	English		20 May
93	IUCN	Cumulative Environmental Impacts in Antarctica: Minimisation and Management: Full Report	6b	English		20 May
94	South Africa	Update on South Africa's Initiative to Acquire ISO 14001 Certification	6b	English		20 May
95	Russia	Opening Address of the Head of the Delegation of the Russian Federation	3	Russian	E	22 May
96	Norway	Norwegian Antarctic Research Expedition (NARE) 1996/97	12	English		20 May
97	Brazil	Contribution to Understanding of Minor or Transitory Environment Impact	6b	English		21 May
98	Bulgaria	Presentation to the Plenary of the Bulgarian Request for Consultative Status	17	English		28 May
99	IOC	IOC Regional Committee for the Southern Ocean (Sixth Session) and the First Southern Ocean Forum	5b	English	S,R,F	22 May
100	IOC	IOC Regional Committee for the Southern Ocean (Sixth Session) and the First Southern Ocean Forum (Recommendations)	5b	English	S,R,F	22 May
101	Finland	Implementation of the Protocol on Environmental Protection to the Antarctic Treaty	6a	English		22 May
102	COMNAP	COMNAP Report to the XXI Antarctic Treaty Consultative Meeting	5	English		22 May
103	Finland	Opening Address by Ambassador Heikki Puurunen, Head of the Delegation of Finland	3	English		22 May
104	United States	Implications of the Current Draft Liability Annex to Activities Among Treaty Members	6g	English	F,S	22 May
105	South Africa	Opening Statement by Dr Francois Hanekom, Head of the Delegation of South Africa	3	English		22 May
106	Uruguay	Uses of a Krill Diet for the Treatment of Atherosclerosis	12	English		22 May
107	Uruguay	Uses of a Krill Diet for the Treatment of Atherosclerosis: Six Studies	12	English		23 May
108	IAATO	Report of the International Association of Antarctica Tour Operators (IAATO)	5b	English	S,R,F	23 May

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
109	Russia and IAATO	Report on the Ecological Research Program within the time frame of co-operation between Russian Antarctic Expedition and Quark Expeditions	12	English		23 May
110	India	Opening Address of Dr A.E. Muthunayagam, Secretary, Department of Ocean Development, Government of India and Head of the Indian Delegation	3	English		23 May
111	Spain	Intervencion Inicial Del Embajador Carlos A. Zaldivar, Jefe De La Delegacion De Espana	3	Spanish	E	23 May
112	Japan	Law Relating to Protection of the Environment in Antarctica	6a	English		23 May
113	UNEP	Statement by UNEP	5b	English		23 May
114	United States/United Kingdom	Antarctic Site Inventory: Summary of Progress - 1994 to 1997	9	English		23 May
115	Russia	Background for Presentation by Dr V. Lukin - Head of the Russian Antarctic Expedition and Dr M. Moskalevsky - Deputy Chairman of Russian Committee on Antarctic Research on Implications of the Draft Liability Annex to Scientific Research Activities in Antarctica	6g	English	F.S.R	23 May
116	Sweden	Opening Address by Ambassador Wanja Tornberg, Head of the Delegation of Sweden	3	English		23 May
117	Argentina, Brazil, Chile, Ecuador, Peru, Uruguay	Establecimiento De La Sede De La Secretaria Del Tratado Antartico Documentato Informativo	7	Spanish	E,F	23 May
118	Argentina	Discurso De Apertura del Dr Horacio E. Solari, Jefe de la Delegacion Argentina	3	Spanish	E	27 May
119	Australia	Current Status of Adherence to the CCAMLR Convention and Membership of the Commission	5a(ii)	English		26 May
120	United States	Opening Address by Mr R. Tucker Scully, Head of Delegation of the United States of America	3	English		26 May
121 (also WP 26)	New Zealand	Inspection Handbook: Examination of Compliance with Antarctica (Environmental Protection) Act 1994 of New Zealand's National Antarctic Activities	6a	English		27 May
122	Republic of Korea	Opening Address by Ambassador Yoon-Kyung Oh, Head of the Delegation of the Republic of Korea	3	English		27 May

FINAL REPORT OF THE TWENTY-FIRST ATCM

Doc No	Submitted By	Title	Item No	Original	Translation	Distribution
123	United Kingdom	Opening Address by Dr Mike Richardson, Head of the Delegation of the United Kingdom	3	English		27 May
124	United Kingdom	UK Data Management Initiatives	11	English		27 May
125	IAATO	Antarctic Tourism: A Resource for Science	12	English		27 May
126	ASOC	Oceanic Debris Observations in the Southern Ocean Whale Sanctuary	14	English		27 May
127	Japan	Opening Address by Mr Toshihide Tsumagari, Head of the Delegation of Japan	3	English		27 May
128	Brazil	Implementation of the Protocol on Environmental Protection to the Antarctic Treaty	6a	English		27 May
129	Argentina	Condiciones de Hielo En El Mar de Weddell Durante El Verano 1996/97	11	Spanish	E	28 May
130	Uruguay	Discurso de Apertura del Jefe de la Delegacion de Uruguay	3	Spanish	E	28 May
131	Bulgaria	Opening Address by Mr Aliocha Nedeltchev, Head of the Delegation of the Republic of Bulgaria	3	English		28 May

**ANNEX H:
ANTARCTIC
TREATY
INSPECTIONS**

ANNEX H: ANTARCTIC TREATY INSPECTIONS

INSPECTIONS BY YEAR, NATIONALITY AND LOCATION CARRIED OUT UNDER ARTICLE VII OF THE ANTARCTIC TREATY

Year	Party Inspecting	Number of Bases or Ships Inspected	Nationality of Bases Inspected
1963	New Zealand	3	USA
1964	USA	10	Argentina (Decepcion) Argentina (Esperanza) Chile (Pres. Videla) Chile (Pedro Cerda) France (D d'Urville) New Zealand (Scott) UK (Base B, Base F) USSR (Mirny, Vostok)
1964	Australia	4	New Zealand (Scott) USA (McMurdo, Byrd) USA (South Pole).
1964	UK	1	USA (McMurdo)
1966	Argentina	1	USA
1967	USA	9	Argentina (Orcadas) Australia (Wilkes) Australia (Mawson) Denmark (M/S Dan) France (D. D'Urville) Japan (Syowa) South Africa (SANAE) UK (Signy) USSR (Molodezhnaya)
1971	USA	4	Australia (Casey) Australia (Mawson) France (D.d'Urville) USSR (Mirny)

Year	Party Inspecting	Number of Bases or Ships Inspected	Nationality of Bases Inspected
1975	USA	4	Argentina (Alm. Brown) Chile (Eduardo Frei) UK (Argentine Islands) USSR (Bellingshausen)
1977	Argentina	1	USA
	USA	5	Argentina (Marambio) Chile (Eduardo Frei) New Zealand (Scott) USSR (Bellingshausen) USSR (Druzhnaya IV)
1980	USA	6	Argentina (Alm Brown) Argentina (Esperanza) Chile (Gen B O'Higgins) Poland (Arctowski) UK (Rothera) USSR (Bellingshausen)
1983	USA	14	Argentina (Marambio) Argentina (Belgrano II) Australia (Casey, Davis) Australia (Mawson) France (D. D'Urville) Germany (G von Neumayer) Japan (Syowa) South Africa (SANAE) UK (Halley) USSR (Novolazarevskaya) USSR (Molodezhnaya) USSR (Mirny) USSR (Leningradskaya)

Year	Party Inspecting	Number of Bases or Ships Inspected	Nationality of Bases Inspected
1985	USA	7	Argentina (Jubany) Chile (Rod. Marsh) Chile (Eduardo Frei) China (Great Wall) Poland (Arctowski) UK (Faraday) USSR (Bellingshausen)
1986	Australia	2	France (D d'Urville) USSR (not available)
1987	Chile	10	Argentina (Decepcion) Argentina (Alm. Brown) Brazil (Cdte. Ferraz/Buque Prof. Besnard) China (Great Wall) Poland (Arctowski) Spain (Buque Alcocero) UK (Faraday) USSR (Bellingshausen) Uruguay (Artigas)
1987	Australia	1	USSR (Mirny)
1988	USSR	not available	not available
1989	USA	6	France (D. D'Urville) Germany (Gondwana) Italy (Terra Nova Bay) New Zealand (Scott/Cape Bird) USSR (Leningradskaya)
1989	USSR	15	Argentina, Brazil, Australia, China, FRG, GDR, India, Japan, New Zealand, Poland, UK, USA (names of stations not available)
1989	New Zealand	3	UK (Faraday, Rothera, Signy)

Year	Party Inspecting	Number of Bases or Ships Inspected	Nationality of Bases Inspected
1989	New Zealand/UK	11	Argentina (G. San Martin) Argentina (Orcadas) Brazil (Cdte. Ferraz) Chile (Ten. Carvajal) Chile (Ten. R. Marsh) China (Great Wall) Poland (Arctowski) Korea (King Sejong) Uruguay (Artigas) USA (Palmer) USSR (Bellingshausen)
1989	France/Germany	8	Argentina, Brazil, Chile, Korea, Spain, Uruguay, UK, USA (names of stations not available)
1990	Norway	3	Germany (G von Neumayer) South Africa (SANAE) UK (Halley)
1990	Brazil	4	Argentina, China, Korea, Uruguay (names of stations not available).
1990	Chile	9	Argentina (Decepcion) Argentina (Jubany) Brazil (Cdte. Ferraz) China (Great Wall) Ecuador (M/S Orion) Poland (Arctowski) Spain (Juan Carlos I) Uruguay (Artigas) USSR (Bellingshausen)
1990	China	7	Argentina, Brazil, Chile, Poland, Korea, Uruguay, USSR (names of stations not available).

Year	Party Inspecting	Number of Bases or Ships Inspected	Nationality of Bases Inspected
1991	Chile	4	Ecuador (V. Maldonado) Poland (Deception Hut) Netherlands (Deception Hut) USA (Seal Island Hut)
1991	Australia	1	China (Zhongshan)
1993	UK/Italy/Korea	19	Argentina (S. Martin, Decepcion) Argentina (Esperanza) Brazil (Cde. Ferraz) Chile (Arturo Prat) Germany (M/S Europa) Liberia (M/S Explorer) Poland (Arctowski) Russia (M/S Vavilov) Korea (King Sejong) UK (Faraday, Rothera) UK (Stonington Is, Deception, Fossil Bluff) USA (Palmer, East Base) Spain (Juan Carlos I, Primero, Gabriel de Castilla)
1994	Sweden	9	Germany (Neumayer) UK (Halley) India (Maitri) Russia (Novolazarevskaya) Germany (Georg Forster) South Africa (SANAE III and IV) South Africa (Sarai Marais) Finland (Aboa)

Year	Party Inspecting	Number of Bases or Ships Inspected	Nationality of Bases Inspected
1995	USA	8	France (D. D'Urville) Russia (Mirny) Australia (Davis) China (Zhongshan) Japan (Syowa) Germany (G von Neumayer) UK (Signy) Argentina (Orcadas)
1995	Argentina	3	Korea (King Sejong) UK (Rothera) UK (Signy)
1996	Norway	4	Russia (Novolazarevskaya) Germany (G von Neumayer) South Africa (SANAE IV) India (Maitri)

**ANNEX I:
LISTS OF SSSIs
WITH MARINE
AREAS OF
INTEREST
TO CCAMLR**

ANNEX I: LIST OF SSSI_s WITH MARINE AREAS OF INTEREST TO CCAMLR

- SSSI 1: Cape Royds, Ross Island
- SSSI 20: Biscoe Point, Anvers Island
- SSSI 26: 'Chile Bay' (Discovery Bay), Greenwich Island, South Shetland Islands
- SSSI 27: Port Foster, Deception Island, South Shetland Islands
- SSSI 28: South Bay, Doumer Island, Palmer Archipelago
- SSSI 32: Cape Shirreff, Livingston Island, South Shetland Islands
- SSSI 34: Lions Rump, King George Island, South Shetland Islands
- SSSI 35: Western Bransfield Strait off Low Island, South Shetland Islands
- SSSI 36: Eastern Dallmann Bay off Brabant Island, Palmer Archipelago

**ANNEX J:
TRIAL REPORT
FORM FOR
TOURISM AND NGO
ACTIVITIES IN
ANTARCTIC
TREATY AREA**

ANNEX J: TRIAL REPORT FORM FOR TOURISM AND NGO ACTIVITIES IN ANTARCTIC TREATY AREA

ADVANCE NOTIFICATION Tourist and non-Governmental Activities in the Antarctic

This information is requested in compliance with Antarctic Treaty Recommendation XVIII-1 and Resolution XIX-3. Please submit to the appropriate national authority prior to the Expedition taking place.

A: Tour / Expedition Organizer

Company name:	Contact person:
Company address:	National registration of Company:
International phone:	Total number of Expedition Staff ¹ :
International fax:	

B: Details of transport and equipment to be used for the Tour / Expedition

(Complete these panels only once if all Tours / Expeditions planned do not vary in their use of transport or equipment: where these vary, complete the panel for every Tour or Expedition)

B.1 Vessel / aircraft used for transport to / from Antarctica

Vessel / aircraft registered name:	Vessel / aircraft type:
National registration:	Vessel / aircraft passenger carrying capacity:
	Vessel ice rating (if applicable):
<input type="checkbox"/> Ship <input type="checkbox"/> Yacht <input type="checkbox"/> Aircraft (check)	Vessel / aircraft fuel capacity:
	Vessel / aircraft fuel type:
Intended use of vessel / aircraft	Vessel / aircraft call sign:
	INMARSAT number / fax:
	Radio frequency:
Captains' / commanders' name(s):	Total number of crew ² :

B.2 Equipment to be used within Antarctica

Number and types of aircraft to be used: <i>Number Type Use</i>	Number and types of other vessels or vehicles (e.g. small boats, snowmobiles) to be used: <i>Number Type Use</i>

¹ Staff: Expedition personnel, guides, lecturers, small boat drivers (exclude crew serving these functions).

² Crew: Vessel's captain and officers, helicopter pilots, crew and hotel / catering staff (exclude Staff, Passengers and Observers).

ADVANCE NOTIFICATION (continued)

C: Contingency planning

Type and amount of insurance cover, including name of insurer(s):

Arrangements for self-sufficiency and contingency plans, including for medical evacuations and search and rescue in the event of an emergency:

D: Expedition Details (complete one of these panels for every separate cruise / expedition you are organizing)

Planned port of embarkation:	Planned date of embarkation:
Planned port of disembarkation:	Planned date of disembarkation:
Planned Cruise/Flight number or Voyage Name:	Estimated number of Passengers ¹ to be carried:
Activities to be undertaken and purpose:	
Intended itinerary — places to be visited, giving estimated dates:	

¹ **Passengers:** Members of the Expedition that are not Staff or Crew, excluding Observers / National Representatives.

Signature: _____ *Tour / Expedition Organizer*

Date: _____

POST-VISIT REPORT: PART 1 – Tour Record

Instructions

The Tour Record is completed for every tour or non-governmental expedition. This information is requested in compliance with Antarctic Treaty Recommendation XVIII-1 and Resolution XIX-3 (1995).

A: Expedition Details

Company name:	Cruise / Flight number:
Expedition Leader(s) name:	Vessel name / aircraft registration:
<input type="checkbox"/> Ship <input type="checkbox"/> Yacht <input type="checkbox"/> Aircraft (check)	Captain's / commander's name:
Port and date of embarkation:	Port and date of disembarkation:
Actual itinerary travelled — please provide description of route, giving dates Note: if you consider the Site Visit Record (SVR) provides an adequate description of itinerary simply write "See SVR":	

B: Observers

Name:	Name:	Name:
Affiliation:	Affiliation:	Affiliation:

C: Record of Expedition numbers by nationality

Nationality	Number of			Nationality	Number of			Nationality	Number of		
	Pax ¹	Staff	Crew ²		Pax ¹	Staff	Crew ²		Pax ¹	Staff	Crew ²
TOTAL											

¹ Pax (Passengers): Members of the Expedition that are not Staff or Crew.
² Staff: Expedition personnel, guides, lecturers and small boat drivers.
³ Crew: Vessel's captain and officers, aircraft pilots, crew and hotel / catering staff (excluding above).

D: Report on Expedition by Expedition Leader (please be brief, but use additional sheets if necessary)

1. Has a meteorological report been submitted to the World Meteorological Organization?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
2. List any unusual incidents affecting people or the environment:	
3. If there were any unusual incidents, has or will an incident report be prepared?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
4. To whom has or will the incident report be provided?	
5. Any other comments or observations (e.g. observations of disturbance to wildlife or the physical environment, changes from expedition Advance Notification, etc.):	
Signature: _____	Expedition Leader or Vessel Captain
Date: _____	

POST-VISIT REPORT: PART 2 - Site Visit Record

One line of the Site Visit Record should be completed per site whenever Expedition members disembark or journey beyond base or camp.

Instructions

Tour Company or Name:		Vessel Name:			Cruise/ Flight Number
Date(s)	Site visited	Site latitude / longitude	Duration of visit from time first passengers left vessel/ aircraft/ base/ camp	Duration of passenger activities at site visited	
		Number of people making site visit		Activities at site (List all codes that apply)	
		Pax ¹	Staff ² Crew ³		

1 Pax (Passengers): Members of the Expedition that are not Staff or Crew.
 2 Staff: Expedition personnel, guides, lecturers and boat drivers.
 3 Crew: Vessel's captain and officers, aircraft pilots, and crew and hotel / catering staff (excluding above).

Activity codes BL Aircraft landing: AL Helicopter landing: HL Station visit: SV
 Small boat landing: BL Aircraft flight: AF Helicopter flight: HF Camping: CP
 Small boat cruising: ZC

**ANNEX K:
LIST OF
PARTICIPANTS**

ANNEX K: LIST OF PARTICIPANTS

CONSULTATIVE PARTIES

ARGENTINA

Representative

Dr H E Solari
Director General for Antarctic Affairs
Ministry of Foreign Affairs

Delegates

Dr A R Mansi
Bureau of Antarctic Affairs
Ministry of Foreign Affairs

Mr F M Lopez Crozet
Bureau of Antarctic Affairs
Ministry of Foreign Affairs

Advisors

Mr A E Molinari
National Antarctic Directorate

Dr J M Acero
Argentine Antarctic Institute

AUSTRALIA

Representative

Ms Gillian Bird
First Assistant Secretary, International
Organisations and Legal Division
Department of Foreign Affairs and Trade

Alternate

Mr Rex Moncur
Director, Australian Antarctic Division
Department of the Environment, Sport and
Territories

Delegates

Ms Linda Hay
Assistant Director, Australian Antarctic Division
Department of the Environment, Sport and
Territories

Mr Jonathan Brown
Director, Sustainable Development Section
Environment and Antarctic Branch, Department
of Foreign Affairs & Trade

Mr Timothy Kane
Environment and Antarctic Branch, Department
of Foreign Affairs & Trade

Mr Adam McCarthy
First Secretary, Australian Embassy, Wellington

Mr Michael Lennard
Counsel, Office of International Law
Attorney-General's Department

Mr Anthony Hughson
Director, Office of Antarctic Affairs, Tasmanian
Government Representative of the Australian
States and Territories

Ms Lyn Goldsworthy
Representative of Environmental Non-
Governmental Organisations

BELGIUM

Representative HE Mr Pierre Vanderveorde
Ambassador, Embassy of Belgium, Wellington

Delegate Mr Frank Anauts
Counsellor, Embassy of Belgium, Canberra

BRAZIL

Representative Rear-Admiral A de Camãra Brandão
Brazilian Navy

Delegates Captain H de Queiroz
Brazilian Navy

Mr A J Teixeira
Advisor for the Antarctic Programme
Ministry of Science and Technology

Prof A C Rocha Campos
Universidade de Sao Paulo
Sao Paulo, Brazil

Mr N Tabajara de Oliveira
First Secretary
Ministry of External Relations

Ms H Rizzo
Ministry of Environment

CHILE**Representative**

Mr O Pinochet de la Barra
Embajador
Director Instituto Antártico Chileno

Delegates

Mr F Heller
Ministerio de Relaciones Exteriores

Mr P Arriarán
Second Secretary, Embassy of Chile, Wellington

Ms M Meneses
Ministerio de Relaciones Exteriores

Advisors

Mr S Carrasco
Estado Mayor de la Defensa Nacional

Coronel J Escobar
Fuerza Aérea de Chile

Mr C Martinez
Direccion General del Territorio Marina
Mercante

Mr E Pieper
Armada de Chile
Estado Mayor General de la Armada

Dr J Valencia
Instituto Antartico Chileno
Ministerio de Relaciones Exteriores

CHINA**Representative**

Mr Zhenmin Liu
Counellor, Department of Treaties and Law
Ministry of Foreign Affairs

Delegates

Mr Liqi Chen
Director General, Chinese Arctic and Antarctic
Administration

Mr Zonglai Wang
Deputy Director, Department of Treaties and
Law, Ministry of Foreign Affairs

Mr Qide Yan
Deputy Director, Polar Research Institute of
China (PRIC)

Mr Qin He
First Secretary, Embassy of China, Wellington

Ms Lina Tao
Deputy Director, Division of International
Cooperation, Chinese Arctic and Antarctic
Administration

Mr Yanbin Li
Ministry of Foreign Affairs

ECUADOR

Representative CPFG-EM Jose A Olmedo Moran
Director, Oceanographic Institute of the
Ecuadorian Navy

Delegate Lieutenant R Armijos Gallegos
Chief, Oceanographic Data Center

FINLAND

Representative Mr H Puurunen
Ambassador for Polar Affairs
Ministry of Foreign Affairs

Delegates Ms S Mäkelä
Legal Officer, Ministry for Foreign Affairs

Ms R Mansukoski
Special Adviser, Ministry of Trade and Industry

Mr T Kuokkanen
Legal Officer, Ministry of the Environment

Mr A Sirén
Researcher, Ministry for Foreign Affairs

Mr P Kauppinen
Senior Adviser, Ministry of Education and
Science

FRANCE

Representative Mr J F Dobbelle
Directeur-adjoint des Affaires Juridiques au
ministère des Affaires étrangères

Alternate

Mr P Lise
Administrateur Supérieur des Terres Australes
et Antarctiques Françaises

Mr J Villemain
Conseiller des Affaires Etrangères, sous-
direction du droit de la mer, des pêches et de
l'Antarctique, ministère des Affaires étrangères

Delegates

Mr S Verniau
Cultural and Scientific Counsellor, Embassy of
France, Wellington

Prof Paul Trehen, président du Comité pour
l'Environnement Polaire

Dr C Terrasse
Directeur-adjoint de l'Institut Français pour la
Recherche et la Technologie Polaires

Prof H Barre
Institut Français pour la Recherche et la
Technologie Polaire

Ms S Gautier
Administration Supérieure des Terres Australes
et Antarctiques Françaises

Mr L Upton
Honorary Consul of France, Christchurch

GERMANY

Representative

Dr J Trebesch
Ambassador, Federal Foreign Office

Delegates

Mr M Kupitz
Counsellor, Federal Ministry of Economics

Ms U Mumpro
Federal Ministry for the Environment

Mrs C Schmidt
Federal Ministry for the Environment

Mr G Roessner
Embassy of the Federal Republic of Germany,
Wellington

Advisors Prof Dr C R Wolfrum
Director, Max Planck Institute for Comparative
Public Law and International Law

Dr U Doyle
Environmental Advisor
Federal Environmental Agency

Dr H Kohlen
Scientific Advisor
Alfred-Wegener Institute for Polar and Marine
Research

INDIA

Representative Dr A E Muthunayagam
Secretary, Department of Ocean Development

Delegates Mr A Chugn
Joint Secretary to Government of India,
Department of Ocean Development

Mr K S Bharti
First Secretary, Embassy of India, Wellington

ITALY

Representative HE Mr A Provenzano
Ambassador, Embassy of Italy, Wellington

Delegates Prof Dr F Franchoni
Legal Adviser, Ministry of Foreign Affairs
University of Siena

Dr M Zucchelli
Manager, Italian Antarctic Programme

Dr P Giuliani
Deputy Manager, Italian Antarctic Programme

JAPAN

Representative Mr T Tsumagari
Director of Global Issues Division, Multilateral
Cooperation Department, Ministry of Foreign
Affairs

Alternates

Mr W Iwamoto
 Director of International Scientific Affairs
 Division
 Ministry of Education

Mr K Mori
 Biodiversity Coordinator, Nature Conservation
 Bureau
 Environment Agency

Prof T Hirasawa
 Director-General, National Institute of Polar
 Research

Delegates

Mr T Takikawa
 Administrative Supervisor, Antarctic Research
 International Scientific Affairs Division
 Ministry of Education

Mr Akira Wakasugi
 Counsellor, Consular Office of Japan,
 Christchurch

Mr H Sakai
 Attorney assign to Foreign Policy Bureau
 Foreign Policy Bureau, Ministry of Foreign
 Affairs

Mr M Sano
 Director of Logistic Section, Office of Expedition
 Operation, National Institute of Polar Research

Mr T Ono
 Deputy Director, Planning Division
 Nature Conservation Bureau, Environment
 Agency

Mr S Urauchi
 Official, Global Issues Division, Multilateral
 Cooperation Department
 Ministry of Foreign Affairs

Ms Junko Kamigori
 Administrative Staff, Consular Office of Japan,
 Christchurch

Advisor

Dr K Watanabe
 Associate Professor
 National Institute of Polar Research

REPUBLIC OF KOREA

- Representative** HE Mr Yoon-Kyung Oh
Ambassador
Embassy of the Republic of Korea, Wellington
- Alternate** Prof Seo-Hang Lee
Institute of Foreign Affairs and National
Security
Ministry of Foreign Affairs
- Delegates** Mr Hantaek Im
First Secretary, Embassy of the Republic of
Korea, Canberra
- Mr Jong In Bae
Assistant Director, International Legal Affairs
Division,
Ministry of Foreign Affairs
- Ms Uni Oh Choi
Public Prosecutor, Office of International Legal
Affairs,
Ministry of Justice
- Mr Ki Jin Hyun
Assistant Director, Marine Development
Division,
Ministry of Maritime Affairs and Fisheries
- Dr In-Young Ahn
Principal Researcher
Polar Research Center, KORDI

THE NETHERLANDS

- Representative** Mr J P H Bosman
Head
Energy, Technology and Research Division
Ministry of Foreign Affairs
- Alternates** Mr H Verheij
Ministry of Environment
- Prof Dr J G Lammers
Deputy Legal Advisor
Ministry of Foreign Affairs
- Delegates** Mr R Jumelet
Ministry of Foreign Affairs

Dr J H Stel
 Director, Netherlands Geosciences Foundation
 (GOA)

Dr D A van der Kroef
 Deputy Director, Netherlands Geosciences
 Foundation

Dr E Bauw
 Ministry of Justice

HE Mr T van Thessen
 Ambassador, Embassy of The Netherlands,
 Wellington

Z F Baron van Dorth tot Medler
 Embassy of The Netherlands, Wellington

NEW ZEALAND

Representative

Mr Stuart Prior
 Head, Antarctic Policy Unit
 Ministry of Foreign Affairs and Trade

Alternate

Mr Don Mackay
 Director, Legal Division
 Ministry of Foreign Affairs and Trade

Ms Louise Sparrer
 Senior Policy Officer, Antarctic Policy Unit
 Ministry of Foreign Affairs and Trade

Mr Michael Prebble
 Manager, Marsden Fund
 Royal Society of New Zealand

Delegates

Ms Felicity Bloor
 Policy Officer, Antarctic Policy Unit
 Ministry of Foreign Affairs and Trade

Ms Gillian Wratt
 Chief Executive
 Antarctica New Zealand

Ms Emma Waterhouse
 Environmental Manager
 Antarctica New Zealand

Mr Paul Fitzgerald
 Science Strategy Manager
 Antarctica New Zealand

Mr Julian Tangaere
Antarctic Support Services Manager
Antarctica New Zealand

Advisers

Dr Alan Hemmings
Consultant

Mr Paul Dingwall
Senior Science Policy Advisor, Department of
Conservation

Mr Bruce Bassett
Advisor, Tourism Policy Group
Ministry of Commerce

Prof Vernon Squire
University of Otago
(Chair, Environmental Assessment and Review
Panel)

NORWAY

Representative

Ambassador J Bech
Ambassador
Ministry of Foreign Affairs

Alternate

Professor O Orheim
Managing Director
Norwegian Polar Institute

Mr M Holmboe
Acting Director General
Ministry of Justice

Delegates

Ms M Sktre
Adviser
Ministry of Foreign Affairs

Mr S Rosenberg
Senior Executive Officer
Ministry of Environment

Dr J G Winther
Head of Antarctic Section
Norwegian Polar Institute

Ms B Njstads
Senior Executive Officer
Norwegian Polar Institute

Ms A Christoffersen
Acting Deputy Director General
Ministry of Justice

Mr J Ramberg
Executive Secretary (Designate)
Ministry of Foreign Affairs

PERU

Representative HE Ms C Silva
Ambassador, Embassy of the Republic of Peru,
Wellington

Delegates Naval Captain J Cicala
Direccion de hidrografia Y Navegacion de la
Marina De Guerra

General M Varela
Comision Nacional Asuntos Antarticos

Mr L Rodriguez
Secretario Ejecutivo de la Conaan
Ministerio de Relaciones Exteriores

Mr J W Kisic
Mayor General FAP
Fuerza Aerea Del Peru

POLAND

Representative Dr Waldemar Figaj
Head, European Branch
Ministry of Foreign Affairs and Trade

RUSSIA

Representative Mr V Sidorov
Deputy Minister of Foreign Affairs of the
Russian Federation

Alternates Mr P Dzyubenko (Acting Head)
Deputy Director, Legal Department
Ministry of Foreign Affairs

Mr S Khodkin
Deputy Chairman, State Meteorological
Committee

Delegates

Mr R Mamin
Head of Department, Ministry of Natural
Resources

Mr V Lukin
Head, Russian Antarctic Expedition

Mr S Nikiforov
Senior Counsellor, Legal Department
Ministry of Foreign Affairs

Mr M Moskalevsky
Senior Expert, Institute of Geography
Russian Academy of Science

HE Mr S Belyaev
Ambassador, Embassy of the Russian
Federation, Wellington

Mr A Botov
Minister-Counsellor, Embassy of the Russian
Federation, Wellington

Mr A Roudenko
First Secretary, Embassy of the Russian
Federation, Wellington

SOUTH AFRICA

Representative

Dr F Hanekom
Deputy Director-General
Department of Environmental Affairs and
Tourism

Alternate

Mr A J Hoffman
Legal Advisor, Department of Foreign Affairs

Delegates

Mr J Hattingh
First Engineer, Directorate: Antarctica and
Islands
Department of Environmental Affairs and
Tourism

Mr D J van Schalkwyk
Director: Antarctica and Islands
Department of Environmental Affairs and
Tourism

Mr S G van Zyl
 Assistant Director, Marine, Maritime and
 Antarctic Affairs, Department of Foreign Affairs

Mr P Gildenhuis
 Environmental Officer
 Department of Environmental Affairs and
 Tourism

SPAIN

Representative Mr C Zaldivar
 Ministry of Foreign Affairs

Delegates Dr J R Vericad
 National Antarctic Programme, Interministerial
 Commission for Science and Technology

SWEDEN

Representative Mrs W Tornberg
 Ambassador
 Ministry for Foreign Affairs

Delegates Ms V Bohn
 Deputy Director, Ministry of the Environment

Prof A Karlquist
 Polar Research Secretariat

Dr O Melander
 Deputy Director, Polar Research Secretariat

Mr P Wrangé
 Deputy Director, Ministry for Foreign Affairs

UNITED KINGDOM

Representative Dr M G Richardson
 Head, Polar Regions Section
 Foreign and Commonwealth Office

Delegates Mr R Mackenzie
 Deputy Head, Polar Regions Section
 Foreign and Commonwealth Office

Mr A I Aust
Legal Counsellor, Foreign and Commonwealth
Office

Advisor Dr J Shears
Environmental Officer, British Antarctic Survey

UNITED STATES OF AMERICA

Representative Mr R T Scully
Director, Office of Oceans Affairs
Bureau of Oceans and International
Environmental and Scientific Affairs,
Department of State

Alternate Dr R J Hofman
Scientific Programme Director
Marine Mammal Commission

Mr E Chiang
National Science Foundation
Office of Polar Programmes

Mr R Naveen
Oceanites Foundation

Mr E Bloom
Attorney-Adviser, Office of the Legal Adviser
Department of State

Dr L Rudolph
General Counsel, National Science Foundation

Ms J Jatko
Environmental Officer, National Science
Foundation

Dr H Cohen
Office of Oceans Affairs, Bureau of Oceans and
International Environmental and Scientific
Affairs, Department of State

Dr R Williams Jr
Research Geologist, United States Geological
Survey
Department of Interior

Dr R Rutherford
Professor of Geosciences, University of Texas at
Dallas

Ms B Clark
The Antarctica Project, ASOC

Mr D Schoeling
Executive Secretary, IAATO

Mr M Dworken
Counsellor and Deputy Chief of Mission,
Embassy of the United States of America,
Wellington

Mr J Whalen
Second Secretary, Embassy of the United States
of America, Wellington

URUGUAY

Representative

Mr J Ruggiero
Chairman
Antarctic Institute

Delegates

Mr C Castells
Chargé d'Affaires, Embassy of Uruguay,
Wellington

Mr C Bentancour
Counsellor, Ministry of Foreign Affairs

Mr J Mateo
Director Logistica, National Antarctic Institute

Prof B Grillo
National Antarctic Institute

Dr R Puceiro
Legal Counsel, National Antarctic Institute

NON-CONSULTATIVE PARTIES

BULGARIA

Representative

Mr A Nedeltchev
Head, International Law Department
Ministry of Foreign Affairs

Delegates

Mr H Pimpirev
Director, Bulgarian Antarctic Institute

CANADA

Representative Dr F Roots
 Science Advisor
 Department of the Environment

COLOMBIA

Representative He Mr H Barjuch
 Ambassador
 Embassy of Colombia, Wellington

Delegate Mr C Forero
 Second Secretary, Embassy of Colombia,
 Wellington

CZECH REPUBLIC

Representative Mr E Metela
 Counsellor and Deputy Chief of Mission
 Embassy of the Czech Republic, Canberra

DENMARK

Representative Dr J C T Schousboe
 Honorary Consul
 Royal Danish Consulate, Christchurch

Delegate Dr M Schousboe
 Royal Danish Consulate, Christchurch

GREECE

Representative Mr V Patronas
 Special Adviser to the Legal Division of the
 Ministry of Foreign Affairs

SWITZERLAND

Representative Mr W Simmen
 Chargé d'Affaires
 Embassy of Switzerland, Wellington

TURKEY

Representative

HE Mr H Güvener
Ambassador
Embassy of Turkey, Wellington

OBSERVERS

CCAMLR

Commission for the Conservation of Antarctic Marine Living Resources

Representative

Mr E de Salas
Executive Secretary

SCAR

Scientific Committee on Antarctic Research

Prof A C Rocha Campos
President

Dr David W H Walton
Convenor of GOSEAC (Group of Specialists on Environmental Affairs and Conservation)

Dr P D Clarkson
Executive Secretary

COMNAP

Council of Managers of National Antarctic Programmes

Representative

Mr A Fowler
Executive Secretary

Prof A Karlquist
COMNAP Chairman

EXPERTS

ASOC

Antarctic and Southern Ocean Coalition

Representative:

Mr J Barnes

Counsellor, Friends of the Earth International
France

Lic Ricardo Roura

ASOC, Southern Hemisphere Secretariat, New Zealand

Mr Barry Weeber

Royal Forest and Bird Protection Society, New Zealand

Mr Chris Laidlaw

World Wildlife Fund, New Zealand

IAATO

International Association of Antarctic Tour Operators

Representative:

Mr J Splettstoesser

Ms D Landau

IAATO Executive Committee

Ms A Kershaw

IAATO Founding Member

IOC

Intergovernmental Oceanographic Commission

Representative:

Mr H Hutchinson

IHO

International Hydrographic Organisation

Representative:

Commander P Usher

IUCN

International Union for the Conservation of Nature and Natural Resources

Representatives:

Ms J Dalziell

Member, IUCN Antarctic Advisory Committee

Dr M De Poorter

Member, IUCN Antarctic Advisory Committee

Dr D Given

IUCN Species Survival Commission

PATA

Pacific Asia Travel Association

Representative:

Mr N Plimmer

UNEP

United Nations Environment Programme

Representative:

Dr K A Edwards

Senior Adviser/Executive Coordinator

Christian Lambrechts

Executive Assistant, UNEP

WMO

World Meteorological Organisation

Representative:

Mr H Hutchinson

**ANNEX L:
NATIONAL
CONTACT
POINTS**

ANNEX L: NATIONAL CONTACT POINTS

CONSULTATIVE PARTIES

ARGENTINA

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Dirección de Antártida
Ministerio de Relaciones Exteriores
Comercio Internacional y Culto
Reconquista 1088 - Piso 10
Buenos Aires, Argentina

Tel: (+54) 1.311.1801
Fax.: (+54) 1.311.1660

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Dirección Nacional del Antartico
Instituto Antartico Argentino
Cerrito 1248
Buenos Aires, Argentina

Tel: (+54) 1.813.7807
Tel: (+54) 1.812.1689
Fax: (+54) 1.1812.2039
E-mail: iaa @ant.org.ar

AUSTRALIA

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

The Assistant Secretary, Environment and Antarctic Branch
Department of Foreign Affairs and Trade
Administrative Building
PARKES
ACT 2600, Australia

Tel: (+61) 6.2691111
Fax: (+61) 6.2612594

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

The Director
Australian Antarctic Division
Channel Highway
Kingston
Tasmania
Australia 7050

Tel: (+61) 02.323209

Fax: (+61) 02.323215

BELGIUM

1. For purposes set out in paragraph 3 of Recommendation XIII-I:

Ministere des Affaires Etrangeres
Service Droit de la MER/Antarctique
2 Rue Quatre Bras
1000 Bruxelles, Belgium

Tel: (+32) 2.516.89.26

Fax: (+32) 2.513.91.48

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Mr S Caschetto
Federal Office for Scientific, Technical and Cultural Affairs (OSTC)
Rue de la Science 8
B-1000 Brussels, Belgium

Tel: (+32) 2.238.3608

Tel: (+32) 2.238.3411

Fax: (+32) 2.230.5912

Telex: 24501 PROSCI B

E-mail: casc@smtp. belspo.be

BRAZIL

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Divisao do Mar, da Antartica e do Espaco (DMAE)
Ministerio dos Relacoes Exteriores
Palacio Itamaraty, Sala 737, Brasilia-D.F. CEP:70.000

Tel: (+55 61) 211 6282/211 6367

Fax: (+55 61) 223 7362/224 1079

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Programa Antartico Brasileiro (PROANTAR)
Secretaria de Comissao Interministerial Para os Recursos do Mar
Ministerio da Marinha, Esplanada os Ministerios,
Bloco N, Anexo B, 3° Andar
Brasilia-D.F. CEP:70.055-900, Brasil

Tel: (+55 61) 226 3937/312 1308/312 1309

Fax: (+55 61) 312 1336

Telex: (+55 61) MMAR BR

CHILE

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Ministerio de Relaciones Exteriores
Dirección de Política Especial
Departamento Antártica
Catedral # 1158
Santiago, Chile

Tel: (+56) 2 6794379
Fax: (+56) 2 6725071

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Embajador Oscar Pinochet de la Barra
Instituto Antártico Chileno
Luis Thayer Ojeda 814 Providencia
Santiago, Chile

Tel: (+56) 2 231 0105
Fax: (+56) 2 232 0440

CHINA, PEOPLE'S REPUBLIC OF

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Division for Environmental and Antarctic Affairs
Department of Treaty & Law
Ministry of Foreign Affairs
Beijing 100701, China

Tel: (+86) 10 525 5520
Fax: (+86) 10 513 4505

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Mr Chen Liqi
Chinese Antarctic Administration
Beijing 100860, China

Tel: (+86) 10 803 3682
Fax: (+86) 10 851 1613

ECUADOR

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Director General de Intereses Maritimos
Av. Amazonas y Cordero - Edif. Flopec 7° Piso
Quito, Ecuador S.A.

Tel: (+593) 2508909 / 2505187

Fax: (+593) 2563075

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Secretario Ejecutivo del Programa Antartico Ecuatorian
Instituto Oceanografico de la Armada
Av. 25 Julio Base Naval Sur
P O Box 5940
Guayaquil, Ecuador S.A.

Tel: (+593) 4481847 / 4480033

Fax: (+593) 4485166

E-mail: inocar @ inocar.mil.ec.

FINLAND

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Ministry for Foreign Affairs
Political Department
P O Box 176
SF-00160 Helsinki, Finland

Tel: (+358) 9.13.41.51

Fax: (+358) 9.13.41.50.65

Telex: 124636 UMINSF

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Polar Commission of Finland
Ministry of Trade and Industry
P O Box 230
SF-00171 Helsinki, Finland

Tel: (+358) 9.160.37.24

Fax: (+358) 9.160.37.05

FRANCE

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Administration des Terres Australes et Antarctiques
Françaises (T.A.A.F.)
34, Rue des Renaudes
75017 Paris, France

Tel: (+33) 40.53.46.77
Fax: (+33) 47. 66.91.23

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Ministère des Affaires Etrangères
Direction des Affaires Juridiques
Sous Direction de droit de la mer, des Pêches et de l'Antarctique,
37 Quai d'Orsay 75007 Paris, France

Tel: (+33) 47.53.53.31 ext. 4386/5331/5325
Fax: (+33) 47.53.94.95

3. For Scientific Purposes :
Institut Français pour la Recherche et la Technologies Polaires (IFRTP)
Technopôle Brest - Iroise
BP 75 29280 Plouzané
France

Tel: (33) 98 05 6500
Fax: (33) 98 05 6555
Telex: 941003 IFRTP

GERMANY

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Auswärtiges Amt
Referat 504
Postfach 1148
53001 Bonn, Germany

Tel: (+49) 228-172997
Fax: (+49) 228-173784

Prof M Tilzer, Dr H Kohnen
Alfred-Wegener-Institut
Columbusstrasse
27568 Bremerhaven, Germany

Tel: (+49) 471-4831-0
Fax: (+49) 471-4831-149
Telex: 238695 POLAR D

INDIA

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Dr A E Muthunayagam
Secretary, Government of India
Department of Ocean Development
12, Mahasagar Bhawan
CGO Complex, New Delhi
Pin 11003 India

Tel: (+91) 11-4360874
Fax: (+91) 11-4362644
Telex: 31,61535 DOD IN
E-mail: aem @ DOD IZ, ERNET.IN

ITALY

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Mr Paolo Scartozzoni
Ministero Degli Affari Esteri
Direzione Generale Delle Relazioni Culturali (DGRC)
Ufficio VII
Ple Delle Farnesina 1 - 00194 Roma, Italy

Tel: (+39) 6-36914057 / 36914061
Fax: (+39) 6-3236239

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Mr Ing M Zucchelli
Enea
Progetto Antartide
S P Anguillarese, 301
00060 Roma A.D, Italy

Tel: (+39) 6-30484939
Fax: (+39) 6-30484893

JAPAN

For purposes set out in paragraph 3 and 5 of recommendation XIII-1:

Director
 Global Issues Division
 Ministry of foreign Affairs
 2-2-1, Kasumigaseki,
 Chiyoda-ku, Tokyo, Japan

Tel: (+81) 3-3581-3882
 Fax: (+81) 3-3592-0364

KOREA, REPUBLIC OF

1. For purposes set out in paragraph 3 of recommendation XIII-1:

Director
 International Legal Affairs Division
 Treaties Bureau, Ministry of Foreign Affairs
 77 Sejongro, Chongro-ku
 Seoul, Republic of Korea

Tel: (+82) 2-720-4045/2-737-3150
 Fax: (+82) 2-733-6737

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Director
 Polar Research Center
 Korea Ocean Research and Development Institute
 Ansan P O Box 29
 Seoul, 425-600, Republic of Korea

Tel: (+82) 345-400-6400
 Fax: (+82) 345-408-5825
 E-mail: iahn@sari.kordi.re.kr

NETHERLANDS, THE

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

DES-ET
 Ministry of Foreign Affairs
 P O Box 20061
 2500 EB The Hague, The Netherlands

Tel: (+31) 70.348.4971
 Fax: (+31) 70.348.4412
 Telex: 31326 BUZANL

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Director
Netherlands Geoscience Foundation
Laan van Nieuw Oost Indië 131
NL 2509 AC The Hague, The Netherlands

Tel: (+31) 70.344.07.80
Fax: (+31) 70.383.21.73

NEW ZEALAND

1. For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

The Head
Antarctic Policy Unit
Ministry of Foreign Affairs and Trade
Private Bay 18-901
Wellington, New Zealand

Tel: (+64) 04 472 8877
Fax: (+64) 04 472 8039

NORWAY

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Royal Ministry of Foreign Affairs
Section for Marine Resources and Polar Affairs
Post Office Box 8114 DEP
0032 Oslo, Norway

Tel: (+47) 22.24.36.14 / 10
Fax: (+47) 22.24.2782 / 9580
Telex: 71004 NOREG N

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Norwegian Polar Institute
Post Office Box 5072 Mojordstua
0301 Oslo, Norway

Tel: (+47) 22.95.95.00
Fax: (+47) 22.95.95.01
Telex: 74745 POLAR

PERU

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Sr. Presidente de la Comision
Nacional de Asuntos Antarticos (CONAAN)
Ministerio de Relaciones Exteriores
"Palacio Torre Tagle" - UCAYALI 363
Lima 01, Peru

Tel: (+51) 1 427-3860/431-7170/427-0995
Fax: (+51) 1 431-7170

POLAND

1. For purposes set out in paragraph 5 of Recommendation XIII-1:

Mr Waldemar Figaj
Ministry of Foreign Affairs
Al. Jana Christiana Szucha 23
Warsaw, Poland

Tel: (+48) 2 2-6239-34
Fax: (+48) 2 2-621-82-2

2. For purposes set out in paragraph 3 of Recommendation XIII-1:

Prof Krzysztof Birkenmajer
Polish Academy of Sciences
Senacka 3, 31-002 Krakow, Poland

Tel: (+48) 12-22 16 09
Fax: (+48) 12-22 16 09
Telex: 0322414 PAN PL

RUSSIAN FEDERATION

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Mr P Dzioubenko
Ministry of Foreign Affairs of the Russian Federation,
Legal Department
Russian Federation, Moscow,
Arbat str, 54, Russian Federation

Tel: (+7) 095-241-28-25
Fax: (+7) 095-241-11-66

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Dr S Khodkin
Federal Service of Russia for Hydrometeorology and Environmental
Monitoring
Novovagan'kovsky str,12
123242 Moscow, Russian Federation

Tel: (+7) 095-252-03-13
Fax: (+7) 095-255-22-69
Telex: 411117 RUMS RF

SOUTH AFRICA

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Director
Environmental, Marine and Antarctic Matters
Dept. of Foreign Affairs
Route DEAM/MA77
Private Bag X 152
Pretoria 0001, South Africa

Tel: (+27) 12-351-1531
Fax: (+27) 12-351-1651

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Dr F Hanekom - Deputy Director General
Department of Environmental Affairs and Tourism
Directorate Antarctic and Islands
Private Bag X447
Pretoria 0001, South Africa

Tel: (+27) 12-3103666
Fax: (+27) 12-3222682

SPAIN

- For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Sr D Arturo Spiegelberg de Ortueta
Subdirector General de Cooperación Científico-Técnica
Dirección General de Relaciones Culturales y Científicas
Ministerio de Asuntos Exteriores
Atocha, 3. 28017 Madrid, Spain

Tel: (+341) 379 9559
Fax: (+341) 442-7657

SWEDEN

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Amb Wanja Tornberg
Ministry of Foreign Affairs
P O Box 16121
10323 Stockholm, Sweden

Tel: (+46) 8-4051000
Fax: (+46) 8-7231176

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Dr Olle Melander
Swedish Polar Research Secretariat
Box 50005 S-10405 Stockholm, Sweden

Tel: (+46) 8-6739500
Fax: (+46) 8-152057

UNITED KINGDOM

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Dr M G Richardson
Head, Polar Regions Section
South Atlantic and Antarctic Department
Foreign and Commonwealth Office
King Charles Street
London SW1A 2AH, England

Tel: (+44) 171-270-2616
Fax: (+44) 171-270-2086

2. For purposes set out in paragraph 5 of Recommendation XIII-1

Director, British Antarctic Survey
High Cross
Madingley Road
Cambridge CB3 0XT, England

Tel: (+44) 1223 361188
Fax: (+44) 1223 62616

UNITED STATES OF AMERICA

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

The Director
Office of Oceans Affairs
OES/OA, Room 5805
Department of State
Washington, DC 20520-7818, USA

Tel: (+1) 202-647-3262
Fax: (+1) 202-647-1106

URUGUAY

1. For purposes set out in paragraph 3 of Recommendation XIII-1

Ministerio de Relaciones Exteriores
Dirección de Asuntos Políticos Especiales
Colonia esq Cuareim
Montevideo, Uruguay

Tel: (+598) 2-921010 and 917122
Fax: (+598) 2-921006

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Instituto Antártico Uruguayo
8 de Octubre 2958
Montevideo, Uruguay

Tel: (+598) 2-478341/45
Fax: (+598) 2-476004
Telex: UY 23125

NON-CONSULTATIVE PARTIES

AUSTRIA

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Mr Christian Zeileissen
Federal Ministry for Foreign Affairs
A-1040 Vienna, Balhausplatz 2, Austria

Tel: (+43) 1 531 15 ex. 3404

BULGARIA

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Department of International Law
Ministry of Foreign Affairs
2AL Zhendov St
1113 Sofia, Bulgaria

Tel: (+3592) 737805
Fax: (+3592) 731216

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Bulgarian Antarctic Institute
15 Tzar Osvoboditel Bul
Sofia University St. Kl. Ochridski
100 Sofia, Bulgaria

Tel: (+3592) 858330
Fax: (+3592) 446487
E-mail: polar@gea.uni.sofia.bg

CANADA

1. For purpose set out in paragraph 3 of Recommendation XIII-1:

Ambassador for Circumpolar Affairs ACX
Department of Foreign Affairs and International Trade
Ottawa, Ontario KIA OG2, Canada

Tel: (+1) 613-992-6700
Fax: (+1) 613-994-1852

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Dr E F Roots
Department of the Environment
Ottawa, Ontario KIA OH3, Canada

Tel: (+1) 613-997-2393
Fax: (+1) 613-997-5813

CZECH REPUBLIC

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Ministry of Foreign Affairs
International Law Department
Loretanske Namesti'5 12510 Praha 1, Hradcany, Czech Republic

Tel: (+422) 2418 1111
Fax: (+422) 2431 0017/2418 2048
Telex: 121866;122096

DENMARK

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Secretariat for Law of the Sea and Antarctic Affairs (JT.2)
Ministry of Foreign Affairs
Asiatisk Plads 2, DK-1448 Copenhagen K
Denmark

Tel: (+45) 33920000
Fax: (+45) 31540533 / 33920303

SLOVAK REPUBLIC

For purposes set out in paragraph 3 and 5 of Recommendation XIII-1:

Ministry of Foreign Affairs
International Law Department
Stromova 1, 83336 Bratislava, Slovak Republic

Tel: (+427) 370411
Fax: (+427) 7316934

SWITZERLAND

1. For purposes set out in paragraph 3 of Recommendation XIII-1:

Mrs Evelyne Gerber
Federal Department of Foreign Affairs
Directorate of Public International Law
Bundesgasse 18 CH-3003 Berne, Switzerland

Tel: (+41) 31 322.31.69
Fax: (+41) 31 322.37.79

2. For purposes set out in paragraph 5 of Recommendation XIII-1:

Swiss Committee for Polar Research
Swiss Academy for Natural Science
Baerenplatz 2 3011 Berne, Switzerland

Tel: (+41) 31 312.33.75

Fax: (+41) 31 312.32.91

**ANNEX M:
PRELIMINARY
AGENDA
FOR ATCM XXII**

ANNEX M: PRELIMINARY AGENDA FOR ATCM XXII

- 1 Opening of Meeting
- 2 Election of Officers
- 3 Adoption of Agenda
- 4 Operation of the Antarctic Treaty System: Reports by Observers and Experts
- 5 Report of the Committee for Environmental Protection
- 6 Compliance with the Protocol on Environmental Protection
- 7 Emergency Response Action and Contingency Planning
- 8 The Question of Liability as Referred to in Article 16 of the Protocol
- 9 Safety of Operations in Antarctica
- 10 Relevance of Developments in the Arctic and Antarctica
- 11 Tourism and NGO Activities in the Antarctic Treaty Area
- 12 Inspections under the Antarctic Treaty
- 13 Operational Issues
- 14 Science Issues
- 15 Education Issues
- 16 Other Business
- 17 Preparation of the XXIII Consultative Meeting
- 18 Adoption of the Report
- 19 Closing of the Meeting

**ANNEX N:
CEP
DRAFT RULES
OF
PROCEDURE**

ANNEX N: COMMITTEE FOR ENVIRONMENTAL PROTECTION (CEP) DRAFT RULES OF PROCEDURE

PART 1: REPRESENTATIVES AND EXPERTS

RULE 1

Each Party to the Protocol on Environmental Protection to the Antarctic Treaty ("the Protocol") is entitled to be a member of the Committee on Environmental Protection ("the Committee") and to appoint a representative who may be accompanied by experts and advisers [with suitable scientific, environmental or technical competence].

Each member of the Committee shall notify the Host Government, as early as possible before each meeting of the Committee, the name and designation of each representative, and before or at the beginning of the session, the name and designation of each expert and adviser.

PART 2: OBSERVERS AND CONSULTATION

RULE 2

Observer status in the Committee shall be open to any Contracting Party to the Antarctic Treaty which is not Party to the Protocol.

Observers shall notify the Host Government as early as possible before each meeting of the Committee, the name and designation of its representatives attending the meeting.

RULE 3

The Committee shall invite the President of the Scientific Committee on Antarctic Research and the Chairman of the Scientific Committee for the Conservation of Antarctic Marine Living Resources, or their nominated Representatives, to participate as observers at its sessions. The Committee may also, with the approval of the Antarctic Treaty Consultative Meeting, invite such other relevant scientific, environmental and technical organisations which can contribute to its work, to participate as observers at its sessions.

RULE 4

Observers may submit documents to the Host Government for distribution to members of the Committee.

RULE 5

In carrying out its work the Committee shall, as appropriate, consult with

the Scientific Committee on Antarctic Research, the Scientific Committee for the Conservation of Antarctic Marine Living Resources and other relevant scientific, environmental and technical organisations.

The Committee may seek the advice of experts as may be required on an ad hoc basis.

PART 3: MEETINGS

RULE 6

The Committee shall meet once a year, in conjunction with the Antarctic Treaty Consultative Meeting, and at the same location. The Committee may meet between annual sessions in order to fulfil its functions as agreed by the Antarctic Treaty Consultative Meeting.

[The Committee may convene intersessional meetings or working groups when it considers it necessary for the proper fulfilment of its functions of assessment, control, inspection, determination of responsibilities, and other matters. Such meetings may be held at a different place, preferably at the nearest countries to the Antarctic continent, and they will use the administrative services of the Host Government.]

RULE 7

When the Committee meets in conjunction with the Antarctic Treaty Consultative Meeting, the Rules of Procedure for the preparation of the Antarctic Treaty Consultative Meeting shall apply.

In other cases the Chairperson shall prepare a preliminary annotated Agenda for each such Session of the Committee. The Host Government shall distribute the preliminary annotated Agenda to all Members of the Committee no later than 100 days prior to the beginning of the session. In the event of emergencies or unforeseen developments it shall be distributed as early as possible.

The Host Government, in consultation with the Chairperson of both the Committee and of any subsidiary body, shall prepare and distribute a preliminary annotated Agenda before each session of any subsidiary body.

RULE 8

Members of the Committee proposing supplementary items for the Agenda shall inform the Host Government thereof no later than 30 days before the beginning of the session and accompany their proposal with an explanatory memorandum.

[PART 4: SUBMISSION OF DOCUMENTS

RULE X

The Committee will need to give early attention to drawing up rules relating to the submission of documents. Until it does so, it [shall] [should] follow the Guidelines on Pre-sessional Document Circulation and Document Handling set out in Annex D of the Final Report of ATCM XX, at page 99. In the rules it develops, the Committee should avoid duplicating requirements for the submission of documents to ATCPs or ATCMS (eg draft CEEs).]

PART 5: CONDUCT OF BUSINESS

[RULE 9

All matters of a procedural nature shall be decided by a majority of the representatives of parties present and voting at the meeting. Any question as to whether an issue is a procedural one shall be decided by consensus.

A quorum shall be constituted by representatives of two-thirds of the members of the Committee.

The Committee shall endeavour to provide advice and recommendations to the Antarctic Treaty Consultative Meeting based on consensus.

Where consensus cannot be achieved, the Committee shall set out in its report all views advanced on the matter under consideration.

All decisions on other matters of a non-procedural nature [shall] [should] be taken by consensus.]

PART 6: CHAIRPERSON AND VICE-CHAIRS

RULE 10

The Committee shall elect a Chairperson and first and second Vice-chairs. The Chairperson and the Vice-chairs shall be elected for a period of two years.

The Chairperson and the Vice-chairs shall not be re-elected to their post for more than one additional term. The Chairperson and Vice-chairs shall not be representatives from the same Party.²

² *Explanatory note:* it will be desirable to ensure a degree of continuity as well as rotation among the Chairperson and Vice-chairs. The Committee may wish to exempt the Vice-chairs from the two-term limitation.

RULE 11

Amongst other duties the Chairperson shall have the following powers and responsibilities:

- a) convene, open, preside at and close each session of the Committee;
- b) make rulings on points of order raised at each of the sessions of the Committee provided that each representative retains the right to request that any such decision be submitted to the Committee for approval;
- c) approve a provisional agenda for the session after consultation with Representatives and the Host Government;
- d) sign, on behalf of the Committee, the reports of each session for transmission to the Parties, and observers attending the session, and other interested persons, as official documents of the proceedings, and;
- e) present the report on each session of the Committee to the Antarctic Treaty Consultative Meeting.

RULE 12

Whenever the Chairperson is unable to act, the first Vice-chair shall assume the powers and responsibilities of the Chairperson.

RULE 13

In the event of the office of the Chairperson falling vacant between these meetings, the first Vice-chair shall exercise the powers and responsibilities of the Chairperson until a new Chairperson is elected.

RULE 14

The Chairperson and Vice-chairs shall commence the fulfilment of their obligations at the conclusion of the session of the Committee at which they have been elected, with the exception of the first Chairperson and the Vice-chairs who shall take office immediately upon their election.

RULE 15

The Committee may establish, with the approval of the Antarctic Treaty Consultative Meeting, subsidiary bodies, as appropriate.

Subsidiary bodies shall operate on the basis of the Rules of Procedure of the Committee as applicable.

The Committee may also establish informal open-ended contact groups to examine specific issues and report back to the Meeting.

PART 7: ADMINISTRATIVE FACILITIES

RULE 16

As a general rule the Committee, and any subsidiary bodies, shall make use of the administrative facilities of the Government which agrees to host its meetings.

PART 8: LANGUAGES

RULE 17

English, French, Russian and Spanish shall be the official languages of the Committee.

PART 9: RECORDS AND REPORTS

RULE 18

The Committee shall present a report on each of its sessions to the Antarctic Treaty Consultative Meeting. The report shall cover all matters considered at the session, including at intersessional meetings and by subsidiary bodies as appropriate, and shall reflect the views expressed. The report shall be circulated to the Parties, and to observers attending the session, and shall thereupon be made publicly available.

PART 10: AMENDMENTS

RULE 19

The Committee may adopt, by consensus, amendments to these rules of procedure, which shall be subject to approval by the Antarctic Treaty Consultative Meeting.